

Local Agency Project Documentation Example

Prepared 6/2021 by CDOT Geotechnical and Materials Branch

Note: This document <u>shall</u> be used only as a reference. All project documentation <u>shall</u> meet all guidelines as outlined in the Field Materials Manual.



Introduction

This document is intended to provide an example of a CDOT Local Agency project materials documentation that conforms to the documentation requirements outlined in the Field Materials Manual. This is also an example of how an electronic project book is set up for an audit; your specific project may differ in types of items to include at which time refer to the Field Materials Manual.

If you have any Local Agency documentation questions or concerns, please contact Cathy Cole (cathy.cole@state.co.us)

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COLORADO DEPARTMENT OF TRANSPORTATION

LETTER OF FINAL MATERIALS **CERTIFICATION**

FOR A LOCAL AGENCY PROJECT

Project No. STE C480-008	Page 1 of 8
Contract ID 19219	Acceptance date 11/15/2017
Project Location Pinon Causeway to Asper	ı Village Dr - S.U.P.
Contractor Crossfire, LLC	

This is to Certify that:

Yes No

The results of the tests on the acceptance samples indicate that the material incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications; and such results compare favorably with the results of the Independent Assurance sampling and testing.

All results from the Independent Assurance sampling and testing are within tolerance limits of the results of sampling and testing that are used in the acceptance program.

Exceptions to the plans and specifications are explained on page 2 of 2 of this Form #473-LA. A CDOT Form #473-LA Page 2 is required to be attached to Page 1.

The referenced documents below are attached with applicable signatures to this form in the order indicated.

Yes	No	Explanation(s) of Exceptions, Form # 473-LA Page 2, (as many pages as required.)				
Yes	No	Explanation of Exceptions, Supplemental Documents.				
Yes	☐ No	Materials Documentation Record, Form #250				
Yes	No	Project Independent Assura	nce Sampling & Testing Schedule	, Form #379.		
Yes	☐ No		Finals Materials Documentation Checklist, (Project Closure) Form #1199, page 1.			
Yes	☐ No					
Approved by	: Local Agenc	y, Person in Responsible Charge	Title:	Date:		
Uifthu (printed nam	e and signatur	While e)	Priject Engineer Davis Engineering Service, Inc. (LA)	3 30 2010		
Gol	0//	egt Engineer Program eng now	Traffiz Elyineer	Date: 7/2/18		

Distribution:

CDOT Resident Engineer

豆 LA Project Engineer / Project Manager

CDOT Region Materials Engineer

CDOT Local Agency Coordinator

Documentation Unit, Staff Materials & Geotechnical Branch

Form 474 has replaced page 2 of Form 473

COLORADO DEPARTMENT OF TRANSPORTATION
LETTER OF FINAL MATERIALS
CERTIFICATION EXPLANATION OF EXCEPTIONS
FOR A LOCAL AGENCY PROJECT

Project No. STE C480-008	Page 2 of 8
Contract ID 19219	Acceptance date 11/15/2017
Project Location Pinon Causeway to Asp	en Village Dr S.U.P.
Contractor Crossfire, LLC	

(Required to be attached to Form #473-LA Page 1 with text below.)

Explanation of Change Order No. 1

Change Order 01 (dated 07/24/2017) was put together to substitute boring of electrical conduit under US Highway 160 instead of performing overhead work for placement of the accessible pedestrian system crossing. Also, a line item was added to relocate a utility line south of US Highway 160. Change Order 01 was formatted to show a no cost change for inclusion of boring under US Highway 160. One pay item was added (613-00206 2 Inch Electrical Conduit (Bored)) and the Contractor provided a COC for the 259 lineal feet of 2 Inch Schedule 80 Conduit placed. A quantity of 392 lineal feet of pay item 613-00200 2 Inch Electrical Conduit was removed, 1 each of pay item 613-50106 Lighting Control Center (Special - Pedestrian) was removed, 34 lineal feet of pay item 1-1/2" Inch Electrical Conduit was removed, 1 each of pay item 613-07023 Pull Box (24"x36"x24") was increased, and 32 lineal feet of pay item 613-01100 1 Inch Electrical Conduit (Plastic) was increased through Change Order No. 01. Reductions to lump sum pay items 613-10010 Wiring (Special - Pedestrian X-Walk) and 630-XXXXX Construction Zone Traffic Control were also included in Change Order No. 01.

For the pay item 613-00206 2 Inch Electrical Conduit (Bored) this was an added item and included within the CDOT Form 250. All other pay items were existing items with quantities paid, or reduced, as indicated on the pay estimates.

Explanation of Force Account - Wal-Mart Utilities & Irrigation

The force account method was utilized to pay for necessary work to relocate irrigation and utility lines near the roadside Wal-Mart sign area, where the Contractor's Subcontractor performed this work. A tabbed section is included and labeled "Force Account - Wal-Mart Utilities & Irrigation". The manufacturer's COC's for electrical conduit, a pull box, 1" PVC, and 2" PVC pipe are included. The Force Account package summarizing payment for this work is also included.

Explanation of Force Account - Trail Lighting Luminaire Swap

The force account method was utilized to pay for swapping out of the trail lighting luminaires by the Contractor's Subcontractor. The Town of Pagosa Springs purchased and supplied the luminaires, and during shipment were damaged. The Subcontractor replaced damaged luminaires with new luminaries provided by the Town of Pagosa Springs. No other material was incorporated into the project for this force account work.

Explanation of Force Account - Culvert Repair

The force account method was utilized to pay for the Contractor to excavate, locate, repair, and replace US Highway 160 crossing culverts. The Contractor potholed in the area where the culverts crossed US Highway 160 and the trail, with deteriorated culverts encountered. A plan was developed to repair one culvert and abandon the other culvert (see Speed Memo 02). The Town of Pagosa Springs purchased and provided to the Contractor the culvert pipe and culvert connection materials. The supplier (Winwater) provided test results for this material and is included for reference. The Contractor also placed flow-fill material around the CMP coupling area. The Contractor provided the mix design and batch ticket. Due to minimal quantities no testing on the flow-fill material was performed and placement was approved by the Project Engineer. A tabbed section is included and labeled "Force Account - Culvert Repair". The Force Account package summarizing payment for this work is also included.

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Project No. STE C480-008	Page 3 of 8
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Project Location Pinon Causeway to Asp	oen Village Dr S.U.P.
Contractor Crossfire, LLC	

(Required to be attached to Form #473-LA Page 1 with text below.)

Materials Certificate of Conformance & Test Results

The Project Engineer requested from the Contractor COC's & CTR's in accordance with the 2017 CDOT FMM OA Frequency Guide Schedule (FMM). For the pay items the CDOT Form 157 summarizes the documentation provided. For respective pay items the required FMM documentation is provided (e.g. COC, CTR, Buy America, APL/QML). For various line items, not indicated within the FMM to be provided, the manufacturer or supplier "COC's", "test results", "Buy America" statements have been included additionally and will not have the Contractor's CCS for a COC or CTR in accordance with CDOT Specification 106.12 and 106.13.

Item 203-00010 Unclassified Excavation (CIP)

A section of density tests is labeled "Density Tests - Info Only" and contains materials testing on prepared subgrade for the bottom of retaining wall from STA 24+26 to 25+03. The Contractor placed covered protection of this excavation but a large rain storm caused this area to become wet then soft. The Project Engineer discussed with the Contractor utilizing the pay item 203-00100 Muck Excavation in conjunction with the pay item 304-02005 Aggregate Base Course (Class 2) and pay item 506-01020 Geogrid Reinforcement (Special) to correct this soft area.

Item 208-00007 Erosion Log (8 Inch)

The Contractor provided submittals for 9" diameter aspen excelsior erosion logs and for a rock aggregate bag for the drain inlet along Alpha Drive. The submittals were approved by the Project Engineer and indicated payment to be provided by the pay item 208-00007 Erosion Log (8 Inch). The manufacturer and supplier provided COC's for the 9" diameter aspen excelsior erosion log and rock aggregate bag.

Item 208-00070 Vehicle Tracking Pad

The aggregate portion of the vehicle tracking pad was not tested for gradation. The Project Engineer field inspected the aggregate size brought on to the project site. However, the Contractor provided aggregate material that was not entirely comprised of material having two fractured faces and the Project Engineer notified the Contractor of this. The Contractor requested if this material could be remain as-is. The Project Engineer and CDOT-Environmental Staff, during an environmental walk through, reviewed the tracking pad locations and approved leaving the material in place for use. The vehicle tracking pad was inspected during the project and the aggregate material was observed to function as a BMP.

Item 212-00006 Seeding (Native), 212-00011 (Lawn) & Seeding (Wetland)

The Contractor provided Certified Test Reports for each seeding pay item. During review of the CTR's, the Project Engineer observed a few test dates, related to purity, outside the 13 month window. In discussions with the seed supplier all test dates, related to germination, were within the 13 month window. The seed supplier indicated that purity test results are not updated for a lot of seed mix stored beyond a 13 month window, however, the same lot of seed mix is tested for germination to demonstrate seed success.

Item 212-00011 Seeding (Lawn)

The Contractor's seed supplier requested a substitution of the Lawn Seed Mix, as indicated on Plan Sheet 10. The seed supplier provided a letter proposing the use of a "Centennial Mix" for the Lawn Seed Mix. In discussions with the seed supplier they indicated their being hundreds of bluegrass seed varieties. The Project Engineer reviewed and approved the use of the "Centennial Mix".

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COLORADO DEPARTMENT OF TRANSPORTATION LETTER OF FINAL MATERIALS CERTIFICATION EXPLANATION OF EXCEPTIONS FOR A LOCAL AGENCY PROJECT

Project No. STE C480-008	Page 4 of 8
Contract ID 19219	Acceptance date 11/15/2017
Project Location Pinon Causeway to As	pen Village Dr S.U.P.
Contractor Crossfire, LLC	

(Required to be attached to Form #473-LA Page 1 with text below.)

Item 213-00012 Spray-On Mulching Blanket

The Project Engineer reviewed the Contractor's proposed Spray-On Mulching Blanket with CDOT-Environmental Staff and CDOT Specification 213. CDOT-Environmental indicated approval to the project to use this product.

Item 304-02005 Aggregate Base Course (Class 2) & 304-06007 Aggregate Base Course (Class 6)
The existing subgrade material at the retaining wall footing location was found to be at a high nature moisture content, thus low density results. The existing subgrade material was reworked, dried, and retested.
Unfortunately a rain event occurred overnight, filling the footing excavation with rainwater and resulting again in a high moisture content and low density after the water was removed. Ultimately, muck excavation of the existing subgrade material took place with the footing grade elevation re-established, stabilized, and paid as pay item 304-02005 ABC Class 2 (ABC Class 6 in lieu of ABC Class 2). All the density tests preformed on the native subgrade material are filed under item 203 - Embankment "Info Only".

The Contractor initially proposed using ABC Class 6 material from their Piedra Pit location. At the beginning of the project a submittal was provided by the Contractor showing gradation test results meeting the 703 specifications. During the first placement of ABC Class 6 (in lieu of ABC Class 2) on 07-20-2017, the Contractor was notified by CDOT Form 626 the Piedra Pit ABC Class 6 material being out of specification on the #200 sieve. The Contractor indicated to the Project Engineer recent testing showing their material being in specification. The Project Engineer discussed with the Contractor paying the placed ABC Class 6 on 07-20-2017 as the pay item 304-02005 ABC Class 2 with future test results of ABC Class 6 material documented under the pay item 304-06007 ABC Class 6.

Testing of placed ABC Class 6 material for the trail portion was performed on 09-01-2017, with this material again being out of specification on the #200 sieve. The Contractor was notified of these test results by CDOT Form 626. At this point in the project the Project Engineer discussed preliminary pay reduction amounts with the Contractor by using the test results to date for the total estimated ABC Class 6 quantity for the project. The Contractor proposed switching to their La Boca Pit for ABC Class 6 material for the duration of the project and indicated this pit material meeting the 703 specifications.

Testing of placed ABC Class 6 material, from the La Boca Pit, for the trail portion was performed on 09-25-2017, with this material again being out of specification on the #200 sieve. The Contractor was notified of these test results by CDOT Form 626. The Project Engineer discussed the ABC Class 6 test results for the project and notified the Contractor of how price reductions will be applied for material incorporated into the project based on no additional testing to be performed for the project. A price reduction for ABC Class 2 for the month of July was established and applied, a price reduction for ABC Class 6 material for the months of July, August, September, and October were established and applied.

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COLORADO DEPARTMENT OF TRANSPORTATION LETTER OF FINAL MATERIALS CERTIFICATION -

EXPLANATION OF EXCEPTIONS FOR A LOCAL AGENCY PROJECT

Project No. STE C480-008	Page 5 of 8		
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304-02005 Aggregate Base Course (Class 2)

50.5 cubic yards of ABC Class 6 was placed in lieu of ABC Class 2 as stabilization for the subgrade of the footing for the retaining wall section from St. 24+26 to St. 25+04. This material was out of specification on the #200 sieve (17.1%, spec = 3 to 15%). The ABC Class 6 material met density specifications, with the #200 sieve out of specification, the ABC Class 6 material was accepted to remain in place and approved by the Project Engineer. With the high #200 sieve values the Project Engineer reminded the Contractor of ensuring positive drainage is configured throughout the project to reduce long term concerns. The Project Total "P" = 9.576, for the month of July, established a price reduction amount of \$120.99 and was applied in Pay Request 04.

No LA Abrasion or R-Value tests were performed for ABC Class 6 material from Crossfire's Piedra Pit. This pit has been used on multiple CDOT projects over the years, with numerous aggregate properties tested performed. The results have always been in specification. No gradation tests were performed or documented for the ABC Class 2 material line item. As previously discussed, ABC Class 6 material was placed and paid as ABC Class 2. Gradation tests were performed for ABC Class 6 and these results also represent material paid as ABC Class 2.

304-06007 Aggregate Base Course (Class 6)

1,402.40 cubic yards were paid as pay item 304-06007 ABC Class 6 for the trail, sidewalk, curb and gutter, curb ramps, and other approved areas. This material was out of specification on the #200 sieve (17.1%, 15.4%, and %13.3, spec = 3 to 12%). The ABC Class 6 material met density specifications, with the #200 sieve out of specification, the ABC Class 6 material was accepted to remain in place and approved by the Project Engineer. With the high #200 sieve values the Project Engineer reminded the Contractor of ensuring positive drainage is configured throughout the project to reduce long term concerns. The Project Total "P" = 23.256, for the month of July, established a price reduction amount of \$1,291.83 and was finalized in Pay Request 07. The Project Total "P" = 15.504, for the month of August, established a price reduction amount of \$1,558.94 and was finalized in Pay Request 07. The Project Total "P" = 5.928, for the month of September, established a price reduction amount of \$977.85 and was finalized in Pay Request 07. The Project Total "P" = 5.928, for the month of October, established a price reduction amount of \$179.31 and was finalized in Pay Request 07.

No LA Abrasion or R-Value tests were performed for ABC Class 6 material from Crossfire's Piedra Pit. This pit has been used on multiple CDOT projects over the years, with numerous aggregate properties tested performed. The results have always been in specification.

No LA Abrasion test was performed for ABC Class 6 material from Crossfire's La Boca Pit. R-Value testing was performed on ABC material from Crossfire's La Boca Pit with a reported R-Value of 76 being below the specification R-Value of 78. This pit has been used on multiple CDOT projects over the years, with numerous aggregate properties tested performed. The results have always been in specification.

Item 411 Emulsified Asphalt

The Contractor damaged the surface of the trail during the project. Speed Memo 05 & 06 were issued discussing the path forward to perform a 1-1/2" thick overlay. An emulsified asphalt product (SS-1h) was used as a tack coat between the original HMA placement with the 1-1/2" thick overlay. Additional payment was not provided for the work associated with surface damage by the Contractor. This same emulsion product was used during HMA (Patching) of tying new concrete curb and gutter to the existing HMA roadway.

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Project No. STE C480-008	Page 6 of 8
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Project Location Pinon Causeway to Asp	en Village Dr S.U.P.
Contractor Crossfire, LLC	

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Item 601-01000 Concrete Class B

Truck Inspections - Four Corners Materials Truck #56921 does not appear within the project's CDOT Form 46. In 2018 FCM was contacted and a request was made to provide this truck's inspection form. FCM indicated they did not have any copies of 2017 Truck #56921 inspection. FCM indicated this truck may not have been available during the dates of inspection and was left out in 2017. This truck was inspected in 2015 and a copy of this truck inspection document from a previous project is included for reference.

Class P Concrete (in lieu of Class B)

For concrete placed on 10-03-2017 for Curb Ramp #7 and Curb & Gutter Type 2 along Alpha Drive and Aspen Village Drive, the reported air content was documented as 4.8%, not meeting the Class B specification for air content (5% to 8%). The reported air content did meet the Class P specification for air (4% to 8%) and was accepted and approved for placement by the Project Engineer. No price reduction was calculated for the reported air content value. Initial concrete testing on this day showed a low, out of specification, air content value. Adjustments to the concrete within the truck were made to increase the air content. For this concrete placed, the 28-day compressive strength average of 6810 psi met specifications.

Class BZ Concrete (in lieu of Class B or D)

Class BZ concrete was approved by the Project Engineer for the pay item 613-40012 Light Standard Foundation (Special), see letter dated 09-08-2017. This material was paid incidental to this pay item number. The slump tests for placements 09-06-17, 09-12-17, and 09-14-17 were higher than the specification range of 5 inches to 8 inches. The approved high range water reducer, MasterGlenium 7500, was added on-site. The slump for concrete placed on 09-22-17 was below the specification range. The water/cementitious materials ratio calculated to 0.46 for loads placed on 08-31-17, 09-11-17, and 09-12-17. The maximum water/cementitious material ratio is 0.45. In spite of all these items, the compressive strength for each load exceeded the project specifications. No price reductions were calculated or applied. The materials were determined to perform as intended for the design, accepted, and approved the by Project Engineer.

The most recent version of the CDOT Form 82 was not used for this Local Agency Project due to old copies of this form available for use. All of the required information is recorded on a summary form and copies of the field worksheets and laboratory worksheets are filed herein which contain the same information as required on the Form 82. The worksheets and test results have been approved by the Project Engineer.

Item 602-00000 Reinforcing Steel

A total quantity of 5,230 lbs of reinforcing steel was estimated for the project, being comprised of 1,700 lbs for the pay item 613-40012 Light Standard Foundation (Special) in the Additive Items - Preparation for Trail Lighting section, and 3,530 lbs for pay items 601, 604, 608, and 609 in the Base Bid Schedule. The installed quantity for pay item 613 was 1,666 lbs and the installed quantity for pay items 601, 604, 608, 609 was 3,561 lbs, producing a total of 5,227 lbs of reinforcing steel for the project. The installed quantity was evaluated in accordance with the 602.07 Specification and no adjustments were made to the estimated quantities.

COLORADO DEPARTMENT OF TRANSPORTATION

LETTER OF FINAL MATERIALS CERTIFICATION EXPLANATION OF EXCEPTIONS

FOR A LOCAL AGENCY PROJECT

Project No. STE C480-008	Page 7 of 8		
Contract ID 19219	Acceptance date 11/15/2017		
Project Location Pinon Causeway to Aspen Village Dr S.U.P.			
Contractor Crossfire, LLC			

(Required to be attached to Form #473-LA Page 1 with text below.)

Item 608-01500 Bituminous Bikeway (Special)

Prior to start of HMA placement activities for the project, check testing took place with QA for samples of HMA material provided by Subcontractor (Strohecker Asphalt & Paving). The sections labeled "Verification Testing" & "Binder Ignition/Gradation Correction Factors" includes worksheets and documentation to determine correction factors related to testing of the project's HMA material.

QA Testing was performed for three days of placement: 09-19-17, 10-23-17, and 10-24-2017. A summary of each day's out of specification item is provided:

Placement on 09-19-17

For the HMA placed the Asphalt Content of 6.36% exceeded the approved range (5.70% to 6.30%), the density of 96.20% exceeded the approved range (92% to 96%), the aggregate sieve gradation for #200 of 7.0% exceeded the approved range (1.1% to 5.1%).

Placement on 10-23-17

For the HMA placed the Asphalt Content of 5.53% exceeded the approved range (5.70% to 6.30%), the aggregate sieve gradation for 3/8" of 79%, #4 of 37%, #8 of 26% and #200 of 6.7% exceeded the approved respective ranges.

Placement on 10-24-17

For the HMA placed the Asphalt Content of 6.52% exceeded the approved range (5.70% to 6.30%), the density of 97% exceeded the approved range (92% to 96%), the aggregate sieve gradation for #200 of 7.8% exceeded the approved range (1.1% to 5.1%).

The QA data was reviewed for the HMA placed on the project with the Owner, CDOT-Materials, QA Test Management, and the Project Engineer. It was determined the HMA would function for the trail/pedestrian walkway and the Project Engineer accepted to leave the HMA material in place and notified the Contractor a price reduction would be calculated for various HMA items not meeting the approved mix design specifications/ranges.

A QPM report, dated 03-20-18, was calculated, finalized, and resulting in a project disincentive payment of \$22,497.22. The QPM report includes test dummy input data (QA #4 dated 10/30/2018) for program calculations. The Contractor and Subcontractor were notified of this amount, through Speed Memo 08, and was applied as a price reduction in the form of a lump sum in Pay Request 07.

Various 613 & 614 Items

During the submittal and review process of the accessible pedestrian system pay items, these were reviewed with CDOT Traffic & Safety, for synchronization into the existing US Highway 160 and Village Drive intersection. CDOT Traffic & Safety also provided guidance to the Contractor's Subcontractor for procurement of approved items previously used in other accessible pedestrian system intersection locations. The Project Engineer coordinated this review process.

COLORADO DEPARTMENT OF TRANSPORTATION LETTER OF FINAL MATERIALS CERTIFICATION EXPLANATION OF EXCEPTIONS FOR A LOCAL AGENCY PROJECT

Project No. STE C480-008	Page 8 of 8
Contract ID 19219	Acceptance date 11/15/2017
Project Location Pinon Causeway to As	pen Village Dr S.U.P.
Contractor Crossfire, LLC	

(Required to be attached to Form #473-LA Page 1 with text below.)

Item 613-20000 Light Standard & Luminaire (Special - Install Only)

The Town of Pagosa Springs purchased and provided light standard poles, arms, luminaires, for the Contractor to install only, for the pay item 613-20000 Light Standard & Luminaire (Special - Install Only). The lighting manufacturer provided a material certificate of conformance for these items and have been included for reference.

item 613-40012 Light Standard Foundation (Special)

The Town of Pagosa Springs purchased and provided the anchor bolts for the Contractor to install for the pay item 613-40012 Light Standard Foundation (Special). The lighting manufacturer (on behalf of the anchor bolt manufacturer) provided material test reports, mill certificates for the anchor bolts, and associated components and have been included for reference.

Item 614-01502 Steel Sign Support (2-Inch Round) (Post & Socket)

The Contractor proposed the use of the product Quikrete 5000 for the pay item 614-01502 Steel Sign Support (2-Inch Round) (Post & Socket). The Project Engineer reviewed and approved use of this product through Speed Memo 04. Within this speed memo, the Contractor was to provide additional concrete material for QA acceptance. The QA tester broke the concrete cylinders at 21-days with an average compressive strength of 3,170 psi. The 21-day break data indicated the placed concrete not meeting the specification strength of Class B concrete (4,500 psi at 28-days). With compressive strength testing values at 21-days a price reductions was not calculated or applied. The concrete material placed was determined to perform as intended for the sign post design, accepted, and approved by the Project Engineer. The Quikrete 5000 concrete test results are included in the section "614: Signal Panel & Steel Sign Support".

Previous editions are obsolete and may not be used.

COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST

Project No.	Project Code (SA#)			
STE C480-008	19219			
Region 5	Date 11/28/2017			
Proj. location				
Pinon Causeway to Aspen Village Drive SUP				

То:	Paul Martin	Address:	Crossfire LLC
			820 Airport Road
			Durango, CO 81303

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by ____12/05/2017 Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017

Item	Description	Materials documentation needed	Date received
208- 00007	Erosion Log (8 Inch)	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/25/2018 (email)
208- 00007	Erosion Log (gravel bag)	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). &	2/5/2018 (cmail)
		Crossfire to have Triton Environmental provide a Certificate of Test Results in accordance with CDOT Specification 106.13 (1-11).	2/26/2018 (email)
208- 00020	Silt Fence	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/25/2018 (email)
212- 00006	Seeding (Native)	Crossfire to have Southwest Seed provide a Certificate of Test Results cover letter summarizing seed lot numbers in accordance with CDOT Specification 106.13 (1-11).	Dec.5,2017
212- 00011	Seeding (Lawn)	Crossfire to have Southwest Seed provide a Certificate of Test Results cover letter summarizing seed lot numbers in accordance with CDOT Specification 106.13 (1-11).	Dec. S. 2017
212- 00028	Seeding (Wetland)	Crossfire to have Southwest Seed provide a Certificate of Test Results cover letter summarizing seed lot numbers in accordance with CDOT Specification 106.13 (1-11).	DEC-5, 2017
	:		

Signed in La	Project Engineer	Date (1/28/2017
Distribution:		CDOT Form #211 3/04

Distribution:

COLORADO DEPARTMENT OF TRANSPORTATION **MATERIALS DOCUMENTATION REQUEST**

Project No.	Project Code (SA#)
STE C480-008	19219
Region 5	Date 11/28/2017
Proj. location Pinon Causeway to As	spen Village Drive SUP

То:	O: Paul Martin	Address:	Crossfire LLC	
			820 Airport Road	
			Durango, CO 81303	

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ltem	Description	Materials documentation needed	Date received
212-	Soil Conditioner	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	2/5/2018
00032	(Mesa Verde)		(email)
212-	Soil Conditioner	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/25/2018
000322	(Richlawn 5-3-2)		(email)
213-	Spray-On	Crossfire (or EcoFelx) to provide a Certificate of Test Results in accordance with CDOT Specification 106.13 (1-11). Also needs to state meeting the Revision of 213 Subsection 213.02.	2 5 2018
00012	Mulch Blanket		(email)
506- 01020	Geogrid Reinforcement (TerraGrid RX1200)	Crossfire to have Triton Environmental or Winwater provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). [Winwater provided a "COC" but needs to address 106.12 (1-11)]	2/2/2018 (email)
506- 01020	Geogrid Reinforcement (Tensar TX140)	Crossfire to have Triton Environmental or Winwater provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). [Winwater provided a "COC" but needs to address 106.12 (1-11)]	2/9/2018 (email)
607- 11525	Fence (Plastic)	Crossfire to have Triton Environmental provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/24 2018 (email)
613-	Concrete Class	Crossfire to provide an APL/QML Selection Letter for Class BZ Concrete (summary for cement, pozzolan, and admixtures).	1/16/2018
40012	BZ		(enast)

Signed .	Juh	Project Enjheer	Date 11/28/2017

Distribution:

CDOT Form #211 3/04

Resident Engineer
Project Engineer

Project Tester
Materials Project Files

COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST

Project No. STE C480-008	Project Code (SA#) 19219
Region 5	Date 11/28/2017
Proj. location	
Pinon Causeway to Asp	en Village Drive SUP

To:	Paul Martin	Address:	Crossfire LLC	
			820 Airport Road	
			Durango, CO 81303	

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**************************************	entral contract to the contract of the contrac			
ltem	Description	Materials documentation needed	Date received	
612- 00043	Delineator (Flexible)	Crossfire to provide an APL/QML Selection Letter for the flexible delineators and provide a COC and BAC for the flexible delineators.	BAC-12/5/2017 APL/QAL-12/0/2017	
613- 00100	1 Inch Electrical Conduit	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	12/13/2017	
613- 10010	Wiring (Special - Pedestrian, Cross-Walk)	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	PAC 1/2/2017 Falcon COC 3/2/	918 Gwail
613- 10010	Wiring (Special - Trail Lighting)	provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	COC/BAC (ENCORE COC 31212018, ex	nail
613- 50106	Lighting Control Center	provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11)	1	abure
614- 70150	Pedestrian Signal Face (16) (Countdown)	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	00C(Mobolicx) evizol 2/26/201 008 21/2/31/201	3 O(enail
614 <i>-</i> 70200	Accessible Pedestrian Signal	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	2 5 201B (cmail) Guar	dian
614- 72863	Pedestrian Push Button Assembly	Crossfire to have One Touch Electric or Supplier provide a Certificate of Conformance and BAC in accordance with CDOT Specification 106.12 (1-11).	COC, TIPS GP3 email, 2/26/2018	
		* BAR is Buy America Certification		

Signed	Project Engineer	Date 11/28/2017
Distribution:		CDOT Form #211 3/0

Distribution:

Resident Engineer
Project Engineer
Project Tester

Materials Project Files

COLORADO DEPARTMENT OF TRANSPORTATION **MATERIALS DOCUMENTATION REQUEST**

Project No.	Project Code (SA#)
STE C480-008	19219
Region 5	Date 11/28/2017
Proj. location	
Pinon Causeway to Asp	en Village Drive SUP

To:	To: Paul Martin	Address:	Crossfire LLC 820 Airport Road	
			Durango, CO 81303	

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by _____12/05/2017 · Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017

Item	Description	Materials documentation needed	Date received
627- 30405	Preformed Thermo Pavement Mrk. (Word-Symbol)	Crossfire to provide an APL/QML selection letter and Crossfire or Supplier to provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	11/30/2017 (ewai)
627- 30410	Preformed Thermo Pavement Mrk. (Crosswalk)	Crossfire to provide an APL/QML selection letter and Crossfire or Supplier to provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11).	1/16/2017 (email)
608- 00012	.Concrete Curb Ramp (Special)	Crossfire or supplier to provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11) for the 1107 Advantage Grout.	11/30/2017 (eurail)
614- 00011	Sign Panel (Class 1)	Crossfire to provide an APL/QML selection letter for the reflective sheeting material.	12/8/2017 (ewai)
	·		

Signed	Title Project Engineer	Date 11-23-2017
Distribution		CDOT Form #211 3/04

Distribution:

Resident Engineer

☐ Project Engineer Project Tester

Materials Project Files

COLORADO DEPA	RTMENT OF TRANSPORTATION
MATERIALS	DOCUMENTATION
REQUEST	

Project No.	Project Code (SA#)
STE C480-008	19219
Region 5	Date 11/29/2017
Proj. location	
Pinon Causeway to Asp	en Village Drive SUP

То:	Paul Martin	Address:	Crossfire LLC	
			820 Airport Road	
			Durango, CO 81303	

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by ___12/05/2017

Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017

Item	Description	Materials documentation needed	Date received
212- 00006	Seeding (Native)	Crossfire or Southwest Seed to provide a signed statement certifying that seed is from a lot that has been tested by a recognized laboratory for seeding testing within 13 months prior to the date of seeding.	Dec.5,2017 (ena:1)
212- 00011	Seeding (Lawn)	Crossfire or Southwest Seed to provide a signed statement certifying that seed is from a lot that has been tested by a recognized laboratory for seeding testing within 13 months prior to the date of seeding.	Dec.5, 2017 (email)
212- 00028	Seeding (Wetland)	Crossfire or Southwest Seed to provide a signed statement certifying that seed is from a lot that has been tested by a recognized laboratory for seeding testing within 13 months prior to the date of seeding.	Dec. 5, 2017 (email)
603- steel items	Corrugated Steel Pipes & Steel End Sections	Crossfire to have Winwater provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). ["COC" has been provided but missing items related to 106.12 (1-11)]	7/19/2017 stricked and okay.
603- plastic items	Plastic Pipe	Crossfire to have Winwater provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11). ["COC" has been provided but missing items related to 106.12 (1-11)]	7/19/2017 Coviewed and okang

······································		
Signed	Title	Date
Clitch	Project Empireca	11/29/2017
Distribution:	1	CDOT Form #211 3/04

Distribution:

Resident Engineer

Project Engineer Project Tester

Materials Project Files

COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST

Project No.	Project Code (SA#)
STE C480-008	19219
Region 5	Date 11/29/2017
Proj. location	•
Pinon Causeway to Asp	pen Village Drive SUP

То:	Paul Martin	Address:	Crossfire LLC	
			820 Airport Road	-
			Durango, CO 81303	

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by

12/05/2017

Please return the original Form #211, for tracking purposes, with the missing documentation by 12/22/2017

ltem	Description	Materials documentation needed	Date received
602- 00000	Reinforcing Steel	Crossfire or concrete products supplier to provide a Certificate of Conformance & BAC in accordance with CDOT Specification 106.12 (1-11) for steel chairs (bolsters).	2 20 2018 (email)
608- 00012	Concrete Curb Ramp (Special)	Crossfire or concrete products supplier to provide a Certificate of Conformance in accordance with CDOT Specification 106.12 (1-11) for steel dowels.	212012018 (email)
612- 00043	Delineators (Flexible) (Type III)	Crossfire to provide a Certificate of Conformance and APL/QML selection letter in accordance with CDOT Specification 106.12 (1-11) for the delineator reflectors.	12/5/2017, 12/0/2017 (email)
614- 72863	Pedestrian Push Button Assembly	Crossfire or One Touch Electric to provide a Certificate of Test Results in accordance with CDOT Specification 106.13 (1-11) for the epoxy adhesive (Hilti HIT-RE 500 V3).	1/2/2018 (email)
614- 72863	Pedestrian Push Button Assembly	Crossfire or One Touch Electric to provide a Certificate of Test Results in accordance with CDOT Specification 106.13 (1-11) for concrete anchors. * BAC is Buy America Certification	3/22/2018 (email) UR on auchor bolts

	Titte	Date
Signed ,	Title	Date,
(Mishala	Project Engineer	11/29/2017
O Milos		ODOT F #044 - 2/04
District Contracts	•	CDOT Form #211 3/04

Distribution:

Resident Engineer
Project Engineer

☐ Project Tester
☐ Materials Project Files

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID: Project Number: 19219 STE-C480-008

Project Location:

Pinon Causeway to Aspen Village/Archuleta Co.

Region:

5

Date Developed: Contractor: 3/21/2017 Crossfire LLC

PROJECT TO BE TESTED AND DOCUMENTED PER THE 2017 CDOT FIELD MATERIALS MANUAL

Comply with the Buy America requirements in Section 4 of the Special Notice to Contractors in the Field Materials Manual.

Forward to the Staff Bridge Fabrication Inspectors Unit the list of materials suppliers and subcontractors upon receipt from the contractor.

Attach additional sheets to this form if more space is needed for documentation.

All samples are to be selected using a stratified random sampling schedule. See Colorado Procedure 75 for details on stratified random sampling. Generate and print all random sampling schedules needed before the work begins. Use the random schedule program contained in the Asphalt03 or Voids03 computer programs to generate schedules. Contact the Pavement Design Program at the Materials and Geotechnical Branch if you have questions, 303 398-6563.

Tests designated for the Central Lab can be performed in the Field Lab or the Region Lab if adequate facilities and equipment are available.

All CDOT Forms referenced on the Form #250 are to be the most current versions. Verify the revision dates with those listed in the Appendix to the Field Materials Manual and with those listed on the CDOT Form Catalog at www.dot.state.co.us/FormsMgmt/, and then use the most recent.

The CDOT Form #250 is to be used in conjunction with the QA Frequency Guide Schedule of the CDOT Field Materials Manual and all referenced Sections of Subsections of the Standard Specifications for Road and Bridge Construction.

Please reference page 40 and 41 of the QA Schedule of the CDOT Field Materials Manual for guidence on small quantities.

LOCAL AGENCY PROJECTS

All documentation issues should be directed to your CDOT Local Agency Coordinator.

All Local Agency Projects shall use the CDOT Form #250 as developed by the Documentation Unit of CDOT's Materials and Geotechnical Branch.

All Local Agency Projects shall use the CDOT Form #379 as developed by the applicable CDOT Region Materials Engineer.

All Local Agency Projects shall use the CDOT Field Materials Manual referenced on the Form #250 for specific guidance on documentation of project files.

The Field Materials Manual is available for viewing at the CDOT External Web Address: http://www.dot.state.co.us/DesignSupport/ (see Manuals). The QA Procedures Chapter, the Documentation Chapter, and the Special Notice to Contractors Chapter provide guidance and justification.

The Item Number, Description, Type of Tests, Plan Quantity, Test Required and Central Laboratory (CL) Test Frequency in this Materials Documentation Record, Colorado Department of Transportation Form #250, shall not be altered in any form or by any means.

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID:

19219 STE-C480-008

Project Number: Project Location:

Pinon Causeway to Aspen Village/Archuleta Co.

Region: Date Developed:

Contractor:

ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL TEST FREQUENCY	LABORATORY FORM # & FS# or S/N
203	Unclassified Excavation		PLAN 1,362			1362		Construction Shear Tests
JUM #19	57 Fs# 19219	-203-1	cubic yard	29 K		cubic yard		
-		In-Place Density CDOT Form #212	TESTABLE cubic yard	1required	Foen 212 Fs#31228	728/ cubic yard		
		Moist-Den Curve CDOT Form #24 (Date)	1 per soil type	reported	71-6-17/			
		Soil Survey (Classification)	CDOT Form #21	9 Date Submitted:	W/A			
						or		
ITEM NUMBER	DESCRIPTION	PLAN QUANTITY	FINAL QUANTITY					
207	Topsoil	650	1-1-1-1	Dertified Test Report	10210 20-			
		cubic yard	cubic vard	·	.02 (b) N/A (WED TOPSOIL OH			

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID: Project Number: Project Location: Region:

19219 STE-C480-008

Pinon Causeway to Aspen Village/Archuleta Co.

5

Date Developed: Contractor:

ITEM NUMBER DESCRIPTION	PLAN FINAL QUANTITY QUANTITY		
208 Erosion Control		Field Inspect.	
Erosion Log:	1,027 lin ft <i>1_939</i> lin ft	CDOT Form #157 FS# 19219-208-2 SEE FOR	u 473.
Sediment Trap and/or Basin	each each	CDOT Form #157 FS#	
Erosion Bales: -	eacheach	COC and CDOT Form #157 FS# COC must state "Weed Free"	
Silt Fence:	3,361 lin ft 2580 lin ft	CDOT Form #157 FS# 19219-209-3	
Silt Berm:	1,009 each 125 LF	CDOT Form #157 FS# 19219-208-1	
Storm Drain Inlet Protect.	eacheach	CDOT Form #157 FS#	
Storm Drain Inlet Protect.	lin ftlin ft	CDOT Form #157 FS#	
Outlet Protection	each each	CDOT Form #157 FS#	
Gravel Bag:	lin ft lin ft	CDOT Form #157 FS#	
OB CONCRETE WASHOUT STRUCTURE	I EA I EA	CDOT Ben FS# 19219-208-4	
DB VEHICLE TRACKING	2/ EA 2/ EA	CONT FORM FS# 19219-208-5- SEE	FORM 473

Colorado Department of Transportation

MATERIALS DOCUMENTATION RECORD

CDOT Form #250, 7/16

Version 17.0

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID:

19219

Project Number: Project Location:

STE-C480-008 Pinon Causeway to Aspen Village/Archuleta Co.

Region: Date Developed: Contractor:

3/21/2017 Crossfire LLC

ITEM Seed: COC and CDOT Form #157 FS# 19219-212-1 (NATIVE) / FS# 19219-212-2 (CAWN) / FS# 19219-212-3 (WETLAND) NUMBER DESCRIPTION Seeding & Sodding Soil Conditioner: COC and CDOT Form #157 FS# 19219 - 212 - 5 Sod; COC and CDOT Form #157 FS# Contractor shall submit to the Project Engineer a sample of sod 6 1/2 ft x 2 ft for comparison standard. Fertilizer: COC and CDOT Form #157 FS# 19219-212-4 ITEM NUMBER DESCRIPTION 19219-213-1 Mulch (All types): COC and CDOT Form #157 FS# 213 Mulching COC must state "Weed Free" Mulch Tackifier: COC and CDOT Form #157 FS# Landscape Borders: GOC and GDOT Form #157 FS#_ Soil Binder: COC and CDOT Form #157 FS#

SPRAY-ON MULCHING BLANKET COC and CDOT Form #157 FS# 19219-213-2 SEE FORM 475

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID: Project Number: Project Location: Region: Date Developed:

19219 STE-C480-008

Pinon Causeway to Aspen Village/Archuleta Co. 5

Contractor:

	ITEM:		TYPE OF	PLAN	TESTS	PROJECT ACCEPTANCE	FINAL		LABORATORY
_ 1		DESCRIPTION	TESTS	QUANTITY	REQUIRED	TEST REPORTED	QUANTITY	TEST FREQUENCY	FORM # & FS# or S/N
							•	1 per source	
	304	Aggregate Base Course	Gradation and Atterberg Limits	350	1	MATERIAL STATE OF THE STATE OF	50.5	per project	
		Class 2 Cubic Yards	CDOT Form #6	cubic yard	required	101922	cubic yard	required	
47 P		-s# 19219-304		•	reported	MATERIAL PROPERTY.			
			In-Place Density	•	1			4	
			CDOT Form #6	-	2 required	101923			
				•	reported	when the same are a second of the second of			
			Moist-Den Curve CDOT Form #24 (Date))	1 per source	7-20-17			
		. •	· ·	,				1 per source	CDOT Form #38 (Dat
			LA Abrasion (Class 4, 5, 6, & 7) CDOT Form #157		>>>	>>>		N / A required	
		-	R-Value: Min. Require	d <u>70</u>	ReportedN/_	A-SEE FORM 473	/		
			Designated Source? (Y	7n) <u>N</u>	Location				

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID:

19219

Project Number: Project Location: Region: Date Developed:

STE-C480-008 Pinon Causeway to Aspen Village/Archuleta Co. 5

Contractor:

	ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL TEST FREQUENCY	LABORATORY FORM # & FS# or S/N	•
•	304	Aggregate Rese	Gradation and	1,115	2	(t. ~~)	1402.4/	1 per source per project		
	304	Aggregate Base Course Class 6	Atterberg Limits _ CDOT Form #6		3 required	6000 HO-FS# 101912-Z	cubic yard	required		
Fien	of co	Cubic Yards S [#] 19219-304 - Z ^		,	7 reported					
FOICH	, 10 t.	= 14514-204 - 5	•		2	Foam 6-Fs# 101912-				
		•	In-Place Density CDOT Form #6		1 4 required					
. •		+			reported					
			Moist-Den Curve CDOT Form #24 (Date)		1 per source	7-20-17-PIECUA PI 8-3-17-Labora PI	T- Class 6 (7- Class 6 C	CURVE I CLEVE Z 1 per source	CDOT Form #38 (Date)	
,	,		LA Abrasion (Ciass 4, 5, 6, & 7) CDOT Form #157		>>>	>>>		Z ¾ required	TRAUTHER GEOTECH DRIED: 7/28/17 FO	t FORM R LA BOCA PIT
			R-Value: Min, Required		Reported_76	- LABOLA PIT / NIA -	PLEDEA P	IT-SEE FORM 473	NIA FUL PIEORAS	Pr=-
			Designated Source? (Y/I	N) <u>N</u>	Location					

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID:

19219 STE-C480-008

Project Number: Project Location: Region:

Pinon Causeway to Aspen Village/Archuleta Co.

5

Date Developed: Contractor:

	ITEM NUMBER DESCRIPTION	TYPE OF	PLAN	FINAL	PROJECT ACCEPTANCE		LABORATORY
•	NOWBER DESCRIPTION	TESTS	QUANTITY	QUANTITY	TEST REPORTED	TEST FREQUENCY	FORM # & FS# or S/N
	403 Hot Mix Asphalt Grading Patching		4 ton	ton		REQUIRED each 10k or fraction therof 0	
Jan H	*157 Fs# 19219-403	- Asphalt Content **, Theoretical Max SpG*** CDOT Form #58	Tests Required 0	Tests Taken			A 100 100 100 100 100 100 100 100 100 10
		In-Place Density CDOT Form #69 **	0	0			
		Gradation **, Aggregate Percent Moisture CDOT Form #6	0				
		Fractured Faces, Voids Fine Aggregate CDOT Form #58	0	0			
		Longitudinal Joint Densi 1:5000 lin ft of joint Per Lift CDOT Form #1290 **	ty	0			
		Hydrated Lime, min 1% Gradation	Plan Quantity 0	Final Quantity	CTR for Chemical and CDOT Form #157 FS#	3-2 ⁶⁰ 0	CDOT Form #38
	CTS and CDOT Form Submit a copy of the o	13 completed, Date: N / 1 #469 completed, Date: N / 1 #469 complete QC/QA report when rest Reports are acceptable of)) /t reviewed and fina	ton	RELEASE AGENT FOLLOW # Mix verification testing per 106.05 (d) and (

	ASPHALT BINDER	FORM # 157	F5#	19219-411-	-1/	
411	EMULSIFIED ASPHALT	FOLM #157	RS#	266293	/SEE FORM	473

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID: Project Number:

19219

Project Location: Region: Date Developed:

STE-C480-008 Pinon Causeway to Aspen Village/Archuleta Co. 5

3/21/2017

Contractor: Crossfire LLC

					Contractor:	Crossfire LLC		
ITEM NUMBER DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL TEST FREQUENCY	LABORATORY FORM # & FS# or S/N	_
601 Structural Concrete Class B FORM #157 FS# 19219-6 (FOR ITEMS 601)	Compressive Strength, Slump, Unit Weight CDOT Form #82, #156	36 cubic yard	1 required reported	CDOT Form #82 FS#: 16941 120587	36° cubic yard	SEFORM 473	Other Report FS#,	
	Air Content.* CDOT Form #156	. -	reported					
	* One per set of cylinder	hapter 600 for de s and test each t	etails. Datch at beginning of	gins. CDOT Concrete Mix Design	No. <u>2017 06</u>	9/_		
	I O O O O O	ee Item 601 in the Portland Cement Reinforcing Steel Vater: Follow ins Air Entraining Ag- Curing Materials Epoxy Adhesive: Expansion Joint No- Class 5 Masonry Structural Concre Bridge Deck Form	e Schedule for details: : CDOT Form #157 F : Follow instructions is tructions in Item 601 ents and Chemical At Liquid: CDOT Form #157 F Material: CDOT Form #157 Finish: CDOT Form #157 the Coating: CDOT Form	s. 9 Z 19 - (001 - Z 15 15 15 15 15 15 15	m#157	01-5		
				MPLETION OF EACH CLASS OF				

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID: Project Number: Project Location: Region: Date Developed: Contractor:

19219 STE-C480-008 Pinon Causeway to Aspen Village/Archuleta Co.

NUMBER DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	PROJECT ACCEPTANCE TEST REPORTED	FINAL QUANTITY	CENTRAL L	ABORATORY FORM#&FS#or.S/N
601 Structural Concrete Class B Class P	Compressive Strength, Slump, Unit Weight CDOT Form #82, #156	36 cubic yard	required	CDOT Form #82 FS#:	36	SEE FORM 473	Other Report FS#,
im#157 FS# 19219-601-		cobic yard	reported	12059 2 12059 2 120595 166001	cubic yard		
elTEMS: 604,608,609)			•	166 003		**************************************	***************************************
	Air Content * CDOT Form #156	-	reported				***************************************
	Mix Design approval is re See Materials Manual, Cl	quired before o	concrete placement beg details.	ins. CDOT Concrete Mix Design N	No. 201706	9	TO THE PROPERTY OF THE PROPERT
	One per set of cylinders	s and test each	batch at beginning of pone random test per five	roduction, when three tests are			
	, within specifications re	daco testing to	one random test per me	e batches.			
	INCIDENTAL ITEMS. Se	ee Item 601 in the Portland Cemer Reinfording Stee Vater: Follow in	he Schedule for details. ht: CDOT Form #157 FS el: Follow instructions in estructions in Item 601 o	#: 19219 - 601 - Z I tem 602 of Schedule. If Schedule. CDOT Form #157 FS		1-5	
	INCIDENTAL ITEMS. Se	ee Item 601 in the ortland Cemer Reinforcing Ster Vater: Follow in the Entraining Activity Materials Epoxy Adhesive Expansion Joint Cementitious Gr	he Schedule for details. ht: CDOT Form #157 FS el: Follow instructions in estructions in Item 601 o gents and Chemical Adi	#: <u> 92 9-60 -</u> Z I tem 602 of Schedule. of Schedule. CDOT Form #157 FS mixtures: CDOT Form #157 FS#: 157 FS#: <u> 92 9-60 -3</u> #: #157 FS#: #157 FS#:) 	1-5	

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID:

19219

Project Number:
Project Location:
Region:
Date Developed:
Contractor:

STE-C480-008

Pinon Causeway to Aspen Village/Archuleta Co.
5
3/21/2017
Crossfire LLC

ITEM NUMBER DESCRIPTION	TYPE	PLAN QUANTITY	FINAL QUANTITY	***************************************	DOCUMENTATION	FORM # & FS# or S/N
506 Riprap		(cu yd or ton)	(cu yd or ton)		Field inspect and/or test according to instructions in Item 506 of Schedule. Determine Specific Gravity.	CDOT Form #157 FS#:
		-				
	Bed Course Material	: Follow instructions	in Item 206 of Sched	ule. CDOT Form #6	····	
		cubic yard	cubic yard			
Gabions and Slope Mattress				Material Represented:	WIRE MESH: Follow instructions in Item 506 of the Schedule. STONE: Follow instructions in	CDOT Form #157 FS#
					Item 506 of the Schedule.	- 100/00
	Туре	square yard	square yard			
Geosynthetics	Geogrid	1,050	962/	Submit CTR and CDOT Form compliance with Subsection 7	#157 showing 12.08 of Standard Specifications.	CDOT Form #157 FS#

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID: Project Number: Project Location: Region: Date Developed:

19219
STE-C480-008
Pinon Causeway to Aspen Village/Archuleta Co.
5
3/21/2017

TS PROJECT ACCEPTANC IRED TEST REPORTED CDOT Form #82 FS#:		CENTRAL L EST FREQUENCY	ABORATORY FORM # & FS# or S
CDOT Form #82 FC#.			
ODOT FORM #82 FS#:	_ <u>3</u> 0,5		Other Report FS#
	cubic yard		
ted /20598/	-		
120600		•	
165959	_	· · · · · · · · · · · · · · · · · · ·	
teid	_		
	<u></u>		
ninning of production, when three tests ar test per five batches.	₽		
for details.			
tructions in Itam 602 of Cohorula	19219-601-5		
temical Admixtures: CDOT Form #157 F	s#: <u>19219 - 601-4</u>		
m #157 FS#:			
OOT Form #157 FS#: Form #157 FS#:			
OT Form #157 FS#:			
	ted 120547 120549 120600 165450 165400 165450 165450 165450 165450 165450 165450 165400 165450 16540	ted 120546 cubic yard 120546 cubic yard 120547 ted 120549 ted 120549 ted 120549 ted 1205450 ted 165459 ted 16559	ted 120546 cubic yard 120547 ted 120549 1205549 1205

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials. Contract ID: Project Number: Project Location: 19219 STE-C480-008

Pinon Causeway to Aspen Village/Archuleta Co.

on: Pin

5

Project Location:
Region:
Date Developed:

Date Developed: 3/21/2017 Contractor: Crossfire LLC

		PLAN	FINAL		CENTRAL	LABORATORY
ITEM	DESCRIPTION	QUANTITY	QUANTITY	· · · · · · · · · · · · · · · · · · ·	TEST FREQUENCY	FORM # & FS# or S/N
602	Reinforcing Steel			Obtain copies of CTR (mill test reports) and file with CDOT Form #157. CDOT Form #157 FS#	1 sample per source required. See Schedule	
	Item 602:	5,230 lb	lb			· · · · · · · · · · · · · · · · · · ·
	From Item 775:	-1700 lb	-/700 lb			
,	From Item:	lb	lb			
	From Item	ib	!b			
	TOTALS	lb	lb			
•						

THIS PAGE MOVED. Now FOLLOWING PAGE "9c".

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID:

19219

Project Number: Project Location:

STE-C480-008

Region:

Pinon Causeway to Aspen Village/Archuleta Co.

Date Developed: Contractor: 3/21/2017 Crossfire LLC

ITEM NI MBED	DESCRIPTION	PLAN		FINAL			CENTRAL	LABORATORY
HOMBER	DESCRIPTION	QUANTITY		QUANTITY		·	TEST FREQUENCY	FORM # & FS# or S/N
602	Reinforcing Steel	F 000	INSTALED OTY.		Obtain copies of CTR (mill test reports) and file with CDOT Form #157. CDOT Form #157 FS#		1 sample per source required. See Schedule	
	Item 602:	5,230 lb	Jb	5,230 lb	19219-602-1/	see Form 4	73	AMEC FW LAG N
	From Item 613	1,700 16	1,666 16	1,700-16				THE PROPERTY
	From Item601_:	2,917/10	2,756 15	2,917 lb				31001 4 3 100 2
	From Item 604:	80 _{In}	105 16	60 lb				8 29 17
	From Item <u>609</u> :	49Z 16	644 16	492 16				
	From Item _ OUT :	4-! lb	56 16	<u>4</u> ;lb				
	TOTALS:	_5,230 lb	5,227 Th	5,230 lb	2			

602 BEINFORCANG STEEL
SMOOTH DOWELS

FORM#157 FS# 19219-602-2

PAID INCIDENTAL TO ITEMS:
608 Concrete Curb Ramp (Special)
609 CURB & GUITER TYPE 2 (12 INCH)

609 CHRES GUTTER TYPEZ (13 INCH)

MATERIALS DOCUMENTATION RECORD

Contract ID:

19219

Project Number: Project Location: STE-C480-008
Pinon Causeway to Aspen Village/Archuleta Co.

Region:

5

Date Developed: Contractor: 3/21/2017 Crossfire LLC

ITEM NUMBER DESCRIPTION	TYPE	SIZE	PLAN QUANTITY	FINAL QUANTITY
603 Culverts			(Lin Ft or each)	(Lin Ft or each)
oos Culverts	CSP	8"	58.5	58.5
	CSP	12"	. 57	57.0
	CSP	18"	43	43.0
	SES	8"	5 ea	5 /
	SES	12"	6 ea	6
			The state of the s	***************************************

Estimated Field Requirements for Minimum Materials

Sampling, Testing, and Inspection and Record of Field

and Central Laboratory Documentation of Materials.

COC and CDOT Form #157 FS# 1 9219-603-1

See Item 603 in Schedule for acceptance procedure for each type.

Total reported quantity must meet or exceed final project quantities.

Backfill Material: Follow instructions in Item 206 of Schedule.

Gaskets and pipe joint-sealing compounds: COC and CDOT Form #157 FS#

ITEM NUMBER DESCRIPTION	TYPE	SIZE	PLAN QUANTITY	FINAL QUANTITY	
COO . : Outbroots			(Lin Ft or each)	(Lin Ft or each)	COC and CDOT
603 Culverts	SES	15"	1 ea		Form #157 FS# 19219 -603 -1
	SES	18"	4 ea	4	T
	Plastic Pipe	15"	4	4/	19719-603-2
	Plastic Pipe	18"	-55-S.S	5/	
•		***************************************	•		

See Item 603 in Schedule for acceptance procedure for each type.

Total reported quantity must meet or exceed final project quantities.

Backfill Material: Follow instructions in Item 206 of Schedule.

Gaskets and pipe joint-sealing compounds: COC and CDOT Form #157 FS#

MATERIALS DOCUMENTATION RECORD

Contract ID; Project Number:

19219 STE-C480-008

Project Location: Region:

Pinon Causeway to Aspen Village/Archuleta Co. 5

Date Developed: Contractor:

3/21/2017 Crossfire LLC

ITEM NUMBER	DESCRIPTION		PAY ITEM	TYPE	SIZE	PLAN QUANTITY	FINAL QUANTITY			
604	Manholes & Inlets							COC and CDOT Form #157 FS#		. 4
			inlet	Special	PER PLAN	3 ea	3.EA.	19219-604	1-1	
				****				\$\$-\$-		
	· · · · · · · · · · · · · · · · · · ·		· rearms ·	*******				- AND TOTAL	•	
					, ************************************		-	7,000,000		
								- Y-nonment		
		See Bad	e Item 604 in Sched ckfiil Material: Follo	ule for acceptanc winstructions in I	e procedure. tem 206 of Schedule.		*****			

607 FENCE (PLASTIC)

2,736 LF PLAN QTY

Estimated Field Requirements for Minimum Materials

Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

3309.5 LF 19219-607-1 FINAL GTY COUT FORM #157 FS#

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID:

19219

Project Number: Project Location: Region: Date Developed:

STE-C480-008

Pinon Causeway to Aspen Village/Archuleta Co.

5

Contractor:

ITEM. NUMBER DESCRIPTION			PROJECT ACCEPTANCE TEST REPORTED	CENTRAL TEST FREQUENCY	LABORATORY FORM # & FS# or S/N
608 Concrete Sidewalk: Form #157 Fs# 19219 - 603	Type Plan Quantity Curb Ramp 128	Final Quantity	FS# or S/N		Other Report FS#,
	128 Total:sq. yard	133,25 sq. yard	AU TEST RESULTS FILEO UNDER ITEM 60	11- Class P Concrete	***************************************
	Compressive Strength, TESTS Slump, & 1 Air Content CDOT Form #82 #1375 required	TESTS			
609 Curb & Gutter:	Truncated Domes: Pre-approved a Type Plan Quantity C & G Type 2 Special 44 C & G Type 2 Special 22	Final Quantity 50,50	#157 FS# 19219-608-1 Final C 9 19219-608-2 (GRE FS# or S/N	nuantity 133.25 SY	Other Report FS#,
FORM#157 FS#19219-6	66	76.00	AU TEST RESULTS		
	Total:lin ft Compressive Strength, TESTS	lin ft TESTS	FILED UNDER ITEM 60	11- Class P CONCRETE	
	Slump, & 1 Air Content CDOT Form #82 #1375 required	reported			
	INCIDENTAL ITEMS. See Item 601 in th	ne Schedule for deta	pegins. CDOT Concrete Mix Design No. 201 pijs. 1219-601-5 UND CDOT Form #157 FS# 19219-60		
	* Curb Ty 6 M, if Bituminous see Schedul	le for testing require			·

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

19219

Contract ID: Project Number: Project Location: Region: Date Developed:

STE-C480-008

Contractor:

Pinon Causeway to Aspen Village/Archuleta Co. 5 3/21/2017 Crossfire LLC

ORM # & FS# or S/
Other Report FS#,
4
•

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID: Project Number: Project Location: Region:

19219 STE-C480-008

Pinon Causeway to Aspen Village/Archuleta Co.

5 3/21/2017

Date Developed: Contractor:

Crossfire LLC

ITEM NUMBER DESCRIPTION	PAY ITEM	PLAN QUANTITY	FINAL QUANTITY	
612 Delineators & Reflectors		(each)	(each)	See Schedule for details. CDOT Form #157 FS#
	Delineator Posts Steel (Type I)			
	Delineator Posts Steel (Type II)			
	Delineator Posts Steel (Type III)			
	Delineator Reflectors (All Types)	i	(\	
	Delineator Posts Flexible (All Types)	6	6	19219-612-1
•	Median Barrier Reflectors			
			<u> </u>	
613	INCH ELECTRICAL CONOURT	16 LF	16 LF /	19219-613-1
LIGHTI'NG	1.5 INCH ELECTRICAL CONDUIT	34 LF		19219-613-1
	I was Electrican Comput (Pustic)	IS CF	18 LE	19219-613-2 (BASEBID)
	2 INCH ELECTRICAL CONDUIT (PLASTIC)	45 re -51 re	SZ LP	19219-613-2
	3 INCH ELECTRICAL CONDUIT (PLASTIC) PULLBOX (24 INX 36 INX 24 N)	3 EA	3 EA /	19219-613-3
	WIRING SPECIAL - PED. CROSS-WALK	1 15	145.	19219-613-4
	I INCH ELECTRICAL CONDUIT (PLASTIC)	32LF	<u> 321.F</u>	19219-613-2 (co *1)
613-ADDITIVE ITEM	2 INCH EXECUTE CONDUCT	4,460 LF	4022 LF/	19219-613-5
reparation for	WIRING (SPECIAL-TRAIL LIGHTING)	1 LS	165	19219-613-6
TRAIL LIGHTING	LIGHT STANDARD FLUMINAIRE (NOTALL)	34 EA.	34 EA	19219-613-7 SEE FORM 473
*	UGHT STANDARD FULNDATION		/	19219-613-8 SEE FORM 473
		34 EA	34 EA	<i></i>
	LIGHT CUNTRUL CENTER (PED/SPECIAL)	<u> 3 sa</u>	3-EA	19219-613-9
			To come Vo	·

MATERIALS DOCUMENTATION RECORD

Contract ID: Project Number: 19219 STE-C480-008

Project Location: Region: Pinon Causeway to Aspen Village/Archuleta Co. 5

:

Date Developed: Contractor: 3/21/2017 Crossfire LLC

ITEM NUMBER	DESCRIPTION	PAY ITEM	PLAN QUANTITY	FINAL QUANTITY			
614	Traffic Control			•	COC or CTR required CDOT Form #157 FS#		If inspected Form #193 Report #
	Devices	Sign Panels (Class I)	72.25 sq.ft	72,25 sqft	19219-614-1	·	
* .		Sign Panels (Class II) Sign Panels (Class III)	sq ft	sq ft			
		Timber Sign Posts (All Sizes)	in ft	sq n			
		Steel Sign Posts (U-2,Type)	lin ft	lin ft			
		Steel Sign Posts	lin ft	lin ft		*	
		Steel Sign Posts (All S)	lin ft	lin ft			· · · · · · · · · · · · · · · · · · ·
		Steel Sign Posts (All W)	lin ft	lin ft	·	·	· .
	•	Steel Sign Support	each	each		<u> </u>	
		Concrete Footing	each	each		-	······································
100	•	Overpass Mtd Sign Bracket Sign Bridge Structure	each	each	***************************************	· · · · —	
		Variable Message Sign	each each	each each			
		Monotube Overhead Sign Cant.	each	each			
		Pedestal Pole	each	each	· -		
		Traffic Signal-Light Pole S	each	each			
	•	Traffic Signal Pole S	each	each			
		Traffic Signal Pedestal Pole S	each	each			
		Impact Attenuator (Quadguard)	each	each			
	•	Impact Attenuator	each	each		75.57%	
		Traffic Signal Span Wire Pole	each	each	*		OT FORWAITBZESH;
		Traffic Signal-Light Span Wire Pole	each	each	19219-1014-1	- 17	- Marine J
		Steel Sign Supp 2 in R (Post/Socket)	165 lin ft	105 lin ft	19717-117-1		06006 4
		Steel Sign Supp 2.5 in R (Slipbase)	each	each			
		PEO. SIGNAL FACE(16) (COUNTAIN)	2 FA (ZEA!	19219-014-2		
		ACCESSIBLE PEDESTRUAN 519 NAL	2 EA	- 20-	19219-614-3		
		ANCHOR BOLTS: CTR and CDOT Fo	orm #157 FS# 24029				
		PEO. PASH BUTTON POST ASSEM	BLA LEA.	I EA	266291		
		See Item 614 in the Schedule for accep	otance procedure on each typ		-		
		•	•				
		CONCRETE: Test according to Item 60	01 of Schedule.		•		

CONCRETE: Test according to Item 601 of Schedule.

REINFORCING STEEL: Report under Item 602 of CDOT Form #250.

Estimated Field Requirements for Minimum Materials

Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

NOTE: The following items are to be field inspected and documented in the project records; no report needed: Lighting Fixtures, Flashing Yellow beacons, Traffic Control Systems, Messenger Cables, Electrical Conduit, Pull Boxes, Direct Buried Cable, Vehicle Detector Wire Loop, Grounding & Bonding, Miscellaneous Hardware.

MATERIALS DOCUMENTATION RECORD

Contract ID:

19219

Project Number: Project Location: Region:

STE-C480:008

Pinon Causeway to Aspen Village/Archuleta Co. 5 3/21/2017

Date Developed: Contractor:

Crossfire LLC

**				Contractor: Crossife LLC	
ITEM NUMBER DESCRIPTION	PAY ITEM	PLAN QUANTITY	FINAL QUANTITY		
627 Pavement Marking					/
	Pavement Marking Paint			CDOT Form #157 FS#	
•	Glass Beads (CTR required)	gal	gal	- Treat - American - A	
,	Thermoplastic Pavement Marking	ibs	lb		
	Glass Beads (CTR required)	sq ft	sq ft	- I shake	
	Epoxy Pavement Marking	lbs	lb	***************************************	
	· ·	gai	gal		•
	Glass Beads (CTR required)	ibs	lb		•
	Pavement Marking Paint (Low VOC)	gal	gal	·	
	Glass Beads (CTR required)	lbs	lb	•••	
	Preformed Thermoplastic Pvmt Mkg (Word - Symbol)	16 sq ft	15,5/ saft	266292	•
	Preformed Thermoplastic Pvmt Mkg (Cross-walk)	957 sq ft	912 / sqft	266292	
	Preform Plastic Pvmt Mkg (Ty II)	sq.ft		The state of the s	
		\$ q 11	sq ft		

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

See Item 627 in Schedule for Certification procedure for each Item.

Document that material is on the pre-approved list and tabulate final quantities on CDOT Form #157.

Colorado Department of Transportation CDOT Form #250, 7/16 Version 17.0

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

19219

STE-C480-008 Pinon Causeway to Aspen Village/Archuleta Co. 5

Contract ID:
Project Number:
Project Location:
Region:
Date Developed:
Contractor:

3/21/2017 Crossfire LLC

		TION FOR ADDED MA		eeded for documents	ation.		÷		
	ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	PLAN QUANTITY	TESTS REQUIRED	FINAL QUANTITY	TESTS REPORTED	PROJECT ACCEPTANCE TEST REPORTED	# OF CHECK TESTS REQUIRED AND SUBMITTED
								CDOT Form #s, FS#s	CDOT Form #s, FS#s
77FAq. FOR	CE ACCOUNT-	CULVELT REPA	A NONE	NIA	0	N/A	0	FURM #157-	FS#266294-1
		E WAL-MART	NONE	NIA	0	NIA	0	Form #157-	PS# 266294-21
16,1d,1h	-CHANGE ORDE	2 Inchelect. Conduit/Box	D) NONE	N/A	Ø	259 L.F.	_ Ø	FORM " 157 -	FS# 266289

	***************************************	· · · ·					nmer.	white the same of	
•	* <u>*</u>	-				· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
				<u> </u>					·
									:
		TERIALS ITEMS, DOO onal sheets to this for			ation.		t e e	* (
	CMO/MCR NUMBER	DATE	ITEM NUMBER	DESCRIPTION	TYPE OF TESTS	EXPLANATION			<u> </u>
Sour	i#105-409	3-70-18	213-00002	MULCHING (WE	E) CTR	A SPAY-ON MULL	UHNG BL	WICET WAS L	USED AND PAID AS 213-00012
FORA	N#105-#09	3-20-18	211-03005	DEWATERING	7 Ø	WAS INCLUDED AS A LI			
FOR	WH 105-409	3-20-18	613-00 100	linch Elect. Con	DUIT COL	ADDITIONAL AMOUNT IN	ias incluid	ed in co#1 an	ID WAS NOT USED.
FOR	m ⁴ 105- ⁴ 09	3-20-13	613-00 200	Zineh ELEGT. CO	NDUIT COC	ADDITIONAL AMOUNT IN	ias includ	GO IN CO#1 AN	ID WAS NOT USED.
	<u>(D#01-14</u>	7-24-18	613-00 ISD	11/2 INCH ELEGT. C	onduit coc	REMOVED THIS ITEM A	as boring	WAS COMPLET	ED UNDER US HWY 160

Colorado Department of Transportation CDOT Form #250, 7/16 Version 17.0

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID:

Project Number:

19219 STE-C480-008

Project Location: Region:

Date Developed: Contractor:

Pinon Causeway to Aspen Village/Archuleta Co. 5 3/21/2017 Crossfire LLC

				· · · · · · · · · · · · · · · · · · ·	VIII CONTRACTOR CONTRA	-
Su Ful	MMARY OF PROJECT PRICE F ly document and explain all price	REDUCTION DOCUMENTATION REDUCTIONS ON COOT Form #4	ON 73 Explanation of Exceptions	(page 2)		
ITEM NUMBER DESCRIPTI	NC	PRICE REDUCTION AMOUNT	CALCULATIONS #266 / #105 DATES	CMO / MCR NUMBERS	LINE ITEM NO. ON FINAL ESTIMATE	
304 CLASS Z ABC	15-	\$120,99			4PRC.	
304 Class 6 ABC		\$35 82,00			4 PRd 4 PRe	UPRE
608 HMA ER BM	MINIOUS BIKELING	\$ 22,497.42			7PRa	, 11 12:
304 Class 6 ABG	2		25.93	-		000 1000
				APII.	-11KO, 11KC,	TPR d, TPR e.
fr	EXPLANATION THE BINDER IGNIT AGCEOURES IN CO SEE FORM 473 6	P-LSIZO APPRO	VED IN 2014 1	rs Develope But Revised	D FOLLOWING DIN 2017.	
AND			· · · · · · · · · · · · · · · · · · ·			100
SUM Fully ITEM NUMBER DESCRIPTION	MARY OF LABORATORY CHE of document and explain all labora	CK TEST DEVIATIONS tory check test deviations on (MEMO DATE	CDOT Form #473 Explanation	of Exceptions (page 2)	
		19A-A		Document Significates per 11.4 of the Q	nt Independent Assurance A Procedures in the Field	differences Materials Manual.

Colorado Department of Transportation CDOT Form #250, 7/16 Version 17.0

MATERIALS DOCUMENTATION RECORD

Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.

Contract ID: Project Number:

19219

Project Location:

STE-C480-008 Pinon Causeway to Aspen Village/Archuleta Co.

Region: Date Developed:

5 3/21/2017

Contractor:

Crossfire LLC

Isolated relatively small quantities of concrete, reinforcing steel, wire mesh, bolts etc. which are paid for incidentally shall be field inspected to determine conformance with specifications and Document in Project Records. If any questions arise concerning the proper documentation of materials during construction, contact the Documentation Unit of the Central Laboratory in Denver @ 303-398-6563,

FIELD DOCUMENTATION ENTERED BY:

DATE:

TINA DENTEN TRANSMER GEOTECH 3-20-18

Distribution: (includes the entire and completed CDOT Form #250)

Resident Engineer

Region Materials Engineer Region Finals Engineer

Documentation Unit (Materials and Geotechnical Branch)

FHWA (Oversight Projects only)

End Ref # IT18R686-12wB588



Pinon Causeway to Aspen Village Drive Shared Use Path Archuleta County, CO Project No. STE C480-608, Project Code: 19219

Pay Estimate No.7 & Final Quantities for period 12/01/2017 to

3/9/2018

For:

Crossfire LLC \$20 Airport Road Durango, CO 81303 Page 1 of 2

	1		Bil	SCHEDULE		THIS PA	Y REQUEST	CO	APLETE TO DA	TE
Hem			1	Consosia			, may bear		TOTAL PROPERTY.	Percent
No.	Description of Item	Quantity	Unit	Unit Price	Extension	Quantity	Extension	Quantity	Extension	Complete
Base Bid Sch			WATER TO THE TE	THE RESERVE OF THE PARTY OF THE		and the same				
201-00001	Clearing & Grubbing	1.63	acre	\$ 3,806,00	\$ 6,203,78		\$	1,63	5 6,203.78	100
202-00012	Removal of Tree Stump	8	21	\$ 256,00	5 2.048.00		\$ -		\$ 2,048,00	100
202-00204	Removal of Curb, Gutter, & Sidowalk	66	1,f,	\$ 12.80	\$ 844,80		S -	77.00	\$ 985,60	117
202-00220	Removal of Asphalt Mat	60	s.y.	\$ 19.75	\$ 1,185.00		\$ -	66.00	\$ 1,185.00	100
202-00250	Removal of Pavement Marking	117	s.f.	\$ 6,50	\$ 760,50		\$ -	164.00	\$ 1,066.00	140
202-00750	Removal of Luminaire	2	CA	\$ 607.00	\$ 1,214,00		2	2.00	\$ 1,214.00	100
202-00810	Removal of Ground Sign	1	ca	\$ 218,00	\$ 218.00		\$	1,00	\$ 218,00	100
202-04002	Clean Culvert	3	CD.	5 1,350.00	\$ 4,050.00		2 .	3.00	\$ 4,050.00	100
203-00100	Muck Excevation	350	c,y,	\$ 18.00	\$ 6,380.00	12,00	\$ 216,00	365,00	S 6,570.00	10
203-01597	Potholing	20	hr.	\$ 252.00	\$ 5,040.00	13,50	\$ 3,402,00	33,50	\$ 8,442.00	161
207-00205	Topsoil	650	c.y.	\$ 24.50	\$ 15,925,00		\$.		\$ 15,925.00	100
207-00210	Stockpile Topsoil	650	c,y.	\$ 16.25	\$ 19,562,50		\$ -		\$ 10,562,50	100
208-00004	Silt Berm	1,009	Lf.	\$ 8.00	S 8,072.00		2 .	125,00	\$ 1,000,00	12
208-00007	Erosion Log (8 Inch)	1,027	1.f.	\$ 5,50	\$ 5,648.50		\$.	1,989.00	5 10,939.50	194
208-00020	Silt Fence	3,361	1.6.	S 2.25	\$ 7,562,25		2 -	2,580,00	\$ 5,805,00	7
201-00045	Concrete Washout Structure	1	ea.	\$ 1,306.00	\$ 1,306.00		s -	1.00	\$ 1,306.00	100
208-00070	Vehicle Tracking Pad	2	Ca.	\$ 1,240,00	\$ 2,480,00		s .		\$ 2,480.00	100
208-00103	Removal & Disposal of Sediment (Labor)	25	hr.	\$ 64.00	\$ 1,600,00		\$.	47.00	\$ 3,008,00	181
208-00205	Brosion Control Management	26	GROS	\$ 278.00	\$ 7,228,00	3.00	\$ 834,00		\$ 10,564,00	141
210-00040	Reset Water Line		1.9.	S 590,00	\$ 590,00		5 -	1.00	\$ 590,00	100
210-00810	Reset Ground Sign	2	C.S.	\$ 223,00	\$ 446.00		s -		\$ 446.00	100
210-04050	Adjust Valve Box	2	· ea.	S 315.00	\$ 630.00		S	2,00	\$ 630,00	100
211-03005	Dewatering	1	1,8.	\$ 6,805,00	\$ 6,805.00		\$ -		\$	
212-00006	Seeding (Native)	0.70	scres	\$ 2,003,00	\$ 1,402.10		s	2,37	5 4,747.11	33
212-00011	Seeding (Lawn)	0,12	racres	5 3,406,50	S 408.78		\$.	0,20	\$ 681.30	16
212-00028	Steding (Wetland)	0.008	BCtcs	\$ 64,310,00	S 514.48		s -	0.008	5 514.48	100
212-00032	Soil Conditioning	0.82	Beres	\$ 6,940.00	\$ 5,690.80		\$.	2.57	\$ 17,835.80	3):
213-00002	Mulching (Weed Free Hay)	0,70	RCTES	\$ 2,512.00	\$ 1,758.40		\$ -	h	2	
213-00012	Spray-On Mulching Blanket	0,82	acres	\$ 2,275.00	S 1,865.50		2 -		\$ 5,846.75	31
240-00000	Wildlife Biologist	10	br.	\$ 111.00	\$ 1,110.00		\$ -	4.00	\$ 444,00	41
304-02005	Aggregato Base Course (Class 2)	350	c.y,	\$ 41,70	\$ 14,595,00		2	50.50	\$ 2,105,85	1
	Hot Mix Asphalt (Patching) (Asphalt)	4	1005	\$ 341,00	\$ 1,364.00		\$ -	4.00	\$ 1,364,00	100
	Geogrid-Reinforcement (Special)	1,050	s.y.	3 3.60	\$ 3,780.00		\$.		\$ 3,463,20	2
601-01000	Concrete Class B	36	Ey.	\$ 1,045,00	\$ 37,620,00		\$	36,00		100
603-10080	8 Inch Corrugated Steel Pipe	58,5	1.6.	\$ 34.00	\$ 1,989,00		\$	58.50		100
603-10120	12 Inch Corrugated Steel Pipe	57	I.f.	\$ 39,00	\$ 2,223,00		\$ -		\$ 2,223,00	100
603-10180	18 Inch Cornigated Steel Pipe	43	I.f.	\$ 48.50	\$ 2,085.50		\$	43,00	\$ 2,085.50	100
	8 Inch Steel Rad Section	5	ÇZ	\$ 423,00	\$ 2,115,00		5 .		\$ 2,115.00	100
	12 Inch Steel End Section	6	ce.	.5 425,00	\$ 2,550,00		s -	6,00	S 2,550.00 S 442.00	10
603-30015	15 Inch Steel End Section	1	ça.	S 442.00	\$ 442.00					
603-30018	18 Inch Steel End Section		ea	S 556.00	\$ 2,224,00		s .	4.00	S 2,224.00 S 465.60	10
603-50015	15 Inch Plastic Pipe	4	1.6	5 116.40	\$ 465,60		\$ -	4,00 5,00		10
603-50018	18 Inch Plastic Pipe	5.5	1.5.	\$ 72.00	\$ 396,00		<u>s</u> .	3,00		10
604-19000	Inlet (Special)	3 3	ca	5 4,188,00	5 12,564.00		\$			12
607-11525	Fence (Piastic)	2,736	1.1,	\$ 4.00	\$ 10,944.00	 	2 .	3,309.50		
608-00012	Concrete Curb Ramp (Special)	128	sy.	\$ 120.00	\$ 15,360.00	ļ	2 -	133,25	\$ 15,990,00 \$ 834,87	10
609-21900	Curb & Guster Type 2 (12 Inen Pan) (Special)	44	-ir	\$ 32,74	5 1,440.56					23
609-21900	Curb & Getter Type 2 (18 Inch l'an) (Special)	22	1.6,	\$ 33,50	\$ 737,00	 		50.50	\$ 1,691,75	10
612-00043	Delineator (Plexible) (Type III)	6	ea	\$ 61,50	\$ 369.00	16.00	\$ -	16,00	\$ 369,00 \$ 1,224,00	10
613-00100	1 Inch Blectrical Conduit	16	LE	\$ 76,50	\$ 1,224,00	16,00	\$ 1,224.00		\$ 2,754.00	
613-00150	1-1/2 Inch Electrical Conduit	34	1.f.	\$ 81,00	\$ 2,754.00	34,00	\$ 2,754.00	34,00		10
613-01100	1 Inch Electrical Conduit (Plastic)	18	1,6.	\$ 29,50	\$ 531,00		3	18,00	\$ 531.00	24
414 MIAC.										
613-01200	2 Inch Electrical Conduit (Plastic) 3 Inch Electrical Conduit (Plastic)	21 42	1.E.	\$ 21.00 \$ 26.00	\$ 441,00		2	84,00	\$ 1,092.00 \$ 2,184.00	20

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This form is region specific. Most regions use Form 1199 in lieu of this example.

	Colorado Department of Transportation, Region 5									
	Final Materials Documentation Checklist - Residency Review									
	ect N		er: 80 <i>-008</i>	Contract I.D. 19219		en VILA		MAU	Acceptan	ce Date:
Cont	tracto	or:		Project Engineer:	Resident	Engineer:		Project Te		
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Date				vas contacted to initiate	the Form	473: <u>2</u>	3/22/2	018	_	
Yes	No	NA		· · · · · · · · · · · · · · · · · · ·						
			Form 473 comple	ted with all signatures e	except the	Final Materials	s Documer	ntation Coc	ordinator.	
				ons are attached, includ						
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			Most recent versi	ons of the 250 (CAR) re	ports and p	rogress estima	ate are ret	ained the f	file	
				Iltant Testing Supervisor						
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				ts have been checked fo				orified		
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<u></u>	Most recent versions of all applicable CDOT testing forms were used. Materials certifications reviewed for Contractor original signature.									
	Pay item codes and quantities are complete in the Contractor's Certification Statement.									
	Testing and certification documentation is filed in the correct order.									
	Copies of materials related Form 211 are retained in the file.									
-	Copies of materials related Form 105 and Change Orders are retained in the file. Buy America Letters have been reviewed for compliance and are retained in the file.									
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	\overline{V}		Form 310 if appli	iculations have been ve	d and and	ne reports are	retained	in the file.		
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This form is region specific. Most regions use Form 1199 in lieu of this example

			•	Colorado Departn	nent of Transportation, F	Region 5		
			Fina	l Materials Docun	nentation Checklist - Pro	ject Closure		
Proje				Contract I.D.	Project Location:		Acceptance Date:	
<u> 5</u>	60	481	0-006	19219	Payosa Springs, CD		11/15/2017	
Contr				Project Engineer:	Resident Engineer:	Project Tes		
			LLC	Clifton Lee	Thomas Humphrey	Trautne	r-Geotech	
			ur Geotech		· V ····			
				as contacted to initia		122/2018		
roje	ct Ce	ertific	cation and QA Assu	ırance Checklists (250	I/CAR) run date:	3/21/2017		
Yes	No	NA	Estimate number	retained in the file:	3	· · · · · · · · · · · · · · · · · · ·		
7				ted with all signature	s affixed			
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4					plete in the Contractor's Certif	ication Statement	,	
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_	$\stackrel{\checkmark}{\dashv}$	V	Form 219, if applie	cable, has been revieu	wed and signed by the RME. Pr	vject by invers L	ocal Agenas off System	s Gyjii
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\nearrow	✓	_			s been received by HQ is filed	with the QPM. (LIN	AS dependent).	
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Project Number:

STE-C480-008

Project Code (SA):

19219

Proj. Description:

PC to AVD SUP

Region:

Date:

2/15/2018

Data from

CDOT Form No.: 565

Field Sheet No.: 3977-A

One test price reduction calculation

Item:

304 Aggregate Base Course Class 2

Lot No.:

Piedra Pit (Cross fire)

Element Name:

No. 200 sieve

17.1 Test Result Value

Upper Spec Limit:

15

Τo

(17)Test Value that Deviates 15 Upper Tolerance of Spec

Lower Spec Limit:

3

Tu TL

3 Lower Tolerance of Spec

Test Results

17.1

F

6.00 Price reduction factor from F factor table

Test Result Above Specification

P =

9.576 0.6

0.76*(To-TU)*F

Multiplier

P * Multiplier

5.7456

Unit Price

\$41.70

Price Adjustment

\$2.40

Quantity in Lot

50.5

Price Recuction

\$120.99

Total P = 9.576

Total Price Reduction = \$120.99

Notes: Sampled by Eric Howes for Piedra Pit ABC Class 6 material placed beneath the retaining wall at STA 24 +48 on 7/20/2017. 50.5 CY, was paid for as Item# 304-02005 Aggregate Base Course Class 2 for subgrade stabilization in Pay Request No. 02. this price reduction is based on the Coot Standard Special Provision, dated october 20, 2016.

Galculations by: Trautner Geotech (QA)

3-20-18

REVIEWED

Project Number:

STE-C480-008

Project Code (SA):

19219

Proj. Description:

PC to AVD SUP

Region:

Date:

3/13/2018

Data from

CDOT Form No.: 565

Field Sheet No.: 3977-A (LAB NO.)

One test price reduction calculation

Item:

Augregate Base Course Class 6

Lot No.:

Piedra Pit (Crossfire)

Element Name:

No. 200 sieve

Upper Spec Limit:

12

Τо

17 Test Value that Deviates

Lower Spec Limit:

3

Tu

12 Upper Tolerance of Spec

TL

3 Lower Tolerance of Spec

Test Results

17.1

F

6.00 Price reduction factor from F factor table

Test Result Above Specification

P =

23,256 0.6 0.76*(To-TU)*F

Multiplier P * Multiplier

13,9536

Unit Price

\$41.75

Price Adjustment

\$5.83

Quantity in Lot

221,75

Price Recuction

\$1,291.83

Total P = 23.256

Total Price Reduction = \$1,291.83

Notes: Sampled by Eric Howes for Piedra Pit ABC Class 6 material placed beneath the retaining wall at STA 24+48 on 7/20/2017. This price reduction is based on the CDOT SSP, dated October 20, 2016. This price reduction of \$1,291.03 applies to July 2017 truck tickets, from Piedra Pit, for the item # 304-06007 Aggregate

Cálculations by: Trautner Geotech (QA)

MENTENEO

Project Number:

STE-C480-008

Project Code (SA):

19219

Proj. Description:

PC to AVD SUP

Region:

Date:

3/9/2018

Data from

CDOT Form No.: 565

Field Sheet No.: QA#4, 60

#2

One test price reduction calculation

Item:

304

Aggregate Base Course Class 6

Lot No.:

Piedra Pit (Crossfire)

Element Name:

No. 200 sieve

Upper Spec Limit:

12

To

15 Test Value that Deviates

Lower Spec Limit:

3

Tu

12 Upper Tolerance of Spec

TL

3 Lower Tolerance of Spec

Test Results

15.4

F

0.76*(To-TU)*F

6.00 Price reduction factor from F factor table

Test Result Above Specification

P =

15.504

0.6 9.3024

P * Multiplier Unit Price

Multiplier

\$41.75

Price Adjustment

\$3.88

Quantity in Lot

401.4

Price Recuction

\$1,558.94

Total P = 15.504

Total Price Reduction = \$1,558.94

Notes: Sampled by Eric Howes for Piedra Pit ABC Class 6 material placed on the trail at STA 25+32. This price reduction is based on the COOT SSP, clated October 20, 2016. This price reduction of \$1,558.94 applies to August 2017 truck tickets, from Piedra Pit, for the item # 304-06007 Aggregate Base Course class 6.

3-70-18

KENIEWED

Galculations by: Trautner Geotech (QA)

Date:

Project Number:

STE-C480-008 A

Project Code (SA):

19219

Date: Data from 3/13/2018

Proj. Description:

PC to AVD SUP

CDOT Form No.: 565 Field Sheet No.: QA #2 GO

Region:

One test price reduction calculation

Item:

Aggregate Base Course Class 6

Lot No.:

La Boca Pit (Cruss fire)

Element Name:

No. 200 sieve

Upper Spec Limit:

To

13 Test Value that Deviates

Lower Spec Limit:

3

Tu

12 Upper Tolerance of Spec

TL

3 Lower Tolerance of Spec

Test Results

13.3

F

6.00 Price reduction factor from F factor table

Test Result Above Specification

P =

5.928

0.76*(To-TU)*F

Multiplier

P * Multiplier

0.6 3.5568

Unit Price

\$41.75

Price Adjustment

\$1.48

Quantity in Lot

658.5

Price Recuction

\$977.85

Total P = 5.928

Total Price Reduction = \$977.85

Notes: Sampled by Eric Howes for La Boca Pit ABC Class 6 material placed on the trail at STA 11+00. This price reduction 1s based on the CDOT SSP, dated October 20, 2016. This price reduction of \$1977.BS applies to September 2017 truck tickets, from La Boca Pit, for the item # 304-06007 Aggregate Base Course Classb.

Galculations by: Trautner Geotech (QA)

3-20-19

PENIEWED

Project Number:

STE-C480-008

Project Code (SA):

19219

Proj. Description:

PC to AVD SUP

Region:

Date:

3/9/2018

Data from

CDOT Form No.: 565

Field Sheet No.: QA#2 @

#3

One test price reduction calculation

Item:

Aggregate Base Course Class 6

Lot No.:

(Crossfire) La Boca Pit

Element Name:

No. 200 sieve

Upper Spec Limit:

12

То

13 Test Value that Deviates

Lower Spec Limit:

3

Tu

12 Upper Tolerance of Spec

13.3

TL

3 Lower Tolerance of Spec

Test Results

F

6.00 Price reduction factor from F factor table

Test Result Above Specification

P =

5.928

0.76*(To-TU)*F

Multiplier P * Multiplier

0.6 3,5568

Unit Price

\$41.75

Price Adjustment

\$1.48

Quantity in Lot

120.75

Price Recuction

\$179.31

Total P = 5.928

Total Price Reduction = \$179.31

Notes: Sampled by Eric Howes for La Boca Pit ABC Class 6 material placed on the trail at STA 11+00. This price reduction is based on the CDOT SSP, dated Detaber 20, 2016. This price reduction of \$179.31 applies to October 2017 truck tickets, from La Boca Pit, for the item \$ 304-06007. Aggregate Base Course Class 6. 3-20-18

-Galetilations by: Trautner Geotech (QA)

Date:

REVIEWED

Gina Denten

^ᢏrom:

Clifton Lee <clifton@daveng.com>

:nt:

Tuesday, March 13, 2018 12:44 PM

To:

Gina Denten

Subject:

Re: 19219 PC to AVD SUP - Item 304-06007 ABC Class 6

Attachments:

19219 PC to AVD SUP - Price Reduction ABC Class 6 La Boca Pit FINAL October.pdf; 19219 PC to AVD SUP - Price Reduction ABC Class 6 La Boca Pit FINAL October.xls; 19219 PC to AVD SUP - Price Reduction ABC Class 6 La Boca Pit FINAL Sept.pdf; 19219 PC to AVD SUP - Price Reduction ABC Class 6 La Boca Pit FINAL Sept.xls; 19219 PC to AVD SUP - Price Reduction ABC Class 6 Piedra Pit FINAL August.pdf; 19219 PC to AVD SUP - Price Reduction ABC Class 6 Piedra Pit FINAL August.xls; 19219 PC to AVD SUP - Price Reduction ABC Class 6 Piedra Pit FINAL July.pdf; 19219 PC to AVD SUP - Price

Reduction ABC Class 6 Piedra Pit FINAL July.xls

Good Afternoon Gina

Please find attached the updated price reduction calculations files in Excel and PDF formats for the line Item 304-06007 ABC Class 6 material paid to date. Below is a summary of each file.

July

- Total amount of ABC Class 6 material provided is 286.75 cubic yards
- 14.0 cubic yards of the total amount was overweight material and not paid
- 50.5 cubic yards of the total amount was paid as line Item 304-02005
- 221.75 cubic yards is the adjusted amount (less overweight material and material paid as ABC Class 2) and id as line Item 304-06007 in Pay Request No. 04 and 07
- price reduction calculations are based on the Trautner Lab No. 3977-A
- material is from Crossfire's Piedra Pit

August

- Total amount of ABC Class 6 material provided is 401.55 cubic yards
- 0.1 cubic yards of the total amount was overweight material and not paid
- 401.4 cubic yards is the adjusted amount (less overweight material) and paid as line Item 304-06007 in Pay Request No. 04 and 07
- price reduction calculations are based on the Trautner Lab No. QA #1
- material is from Crossfire's Piedra Pit

September

- Total amount of ABC Class 6 material is 658.50 cubic yards
- There was no overweight material during this month
- 658.50 cubic yards is the adjusted amount and paid as line item 304-06007 in Pay Request No. 04 and 07
- price reduction calculations are based on the Trautner Lab No. QA #2
- material is from Crossfire's La Boca Pit

October

- Total amount of ABC Class 6 material is 379.75 cubic yards
- 1.5 cubic yards of the total amount was overweight material (this overweight material is for trucks that was rt of excess material)

September

- Adjusted amount of ABC Class 6 material for payment 539.50 cubic yards
- 539.50 cubic yards of the adjusted amount was paid as line item 304-06007 in Pay Request No. 04 price reduction calculations are based on the Trautner Lab No. QA #2
- material is from Crossfire's La Boca Pit

Total of the above, 1,148.40 cubic yards of Item 304-06007 paid to date (Pay Request No.06)

The Contractor did have overweight trucks that was revealed during my review of the truck tickets for payment. I reviewed the following method with CDOT, first a quantity was determined for overweight material weight and was not paid, second the overweight penalty was applied based on the overweight material weight, third the price reduction for the 200 sieve was applied on the adjusted weight (not including the overweight material weight) and withheld in the pay requests. In the notes sections of Pay Request No. 04 I explained the total weight of truck tickets provided, the overweight material weight not paid, the adjusted weight of ABC Class 6 material paid.

I have not paid for material delivered in October or November. These are currently under review as the tickets were provided to me recently. I will update this email thread with price reduction calculations that will be based on QA #2 test results for October and November.

Regards,

Clifton Lee



Davis Engineering Service, Inc. 188 S. 8th Street - P.O. Box 1208 Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105 Fax: (970) 264-9210 E-mail: alfton@daveng.com

Gina Denten

From:

Clifton Lee <clifton@daveng.com>

nt:

Wednesday, October 04, 2017 7:51 AM

ro: Cc: Gina Denten Eric Howes

Subject:

19219 PC to AVD SUP - Concrete Pour 10/3/2017

Good Morning Gina

I wanted to share notes about yesterday's concrete pour.

The concrete truck arrived onsite and the QA initial test for air showed 3.5%. A decision was made to add a bag of air to bring it up. The QA initial test after mixing in one bag of air showed it rising to 4.9%. I told Crossfire and FCM this was acceptable to pour. I know we discussed keeping the Class D specification air range (5-8%). I would explain that this was a Class P mix and meets the Class P air range (4-8%) but does not meet the Class D air range (5-8%). The documented air value, if I remember correctly, was 4.8%.

Regards,

Clifton Lee



vis Engineering Service, Inc. 188 S. 8th Street - P.O. Box 1208 Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105

Fax: (970) 264-9210 E-mail: clifton@daveng.com



Date: August 18, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification - June

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

1.) No steel was incorporated during the month of June

Respectfully.

Paul Martin

Project Manager

Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.



Date: November 28, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification – July 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 2,700 pounds reinforcing steel Bid Item 602-00000
- 2.) Metal wall ties, tie-wire, bolsters Bid Item 601-01000

Respectfully

Paul Martin
Project Manager

Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.



Date: November 28, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification - August 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 571 pounds reinforcing steel Bid Item 602-00000
- 2.) 245 pounds reinforcing steel Bid Item 602-00000 (Light Bases)
- 3.) Metal wall ties, tie-wire, bolsters Bid Item 601-01000
- 4.) 43 lf 8 Inch Corrugated Steel Pipe 603-10080
- 5.) 41 lf 12 Inch Corrugated Steel Pipe 603-10120
- 6.) 43 lf 18 Inch Corrugated Steel Pipe 603-10180
- 7.) 3 ea 8 Inch Steel End Section 603-XXXXX
- 8.) 4 ea 12 Inch Steel End Section 603-30012
- 9.) 1 ea 15 Inch Steel End Section 603-30015
- 10.) 4 ea 18 Inch Steel End Section 603-30018
- 11.) 3 ea Inlet (Special) 604-19000
- 12.) 5 ea Light Standard Foundation (Special) 613-40012 (Anchor Bolts)
- 13.) 117 sf Truncated Domes 608-00012
- 14.) Force Account 1 ea 1" Rigid 90
- 15.) Tie Wire 608-00012, 609-21900, 604-19000, 613-40012
- 16.) Steel rebar dowels 608-00012

Respectfully

Paul Martin

Project Manager

Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.



Date: November 28, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification - September 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 1,455 pounds reinforcing steel Bid Item 602-00000 (Light Bases)
- 2.) 16 lf 12 Inch Corrugated Steel Pipe 603-10120
- 3.) 2 ea 12 Inch Steel End Section 603-30012
- 4.) 29 ea Light Standard Foundation (Special) 613-40012 (Anchor Bolts)
- 5.) Tie Wire 602-00000, 613-40012

Respectfully.

Paul Martin

Project Manager

Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.



Date: November 28, 2017

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification - October 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 259 pounds reinforcing steel Bid Item 602-00000
- 2.) 15.5 lf 8 Inch Corrugated Steel Pipe 603-10080
- 3.) 2 ea 8 Inch Steel End Section 603-XXXXX
- 4.) 165 lf Steel Sign Support (2-Inch Round) (Post & Socket) 614-01502
- 5.) 6 ea Delineator (Flexible)(Type III) 612-00043
- 6.) 60 SF Truncated Domes 608-00012
- 7.) Tie Wire 608-00012, 609-21900
- 8.) Steel rebar dowels 608-00012

Respectfully

Paul Martin '
Project Manager

Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.



Date: 1/10/2018

Re: CDOT Contract ID: 19219

Re: CDOT Project No. STE C480-008

Subject: Buy America Certification - November 2017

Crossfire LLC hereby certifies that the materials and quantities represented below, to be incorporated into the project, meet the contract Buy America requirements. We also certify that the Buy America paperwork and certifications required by Section 106.11 are on file at the project.

- 1.) 613-10010 1 LS Wiring (Special Pedestrian, Crosswalk)
- 2.) 613-10010 1 LS Wiring (Special Trail Lighting)
- 3.) 614-70200 2 EA Accessible Pedestrian Signal
- 4.) 614-72863 1 EA Pedestrian Push Button Post Assembly
- 5.) 614-72863 1 EA Pedestrian Push Button Post Assembly (Anchor Bolts)
- 6.) 614-70150 2 EA Pedestrian Signal Face (16) (Countdown)

Respectfully,

Paul Martin

Project Manager

Crossfire LLC

Note 1: The Buy America Certification is to always be received by the Project Engineer prior to the steel or iron being incorporated into the project.

COLORADO DEPARTMENT OF TRANSPORTATION CP 16, EVALUATION OF MATERIALS TESTING

Region:	Residency: Payosa Soviess, Co	(06)	
Contract ID:			Date 3/25/20/8
Project No.:	STE C480-008		
Proj. Locatio	Dunce Caires AD		

The contractor, consultant and head tester should be interviewed prior o completing this form, There should be a final meeting with the		Project No.: STE	C480-008	
onsultant to review strengths and weaknesses.		Proj. Location:	C480-008 sa Springs, CD	
		V		
me of Consultant Company: Cautiner Guetech	Name of Consultant Te	ster:	Quality of Work/Total Rating	g:
And her Eres form	1 Die Gas		Van Good (Mai Average (Field	1 Forlar) 1
ROJECT TESTER (A)			, voi ge carec	4 (20-191)
valuation Factors:	R	atings: (5) very good,	, (4) good, (3) average, (2) belov	v average, (1) poor
. Knowledge of test procedures				\$3 K
. Following test procedures				83 R
. Knowledge of project specificat	ions			83 8
. Following project specifications				8313
. Test result distribution				4
. Following protocol for failing tes	ts			4
. Following instructions / direction		ent staff		5 3 R
Paperwork / documentation (du				4
). Final paperwork / documentation				4
0, Time management				8 3 h
Scheduling I.A. testing				N/A
2. Attendance at weekly / required	l meetings			N/A
3. Housekeeping / field lab organi:				5
14. Test equipment maintenance				yc 5
			Subtotal: 4.	4.056 (12 valu
			Average:	4473.1
CONSULTANT MANAGEMENT SU	IDDADT (D)			
Evaluation Factors: For Give De		atings: (5) above sta	ndard, (3) standard, (1) below st	andard
Note: Description of the factors	142 1 NS 2			
. Quality	Carr Do Touria in Cr. 10	, 6455661077 0.076		5
2. Timeliness				5
3. Price / Budget				5
Business Relations / Customer	Service			\$
5. Deliverables / Requirements				5
			Subtotal:	25
			Average:	5
NIMILLATIVE DATING				
CUMULATIVE RATING	Maichte	nd average total so	ore (sections A and B):	4.84
	vveignte	a average wiai su	no toogone is and pl	- E • & •
omments on referenced evaluation factors:		angeres and the second		
omments on referenced evaluation factors: This improved from the last to be checked the last to be compared the last to be compared to be compared to the last to be compared to be co	ocal Agency Project	where I worked	with him. He is respons	ive and
ater: (Project Engineer)	Nico 1		Date:	3/28/2018
CIPTIN WE	· Chhh		Date:	2012010

Copy distribution: Project Engineer (Original), Consultant, Region Materials Engineer, Central Laboratory (Documentation Unit)

CONTRACT CHANGE ORDER

	ORDER NO.; 1
	DATE: 7/24/2017
	STATE: Colorado
	COUNTY: Archuleta
OWNER: Archuleta County	Proj. #: STE M016-025 Proj. Code: 19219
PROJECT: Pinon Causeway to Aspen Village Dr. S.U.P.	FEDERAL OVERSIGHT: TYPES FIND
PROJECT LOCATION: Pagosa Springs, Colorado, adjacent to U	IS highway 160, between MP 139,72 to 140.2

TO: Crossfire, LLC 820 Airport Road Durango, CO 81303

You are hereby requested to comply with the following changes from the contract plans and specifications.

All work shall be done in accordance with the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction, project plans, project special provisions, and as directed by the Project Engineer.

The Contractor shall provide additional bonding to cover the cost of this work at no additional cost to the project.

By signing below, the Contractor hereby waives any and all claims or rights to claim which it now has or may have in the future relating to this change order.

Should federal funds not be available to cover these additional costs, or the FHWA decides not to participate, Archuleta County agrees to provide the required funds.

Archuleta County approves this Change Order by signing below.

ľ			~	7	
	DESCRIPTION OF CHANGES	١.	Contract		Contract
Bo	ring Substitution for Village Drive/Pinon Causeway	<u> </u>	DECREASE		INCREASE
a,	Remove Item 613-00200 2 Inch Electrical Conduit	T .			
<u>ъ.</u>	New Item 613-00206 2 Inch Electrical Conduit (Bored)	S	(1,044.00)		
<u> </u>	110W 125M 013-00200 2 Inch Electrical Conduit (Bored)	<u> </u>		S	2,610.00
Bo	ring Substitution for Alpha Drive				
c.	Remove Item 613-00200 2 Inch Electrical Conduit	\$	(1,098.00)		
d.	New Item 613-00206 2 Inch Electrical Conduit (Bored)		(1,050,00)	\$	2,745,00
Roi	ing Substitution 6 - TO Till 100 G				
e.	ing Substitution for US Highway 160 Crossing				
f.	Remove Item 613-00200 2 Inch Electrical Conduit	\$	(4,914.00)		
_	Remove Item 613-50106 Light, Ctrl. Cen. (Pedest. Spec.)	\$	(1,765.00)		
g.	Increase Item 613-01100 1 Inch Electrical Conduit (Plastic)			\$	1,239.00
h_	New Item 613-00206 2 Inch Electrical Conduit (Bored)			\$	6,300,00
1.	Increase Item 613-00200 2 Inch Electrical Conduit			\$	522.00
j	Increase Item 613-00100 1 Inch Electrical Conduit			\$	1,071.00
<u>k.</u>	Remove Item 613-00150 1-1/2 Inch Electrical Conduit	\$	(2,754.00)		1,071.00
l.	Increase Item 613-07023 Pull Box (24"x36"x24")		<u> </u>	\$	1,990.00
Mo	dification of Existing Line Items for Placement of 2" Electrics	Conduit	(Boring)		
m.	New Item 613-10010 Wiring (SpecPedest, X-Walk)	S	(1,923.53)		
n	New Item 630-XXXXX Const. Zone Traffic Control	\$	(1,693.33)		
Adi	ust Communications Utility Lines				
0.	New Item 900-00012 Added Item (Foot)/	1		S	0.602.60
	TOTALS	S	(15,191,86)	\$	8,683.50 25,160.50
	NET CHANGE IN CONTRACT PRICE		(10,171,80)	s	9,968,64

Electrical Conduit Boring, Trenching and Backfilling of Utilities, Reduction of Lump Sum Items (Traffic Control & Wiring) DISCUSSION OF CHANGES:

a. Remove a portion of the original contract quantity of 2" electrical conduit for an estimated length of (1988 T E ac

Local Agency - Archidety County & Davis Enjineering Service, Inc. Project No.: STE C480-008 Project Code (SA#): COLORADO DEPARTMENT OF TRANSPORTATION 19219 **SPEED MEMO** Location: Pinon Causeway to Aspen Village Drive Shared Use Path, Archuleta County, Colorado MESSAGE Date: 10/17/2017 ™ Crossfire, LLC (Paul Martin) Subject: Speed Memo #3 - Excavator Tracking on HMA Trail Surface Starting on October 2, 2017, Crossfire began topsoil work with a John Deere 60G excavator along the trail between STA 28+50 to STA 36+50. On October 4, 2017, Jason Vavrina (Crossfire) notified me about seeing excavator tracking marks on the HMA trail surface. Jason and myself walked the portion of the trail driven on by the excavator. From trail STA 28+50 to STA 33+50 the excavator tracks noticeably deformed the surface of the trail. From trail STA 33+50 to STA 36+50 the excavator tracks deformed the surface of the trail to a lesser extent. Jason showed me a location where the HMA surface was demaged by a rock driven on by the excavator. I notified Jason to stop driving this excavator on the trail surface. On October 5, 2017, I met with you and Jason to review the excavator tracking marks and discussed options in moving forward in this area. We discussed using plywood or steel plates for protection of the HMA surface, a smaller excavator to which you expressed space, time and personnel constraints for these. Also on this day I brought Scott Lewandowski (Town of Pagosa Springs) to review the excavator tracking marks. On October 6, 2017, I met with Jessica Ebel (Colorado Department of Transportation) to also review the excavator tracking marks and topsoil work performed in this area. On October 10, 2017 Jon Bulter (Trautner Geotech), Russell Ebel and Jessica Ebel (CDOT), you, and Jason Vavrina (Crossfire, LLC) met on site to walk through the section of trail driven on by the excavator. We discussed topsoil work performed in the area, protection of the HMA surface, HMA QC/QA results to date, and best practices in driving equipment on new HMA surfaces. On 10/16/2017, longitudinal tears were observed within the tracking. The HMA QC/QA test results, HMA structural section design, and approved HMA mix design were reviewed. The HMA QC/QA test results show the 200 sleve percentage and asphalt cement content at and elightly above the specified maximum with HMA density achieved. With the asphalt cement content and 200 sleve percentages on the higher end the HMA will tend to have elastic behavior. With the placed HMA material being charecterized as "soft"/elastic, the Contractor is to use care and be cautious driving or moving equipment on the HMA trail surface. It is recommended smooth track tires be utilized on equipment, protection of the HMA surface (i.e. plywood), and no loads be placed within 18 inches from the edge of the HMA trail section. The excavator track marks are unacceptable and the HMA trail surface shall be corrected at the expense of the Contractor. The Contractor is requested to provide correction methods for review to remove excavator track marks and reestablish a smooth surface on the HMA trail surface. Local Agence Signed (CDOT) By Signing Below I Acknowledge Receipt of This Document Signed: Title: REPLY Clifton Lee 11/02/17 To: Crossfire to contact Sealmaster and schedule a representative to visit the site and provide recommendations. Ideally getting a test sample down this year to verify viable option.

Title:

Project Manager

Signed:
Distribution:

Contractor Resident Engineer Project Engineer CDOT Form #105 02/17

SERVICE, INC			STE C480		Project Code (SA #): 19219			
SPEED M	EMO			County – Pi Village Drive	non Causeway			
MESSAGE		No. of the last of	<u> </u>					
То:	Crossfire, LLC 820 Airport Road, Durango, Colorado	81303		Date:				
Attention:	Paul Martin			10/23/201	7			
Subject:	Use of Quikrete 5000 Concrete Mix for	r Sign Founda	tions	1	ORM NO. 05-#04			
the foundation mix (Production 5000 concrete mix design. Inclusion of Contractor at The Contractor at Concrete Compostrence at The Contractor at Concrete Compostrence at The Contractor at Contractor at Concrete Compostrence at Contractor a	Crossfire provided a preliminary submittal for the traffic and pedestrian control sign foundations. For the foundation concrete material the submittal consisted of using the product Quikrete 5000 concrete mix (Product No. 1007) in lieu of CDOT Class B concrete per the CDOT Standard S-614-8. Quikrete 5000 concrete mix is currently not on the CDOT Approved Products List and is not a CDOT Class B							
Signed:	1.61.		Title:	Project En	nineer			
	Mari	- Company and Comp		117,700,	Jinooi			
REPLY To:	CLIFTON LEE	• And the second		Date: / <i>v</i> /	24/17			
Agree	. L			/-				

Title: Project Manager

Signed: (

ARCHULETA COUNTY & DAVIS ENGINEERING	Project No:	STE C480-008	Project Code (SA #):
SERVICE, INC.		01E 0400-000	19219
SPEED MEMO	Location:	Archuleta County - P	inon Causeway
		to Apsen Village Drive	•

MESSAGE To:	Crossfire, LLC 820 Airport Road, Durango, Colorado 81303	Date:
	Paul Martin	10/24/2017
Subject:	Repair of HMA Surface Damage	FORM NO.
and the second s		105-#05

At plus/minus STA 33+50, a rock was driven on by Crossfire's John Deere 60G excavator during topsoil work on the adjacent trail slopes damaging the HMA trail surface. The damage was repaired by using an unapproved HMA filler product. The location is on the right hand side of the HMA trail. At plus/minus STA 33+00, where coring operations were performed by Quality Control (Western Technologies), Crossfire filled the cored openings with an unapproved HMA filler product.

At plus/minus STA 33+00 (cored holes) and STA 33+50 (rock damage) the Project Engineer shall mark out the HMA trail surface to be saw cut and replaced with an approved HMA filler product. This damage by the Contractor and/or use of unapproved material shall be corrected at the Contractor's expense using an approved HMA filler material. HMA material from the approved Strohecker Asphalt & Paving mix design may be utilized as HMA filler material in these areas for repair as paving operations continue.

At plus/minus STA 31+50 and STA 32+00, small longitudinal tears are starting to form at the HMA trail surface. These tears appear to be growing in length and require sealing maintenance during the project.

The Contractor shall apply an approved crack sealing product at these approximate station locations. With the location of the longitudinal tears occurring at the excavator tracking mark locations, damage to the HMA surface, this shall be corrected and managed at the Contractor's expense using an approved crack sealing product. Areas driven on by the excavator shall be watched and crack sealing applied to prevent integration of moisture into the asphalt and subsurface.

T:11 - .

11:6

a Me Low

	I HIIC,	Project Engineer
REPLY Clifton Lee To:		11/02/17 Date:
Crossfire will sawcut the damaged areas and patch that is being utilized on the final mat placement Crossfire has directed Strohecker to apply crack cracks.		ů
Signed: \ \ \alpha \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Title: Pr	oject Manager



Clifton Lee <clifton@daveng.com>

19219 PC to AVD SUP - CDOT Speed Memo 02 Culvert Repair

Clifton Lee <clifton@daveng.com>
To: Paul Martin <paul.martin@crossfire-llc.com>

Thu, Aug 31, 2017 at 12:14 PM

Good Afternoon Paul

Will you review the attached CDOT Speed Memo 02? If you do not have any questions will you return a signed copy to me? This speed memo addressed the path forward utilizing the Force Account - Minor Credit Revisions to repair the damaged culvert and abandon the other culvert.

Regards,

Clifton Lee



dayis Engineering Service, inc.

Davis Engineering Service, Inc. 188 S. 8th Street - P.O. Box 1208 Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105

Fax: (970) 264-9210 E-mail: difton@daveng.com

19219 PC to AVD SUP - Speed Memo 02 (part signed).pdf 676K



Davis Engineering Service, Inc.

September 8, 2017

Paul Martin Crossfire, LLC 820 Airport Road Durango, CO 81303

Re:

Pinon Causeway to Aspen Village Shared Use Path Project CDOT No.: STE C480-008, CDOT Project Code: 19219

Substitution of CDOT Class P Concrete for CDOT Class B Concrete

Dear Mr. Martin:

The purpose of this correspondence is to document substitution of CDOT Class P concrete, for the subject project, for the items indicating use of CDOT Class B concrete.

The Contract Documents indicate a line item # 601-01000 Concrete Class B with a quantity of 36 c.y. estimated for the project. As discussed at the Pre-Pour Conference on July 18, 2017, since the CDOT Class B specifications have a narrower air content range (5-8%) and maximum water cement ratio of 0.45, these values for the CDOT Class B concrete will apply to the CDOT Class P concrete.

Please find attached the CDOT Form 1373 - Concrete Mix Design Report approving the Four Corners Materials Class P, Supplier Mix ID: 37523344, CDOT Mix Number: 2017069 for the subject project.

Sincerely,

Clifton Lee

970-264-5055 ext. 105

Encl.: CDOT Form 1373 Concrete Mix Design Report (dated 7/18/2017)

C.C.: Robert Shanks, Colorado Department of Transportation, Region 5 Mike Davis, Davis Engineering Service, Inc.

COLORADO DEPARTMENT OF TRANSPORTATION

Concrete Mix Design Report

Approved for use on SA 19219 by CDOT CPP Unit on 7/18/17.

R. Ebel

Concrete Supplier	r: Four C	orners Mate	rials	CDOT Mix Number :	201706	9	
Supplier Mix ID:	375233	344		Item 601 Class P	Con	crete	
Field Compressiv	e Strength:	4500	psi	Class 2 Sulfate Resistan	ce and lowe	r*	
	-			*Class 3 Sulfate resistance	e requires a	w/cm ratio ≤0.40	
		Concre	te Mix Propo	ortions (SSD Batch Weights fo	r 1 Cubic '	Yard)	
Cement:	565	Pounds	GCC (Pueblo)				
- Comoni	000	, odnas	Type I/II	Cement			
Fly Ash:	141	Pounds	SRMG (4-Con	ners)			
,		· outino	Class F Fly	Ash			
Silica Fume		Pounds					
Coarse Aggregate 1	1682	Pounds	Animas Glacie	r Pit; #67			
Coarse Aggregate 2		Pounds					
Coarse Aggregate 3		Pounds					
Fine Aggregate	1077	Pounds	Animas Glacie	r Pit			
Admixture	7,0	Ounces	BASF - Master	Air AE 200			
Admixture	56.0	Ounces	BASF - Master	Polyheed 997			
Admixture		Ounces					
Admixture		Ounces					
Water	295.9	Pounds					
				Trial Batch Properties			
THE STATE OF THE S				7-Day Compressive Strength:	4485	psl	
Unit Weight :	140.8	PCF		14-Day Compressive Strength	: 5255	psi	
W / Cm Ratio:	0.42			28-Day Compressive Strength	: 6950	psi	
Slump :	2.25	Inches		56-Day Compressive Strength	:	psi	
Air Content :	4.70	%		7-Day Flexural Strength:	723	psf	
Relative Yield:	0.99			28-Day Flexural Strength:	770	psl	
				Aggregate Test Results			
		Specific	c Gravity (SSD)	Absorption			
Coarse Aggregate	1:		2.66	1.2 %			
Coarse Aggregate	2:			%			
Coarse Aggregate	3:		٠	%			
Fine Aggregate :			2.66	1.3 %			
				Comments:			

Reviewed by: Val Niculae

Review date: 3/17/2017

Please contact CDOT Concrete and Physical Properties Lab at 303-398-6549 with any questions.

COLORADO DEPARTMENT OF TRANSPORTATION SPEED MEMO

Project No.: STE C480-008

Project Code (SA#): 19219

Location: Archuleta County

MESSAGE To: Crossfire, LLC	Date: 8/30)/2017
Subject: Speed Memo #2 - Culvert Repair work at STA 16+2	1 & STA 16+89	
		and the second s
During potholing of two existing highway crossing culverts by the Contractor, existing CMP were deteriorating and in poor condition. The related potholing CMP's caved in. On August 22, 2017 it was determined a Black Hills Energy with additional damage to the north. A meeting was conducted onsite (with re CDOT-Utilities, Town of Pagosa Springs, and Davis Engineering Service, Inc Following the meeting it was discussed that the Town of Pagosa Springs wou (with the invoice sent to Black Hills Energy for reimbursement) and the Contra Revision for this work; exacavate, remove and replace the existing culvert at backfill the existing culvert at STA 16+89. The method of payment for installation of a new 30 inch diameter culvert at S Credit Revisions. The Contractor will need to maintain documentation in accounts.	pok place on August 14, 2017 has line was trenched into the coresentatives from Crossfire LL on August 25, 2017 to determ d provide the new 30 inch diarctor would utilize the Force Ac STA 16+21, and excavate, removed the Force Ac Crossen and The	where the top of the culvert at STA 16+21 C, Black Hills Energy, nine the path forward. The count of the path forward of the path forward of the count of the path forward of the path forward of the path forward Specification 109.04
for materials incorporated, Contractor personnel work, and Contractor equipm	ent utilized with installation of t	the culvert.
The method of payment for excavation and embankment for the removal of the Account Item Minor Credit Revisions. The Contractor will need to maintain do Specification 109.04 for Contractor personnel work and Contractor equipment and removal the exisiting culvert and then backfill with onsite native material.	cumentation in accordance with utilized with removal of subsu	h the CDOT Standard rface material to locate
	ille: Project Eugineer	
By Signing Below I Acknowlege Receipt of This Document		
Signed:	Title:	
REPLY	Date:	
To:		
·		

Title:

Distribution:

Signed:

Contractor Resident Engineer Project Engineer

CDOT Form #105 02/17

COLORADO DEPARTMENT OF TRANSPORTATION SPEED MEMO

Project No.: STE C480-008

Project Code (SA#): 19219

SLEED MEMO	^{Location:} Archuleta Cou	nty
MESSAGE To: Crossfire, LLC	A PORTO POR PORTO POR CONTRACTOR DE LA C	Date: 7/27/2017
Subject: Speed Memo #1 - Boring at the Intersection Village Drive and Pinon Causeway, and acre	s of US Highway 160 oss Alpha Drive	and Pinon Causeway,
The design plans reflect installation of an accessible pedestrian signal (APS shared use path. To include the APS at this intersection, conduit and wiring cross US Highway 160, The design plans also incidated providing an electrical loading of the trail lighting system, two electrical circuits could be a Highway 160 and wiring for this will need to cross US Highway 160 to main Highway 160, Village Drive and Alpha Drive was discussed in addition to be Pinon Causeway.	line items were provided for rou ical service at the southwest cor configured for all 34 trail lights, 3 tan two electrical circuits, Boring	iting of wiring on the bottom span wire to ner of the King Capital Lot, Based on the trail lights are located north of US of conduit for trail lighting underneath US
The method of payment for boring at the intersections of US Highway 160 at Alpha Drive will utilize the Force Account Item Adjust Utilities and Minor Colacordance with the CDOT Standard Specification 109,04 for materials incomit with boring. It is anticipated the electrical service at the southwest corner of conduit locations at US Highway 160, and adjustment of quantities for 1", 1-	ntract Revisions. The Contractor orporated, Contractor personnel the King Capital Lot will be elim	will need to maintain documentation in work, and subcontractor work associated
Discussions to date included two 2" electrical condult borings for boring at the trail lighting and one conduit for the traffic intersection improvements. But intersection wiring placed, one boring conduit may be elected for placement intersection of Village Drive and Pinon Causeway and across Alpha Drive will be decumentation provided for this work will result in delay or no payment.	ased on standard electrical prac t. No other wiring will be run insi vill utllize 2" electrical conduit an	tice, for the trail lighting and traffic de this boring conduit. Borings at the
Signed (CDOT) Who have	Mile: Project E	Wineer
By Signing Below LAcknowlege Receipt of This Document		/
Signed: \ \ \ a \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Title: PROTECT	MUNAGER/CROSSFIRE
REPLY	edd allifel dailleidyn Deu Colddoll Garnel (Calent Calent Calent Calent Calent Calent Calent Calent Calent Cal	Date:
То:		

Title:

Distribution:

Signed:

CDOT Form #105 02/17

COLORADO DEPARTMENT OF TRANSPORTATION

Concrete Mix Design Report

This report was issued by and approved for use on SA 19219 by CDOT CPP Unit on 08/11/17. R. Ebel

Concrete Supplier	r: Four Co	orners	CDOT Mix Number: 2017173
Supplier Mix ID :	369233	344	Item 601 Class BZ Concrete
Field Compressive	e Strength:	: 4000 p	psi Class 2 Sulfate Resistance and lower*
			*Class 3 Sulfate resistance requires a w/cm ratio ≤0.40
		Concre	ete Mix Proportions (SSD Batch Weights for 1 Cubic Yard)
Cement:	490	Pounds	GCC (Pueblo)
		•	Type I/II Cement
Fly Ash:	125	Pounds	SRMG (Four Corners)
	1		Class F Fly Ash
Silica Fume		Pounds	
Coarse Aggregate 1	1798	Pounds	4Corners - Animas Glaicler Pit; #67
Coarse Aggregate 2		Pounds	
Coarse Aggregate 3		Pounds	
Fine Aggregate	1302	Pounds	4Corners - Animas Glaicler Pit
Admixture	66.0	Ounces	BASF - MasterGlenium 7500
Admixture		Ounces	
Admixture		Ounces	
Admixture		Ounces	
Water	275	Pounds	
			Trial Batch Properties
			7-Day Compressive Strength : 6470 psl
Unit Weight :	146.9	PCF	14-Day Compressive Strength: 7145 psl
W / Cm Ratio :	0.45		28-Day Compressive Strength: 7340 psi
Slump :	8.00	Inches	56-Day Compressive Strength: psi
Air Content :	2.40	%	7-Day Flexural Strength: psi
Relative Yield :	1.01		28-Day Flexural Strength: psi
			Aggregate Test Results
		Specific	c Gravity (SSD) Absorption
Coarse Aggregate	1:		2.66 1.2 %
Coarse Aggregate	2:		%
Coarse Aggregate	3:		%
Fine Aggregate :			2.66 1.3 %
			Comments:

Reviewed by: Val Niculae

Review date: 7/31/2017

Please contact CDOT Concrete and Physical Properties Lab at 303-398-6549 with any questions.



Clifton Lee <clifton@daveng.com>

19219 PC to AVD SUP - Speed Memo #06 Repair of HMA Surface Damage

Clifton Lee <clifton@daveng.com>

Tue, Nov 7, 2017 at 4:43 PM

To: Paul Martin <paul.martin@crossfire-llc.com>

Cc: Jason D Vavrina < Jason. Vavrina@crossfire-llc.com>

Good Afternoon Paul

Please find attached speed memo #6 providing direction for an overlay for HMA surface damage on the section of trail paved several weeks ago.

Please review, sign, and return to me for acknowledge and your response.

Regards,

19219 PC to AVD SUP - Speed Memo 06 (part signed).pdf



Davis Engineering Service. Inc.

September 8, 2017

Paul Martin Crossfire, LLC 820 Airport Road Durango, CO 81303

Re:

Pinon Causeway to Aspen Village Shared Use Path Project

CDOT No.: STE C480-008, CDOT Project Code: 19219

Use of CDOT Class BZ Mix Design for Light Base Standard Foundations

Dear Mr. Martin:

The purpose of this correspondence is to document the use of CDOT Class BZ concrete, for the subject project, for the item # 613-40012 Light Standard Foundation (Special).

The Contract Documents CDOT Project Special Provisions – Revision of Section 613 Light Standard Foundation (Special) indicates the class of concrete to be used (CDOT Class B or D) and the electrical subcontractor (One Touch Electric) requested using the CDOT Class BZ concrete. The light base foundation design was reviewed for material requirements (e.g. compressive strength) and the CDOT Class BZ concrete will meet the design requirements.

Please find attached the CDOT Form 1373 - Concrete Mix Design Report approving the Four Corners Materials Class BZ, Supplier Mix ID: 36923344, CDOT Mix Number: 2017173 for the subject project.

Sincerely,

Clifton Lee

970-264-5055 ext. 105

Encl.: CDOT Form 1373 Concrete Mix Design Report (dated 8/11/2017)

C.C.: Robert Shanks, Colorado Department of Transportation, Region 5

Mike Davis, Davis Engineering Service, Inc.

	Project No:		Project Code (SA #):	
ARCHULETA COUNTY & DAVIS ENGINEERING	STE C	C480-008	19219	
SERVICE, INC.	Location: Archu	/ Hortalota County		
SPEED MEMO		oen Village Dr		
			, , , , , , , , , , , , , , , , , , ,	
MESSAGE		D-1		
Crossfire, LLC To: 820 Airport Road, Durango, Colorado	81303	Date:		
		11/07/2	017	
Attention: Paul Martin			TORM NO	
Subject: Excavator Tracking on HMA Trail Sur	face (Update #1)		FORM NO. 105-#06	
		-6 - product hi		
Following Speed Memo #3 (dated 10/17/2017), Crossfi LiquidRoad, and was reviewed with the Owner and CD LiquidRoad product (e.g. ability of the product to correct spring 2017 to apply this temperature sensitive product project, a (1-1/2") one and one half inch hot mix asphal path forward. Inclusion of the (1-1/2") one and one half inch HMA overfollowing: The Contractor shall use an approved HMA mix 52017A19219BP review dated 06-26-2017 is a 190-190 the Contractor shall grind the existing HMA tractional traction	ot tracking marks, long tracking marks, long the tracking marks, long to Following this review to (HMA) overlay soluterlay is approved given approved mix design (Strohecker napproved mix design from trail STA 28+7 will surface down (1-1/STA 29+28.05 (taper val can also take play HMA trail surface port material, sweeping oat at an application he HMA overlay, personnel onsite pent, and gradation), lect a warm day to play to the trail surface due to the trail surface due to ork shall be performed.	gevity of the prew and the destion has been of the Contract Asphalt & Pavign). 5 to STA 36+4'2") one and oned transition lead	oduct, waiting until ire to complete the determined as the tor agrees to the many many many many many many many many	
		Title:		
Signed:		_		

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		T Designation			Project Code (SA #).
ARCHULETA (SERVICE, INC	COUNTY & DAVIS ENGINEERING	Project No:	STE C480	-008	19219
SPEED M		Location:	Archuleta	County	- Pinon Causeway
		and the same of th	to Aspen \	/illage	Drive
MESSAGE			ingrama english ing ing pangangan ang pangangan ang pangangan ang pangangan ang pangangan ang pangangan ang pa		
То:	Crossfire, LLC 820 Airport Road, Durango, Colorado	81303		Date:	
Attention:	Paul Martin			02/09	/2018
Subject:	Hot Mix Asphalt (HMA) Incentive/Disi	ncentive			FORM NO.
	rance (QA) (Trautner Geotech) performed				105-#08
Standard Sp	esign. The Asphalt03 report is based on the ecifications for Road and Bridge Construct	ion Section 1	05.03.		
reviewed for provided by	ummary reflects installation of 650 tons (the September 19, 2017, October 23, 2017, C Strohecker Asphalt & Paving, Inc. Based or request will be a lump sum amount of (-)\$	october 24, 20 on the HMA t)17, and Octo	ber 30,	2017) of HMA
reviewed for provided by	September 19, 2017, October 23, 2017, C Strohecker Asphalt & Paving, Inc. Based of	october 24, 20 on the HMA t)17, and Octo	ber 30, disinc	2017) of HMA
reviewed for provided by the next pay	September 19, 2017, October 23, 2017, O Strohecker Asphalt & Paving, Inc. Based of request will be a lump sum amount of (-)\$	october 24, 20 on the HMA t)17, and Octo	ber 30, disinc	2017) of HMA entive to be applied on
reviewed for provided by the next pay Signed:	September 19, 2017, October 23, 2017, C Strohecker Asphalt & Paving, Inc. Based of	october 24, 20 on the HMA t)17, and Octo	Proje	2017) of HMA entive to be applied on

			 					
ARCHULETA SERVICE, INC	COUNTY & DAVIS ENGINEERING	Project No:	STE C480		Project Code (SA #): 19219			
SPEED M		Location:		Archuleta County – Pinon Causeway o Aspen Village Drive				
				·				
MESSAGE To:	Crossfire, LLC 820 Airport Road, Durango, Colorado	81303		Date:				
Attention:	Paul Martin			03/19/20	18			
Subject:	Final Quantities			ţ	FORM NO. 105-#09			
final project of reductions. O 07 & Final Q	The project is complete. A revised spreadsheet (see attached, dated 3/14/2018) has been assembled showing final project quantities and costs to date, including all project over and under runs, change orders, and price reductions. Over and under runs of original project items have been tracked and balanced in Pay Request No. 07 & Final Quantities. All change orders were approved by the Owner, Contractor, Project Engineer, and CDOT, as required.							
Following Pa following line	y Request No. 07 & Final Quantities (perio items from the original contract were not i	od of performa installed, or us	ince 12/01/20 sed, and will	017 through not be paid:	03/09/2018) the			
 Item 211-03005 Dewatering The original contract included a dewatering item for unit pricing if dewatering was required during the project. A dewatering permit was not obtained during the project and will not be paid. 								
- Item 213-00002 Mulching (Weed Free Hay) The original contract included a Mulching (Weed Free Hay) quantity for unit pricing. The item 213- 00012 Spray-On Mulching Blanket was used for the reseeding work on the project. No mulching, using the Mulching (Weed Free Hay) item, was installed during the project and will not be paid.								
 Item 613-00200 2 Inch Electrical Conduit (Change Order 1i.) Change Order No. 01 included an additional quantity of 2 inch electrical conduit for the pedestrian accessible system wiring transition to the pull box and for adjacent trail lights. A configuration of 2 inch electrical conduit was installed and did not require additional lengths for payment and will not be paid. 								
- Item 613-00100 1 Inch Electrical Conduit (Change Order 1j.) Change Order No. 01 included an additional quantity of 1 inch electrical conduit for the NW and SW traffic light poles for the accessible pedestrian system interface. Payment was provided for 1 inch electrical conduit installed during the project and this additional amount was not installed and will not be paid.								
Signed;	tille		Title:	Project E	ngineer			
REPLY To:	Clifton Lec (via email)			3/2 Date:	10/2018 (Via email)			
Signed:	711		Title:	2	Nauma -			

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Pinon Causeway to Aspen Village Drive Shared Use Path Archuleta County, CO Project No. STE C480-008, Project Code: 19219

Final Quantities 03/14/2018

For:

Crossfire LLC 820 Airport Road Durango, CO 81303

Item		 	ııv,AL QL	NAN	TITIES/PRI	ر <u>دي</u> ا	
No.	Description of Item	Quantity	Unit	τ	Jnit Price	Ь	Extension
Base Bid Scl							
201-00001	Clearing & Grubbing	1,63	acrè	\$	3,806,00		6,203.7
202-00012	Removal of Tree Stump	8.00	ea.	\$	256.00	2	2,048.0
202-00204	Reunival of Curb, Gutter, & Sidewalk	77.00 60.00	lf,	\$	12.80	5	985.6 1,185.0
202-00220	Removal of Asphalt Mat	164.00	5.y. 5.f.	\$	6.50	\$	1,066.0
202-00250 202-00750	Removal of Pavement Marking Removal of Luminaire	2.00	5.1. tzl.	5	607.00	\$	1,214,0
202-00730	Removal of Ground Sign	1,00	€2.	\$	218,00	\$	218,0
202-04002	Clean Culvert	3,00	ea.	\$	1,350.00	\$	4,050.0
203-00100	Muck Excavation	365.00	c.y.	\$	18,00	\$	6,570.0
203-01597	Potkoling	33.50	hr.	\$	252,00	\$	8,442.0
207-00205	Topsoil	650,00	c.y.	S	24,50	\$	15,925.0
207-00210	Stockpile Topsoit	650.00	c.y.	8	16.25	5	10,562.5
208-00004	Silt Berm	1,989,00	1.f.	S	8.00 5.50	\$	1,000.0
208-00007	Erosion Log (8 Inch)	2,580.00	Lf.	3	2,25	5	5,805.0
208-00020	Silt Fence Concrete Washout Structure	1.00	ea.	5	1,306.00	S	1,306.0
208-00070	Vehicle Tracking Pad	2.00	ea,	\$	1,240.00	\$	2,480.0
208-00103	Removal & Disposal of Sediment (Labor)	47.00	Ъг.	ŝ	64.00	5	3,008.0
208-00206	Frosion Control Management	38.00	days	\$	278,00	S	10,564,0
210-00040	Reset Water Line	1,00	1.s.	S	590,00	\$	590.0
210-00810	Reset Ground Sign	2,00	ea.	\$	223,00	\$	446.0
210-04050	Adjust Valve Hox	2,00	ea.	S	315,00	\$	630.0
211-03005	Dewatering	- 0.27	l,s,	\$	6,805,00	S	4,747.1
212-00006	Seeding (Native)	2.37 0.20	acres	\$	2,003.00 3,406.50	\$	681.3
212-00011	Seeding (Lawn)	0.20	acres	\$	64,310.00	\$	514.4
212-00028 212-00032	Seeding (Wedland) Soil Conditioning	2.57	acres	5	6,940.00	S	17,835.
213-00002	Mulching (Weed Free Hay)		acres	s	2,512.00	\$	-
213-00002	Spray-On Mulching Blanket	2.57	acres	s	2,275.00	5	5,846.
240-00000	Wildlife Biologist	4.00	hr.	\$	111.00	5	444.
304-02005	Aggregate Base Course (Class 2)	50.50	c.y.	\$	41.70	5	2,105,8
403-00720	Hot Mix Asphalt (Patching) (Asphalt)	4,00	tons	s	341.00	5	1,364,0
506-01020	Geogrid Reinforcement (Special)	962,00	s.y.	5	3.60	\$	3,463,
601-01000	Concrete Class B	36,00	c.y.	5	1,045.00	\$	37,620.0
603-10080	8 Inch Corrugated Steel Pipe	58,50	l.f.	5	34,00	S	1,989.0 2,223.0
603-10120	12 Inch Corrugated Steel Pipe	57.00	l,f.	S	39,00 48.50	S	2.085.3
603-10180	18 Inch Corrugated Steel Pipe	43.00		8	423.00	5	2,115.0
503-XXXXX		5.00	63. £H	\$	425.00	\$	2,550.
603-30012 603-30015	15 Inch Steel End Section	1,00	ea.	Š	442.00		442,6
603-30018	18 Inch Steel End Section	4.00	ca.	\$	556.00		2,224.
603-50015	15 Inch Plastic Pipe	4,00	1.0.	\$	116,40		465.1
603-56018	18 Inch Plastic Pipe	5.00	Lf,	S	72.00		360.
604-19000	Inlet (Special)	3.00	ea.	ŝ	4,188.00	\$	12,564.
607-11525	Fence (Plastic)	3,309.50	Lf.	\$	4.00	s	13,238.
608-00012	Concrete Curb Ramp (Special)	133.25	5,y	\$	120.60	\$	15,990.
609-21900	Curb & Gutter Type 2 (12 Inch Pan) (Special)	25.50	14.	\$	32,74		834.
609-21900	Curb & Gutter Type 2 (18 Inch Pan) (Special)	50.50	i.f.	\$	33.50 61.50	\$	1,691. 369.
612-00043	Delineator (Flexible) (Type III) 1 Inch Electrical Conduit	16.00	ea.	\$	76.50		1,224.
613-00100 613-00150	1-1/2 Inch Electrical Conduit	34.00	1.f.	Š	81.00		2,754.
613-01100	1 Inch Electrical Conduit (Plastic)	18.00	1.f.	s	29.50		531.
613-01200	2 Inch Electrical Conduit (Plastic)	52,00	1.f.	\$	21.00	\$	1,092,
613-01300	3 Inch Electrical Conduit (Plastic)	84,00	l,f,	\$	26.00		2,184.
613-07023	Pull Box (24"x36"x24")	3.00	ca.	\$	1,990.00		5,970.
613-10010	Wiring (Special - Pedestrian, Cross-Walk)	1.00	i.s.	\$	3,850,00		3.850.
614-00011	Sign Panel (Class I)	72,25	s.f.	Ş	27,00		1,950.
614-01502	Steel Sign Support (2-Inch Round) (Post & Socket)	165.00	l.f.	s	46.00		7,590.
614-70150	Pedestrian Signal Face (16) (Countdown)	2,00	£3.	S	905.D0 2,765.00		1,810. 5,530.
614-70200	Accessible Pedestrian Signal	2.00 1.00	ea.	8	1,706,00		1,706.
614-72863	Pedestrian Push Button Post Assembly	1.00	ls.	\$	13,650,00		13,650.
625-00000	Construction Surveying Public Information Services	00.1	l.s.	\$	4,412.00		4,412.
	Preformed Thermoplastic Pymt, Mrk, (Word-Symbol)	15.50	+	\$	25.30		392.
	Preformed Thermoplastic Pvmt, Mrk, (Crosswalk)	912.00		\$	14.60	15	13,315.
	- Asphalt Trail						
203-00010	Unclassified Excavation (CIP)	1,362.00		Ş	17.70		24,167.
304-06007	Aggregate Base Course (Class 6)	1,402.40		S	41.75		58,550.
602-00000	Reinforcing Steel	3,530.00		15	1.35		4,765.
608-01500		650.00		S	177.85 74,000.00		74,000.
626-00000	Mobilization Construction Zone Traffic Control	1.00	l.s.	5	25,400.00		25,400.
	sus - Preparation for Trail Lighting	1 1,00	1	۳.			-2,100
602-00000		1,700.00	lbs.	Ş	1,50	\$	2,550.
613-00200	2 Inch Electrical Conduit	4,414.00	lf,	Š	18.00		79,452.
613-10010	Wiring (Special - Trail Lighting)	1,00	l.s.	ş	10,000.00		10,000,
613-20000	Light Standard & Luminaire (Special - Install Only)	34.00	ea.	\$	495.00		16,830.
613-40012	Light Standard Foundation (Special)	34,00	ea.	5	1,412.00		48,008.
613-50106		3,00		\$	1,765.00		5,295.
625-00001	Construction Surveying	9,00	hr.	s	125,30	S	1,127.
	ract Revisions, Price Reductions, Force Account Items	1 100	1 1-	ŀe	8,080.64	l e	8,080.
	r CO No. 01 - Boring and Electrical Adjustments (used items)	1.00		\$ \$	2,340.41		2,340.
Force Acct.	F/A - Walmart Utilities & Irrigation	1,00		\$	589.79		589.
Force Acct.	F/A - Trail Lighting Luminaire Swap	1,00		5	18,828,20		18,828
Force Acct. Price Reduct		1,00		\$	(1,026.00		(1,026
Price Reduct Price Reduct		1.00		s	(20.00		(20)
	Price Reduction - ABC Class 2 Piedra Pit (July 2017)	1,00		s	(120,99		(120.
Price Reduct		1,00		s	(1,291.83		(1,291
	Price Reduction - ABC Class 6 Piedra Pit (Aug. 2017)	1,00		s	(1,558,94) \$	(1,558
Price Reduct	Price Reduction - ABC Class 6 La Buca Pit (Sept. 2017)	1.00	l.s.	S	(977.85) \$	(977
	Price Reduction - ABC Class 6 La Boca Pit (Oct. 2017)	1,00		S	(179.31		(179
	Price Reduction - Out of Spec. HMA	1.00	I.s.	1 \$	(22,497.42) \$	(22,497

TRAUTNER EXHIBITED INFO

GEOTECHNICAL ENGINEERING, MATERIAL TESTING AND ENGINEERING GEOLOGY

ugust 1, 2017

Mr. Clifton Lee, PE Project Engineer Davis Engineering Services, Inc.

Re: Pinon Causeway to Aspen Village Shared Use Path - STE C480-008 / 19219

Mr. Lee,

Materials testing and documentation for the above referenced project has been performed in general accordance with CDOT Field Materials Manual 2017 and the CDOT Standard Specifications for Road and Bridge Construction 2011. Our technicians performing testing services on this project are certified as required, or they are monitored and supervised by a certified technician and/or Gina Denten, Trautner Geotech Materials Testing Manager and/or Don Manchester, Trautner Geotech Durango Material Testing Manager.

A list of certified technicians is attached. Please feel free to contact us if you have any questions.

Thank you,

Gina Denten Trautner Geotech

Materials Testing Manager

Cortez and Durango

Don Manchester Trautner Geotech Materials Testing Manager

Durango

TRAUTNER SEIGHING

GEO HNICAL ENGINEERING, MATERIAL TESTING AND GINEERING GEOLOGY

Trautner Geotech Certified Engineering Technicians

	Nuclear Gauge User Safety Training (HAZMAT)	WAQTC	ACI Field Testing Tech. Grade I	ACI Strength Testing Tech.	ACI Agg. Testing Tech. Level I	ACI Agg. Testing Tech. Level II	ACI Concrete Lab Testing Tech Level I	CRMCA Concrete Pavement Inspector Level I	RMAEC CAPA Cert Level A,B	RMAEC CAPA Certified Level I Asphalt Inspector	NICET	ICC - Reinforced Concrete Inspector	Years of Experience
Craig E. Campbell	3/2018	3/2/2022	2/18/2022	4/10/2021	4/10/2021		4/10/2021		3/2018	The Board			9.0
Jason W. Center	2/2020	4/30/2018	4/18/2019	4/11/2020	4/11/2020		4/11/2020		3/2018	3/2018			3.0
Steven D. Chiarito	3/2020	Pending	4/20/2022	Pending	Pending	2.10	Pending		Pending				1.0*
Connor DeLeon	5/2019	Pending	5/13/2022	Pending	Pending	an an an an an	Pending		Pending				1.0
Gina K. Denten	3/2018	3/26/2020	2/21/2020	4/13/2018	4/13/2018	3/06/2017	4/13/2018	March 2020	4/25/2020	4/2015	Level 2		20.0
Reed Tsosie	4/2019	3/31/2022	2/18/2022	4/8/2022	4/8/2022	RMAEC Level E 4/1/19	4/8/2022		3/2018	3/2018			30.5
Gregory A. Jadrych	N/A		8. E. 10. C.	4/11/2020	4/11/2020		4/11/2020						9.0
Jordan Townsend, El	4/2019	4/8/2017	5/11/2018	100 page 1999 (1)		10 (5) (6)						Received 2014	4.0
Don J. Manchester	3/2018		2/21/2020		Profession of				4/2017	3/2018			35.5
Phillip Kibel	7/2019	3/31/2020	9/10/2021	Pending	Pending		Pending		Pending				15.5*
Dillon Hughes, El	5/2020	Pending	5/24/2022		(4)								1.0*
Eric Howes	4/2019	9/22/19	5/14/2021	4/8/2022	4/8/2022		4/8/2022		Pending				10.5*
Andrew Ramsey	5/2020	Pending	5/13/2022	Pending	Pending		Pending		Pending				1.0*
Kevin Uptain	8/2019	3/2/2020	4/20/2022	Pending	Pending		Pending		Pending				2.0*
Scott Vandervert	5/2019	8/25/19	5/14/2021	Pending	Pending		Pending		Pending				10.5*

^{*} NOTE: New Hires to Trautner Geotech, experience is within the construction industry.

Updated 6/05/2017 - certification expiration dates are listed above CDOT-Colorado Department of Transportation WAQTC – Western Alliance for Quality Transportation Construction RMAEC – Rocky Mountain Asphalt Education Center NICET – National Institute of Certification in Engineering Technologies

ACI – American Concrete Institute CRMCA – Colorado Ready Mix Concrete Association CAPA – Colorado Asphalt Pavement Association

This is to certify that

STEVEN D CHIARITO

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 04/20/2017

Expires: 04/20/2022

Examiner of Record: James F Mesite III

ACI Managing Director of Certification

This is to certify that

ERIC HOWES

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/14/2016

Expires: 05/14/2021

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

This is to certify that

ERIC HOWES

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/08/2017

Expires: 04/08/2022

Examiner of Record: John W Nehasil

ACI Managing Director of Certification

This is to certify that

ERIC HOWES

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/08/2017

Expires: 04/08/2022

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

This is to certify that

ERIC HOWES

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Strength Testing Technician

Certified Date: 04/08/2017

Expires: 04/08/2022

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

Western Alliance For Quality Transportation Construction



Qualification Certificate

Eric Howes

has completed the qualification recommends	· -	٠.,٠
has completed the qualification requirements for	or Embankment & Rase T	esting Tachnician
		Course a contractoring

sponsored by the Colorado Department of Transportation

DATE 9/22/2016

AUTHORITY

Christopher P. Rungell

See the WAQTC web site at http://www.waqtc.org for information on this qualification. Qualification Expires 3 Years from Date

This is to certify that

KEVIN F UPTAIN

3222. Outstry

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

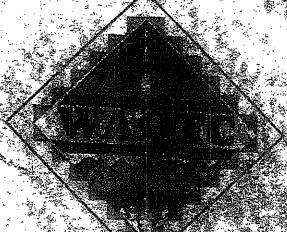
Certified Date: 04/20/2017

Expires: 04/20/2022

Examiner of Record: James F Mesite III

ACI Managing Director of Certification

Western Alliance For Quality Transportation Constitution



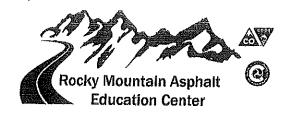
Qualification action designate

Kevine Epocation

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 3/2/2017



6880 South Yosemite Court, Suite 110, Centennial, Colorado 80112 PHONE (303) 741-6148 ext 154, FAX (303) 741-6146, EMAIL: rmaec@co-asphalt.com

April 26, 2017

Gina Denten Trautner Geotech 649 Tech Center Drive Durango, CO 81301

Dear Gina,

You have successfully completed the LabCAT Program. Please remove the wallet card from the perforated section of this document and retain for your records.

Levels of Certification: AB
Certification Issue and Expiration Date: 4/25/2017 to 4/25/2020

It is your responsibility to keep your certification current. To prepare for your re-certification the RMAEC recommends scheduling 3-4 months prior to the expiration date. As per CDOT specifications, Technicians are required to have current certification for CDOT Projects.

Thank you for attending.

Pom Clay ton

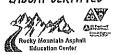
Sincerely,

Tom Clayton
Director of Training and Member Services
Enclosures

Gina Denten

LabCAT Certification: Level AB Expiration Date: 4/25/2020

LABCAT CERTIFIED





This is to certify that

GINA KDENTEN

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 02/21/2015

Expires: 02/21/2020

Examiner of Record: Mr George A Madrid

ACI Managing Director of Certification

say to certify that

GINAKDENTEN

nowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/13/2013 Expires: 04/13/2018

Examiner of Record: John W Nehasil

The Authenticity of this cerufication course serviced at minute the grantestion to

This is to certify that

GINAK DENTEN

hus demonstrated thowledge and ability by successfully completing the ACI Certification regularements and is hereby recognized as an

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/13/2013 Expires: 04/13/2018

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

The Authenticavor this certification coulbe verified at www. series engineering and all given by

This as to certify that

GINAKDENTEN

the knowledge and ability by successfully completing the ACI Certification requirements and is bereby recognized as an

ACI Concrete Strength Testing Technician

Cestified Date: 04/13/2013 Expires: 04/43/2018

Examiner of Record: Mr William L Barringer

The Authemicity of this centifications combower fied or would

This is to certify that

GINA K DENTEN

tos demonstrated knowledge and ability by
the schill completing the ACI Certification
requirements and is hereby recognized as an

ACI Aggregate Testing Technician - Level 2

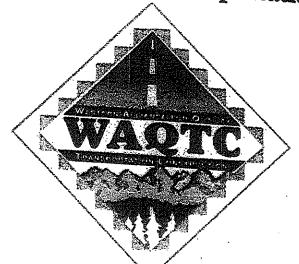
Certified Date: 03/06/2012 - Expires: 03/06/2017

Framiner of Record: Ms Janet O White

ACI Mininging Director of Counticanne

The Authorities of this certification can be verified at trust ACR entireation or storifi





Qualification Certificate Gina Denten

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 3/26/2015

AUTHORITY

See the WAQTC web site at http://www.waqtc.org for information on this qualification.

This is to certify that

CRAIG E CAMPBELL

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 02/18/2017

Expires: 02/18/2022

Examiner of Record: Mr George A Madrid

ACI Managing Director of Certification

This is to certify that

CRAIG E CAMPBELL

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Strength Testing Technician

Certified Date: 04/09/2016

Expires: 04/09/2021

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

This is to certify that

CRAIG E CAMPBELL

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/09/2016

Expires: 04/09/2021

Examiner of Record: John W Nehasil

ACI Managing Director of Certification

This is to certify that

CRAIG E CAMPBELL

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/09/2016

Expires: 04/09/2021

Examiner of Record: Mr William Barringer

ACI Managing Director of Certification

Western Alliance For Quality Transportation Construction



Qualification Certificate Craig Campbell

has completed the qualification requirements for Embankment & Base Testing Technician

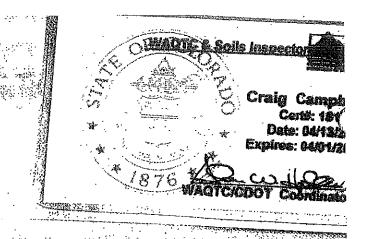
sponsored by the Colorado Department of Transportation

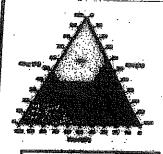
DATE 3/2/2017

AUTHORITY

Christoph P. Rigel.

See the WAQTC web site at http://www.waqtc.org for information on this qualification. Qualification Expires Five Years from Date





CDOT Soil Inspector



Soils Technician

Rocky Mountain Asphalt Education Center

Asphalt Technician Certification Program

This certifies that

Craig Campbell

has successfully completed

Certification Level A – Laydown

Certification Level B – Plant Materials Control

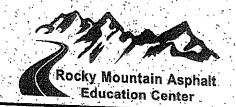
Thomas J. Clayton, SHT

Director of Training and Member Services

Expiration Date: March 2018



DEPARTMENT OF TRANSPORTATION





U.S. Department of Transportation

Federal Highway Administration Western Alliance For Quality Transportation Construction



Qualification Certificate Michael Scott Vandervert

has completed the qualification requirements for	Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 8/25/2016

AUTHORITY

Christoph P. Nemel

See the WAQTC web site at http://www.waqtc.org for information on this qualification. Qualification Expires 3 Years from Date

This is to certify that

MICHAEL S VANDERVERT

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/14/2016

Expires: 05/14/2021

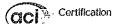
Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

ACI Concrete Field Testing Technician - Grade I

MICHAEL S VANDERVERT

Certification ID #01366660 Expires on: 05/14/2021



Verify at CheckACI.org





American Concrete Institute Always advancing

Home > Certification > Verify A Certification

Verify A Certification

SEARCH RESULTS

Name: manchester

Your search returned 1 record.

Manchester, Don J

ACI CONCRETE FIELD TESTING TECHNICIAN - GRADE I

Expires: February 21, 2020 Farmington, NM 87401-2306

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Concrete International Product Guide

ACI Concrete Specification Center





6880 South Yosemite Court, Suite 110, Centennial, Colorado 80112 PHONE (303) 741-6148 ext 154, FAX (303) 741-6146, EMAIL: rmaec@co-asphalt.com

September 27, 2017

Don J. Manchester Trautner Geotech 649 Tech Center Drive Suite A Durango, CO 81301

Dear Don J.,

You have successfully completed the LabCAT Program. Please remove the wallet card from the perforated section of this document and retain for your records.

Levels of Certification: AB
Certification Issue and Expiration Date: 9/27/2017 to 9/27/2020

It is your responsibility to keep your certification current. To prepare for your re-certification the RMAEC recommends scheduling 3-4 months prior to the expiration date. As per CDOT specifications, Technicians are required to have current certification for CDOT Projects.

Thank you for attending.

Pom Clay ton

Sincerely,

Tom Clayton
Director of Training and Member Services
Enclosures

Don J. Manchester

LabCAT Certification: Level AB Expiration Date: 9/27/2020

LABCAT CERTIFIED





Rocky Mountain Asphalt Education Center

Asphalt Inspector Certification Program

This certifies that

Don J. Manchester

has successfully completed

Certification Level I

Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018







Federal Highway Administration

This is to certify that

GREGORY AJADRYCH

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/11/2015

Expires: 04/11/2020

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

This is to certify that

GREGORY A JADRYCH

has demonstrated knowledge and ability by successfully completing the ACL Certification requirements and is hereby recognized as an

ACI Concrete Strength Testing Technician

Certified Date: 04/11/2015

Expires: 04/11/2020

Examiner of Record: Mr William L Barringer

ACI Managing Director of Gertification

Rocky Mountain Asphalt Education Center

Asphalt Technician Certification Program

This certifies that

Reed Tsosie

has successfully completed



Certification Level E - Aggregates

Thomas J. Clayton, SET Director of Training and Member Services

Expiration Date: April 1, 2019



Federal Highway

U.S. Department of Transportation



Rocky Mountain Asphalt Education Center

Asphalt Inspector Certification Program

This certifies that

Reed Tsosie

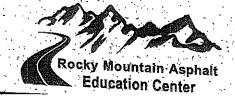
has successfully completed

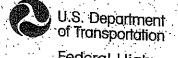
Certification Level I

Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018







Federal Hinhway

Rocky Mountain Asphalt Education Center Asphalt Technician Certification Program

This certifies that

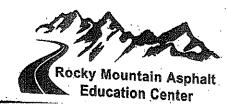
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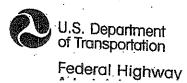
has successfully completed

Certification Level A – Laydown
Certification Level B – Plant Materials Control
Certification Level C – Volumetrics and Stability

Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018





Level A – Laydown int Materials Conirol unetries & Stability pries: March 2018

y u.s. Depointment of Topisopholion Federic Highwoy Administration







DEPARTMENT OF TRANSPORTATION

Western Alliance For Quality Transportation Construction





WAQTC/Soils Inspector





Herbert R. Tsosie Cert# 180,368 Date: 03/02/2017 Expires: 03/31/2022

Christoph P. Rosell

CDOT/WAQTC Coordinator

Qualification Certificate

Herbert R. Tsosie

has completed the qualification requirements for	Embanhania (C. T.)
and death reduition reduitements for	LIDDAUKMENT & Base Testing Technician
-	TOUR TENEDS TO THE TENEDS TO T

sponsored by the Colorado Department of Transportation

DATE 3/2/2017

AUTHORITY

Christoph P. Russell

See the WAQTC web site at http://www.waqtc.org for information on this qualification Qualification Expires Five Years from Date

This is to certify that

REED TSOSIE

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 02/18/2017

Expires: 02/18/2022

Examiner of Record: Mr George A Madrid

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification .org/verify

This is to certify that

REED TSOSIE

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/08/2017

Expires: 04/08/2022

Examiner of Record: John W Nehasil

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification .org/verify

This is to certify that

REED TSOSIE

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Aggregate Testing Technician - Level 1

Certified Date: 04/08/2017

Expires: 04/08/2022

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

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has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Strength Testing Technician

Certified Date: 04/08/2017

Expires: 04/08/2022

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification.org/verify





Reinforced Concrete Special Inspector



Candidate ID:

ICC00227441

Name:

Jordan Townsend

Date:

4/23/2014

Address:

649 Tech Center Drive

Durango

CO

81301

EXAMINATION RESULT: Pass

Congratulations! You have passed the Reinforced Concrete Special Inspector examination. When all requirements have been met, ICC will forward you the certificate and wallet card.

You may request a certificate of completion from ICC. This certificate of completion will be provided at no cost to you, if you request it within 90 days of your exam. Only one certificate of completion will be provided to you at no charge. For more information on requirements to obtain your wallet card and to request a certificate of completion, go to www.iccsafe.org/inspector.

It is extremely important that you notify Pearson VUE and ICC of any changes in name and/or address to avoid the possibility of your certificate not being received. Please contact Pearson VUE at 800-275-8301 and ICC at certexam@iccsafe.org with changes to your name and address. There may be an additional fee if a certification is re-issued due to a misspelled name or incorrect address.

Western Alliance For Quality Transportation Construction



Qualification Certificate

Jordan Townsend

has completed	the qualifies	fion money	والمنافعة المنافعة	1				
has completed	daminic	mon reduit	ements to	Lmba	nkment d	Rase T	estino.	lack wint.
			- 25 - 14) - 1		the second of the first		# endormage	

sponsored by the Colorado Department of Transportation

DATE 4/8/2014

AUTHORITY

Christo P. Regell

See the WAQTC web site at http://www.waqte.org for information on this qualification.

Qualification Expires 3 Years from Date

This is to certify that

JORDAN M TOWNSEND

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

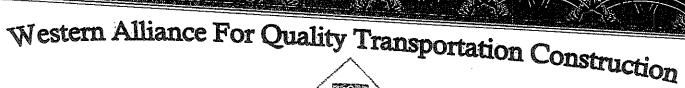
ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/11/2013 Expires 05/11/2018

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

The Authenticity of this certification can be verified at whim ACIC erification savely verify





Qualification Certificate

Jason Center

has completed the qualification requirements for Embankment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 4/30/2015

AUTHORITY

See the WAQTC web site at http://www.waqtc.org for information on this qualification.

Qualification Expires 3 Years from Port

This is to certify that

JASON W CENTER

0.4936

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 04/18/2014

Expires: 04/18/2019

Examiner of Record: Michael Berry

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification .org/verify

This is to certify that

JASON W CENTER

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Laboratory Testing Technician - Level 1

Certified Date: 04/11/2015

Expires: 04/11/2020

Examiner of Record: John W Nebasil

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification .org/verify

This is to certify that

JASON W CENTER

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Aggregate Testing Technician-Level 1

Certified Date: 04/11/2015

Expires: 04/11/2020

Examiner of Record: Mr William E Barringer

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACIC extification organisty

This is to certify that

JASON W CENTER

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Strength Testing Technician

Certified Date: 04/11/2015

Expires: 04/11/2020

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACIC estification organify

Rocky Mountain Asphalt Education Center Asphalt Technician Certification Program

This certifies that

Jason Center

has successfully completed

Certification Level A - Laydown

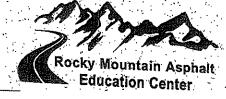
Certification Level B - Plant Materials Control

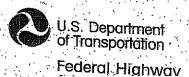
Certification Level C - Volumetrics and Stability

Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018







Rocky Mountain Asphalt Education Center

Asphalt Inspector Certification Program

This certifies that

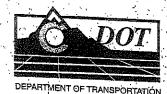
Jason Center

has successfully completed

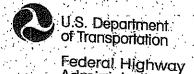
Certification Level I

Thomas J. Clayton, SET
Director of Training and Member Services

Expiration Date: March 2018







This is to certify that

PHILLIP M KIBEL

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 09/10/2016

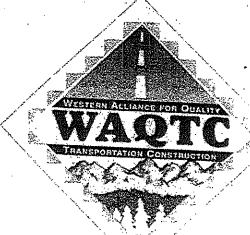
Expires: 09/10/2021

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification .org/verify

Western Alliance For Quality Transportation Construction



Qualification Certificate Phillip Kibel

has completed the areas	•
has completed the qualification requirements for	r Pmhanland on
has completed the qualification requirements fo	Lunaukment & Base Testing Technician

sponsored by the Colorado Department of Transportation

DATE 3/2/2017

AUTHORITY

Christoph P. Runell

See the WAQTC web site at http://www.waqtc.org for information on this qualification. Qualification Expires 3 Years from Date

This is to certify that

CONNOR S DELEON

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/13/2017

Expires: 05/13/2022

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification .org/verify

This is to certify that

ANDREW M RAMSEY

has demonstrated knowledge and ability by successfully completing the ACI Certification requirements and is hereby recognized as an

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/13/2017

Expires: 05/13/2022

Examiner of Record: Mr William L Barringer

ACI Managing Director of Certification

The Authenticity of this certification can be verified at www. ACICertification.org/verify

19219-203-1

COLORADO DEPARTMENT OF FIELD REPORT FOR S				Region 5		sheet#_266294
OR MATERIALS DOC				19219		3-20-18
•		_	/	Project No. STE C46	30-008	
Metric units	yes	7	no	Project Location		spen Village DrS.U.P.
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Material Code (LIMS)	1tem 203		Class	Grading	Spec	ial Provisions yes
Previously used on Project No.:	,		Previous CDOT Form	#157 F/S No.(s):		CDOT Form #633 (sack) CDOT Form #634 (can)
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Supervisor (Pro./Res./Mails. Engr/Maint. Supt.) WINCE DAVIS PE	(print name)	Titl	ESIDENT-DI	. Re	sidency	

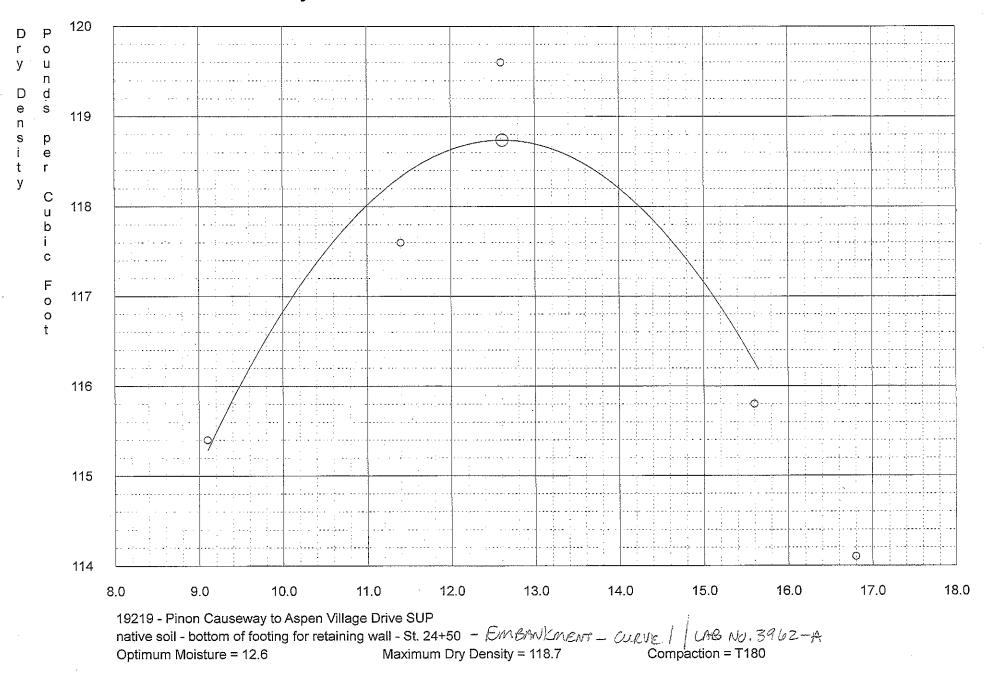
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(submit white copy only if sample or information is directed to Staff Materials)
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Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.

CDOT Form #157 3/15

Moisture Density Curve



Soils Curve Program Version 1.10

19219 - Pinon Causeway to Aspen Village Drive SUP native soil - bottom of footing for retaining wall - St. 24+50

Percent #10 92.0 Percent #40 88.0 Percent #200 81.00 Compaction T180 Liquid Limit 43
Plastic Index 24
Bulk Sp. Gr.
Absorption

Soil Classification A-7-6(19)

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Trial No.	Sample mass	Water added	Moisture samples	Percent moisture	Compacted wet mass		□ Kg/m³	Sieve anal	ysis of - #4		***************************************
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COLORADO DEPARTMENT OF TRANSPORTATION SIEVE ANALYSIS FOR AGGREGATES NOT SPLIT ON THE NO. 4 SIEVE Pinon CAUSEWAY FINANCE STE CHBO-OOD CONTract ID 19219 Project Location: Pagasa Source - PC TO AVID SUP Pit Name: nativo - ST. 24 + 400 1 203 8 NIA Material EMBANEMENT

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1"					1"				
3/4"	0	0	100		3/4"				
1/2 ⁿ	9,7	0.5	79,5		1/2"				
3/8"	96.7	N. E.A	198.6		3/8"				
#4	146.5	5.4	194,6	¹ 2 ∀ ⁴ €	#4				
#8 / #10	153.4	¥38,4	92.7		#8 / #10				
#16	200.3	10,80	89,81		#16				
#30 / #40	240.1	13,0,	87.8	1	#30 / #40				
#50	275,7	149	86.0		#50				
#100	3 <i>2</i> 7, &	16.6	GJ, I		#100				
#200	394.4	20.1	77,9		#200				
Pan	438,7	(Dry Wt, Life	(Dry.W	.) = % Diff.	Pan		(Dry Wt	ΓSW)÷(Dry W	i.) = % Diff.
- #200	1526.3	[after wash] , みっ タ カ	30 K - 1120.	4 2006色 100) =%	-#200		[after wash]		
TSW	438,7		20:) 7 (<u>770</u>)	100) =	TSW		<u> </u>)÷()	(100) =%
<u>-</u>	Gradation S	Sample	Moisture	e Sample	·	Gradation	Sample	Moistur	e Sample
Pan ID:					Pan ID:				
Wet Wt. + Pan	676/6	7.4	orto c	Mar F	Wet Wt. + Pan				
Dry Wt. + Pan:	246	5:0	all de	7%9	Dry Wt. + Pan:				
Pan Wt:	(Sign C	11. 1		> 7,5	Pan Wt:				
Wet Wt.	A ÉRA	Wolf !	******	*******	Wet Wt.	A		************	
Dry Wt.		4, 7/	19	24. 4 1	Dry Wt.	В			
Washed Dry Wt. and pan		Sect.	H ₂ O Loss /	w <i>a.</i> 87	Washed Dry Wl. and pan			H₂O Loss	
	1 ed /526.3	433,4	% H₂O	905	-#200 Mat' Lost Seive	l ed		% H₂O	
	Vet Weight : (100		100 = Dry Wei)ht	V	Vet Weight ÷ (1	00 + % H ₂ O) x	100 = Dry Wei	ght
	′÷ (100+	705) x 100 = B	1968.81	Α	÷ (100 +) x 100 = B	
Sampled By	Q42G5 C	sted By Seet Jaa	tych !	Crais Carabell	Sampled By		Tested By	į.	π̂ >

COOT Project No. STE-C400-000/ TRAUTNER CETOIEGIE Atterberg Limits - ASTM 4318 -ROJECT: Pinon CAUSEWAY PROJECT#: 54748 at mt Date: July 07,2017 Lab Number: 3962 - A SAMPLE DESCRIPTION: Brown clay SOURCE: 1105770 LOCATION: Belt Sample, On-site Stockpile, Stockpile at Pit, Sample Prep : Wet or Dry (see ASTM) Windrow, Loose In-place, Test Bore, Other: _ _ // "neg fuchy A Date: 07/10 Tested By: Nas Placky cle Moisture Condition By: **Liquid Limit Determination** Minimum 3 Trials Required Blows 15 - 25 20 - 30 25 - 35 $LL = W\% \left(\frac{N}{25}\right)$ Can Number 4% Wt. of Wet Soil + Can 26.55 25.85 25.99 Liquid Limit: 43 છેએ. છેક 22.39 Wt. of Dry Soil + Can 22.63 Wt. of Can 14,60 14,27 14.60 8,03 Wt. of Dry Soil 8.12/ Plastic Limit: /9 8.231 3,721

OS Francisco	the same and the s	L	<u>iquid Limit</u>	L/0101	1 1 1 1 1 1 1 1 1 1 1	1 1	
· ·	granacoji njegova sa ugjanjoji ga karampinja nakali na majeja je						
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42.6 7

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#1.8

Plastic Limit Determination	M	linimum 3 Tria	als	.]	
Can Number:	B	(A)			
Wt. of Wet Soil + Can	26,06	25,43			
Wt. of Dry Soil + Can	24,24	3.73			
Wt. of Can	14.55	14.61			
Wt. of Dry Soil	9,691,	9.12			
Wt. of Moisture	1,827	1.70/	,		
Water Content, w%	18.8	18,61			

Classification A-7-6(19)

Plasticity

Index: 🐟

cales. I by Craix Campbell amarks:

Wt. of Moisture

No. of Blows, N

Water Content, w%

COLORADO DEPARTMENT			FEART	 HWORK		and the second second	Region			Field shee	31	228/
	•						Contract ID	Ì	•	Date Sub	nitted 9 - 17	
Item#_20 <u>3</u>	□ Sta	andar	d (AASHTO	T 99)	ne i e u mag tra e muse muse, i de e digement est grade (de la faction). De	and the second of the second of the	Project No. STE 480-6					AND THE PLANE
User ID	■ Mo	dified	OTHRAA)	T 180)			Project Location PA 405A SP		PINON ASPEN	CAUSE	uag e dei	10 - S.U.P
SMM/LIMS Sample ID (or Test # [Date])	Station or Location	ΙA	Sulfate % or class	Chloride	Resist- ivity	рН	AASHTO Classification	Plus #4 matl. %	Relative compaction %	Moist Opt.	ure % In-place	*Cubic yards (m³) represented
QAE1 8-11-17	24+58, CL						A-7-6(19)	45%	93	12.6	15,0	1000
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Remarks										Shee	t Total	-0:00 1000
4 PER PRODECT PLA MIN, RELATIVE CO	N SET SHEET	3,	EMBANK	MENT N	ज€8 I)	_	Final report 🕱 ye:	s 🔲 no	Total quar	ntity tested		000 CY V
MIN, RELATIVE CO	mPACFION 90%	M	ODIFIED	PROCTO	a-'		Project Tester (print EQIC HOWE	name)	(final repo	Title		TESTER
							Distribution: White - Region project Yellow - Region Materi	fîle	* Cu (use	bic yards (		ented are estimated uare yards (m²) for

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comment of the	O DEPARTI	82 E-101 (-97)	MAINOL OL	# 1 1 6 1 1 6 5 1 6 6 F F F F F F F F F F F F F F F F F	1 STE 4	180-081	5	19219
	ICLEAR SOILS			AND	Project Location			
and the second s	P 25 PERCENT		The state of the s	on the comment of the	Control of the contro	Causukiy	ang a sang ang ang ang ang ang ang ang ang ang	and the second s
Pit Name NIA	Material EmBA		Class		1tem 203		Date 7 *	11-17
ample ID (Test#)			Tested by (print				<u> </u>	1
O.F			Eric Ho			24+58		t sub
auge ID <u> </u>	Moisture Standard も当り		Density Standard		Transmission	f ε	Soil Classific	6[19]
urve No. IMB - CULVE	Maximum Dry Den		Optimum Moist	L 12.6	AASHTO T99 o	(1180)	Method A of ME1けの	- 1000-01
auge Reading	Moisture	Field Test D	Den Den	osity		M/D G Wet Soil v	auge Moist vt. + pan	ure Check
.) % Moisture	15.4	Wet Dens.	128.2	Dry Dens.	m.1	Dry Soil	wt. + pan	
) % Moisture	14.8	Wet Dens.	128,1	Dry Dens.	111,6		Pan w	t.
) % Moisture	14,9	Wet Dens.	128.0	Dry Dens.	111.4		Dry soil w	t.
) % Moisture	4,9	Wet Dens.	127.1	Dry Dens.	111,3		Water w	t.
Average	15.6/	Average	125,1	Average	111,4	% м	oisture =	Approximate the particle of
	Calculati	ons for Percer	nt Rock [Plus#	4 (Method A) Oven Dried	or 3/4 inch (	Method D)]		
y wt. of rock		÷ Dry wt. total		Oven Dried	:	% Rock &		% Soil
			Method B - Us	sing Gauge MC		· · · · · · · · · · · · · · · · · · ·		
ISUAL WA	et weight of rock -		÷ (1+	a	hsorntian ± 10	0)= dry weight	rock	
C 42	-				propherent and	o/- dry weight	OCK	
=	et weight of soil -		÷ (1+	•	1/D Gauge MC	÷ 100)= dry wt.	soil	
COANSE MA-YE wt. of rock + (Dr	et weight of soil — (((aL) y wt. of rock + Dry	wt. of soil) X 10	-	•	1/D Gauge MC	÷ 100)= dry wt. % Rock &	soil	% Soil
COANSE MA-W	et weight of soil — (\{a\) y wt. of rock + Dry	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-	N	Qian and Management and State Control		soil	% Soil
COMMSE MAYE wt. of rock ÷ ( Dr	y wt. of rock + Dry	Rock	0% =	nula and Calcul	lations	% Rock &	soil	% Soil
wt. of rock ÷ ( Dr	y wt. of rock + Dry [( % Soi For A	Rock of the Rock o	00% = Correction Formulative of Soil) + ( %	nula and Calcul	lations 2.4 x Sp Gr Roc	% Rock &	soll	
vwt. of rock ÷ ( Dr % Soil_	y wt. of rock + Dry [( % Soi For A.	Rock of the Rock o	Correction Form sity of Soil) + ( % = 0,90 For AA Maximum	nula and Calcul 6 Rock x CF x 62 SHTO T180, CF Dry Density of	lations 2.4 x Sp Gr Roc = 0.95 soil =	% Rock &	soil	Correcte
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Townstone Goolech Aroject No. 54748 mt

COLORAD	O DEPART	MENT OF T	<b>TRANSPOF</b>	RTATION	Project No.	r-008)	Region	Contract ID
	CLEAR SOILS			AND	Project Location	on .	<u> </u>	
Pit Name	P 25 PERCENT	RELATIVE C	OMPACTION Class	· · · · · · · · · · · · · · · · · · ·	ltem	Causewal		
NIA	EMANEMENT	- NATIVE	NIA			TO 601-WATE	Date	10-17
Sample ID (Test #)  INF() () i	VU		Tested by (print	name) HOWG-S		Station/offset	Elevation /	
Gauge ID 28771	Moisture Standard	Count	Density Standard		Transmission.	Depth, in.	Soli Çlassifica	
Curve No. 3962-A	Maximum Dry Den	118.7	Optimum Moist	<del></del>	AASHTO T99 o	Ť180	Method A of	
EMBANKMENT		Field Test E	Data	12,6			auge Moist	ure Check
Gauge Reading (1) % Moisture	Moisture よのチ	Wet Dens.	125.1	sity	103.6	Wet Soil ۱ ادامان	•	<del></del>
(1) % Moisture (2) % Moisture	71.4	Wet Dens.	125.3	Dry Dens. Dry Dens.	103.2	Dry Soil	wt. + pan	. ——
(3) % Moisture	21.2	Wet Dens.	125.9	Dry Dens.	103,7		Pan w Dry soil w	
(4) % Moisture	215	Wet Dens.	195.6	Dry Dens.	103,4		Water w	
Average	21.2/	Average	123.5	/ Average	103,5	√ %M	oisture =	
	Calculati	ons for Perce	nt Rock [Plus #	4 (Method A)	or 3/4 inch (	Method D)]		
				Oven Dried				
Dry wt. of rock	<del>,                                      </del>	÷ Dry wt. tota		= sing Gauge MC		% Rock &		% Soil
	······································	•	÷ (1+					
	t weight of rock –	<u>.                                      </u>	÷ (1÷	•	bsorption ÷ 10	•		
W ory wt. of rock ÷ ( Dr	et weight of soil —	unt of call V 10			I/D Gauge MC	÷ 100)= dry wt. % Rock &	. soil	% Soil
NY WE DITUER TIDI	W. OITOCK + DIV		Correction Forn	oula and Calcul	ations			· · · · · · · · · · · · · · · · · · ·
	Ií % Soi		nsity of Soil) + ( 9		1 2	()] ÷ 100		
	•	ASHTO T99, CF		ISHTO T180, CF	-			
% Soil	X	<del> </del>		Dry Density of				Corrected Maximum
% Rock	x	x		Specific Gravit	y of Rock = Sum =	<del></del> `.	100'-	Dry Density
					3um =		100'=:	
	Optimum M	oisture Correct	ion Calculations	•	• [	1 Point Moi		mination
[(%	Soil x OMC of Soil	l) + ( % Rock x A	bsorption of Roc	k)] ÷ 100	•	Wet Soil wt. Dry Soil wt		
% Soil	х					DI Y 3011 W(	Pan wt.	
% Rock			Optimum MC of				Dry soil wt.	
			Absorption o	fRock≃ Sum =			Water wt.	<del></del>
	Corrected Optin	num Maisture	Content %	÷ 100 =		% Mois		
	corrected open		eck Compaction	Cylinder Dens	ity Data			
Gross wt.		Volume of		•				. [
- Tare.wt.			Wet Density	Mo	isture Content	,	ַם	ry Density
Net wt.	÷	=		÷ (1	00+	%H2	O)x100=	
eld Dry Density <u>(</u> Spec	_	441) (c	rcent Compactio Corrected Maximur or (Curve Maxim 2, 63,70 15	n dry density) x num Dry Dens) >	100=	% Rela 97.2	itive Compact	ion 6/3 (
narks: calcs, V	ly Craig Can	opbell		g grannen mil Volenia a militaria y 1955 g il 1852 — mara			V. S.	
B0170m 0	FOOTING	FUR-RE	7AINING U	JAW-5	EE Gam	413		

COLOBAD	O DEPART	RENT OF			ech Project No.		Region	Contract
					STE CHE		5_	19219
	ICLEAR SOILS P 25 PERCENT			AND	Project Location	on Causeur	TO AVO	SUP
it Name	Material	or Marie	Class		item INCIDE	NTAL	Date	
NIA- ample ID (Test#)	Embaniame	M-IVANE	M/A Tested by (print na	amel	TO ITEM (	Station/o	ffset Elevation	0-17
+(4,)	INPO UNU	4	ERK HOW			124+4	7 51	selon du
augge ID 7771	Moisture Standard	Count	Density Standard C	Count	Transmission	Depth, in.	Soil Class	fication
urve No. 3962-A	Maximum Dry Der	118.7	Optimum Moistur		AASHTO T99 c	0 or T180	Method A	- 6 (19) or \$5 ³
EMBANIOME		Field Test D	ata	and the same of th	.1	M	/D Gauge Mo	isture Check
auge Reading ) % Moisture	19/1	Wet Dens.	Densi	_	laid	1	Soil wt. + pan	
) % Moisture	18.4	Wet Dens.	1.0.0	Dry Dens. Dry Dens.	100.8	Dry	Soil wt. + pan	
) % Moisture	18.5	Wet Dens.	-//	Dry Dens.	100.5		Pan Dry soil	
% Moisture	14.6	Wet Dens.	1100	Dry Dens.	99.16		Water	
Average	19.1	Average	110,0/	Average	99,9,		% Moisture =	
	Calculati	ons for Percer	nt Rock [Plus #4 Method A - C		or 3/4 inch (	Method I	)]	
wt. of rock		÷ Dry wt. total		= =		% Rock 8	<u> </u>	% Soil
			Method B - Usir	ng Gauge MC				
\ <b>\</b> /e		•	÷ (1+					
***	t weight of rock -			al	propertion $\div 10$	0}= drv we	ieht rock	
	et weight of rock — et weight of soil —		÷ (1+		osorption ÷ 10 /D Gauge MC	-	-	
w	_		÷ (1+		/D Gauge MC	-	y wt. soil	% Soil
w	et weight of soil -	wt. of soil) X 10	÷ (1+	M	/D Gauge MC	÷ 100)= dr	y wt. soil	% Soil
w	et weight of soil — y wt. of rock + Dry [( % Soi	wt. of soil) X 10 Rock (	÷ (1+  0% =  Correction Formu  sity of Soil) + ( % F	la and Calcul	/D Gauge MC	÷ 100)= dr % Rock 8	y wt. soil	% Soil
w	et weight of soil — y wt. of rock + Dry [( % Soi	wt. of soil) X 10	÷ (1+  0% =  Correction Formu sity of Soil) + (% F	M la and Calcul Rock x CF x 62 HTO T180, CF	/D Gauge MC ations .4 x Sp Gr Rock = 0.95	÷ 100)= dr % Rock 8	y wt. soil	`
Wt. of rock ÷ ( Dr	et weight of soil — <u>y wt. of rock + Dry</u> [( % Soi For A	wt. of soil) X 10 Rock (	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASI  Maximum Dr	la and Calcul Rock x CF x 62	/D Gauge MC ations .4 x Sp Gr Rock = 0.95 oil =	÷ 100)= dr % Rock 8	y wt. soil	Correcte
W wt. of rock ÷ ( Dr % Soil_	et weight of soil — y wt. of rock + Dry [( % Soi For A	wt. of soil) X 10 Rock of X Max dry den ASHTO T99, CF =	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASI  Maximum Dr	Ila and Calcul Rock x CF x 62 HTO T180, CF ry Density of s	/D Gauge MC ations .4 x Sp Gr Rock = 0.95 oil =	÷ 100)= dr % Rock 8	y wt. soil	Correcte Maximu
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Wt. of rock ÷ ( Dr % Soil _ % Rock _	et weight of soil — y wt. of rock + Dry  [( % Soi For A X  Optimum M	wt. of soil) X 10 Rock of X Max dry den ASHTO T99, CF = X	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASi  Maximum Dr  Si  on Calculations	lla and Calcul Rock x CF x 62 HTO T180, CF ry Density of s pecific Gravity	/D Gauge MC  ations .4 x Sp Gr Rocl = 0.95 oil = y of Rock =	÷ 100)= dr % Rock 8 k)] ÷ 100	y wt. soil	Correct Maximu Dry Dens
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Wt. of rock ÷ ( Dr % Soil _ % Rock _	et weight of soil — y wt. of rock + Dry  [( % Soi For A X  Optimum M	wt. of soil) X 10 Rock ( I x Max dry den ASHTO T99, CF =  X  oisture Correction) + { % Rock x Ab	÷ (1+  0% =  Correction Formu sity of Soil) + (% F = 0.90 For AASI Maximum Dr Si  on Calculations	la and Calcula Rock x CF x 62 HTO T180, CF ry Density of s pecific Gravity	/D Gauge MC  ations .4 x Sp Gr Rocl = 0.95 oil = y of Rock =	÷ 100)= dr % Rock 8 k)] ÷ 100	÷ 100 =  Moisture Det	Correcto Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil _ % Rock _	et weight of soil — y wt. of rock + Dry  [( % Soi For Ax x  Optimum Mo	wt. of soil) X 10 Rock ( I x Max dry den ASHTO T99, CF =  X  oisture Correction) + { % Rock x Ab	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASI Maximum Dr S  on Calculations  osorption of Rock)	la and Calcular Rock x CF x 62 HTO T180, CF by Density of specific Gravity	/D Gauge MC  ations .4 x Sp Gr Rocl = 0.95 oil = y of Rock =	÷ 100)= dr % Rock 8 k)] ÷ 100	÷ 100 =  Moisture Det il wt. + pan il wt. + pan	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil	et weight of soil — y wt. of rock + Dry  [( % Soi For A X  Optimum M Soil x OMC of Soil	wt. of soil) X 10 Rock ( I x Max dry den ASHTO T99, CF =  X  oisture Correction) + { % Rock x Ab	÷ (1+  0% =  Correction Formu sity of Soil) + (% F = 0.90 For AASI Maximum Dr Si  on Calculations	la and Calcular Rock x CF x 62 HTO T180, CF by Density of specific Gravity   ÷ 100   =	/D Gauge MC  ations .4 x Sp Gr Rocl = 0.95 oil = y of Rock =	÷ 100)= dr % Rock 8 k)] ÷ 100	÷ 100 =  Moisture Det il wt. + pan Pan wi	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil _ % Rock _ [( % : % Soil _ % Rock _	et weight of soil — y wt. of rock + Dry  [( % Soi For A X  Optimum M Soil x OMC of Soil	wt. of soil) X 10 Rock ( Rock ( X Max dry den ASHTO T99, CF =  X  oisture Correction () + { % Rock x Ab	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASI Maximum Dr  Si  on Calculations  osorption of Rock)  Optimum MC of So  Absorption of F	la and Calcular Rock x CF x 62 HTO T180, CF by Density of specific Gravity	/D Gauge MC  ations .4 x Sp Gr Rocl = 0.95 oil = y of Rock =	÷ 100)= dr % Rock 8 k)] ÷ 100 1 Point Wet Soi Dry So	÷ 100 =  Moisture Det il wt. + pan il wt. + pan Pan wt Dry soil wt	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil % Rock [( %: % Soil % Rock	et weight of soil — y wt. of rock + Dry  [( % Soi For A X  Optimum M Soil x OMC of Soil X X	wt. of soil) X 10 Rock of Rock of X Max dry den ASHTO T99, CF =  X  oisture Correction ) + ( % Rock x Ab	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASI Maximum Dr  Si  on Calculations  osorption of Rock)  Optimum MC of So  Absorption of F	la and Calcula Rock x CF x 62 HTO T180, CF ry Density of s pecific Gravity  ] ÷ 100  oil =  Sock =  Sum =  ÷ 100 =	/D Gauge MC  ations .4 x Sp Gr Rock = 0.95 oil = y of Rock = Sum =	÷ 100)= dr % Rock 8 k)] ÷ 100 1 Point Wet Soi Dry So	÷ 100 =  Moisture Det il wt. + pan Pan wt Dry soil wt Water wt	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil _ % Rock _ [( % % Soil _ % Rock _	et weight of soil — y wt. of rock + Dry  [( % Soi For A X X   Optimum M Soil x OMC of Soil  x X  Corrected Optim	wt. of soil) X 10 Rock of Rock of X Max dry den ASHTO T99, CF =  X  oisture Correction  1 + { % Rock x Ab  1 Point Che  Volume of	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASI Maximum Dr  S  on Calculations  oscrption of Rock)  Optimum MC of So Absorption of F  Content, %	la and Calcula Rock x CF x 62 HTO T180, CF ry Density of s pecific Gravity  ] ÷ 100  oil =  Sock =  Sum =  ÷ 100 =	/D Gauge MC  ations .4 x Sp Gr Rock = 0.95 oil = y of Rock = Sum =	÷ 100)= dr % Rock 8 k)] ÷ 100 1 Point Wet Soi Dry So	÷ 100 =  Moisture Det il wt. + pan Pan wt Dry soil wt Water wt	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil % Rock (( % % Soil % Rock Gross wt. - Tare.wt.	et weight of soil — y wt. of rock + Dry  [( % Soi For A X  Optimum M Soil x OMC of Soil  X  X  Corrected Optim	wt. of soil) X 10 Rock of X Max dry den ASHTO T99, CF =  X  oisture Correction  Y Rock x Ab  1 Point Che  Volume of	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASI Maximum Dr  Si  on Calculations  assorption of Rock)  Optimum MC of So  Absorption of F	la and Calcular Rock x CF x 62 HTO T180, CF by Density of specific Gravity    ÷ 100     =	/D Gauge MC  ations .4 x Sp Gr Rock = 0.95 oil = y of Rock = Sum =	÷ 100)= dr % Rock 8 k)] ÷ 100 1 Point Wet Soi Dry So	÷ 100 =  Moisture Det il wt. + pan Pan wt Dry soil wt Water wt	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil _ % Rock _ [( % % Soil _ % Rock _	et weight of soil— y wt. of rock + Dry  [( % Soi For A X  Optimum M Soil x OMC of Soil  X X  Corrected Optim	oisture Correction  The Point Check of the Mold  The Rock of the R	÷ (1+  0% =  Correction Formu sity of Soil) + (% F  0.90 For AASI Maximum Dr  S  on Calculations  oscrption of Rock)  Optimum MC of So Absorption of F  Content, %	la and Calcular Rock x CF x 62 HTO T180, CF by Density of specific Gravity    ÷ 100     =	Ations  .4 x Sp Gr Rock  = 0.95  oil =	÷ 100)= dr % Rock 8 k)] ÷ 100 1 Point Wet Soi Dry So	÷ 100 =  Moisture Det il wt. + pan Pan wt Dry soil wt Water wt	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil % Rock [( % % Soil % Rock Gross wt. - Tare.wt. Net wt.	et weight of soil— y wt. of rock + Dry  [( % Soi For A X X  Optimum M Soil x OMC of Soil X X  Corrected Optim	oisture Correction  Point Che Volume of Mold  Percentage  Percentage  Percentage  Percentage  Percentage  Percentage  Percentage  Rock v Ab  Octobre Correction  A Point Che Volume of Mold  Percentage  Percentag	÷ (1+  0% =  Correction Formu sity of Soil) + (% F 0.90 For AASI Maximum Dr S  on Calculations  escrption of Rock)  Optimum MC of So Absorption of F  Content, %  eck Compaction C  Net Density	la and Calcula Rock x CF x 62 HTO T180, CF ry Density of s pecific Gravity  ] ÷ 100  oil = Rock = Sum = † 100 =  cylinder Densi  Moi † (10  calculation	Ations  .4 x Sp Gr Rock = 0.95  oil =	÷ 100)= dr % Rock 8 k)] ÷ 100 1 Point Wet Soi Dry So	÷ 100 =  Moisture Det il wt. + pan Pan wi Dry soil wt Water wt Moisture =	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil % Rock [( % % Soil % Rock Gross wt. - Tare.wt. Net wt.	et weight of soil— y wt. of rock + Dry  [( % Soi For A X  Optimum M Soil x OMC of Soil  X X  Corrected Optim	oisture Correction  Point Che Volume of Mold  Percentage  Percentage  Percentage  Percentage  Percentage  Percentage  Percentage  Rock v Ab  Octobre Correction  A Point Che Volume of Mold  Percentage  Percentag	÷ (1+  0% =  Correction Formu sity of Soil) + (% F 0.90 For AASI Maximum Dr Si  on Calculations  escription of Rock)  Optimum MC of So Absorption of F  Content, %  eck Compaction Corrected Maximum of Source Maximum Corrected Max	la and Calcula Rock x CF x 62 HTO T180, CF ry Density of s pecific Gravity  ] ÷ 100  oil = Rock = \$um = † 100 =  cylinder Densi  Moi † (10  calculation dry density) x 1	/D Gauge MC  ations .4 x Sp Gr Rocl = 0.95 roil =	÷ 100)= dr % Rock 8 k)] ÷ 100 1 Point Wet Soi Dry So	÷ 100 =  Moisture Det il wt. + pan Pan wi Dry soil wt Water wt Moisture =	Correcte Maximu Dry Dens ermination
Wt. of rock ÷ ( Dr % Soil % Rock [( % % Soil % Rock Gross wt. - Tare.wt. Net wt.	et weight of soil— y wt. of rock + Dry  [( % Soi For A X X  Optimum M Soil x OMC of Soil X X  Corrected Optim	oisture Correction  The Point Chevel of the Po	÷ (1+  0% =  Correction Formu sity of Soil) + (% F 0.90 For AASI Maximum Dr S  on Calculations  escrption of Rock)  Optimum MC of So Absorption of F  Content, %  eck Compaction C  Net Density	la and Calculation Rock x CF x 62 HTO T180, CF ry Density of s pecific Gravity  ] ÷ 100  oil = Rock = Sum = ; 100 = Cylinder Densi  Moi ; (10 calculation dry density) x 1 m Dry Dens) x	/D Gauge MC  ations .4 x Sp Gr Rocl = 0.95 oil =	÷ 100)= dr % Rock 8 k)] ÷ 100 1 Point Wet Soi Dry So	÷ 100 =  Moisture Det il wt. + pan Pan wt Dry soil wt Water wt Moisture =	Correcte Maximu Dry Dens ermination

		Trun	tou Geolech K			'nt		
COLORADO	O DEPARTN	IENT OF	TRANSPORTA	TION	roject No. TE-C40	30-000	Region	Contract ID
CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND				miect Locatio	n	1 <u> </u>	19219	
Ci Pit Name	P 25 PERCENT	RELATIVE C	OMPACTION Class	it.	Pinore	Causwar	-	Sup
NIA	EMBANKMEN	1-NATIVE	NIA	11/		1.19em 601-w	Date NU 7-	11-17
Sample ID (Test #)	18 INFO	ONLY	Tested by (print name)			Station/offset		Depth ow Gride
Gauge ID ユ&アナイ	Moisture Standard	Count	Density Standard Coun ええの	t	Transmission (	epth, in.	Soil Classific	6(19)
Curve No. 3962-A	Maximum Dry Dens	sity 118,7	Optimum Moisture Co	intent 2.6	AASHTO T99 o	T180	Method A o	·D)
EMBANIMENT  Gauge Reading	Moisture	Field Test	Data <u>Density</u>				iauge Moist wt. + pan	ure Check
(1) % Moisture	13.2	Wet Dens.	12218 Dry	Dens.	108.5	Dry Soil	wt. + pan	
(2) % Moisture	12.4	Wet Dens.	1000	Dens.	109.6		Pan w	t,
(3) % Moisture	12.6	Wet Dens.	123,2 Dry	Dens.	109.4		Dry soll w	t.
(4) % Moisture	11.9	Wet Dens.	1000	Dens.	109.9	_	Water w	t,
Average	12.5 /	Average	123.0/	Average	109.4	/ % N	loisture =	
	Calculation	ons for Perce	nt Rock [Plus #4 (M	-	r 3/4 inch (I	Method D)]		
Dry wt. of rock	······································	÷ Dry wt. tota	Method A - Over	n Dried =		% Rock &		% Soil
77 TO 170 CI	<del>,</del>	. 51, 100.100	Method B - Using G	iauge MC		WHOCK &	· · · · · · · · · · · · · · · · · · ·	70 3011
We	t weight of rock-	•	÷ (1+	<del></del>	oration ÷ 100	D)= dry weight	rock	
	et weight of soil —		÷ (1+		=	÷ 100)= dry w		
ry wt. of rock ÷ ( Dry	-	wt. of soil) X 1	00% =			% Rock &		% Soil
		Rock	Correction Formula a	nd Calculati	ions			
	[( % Soil	x Max dry de	nsity of Soil) + ( % Roci	x CF x 62.4	x Sp Gr Rock	;)] ÷ 100		
% Soil	For AA	ASHTO T99, CF	A COLUMN TO THE PARTY OF THE PA					Corrected
% Rock			Maximum Dry D Spec	ensity of soi ific Gravity o				Maximum
, , , , , , , , , , , , , , , , , , ,				,	Sum =	<del></del> .	· 100 =	Dry Density
<del></del>	Optimum Mo	oisture Correc	tion Calculations		-	1 Point Mo	isture Dete	mination
11 02 4	-		Absorption of Rock)] ÷	100	ļ	Wet Soil w		
[[ 30 7	SOIF X OIVIC OI SOIF	/ T { 20 NOCK X F	rosorption of Notk)} +			Dry Soil w	t. + pan	****
% Soil	x		Optimum MC of Soil =				Pan wt.	
% Rock	x		Absorption of Rocl				Dry soil wt.	
			S	um =			Water wt.	
(	Corrected Optim	um Moisture	Content, %	100 =		% Mo	sture =	
_	-	1 Point C	heck Compaction Cylir	der Density	Data		•	
Gross wt.		Volume of					_	
- Tare wt.	<del></del> .	Mold	Wet Density	Moist	ure Content		Ĭ.	ry Density
Net wt.	÷	=		÷ {100			2O)x100= _	
	ng, 4 ÷ 13	14.3 1	rcent Compaction cald Corrected Maximum dry or (Curve Maximum E 2. 6 To: 15, 6 ² 7	density) x 100	00 =		ative Compact	tion <i>90.0</i> num 95 <del>.0 %</del>
narks / /	6. CC.	1.//		en e	e menter <del>e de</del> jerresers			
narks: cades. V	J. Comp	de fi						j

Previous editions are obsolete and may not be used.

CDOT Form #427 5/14

COLOBAD		TO A MODODTA TIOM	Project No.	- ^	Region	Contract ID
	O DEPARTMENT OF		9.000		15	H219
	CLEAR SOILS MOISTURE/ P 25 PERCENT RELATIVE (		Project Location		70 AV	sup
Pit Name	Material Material	Class	Pinon	Causeway	Date	OUT
NIA	Brown Clas	many of the State Control of the Con	INCLOGATAL "	TO 17Em 601W	7-14	1/2/17/
Sample ID (Test #)		Tested by (print name)	-	Station/offset	Elevation /	Depth
2 /NF	Moisture Standard Count	Ern Howe	5	24169	polpw	foot Cramor
Gaugé ID 1877 I	706	Density Standard Count	Transmission I	veptn, in.	Soil Classific	
Curve No. 39 62-14	Maximum Dry Density  (20.2 //8.7	Optimum Moisture Content	AASHTO T99 o	r4180)	Method A o	(P,)
EMBRIOME Gauge Reading	Moisture Field Test		<del></del>	M/D G	auge Moist	ure Check
1) % Moisture	10.7 Wet Dens.	121, 6 Dry Dens.	102,5	Dry Soil	•	
2) % Moisture	19.3 Wet Dens.	122, 9 Dry Dens.	102,6	Diy Son	Pan w	
3) % Moisture	Wet Dens.	123.5 Dry Dens.	104,1		Dry soil w	
1) % Moisture	8,9 Wet Dens.	122,7 Dry Dens.	Α.		-	
Average	19.2 Average		11/2	0/ N.#	Water w	τ
Wesage	7	Average Average Plus #4 (Method A	103.1/		oisture =	
	Calculations for Ferd	Method A - Oven Dried	y or 3/4 men (	ivietilog DJ]		
ry wt. of rock	÷ Dry wt. tot	· · · · · · · · · · · · · · · · · · ·	=	% Rock &		% Soil
		Method B - Using Gauge M	С			
We	t weight of rock ————	÷ (1+	absorption ÷ 10	0)= dry weight	rock	
w	et weight of soil	± /1 ±	M/D Gauge MC	÷ 100)= dry wt.		
v wt. of rock ÷ ( Dr	v wt. of rock + Dry wt. of soil) X :	100% =		% Rock &		% Soil
	Roc	k Correction Formula and Calc	ulations			
	[( % Soil x Max dry de	ensity of Soil) + ( % Rock x CF x 6	62.4 x Sp Gr Rock	()] ÷ 100		
% Soil	For AASHTO T99, CI	F = 0.90 For AASHTO T180, C	CF = 0.95			Commented
-	x	Maximum Dry Density of				Corrected Maximum
% Rock 	x	X Specific Grav		<del></del> .	100-	Dry Density
<u></u>			Sum =	***********	100 =	
	Optimum Moisture Correc	tion Calculations		1 Point Moi		rmination
[{ %	Soil x OMC of Soil) + ( % Rock x	Absorption of Rock)] ÷ 100	•	Wet Soil wt.		
				Dry Soil wt	+ pan	
% Soil	<u> </u>	Optimum MC of Soil =			Pan wt.	
% Rock	x	Absorption of Rock = .		E	Ory soil wt.	
		Sum =			Water wt.	
	Corrected Optimum Moistur	e Content, % ÷ 100 =		% Mois	sture = ·	
	1 Point C	heck Compaction Cylinder Der	sity Data			
Gross wt.	Volume of					
- Tare.wt.	Mold	Wet Density M	loisture Content		r	Dry Density
Net wt.	÷ =		100 +		O)x100=	
		ercent Compaction calculation	,	0.9		
d Dry Density	07,1 ÷ 120,3	Corrected Maximum dry density)		₩ Rela	tive Compact	tion
Spec	ifications: Moisture	or (Curve Maximum Dry Dens)	x 100 = paction		5 dt	05.00
•	ig for moments		5. V by C	rais Can	Minin	num 95.0 %
	2m 473	· · · · · · · · · · · · · · · · · · ·	Ť	·		
165 101	UNIT I					1

19219-207

COLORADO DEPARTMENT OF	Region 5 Field sheet # 260203						
FIELD REPORT FOR SA	Contract ID Date Submitted						
OR MATERIALS DOC	19219 3-9-18						
<b>.</b>	_	-£-	Project No. STE C48	0-008			
Metric units	_ yes   ⊻	no	Project Location	0.000			
				SEWAY	TO ASPEN VILLAGE (		
Material Type TOPSOIC			Field Lab phone		Cell Phone Sur		
Material Code (LIMS)	em	Class	Grading	Specia	al Provisions yes		
	207				L1'		
Previously used on Project No.:		Previous CDOT Form #	#157 F/S No.(s): CDOT Form #633 (sack)  CDOT Form #634 (can)				
<ul> <li>Sample Identification: Quantity &amp; Unit of Materials Documentation: Field inspect</li> </ul>							
watenats Documentation. Fletd Inspect	ed (describe appeara	ance, weighwulthensions	, model/senai num	bery, COC aron	CTR provided , etc.		
TOPSOIL WAS G	enerateo	ON-SITE	AND AP	PROVED	FOR USE		
ON THE PROJECT	BY THE	PROJECT	ENGINI	ELL.			
TOPSOIL GENERATED					AV OH F		
,	ONSTIE V	oks thin hi	201-002		ick-tirc		
TOPSOIL (650 C.Y.).				· · · · · · · · · · · · · · · · · · ·			
Jser ID		·					
Sample ID (#1)	Sample I	D (#2)		Sample ID (#3)			
Manufacture and the state of th							
Sample ID (#4)	D (#5)		Sample ID (#6)				
APL/QML Acceptance; APL Ref. No.	Product name:		Annual Control of the	<del>ane a sur a su</del>	Date checked:		
The Engine Moodplattoo. At a Mot Mo.	1 Toddot Harries				Date oriodica.		
APL/QML Acceptance: APL Ref. No.	Product name:				Date checked:		
Preliminary Constructi	l ion Maintenar	ice Emergency	entimentaliste de projection de la company de la compa	en para serienza en deligión per el porte deligión de seriente de la composição de la compo	Date needed		
		Ů					
Contractor  Supplier  CADES FOR 11 C							
CROSSFIRE LLC Sampled from Pit name or owner							
(Pit, roadway, windrow, stock, etc.)							
Quantity represented 650 CY	Previou	s quantity		Total quantit	y to date 650 cy		
Sample submitted: Shipped specified quantity to: Via Date  Yes No Central lab Region lab							
Sampled or inspected by (print name)  Title  E-mail  TOVECT ENGINEER							
CUFTON LEE PE PROJECT ENGINEER  Upervisor (Pro./Res./Matis. Engr./Maint, Supt.) (print name)  Title  Residency							
MIKE DAVIS PE POESIDENT							

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Region 5 COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 19719 OR MATERIALS DOCUMENTATION Project No. PINON CAUSEWAY TO ASPEN VILLAGE ! Metric units ves Project Location STE C400-000 Field Lab phone Cell Phone Material Type BERM Special Provisions Grading Class yes Material Code (LIMS) 208 Previous CDOT Form #157 F/S No.(s): Previously used on Project No.: CDOT Form #633 (sack) CDOT Form #634 (can) • Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided EMBANKMENT A SILT BERM WAS CONSTRUCTED OF ON-SITE MATERIALS BY THE PROJECT ENGINEER. THE SILT BERM WAS CONSTRUCTED IN THE STAGING AREA AROUND STOCKPILES, (TOPSOIL, EMBANKMENT, & ABC CLASS 6). ONLY 125 L.F. OF SILT BERM WAS CONSTRUCTED AND PAID User ID Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date needed Maintenance Emergency Preliminary Construction Supplier Contractor Choisfire LLC (ROSSFIRE Sampled from Pit name or owner (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity Quantity represented 1009-EF 125 LF 125 LF Date Via Shipped specified quantity to: Sample submitted: __ 🔲 Region lab Central lab Yes E-mail Title Sampled or inspected by (print name)

Distribution: White copy - CDOT Central Laboratory

Supervisor (Pro./Res./Malls, Engr./Maint, Supt.) (print name)

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CDOT Form #157

3/15

COLORADO DEPARTMENT OF FIELD REPORT FOR S	Region 5	Field sheet # 260	<del>,289.</del> .		
OR MATERIALS DOC	Contract ID 19219	Date Submitted $3 - 9 - 10$	<b>)</b>		
			Project No. STE C40	12-1008	f
Metric units	Project Location PINON CAUSEWAY TO ASPEN VIWAPE DR.				
					AIMAR DE S
Material Type ECOSION LO	65 (B INC	(4)	Field Lab phone	Cell Phone	
Material Code (LIMS)	708	Class	Grading	Special Provisions	yes
Previously used on Project No.:		Previous CDOT Form	#157 F/S No.(s);	CDOT Form #	
<ul><li>Sample Identification: Quantity &amp; Uni</li><li>Materials Documentation: Field insper</li></ul>	t of material submi cted (describe app	tted, describe tests require pearance, weight/dimension	d, precise location sa ns, model/serial numb	mple removed from ( statio er), COC &/or CTR provided	oning), etc. , etc.
FOR PAY ITEM Z	08-000	ot, Two M	ATAUALS I	WERE INSTALL	EO AS
G. 1016 1969	ie ocho	RDEN EVICEIS	102 lag 8	20 LE OF POCI	K AGGREGAT
BAG FOR A TOTA	ac of 19	189 LF. WER	"ASPEN EXCELSIVE PAID AS 2018.	ORLOG GROCK KGGEE -100007 EROSION LOG	(BINCH)
BAG FOR A TOTA	reasico	phers C IS ATTA	etten For	BOTH MAT	ENIAUS.
BOTH MATERIALS					
HID		ER. SEE FORM		1	
Sample ID (#1)	Sam	ple ID (#2)		Sample ID (#3)	
Sample ID (#4)	Sam	ple ID (#5)		Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name			Date che	cked:
APL/QML Acceptance: APL Ref. No.	Product name	×:		Date ched	cked:
Preliminary Constru	ction Mainte	enance Emergency		Date need	bei
Contractor  CROSS FIVE LLC		Supplier (	ATRIOT ENVI	RONMENTAL PROP	ucis 9
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name o	or owner		
Quantity represented 1909 CF	Pro	evious quantity		Total quantity to date	709 LF
Sample submitted: Shippe	d specified quantity Central lab	rto: ☐ Region lab	Via	Date	
Sampled or inspected by (print name)  LIFTON LEE PE		MODECT ENGI			
Supervisor (Pro/Res/Matts, Engr/Maint, Supt.)  MICE DAVIS, PE	(print name)	Title PRESIDENT-L	)AVIS ENCINI	tency SECUNC SAWICES	
Distribution: White copy - CDOT Central L	aboratory				OT Form #157 3/15

#### **Gina Denten**

om:

Clifton Lee <clifton@daveng.com>

ent:

Thursday, February 15, 2018 1:44 PM

To:

Gina Denten

Subject:

19219 PC to AVD SUP - Item 208-00007 Erosion Log (8 inch)

#### Good Morning Gina

I reviewed pay requests during the project and show that 20 lineal feet of the rock aggregate bag was installed on the project.

#### In summary:

- 1,989 lineal feet of the line Item 208-00007 was paid in the project to date
- of this 20 lineal feet was the rock aggregate bag
- of this 1,969 lineal feet was the aspen excelsior log

#### Regards,

#### Clifton Lee



wis Engineering Service, Inc. 38 S. 8th Street - P.O. Box 1208 Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105

Fax: (970) 264-9210 E-mail: difton@daveng.com



5433 Newport Street • Commerce City, CO 80022 • (303) 945-7588 Office • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK.

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

**AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219** 

MANUFACTURER: SUPERIOR EXCELSIOR, LLC/PATRIOT ENVIRONMENTAL PRODUCTS; 11430 2ND AVE., HOOPER, CO 81136

LABORATORY NAME/ADDRESS: N/A

TYPE OF MATERIAL: 9"X25' EXCELSIOR LOG

THIS PRODUCT IS AN EROSION CONTROL SEDIMENT LOG. MATERIAL COMPOSITION: ASPEN EXCELSIOR FIBERS ENCASED IN UV STABILIZED HIGH-DENSITY POLYETHYLENE NETTING.

LOT/BATCH NUMBER: 9305

DATE OF TEST: N/A

SPECIFICATIONS: SEE ATTACHED SPECIFICATION SHEET

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC 208.02 (H) EROSION LOGS. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Harna Dent Campbell

Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1969 LF (quantity and units) of pay item 200 - 00007 Easton 1665 (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01 26 18 Date

I hereby certify under penalty of perjury that the material listed in this

Certificate of Compliance represents ______(quantity and units) of

pay item (pay item number and Description) that will be

installed on project number STE C480-008 - PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



5433 Newport Street • Commerce City, CO 80022 • (303) 945-7588 Office • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 -- PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK.

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219

MANUFACTURER: EROSION SOLUTIONS INC; 960 98TH STREET, OAKLAND, CA 94603

LABORATORY NAME/ADDRESS: TRI ENVIRONMENTAL, INC.; 9063 BEE CAVES ROAD, AUSTIN, TX 78733

TYPE OF MATERIAL: GRAVEL SNAKE BAG ROLL 11" X 750L

- GEO-SYNTHETIC MATERIAL, WOVEN SEAMS, UV RATED FOR 5 YEARS SEE ATTACHED DATA SHEET.
- PRODUCT TO BE USED AS A WATTLE, PIPE SOCK, DROP INLET PROTECTION, CHECK DAM OR GRAVEL BAG BERM FOR EROSION CONTROL, FILTRATION, SEDIMENTATION PER SWPPP GUIDELINES.

LOT/BATCH NUMBER: N/A

DATE OF TEST: N/A

SPECIFICATIONS: SEE ATTACHED SPECIFICATION SHEET

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC 208 AGGREGATE BAG. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Clausa Dert Campbell

Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 20 CF (quantity and units) of pay item Z0G-00007 F10510N L095 (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

2/4/18 Date

I hereby certify under penalty of perjury that the material listed in this

Certificate of Compliance represents ________(quantity and units) of

pay item ________(pay item number and Description) that will be

installed on project number __STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



ESI Resource Services LLC 11854 Larisa Way Rancho Cordova, CA 95742 Tel 916-985-7787 Fax 916-985-7887



Chris A. Marr CPESC #2211

## **Certificate of Compliance**

DATE: 12-28-17





As a manufacture representative of "Woven Snake Bag Roll", we certify that the material to be supplied will meet or exceed the following Physical specifications.

Property	<b>Test Method</b>	Woven (Typical:)
Fabric Weight	ASTM D-5261	5 oz./sq./yd.
Wide Width Tensile (MD/TD)	ASTM D-4595	2400/1680 lbs
Grab Tensile (MD/TD)	ASTM D-4632	365/200 lbs.
Trapezoid Tear (MD/TD)	ASTM D-4533	115/75 lbs.
Puncture	ASTM D-4833	112 lbs.
Apparent Opening Size	ASTM D-4751	40 US Sieve (0.425mm).
Mullen Burst	ASTM D-3786	450 psi.
Permittivity	ASTM D-4491	2.1 sec-1
Permeability	ASTM D-4491	0.14 cm/sec
Water Flow	ASTM D-4491	145 gal/min per sq. ft.
UV Resistance (500hrs)	ASTM D-4355	90%
Material	Hig	h Density Polyethylene (HDPE)

We at ESI Resource Services look forward for future business with your company.

Chris A. Marr Aff.M.ASCE CPESC #2211
ESI Resource Services LLC
WCIECA Board Member
Tel# 623-386-5666 cell# 209-712-2616





#### 9" Excelsior Wattle

Are made of curled wood excelsior with a consistent width of fibers evenly distributed throughout the log

#### **SPECIFICATIONS**

LENGTH:

25' STANDARD (OTHER LENGTHS CAN BE SPECIAL ORDERED)

DIAMETER:

9" (+/- 10%)

CORE:

ASPEN WOOD EXCELSIOR WITH INTERLOCKING BARBS, 80% OF FIBERS

AT LEAST 6" LONG

**NETTING TYPE:** 

UV STABILIZED/PHOTODEGRADABLE

NETTING WEIGHT:

HEAVY DUTY: 94% HIGH-DENSITY POLYETHYLENE WITH 6% UV

INHIBITOR

NETTING THICKNESS:

STRAND THICKNESS OF 0.03", KNOT THICKNESS OF 0.055"

**NETTING WEIGHT:** 

0.35-OUNCE PER FOOT (+/- 10%)

NETTING COLOR:

BLACK (OTHER COLORS CAN BE SPECIAL ORDERED)

**ROLL WEIGHT:** 

AVERAGE 40 LBS. (+/- 10%)

WEIGHT PER LF:

NO LESS THAN 1.6 LBS (+/- 10%)

Our Sediment Control Products are used in a multitude of applications, providing benefits such as:

- Better filtering of runoff waters
- Preventing check dam blowouts
- Protecting water from going around check dams
- Preventing the spread of non-native vegetation
- Ease of use: easier to handle and install than straw bales
- Safe to use around livestock: Non-food source for animals

DISTRIBUTED BY:
TRITON ENVIROMENTAL
5433 NEWPORT STREET
COMMERCE CITY, CO 80022

0: 303.945.7588 F: 303.945.7579

(1) Patriot certifies the curled aspen wood excelsior is fungus free, resin free, and free of growth or germination inhibiting substances. Patriot follows the CDOT table below and weighs multiple wattles per truckload to insure the weights are in tolerance and Patriot measures the diameter per CDOT Spec table 208-1

(2) We also get a Phyto cert done about 3 times a year which gives our plant certification

that the plant is bug free.

Table 208-1
NOMINAL DIMENSIONS OF EROSION LOGS

Diameter Type 1 (Inches)	Diameter Type 2 (Inches)	Leng	th (feet)	Weight (minimum) (pounds/foot)	Stake Dimensions (Inches)
		Min.	Max.		
ý á S	-8 · · · · ·	10 ***	180	1.6	1.5 by 1.5 (nominal)
		5. Park (14)			by 18 ¹
12	12	10	180	2.5	1.5 by 1.5(nominal)
12	,2	, •			by 24
火 30%等等等	14 <b>8</b> 18. 18. 12	10.00	100:	4.0	2 by 2 (nominal)
20 2	-1.42 -1.42			26.30%。2000年36%。	by 30

12-13-17

J. Colter Anderson VP Patriot Environmental Products

Date

Region 5 COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 19219 OR MATERIALS DOCUMENTATION Project No. STE C480-008 Metric units yes Project Location PINON CAUSEWAY TO ASPEN VILLARE DR Field Lab phone Material Type FENCE Special Provisions Grading Class lyes Material Code (LIMS) 200 Previous CDOT Form #157 F/S No.(s): Previously used on Project No.: CDOT Form #633 (sack) CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided SILT FENCE INSTALLED ON THE PROJECT WAS FIELD INSPECTED APPROVED BY THE PROJECT ENGINEER, POSTS WERE MEASURED TO BE 42 INCHES IN LIBNGTH AND 1.5 INCHES X 1.5 INCHES. COC IS ATTACHEO. AND THE SUPPLIER MANNIFACTURERS MANUFACTUMERS Coc's is attached. Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date needed Emergency Preliminary Construction Maintenance X TRITON Supplier Contractor ILLA COOCHEE INDUSTRIAL CROSSFIRE Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.)

Total quantity to date Previous quantity Quantity represented 2590 LF 02590 LF Shipped specified quantity to: Via Sample submitted: ☑ No __ 🔲 Region lab ☐ Central lab Yes E-mail Sampled or inspected by (print name) PROJECT ENGINCER LIFTON LEE PE Residency Supervisor (Pro./Res./Matls. Engr./Maint. Supl.) (print name) ENCINEERING SELVICE MLESIDENT. TIIKE DAVIS PE



5433 NewPort Street • Commerce City, CO 80022 • (303) 945-7588 Office • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

**AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219** 

MANUFACTURER: WILLACOOCHEE INDUSTRIAL FABRICS, INC. PO BOX 599-769 WEST MAIN STREET, WILLACOOCHEE, GA 31650

LABORATORY NAME/ADDRESS: N/A

TYPE OF MATERIAL: SILT FENCE WINFAB 105SF

THIS PRODUCT IS A IS A SEDIMENT CONTROL DEVICE CONSISTING OF A WOVEN GEOTEXTILE FABRIC MANUFACTURED USING HIGH TENACITY POLYPROPYLENE YARNS THAT ARE WOVEN TO FORM A DIMENSIONALLY STABLE NETWORK, WHICH ALLOWS THE YARNS TO MAINTAIN THEIR RELATIVE POSITION. THIS POLYPROPELENE WOVEN FABRIC RESISTS ULTRAVILOT DETERIORATION, ROTTING, AND BIOLOGICAL DEGRADATION AND IS INERT TO COMMONLY ENCOUNTERED SOIL CHEMICALS.

LOT/BATCH NUMBER: 9090

SPECIFICATIONS: SEE ATTACHED DATA SHEET AND TESTING DATA FROM WILLACOOCHEE INDUSTRIAL FABRICS

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC SECTION 208.02 (B) EROSION CONTROL. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Karna Dent Campbell

Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2,500 L.F. (quantity and units) of pay
Compliance represents 2,500 L.F. (quantity and units) of pay
item ZOB-ODD 20 Silf Fence (pay item # and description) that will
be installed in conformance with the plans and specifications on Project Number
19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

ontractor Rep. Signature

01 28 18

I hereby certify under penalty of perjury that the material listed in this

Certificate of Compliance represents ________(quantity and units) of

pay item_________(pay item number and Description) that will be

installed on project number __STE C480-008 -- PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



## PRODUCT DATA SHEET

# WINFAB 105SF

**WINFAB 105SF** is manufactured using high tenacity polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position.

WINFAB 105SF resists ultraviolet deterioration, rotting, and biological degradation and is inert to commonly encountered soil chemicals.

PROPERTY	TEST METHOD	MARV English	MARV Metric
Tensile Strength (Grab)	ASTM D-4632	124 x 124 lbs	551.6 x 551.6 N
Elongation	ASTM D-4632	15%	15%
CBR Puncture	ASTM D-6241	325 lbs	1445.7 N
Trapezoidal Tear	ASTM D-4533	65 x 65 lbs	289.1 x 289.1 N
UV Resistance (500 hrs)	ASTM D-4355	70%	70%
Apparent Opening Size (AOS)*	ASTM D-4751	30 US Std. Sieve	0,60 mm
Permittivity	ASTM D-4491	0.05 sec ⁻¹	0.05 sec ⁻¹
Water Flow Rate	ASTM D-4491	10 gpm/ft²	407.4 lpm/m2

#### *Maximum Average Roll Valve

#### otes:

Mullen Burst ASTM D-3786 has been removed. It is not recognized by ASTM D-35 on Geosynthetics.

Puncture ASTM D-4833 has been removed. It is not recognized by AASHTO M288 and has been replaced with CBR Puncture ASTM D-6241

PROPERTY	Typical English	Typical Metric
No. of the second secon	36 in x 2600 yds	.91 m x 2377 m
	36 in x Custom	.91 m x Custom
	42 in x 2600 yds	1.07 m x 2377 m
Roll Dimensions	42 in x Custom	1.07 m x Custom
	48 in x 2600 yds	1.22 m x 2377 m
·	48 in x Custom	1.22 m x Custom

Disclaimer: Willacoochee Industrial Fabrics assumes no liability for the completeness or accuracy of this information or the ultimate use of this information. Willacoochee Industrial Fabrics disclaims any and all implied, expressed, or statutory standards, guarantees, or warranties. This includes without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to equipment, materials, or information furnished herewith. This document should not be construed as engineering advice. Always consult the project engineer for project specific requirements. The end user assumes sole responsibility for the use of this information and product. The property values listed above are subject to change without notice.

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# WILLACOOCHEE INDUSTRIAL FABRICS CERTIFICATE OF ANALYSIS

Style WINFAB 105SF

					PO Nu	mber	9090			
Red Number	Warp Teesde (Grab) ASTM DAGD bs	Wap Elospacon (Grab) ASTBI DJ632 %	Fall Teinsle (Olah) ASTRI 04532 Ins	Ful Elempatun (Grab) ASTM Daloss	Warp Trap Tear ASTM D4533 Ins	Fill trap Teat ASTM Dissa Bs	CRP Puncture ASTM DS241 Ibe	ADS. ASTALDATGI mm	Permitosiy Astru pidasi Vises	Mater rlow Rate ASTA D14/91 gen
1N10081152	168	20	152	23	86	99	564	0.6	0.157	11.7
1N10081568	150	20	140	22	85	98	553	0.6	0.166	12.4
1N10081594	150	20	140	22	85	98	553	0.6	0.166	124
1N10240030	172	22	159	26	72	76	553	0,22	0,067	5
1N10240056	172	22	159	26	72	76	553	0.22	0.067	5
1N10240082	172	22	159	26	72	76	553	0,22	0,067	5
1N10240108	172	22	159	26	72	76	553	0,22	0.067	5
1N10240134	172	22	159	26	72	76	553	0.22	0.067	5
1N10240160	172	22	159	26	72	. 76	553	0.22	0.067	5
1N10240212	172	22	159	26	72	76	553	0.22	0.067	.5
1N10240290	178	23	153	26	73	87	559	0.255	0.09	6.7
1N10240316	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240342	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240368	178	23	163	26	73	87	559	0,255	0.09	6.7
1N10240394	178	23	163	26	73	67	559	0.255	0.09	6.7
1N10240420	178	23	163	26	73	87	559	0,255	0,09	6,7
1N10240446	178	23	163	26	73	87	559	0,255	0.09	6.7
1N10240472	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240498	178	23	163	26	73	87	559	0.255	0.09	6.7
1N10240524	178	23	163	26	73	87	559	0,255	0,09	6,7

*Actual roll tested. All rolls in between tested rolls are assumed to have the same value. All Testing is done in accordance to ASTM D-4354. Property values at time of manufacturing. Handling may change these properties.

Jazon Sooth, Quality Manager

I hereby certify under penalty of perjury that the material listed in this Certified Test
Report represents 2.580 L.F. (quantity and units) of pay item
208-000 20 Silf Ferce. (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

Date



#### WILLACOOCHEE INDUSTRIAL FABRICS **CERTIFICATE OF ANALYSIS**

Style WINFAB 105SF

					PO Nu	ımber	9090			
Raftimbet	Warp Tensile (Grab) ASTM D4612 Bs	Waip Elergation (Grab) ASTRI D4532 %	Fill Tensile (Grab) ASTAI D4532 fts	Fil Etrogation (Grab) ASTM D4532	Warp Trap Teur AsTM DASos Ibs	Filtrap Tear Astric passis Is	CBR Puncture ASTIAD9241 IS	AOS ASTURDATSI RAN	Permituny Astitrouign fisc	Water Flax Rate Astru Dugat gem
1N10240550	178	23	163	26	73	87	559	0.255	0.09	6,7
* 1N10240676	174	22	160	26	70	82	559	0,227	0.089	6.7
1N10240602	174	22	160	26	70	82	559	0,227	0,089	6.7
1N10240628	174	22	160	26	70	82	559	0.227	0.089	6.7
1N10240654	174	22	160	26	70	62	559	0.227	0,089	6.7
1N10240680	174	22	160	26	70	82	559	0,227	0.089	6,7
1N10240706	174	22	160	26	70	82	559	0.227	0,089	6,7
1N10240792	174	22	160	26	70	62	559	0.227	0.089	6.7
1N10240758	174	22	160	26	70	82	559	0,227	0,089	6.7
1N10240784	174	22	160	26	70	62	569	0.227	0.089	6.7
1N10240810	174	22	160	26	70	82	559	0.227	0.089	6,7
1N10240836	174	22	160	26	70	82	559	0.227	0.089	6.7
* 1N10240862	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10240888	182	23	163	25	71	79	561	0,207	0.086	6.4
1N10240914	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10240940	182	23	163	26	71	79	561	0.207	0.086	6,4
1N10240956	182	23	163	25	71	79	561	0,207	0.066	6.4
1N10240992	182	23	163	25	71	79	561	0.207	0.086	6,4
1N10241018	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10241044	182	23	163	25	71	79	561	0,207	0,086	6.4

^{*}Actual roll tested. All rolls in between tested rolls are assumed to have the same value, All Testing is done in accordance to ASTM D-4354. Property values at time of manufacturing. Handling may change these properties.

Jason Booth, Quality Manager



# WILLACOOCHEE INDUSTRIAL FABRICS CERTIFICATE OF ANALYSIS

Style WINFAB 105SF

·					PO Nu	mber	9090			
Red Number	Vap Tenske i Grabi Astivi pvezz bs	Warp Eksiyation (Grah) ASTM D4532	Fill Tensile (Grab) ASTAI Datas Ins	Fill Elevyaten (Grab) ASTM Dasiz	Warn Trap Tew ASTM DAS39 Ds	Fill Trap Teat ASTM DASTA Es	CBR Puveture ASTM DS241 Per	AOS ASTUI DATST	Permitsely ASTM Delega Usec	Water flow Rate ASTM Duffitt gran
1N10241070	182	23	163	25	71	79	561	0,207	0.086	6,4
1N10241096	182	23	163	25	71	79	561	0.207	0,086	6.4
1N10241122	182	23	163	25	71	79	561	0.207	0,086	6.4
1N10241148	182	23	163	25	71	79	561	0.207	0.086	6.4
1N10241174	182	23	163	25	71	79	561	0.207	0.086	6,4

*Actual roll tested. All rolls in between tested rolls are assumed to have the same value. All Testing is done in accordance to ASTM D-4354. Property values at time of manufacturing. Handling may change these properties.

Jason Booth, Quality Manager

19219-208-4

COLORADO DEPARTMENT OF T	Region 5 Field sheet # 266289						
FIELD REPORT FOR SA	AMPLE IDEN	ITIFICATION	Contract ID	ID Date Submitted			
OR MATERIALS DOCU			19219	é	3-9-18	<u> </u>	
JR WATERIALS DOC			Project No.				
		57	STE C480	o-008		:	
Metric units	yes	∐ no	m 1 (1 - 1)				
<del></del>			PINON CAUSEWAY TO ASPEN VILLAGE DE				
	,	da state	Field Lab phone		ell Phone	S.UP.	
Material Type CONCLETE WA	RHALL ZIB	ucture.					
Material Code (LIMS) It	em 208	Class	Grading	Special P	Provisions	yes	
Previously used on Project No.;		Previous CDOT Form	#157 F/S No.(s):	ļ ,—	DOT Form #	1	
Sample Identification: Quantity & Unit of the Control of the Co	of material submitted	. describe tests require	d, precise location sam	ple removed fro	om ( statio	ning), etc.	
Sample Identification: Quality & Office     Materials Documentation: Field inspect	ted (describe appear	ance, weight/dimension	ns, model/serial numbe	r), COC &/or CT	fR provided	, etc.	
THE CONCRETE WASH	lout Stru	CIURE WAS	S HELD IN	ISPECIE	D ANC	) APPROVED	
FOR USE BY THE							
WITH MGS STANDAR	DS			<del></del>			
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User ID				,			
	Commis	ID (#0)	T S	ample ID (#3)			
Sample ID (#1)	Sample	10 (#2)		umpre ;= (;; -)			
i				10 (10)			
Sample ID (#4)	Sample	ID (#5)	S	ample ID (#6)			
					VE V		
APL/QML Acceptance: APL Ref. No.	Product name:				Date che	cked:	
· · · · · · · · · · · · · · · · · · ·					<del>                                     </del>	1	
APL/QML Acceptance: APL Ref. No.	Product name:				Date che	скеа:	
					Date nee	dod	
Preliminary Construc	tion Maintena		<i>'</i>		Date field	ueu	
□ 母							
Contractor CN035FIRE, LCC		Supplier	Chossfire, LL	_C	·····		
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name	or owner				
Quantity represented   EACH	Previo	ous quantity		Total quantity	to date	EACH	
	l specified quantity to	•	Via		Date		
	Central lab	🗌 Region lat	o				
Sampled or inspected by (print name)	Ti	le	E-ma	il			
CLIPTON LEE PE	{-	MOJECT ENG	TNEER-				
Supervisor (Pro./Res./Malls, Engr./Maint, Supt.) (	print name) Til	MOUECT ENG 10 NESIDENT - 1	Resid	lency	ı		
MIKE DAVIS, PE	10	RESIDENT - 1	JAVIS ENSIN	EERLING,	INC.		
Platification White copy CDOT Central Is	The state of the s		Name of the last o	J	CD	OT Form #157 3/15	

19219-208-5

COLORADO DEPARTMENT O			Region S	Field sheet # 266289
FIELD REPORT FOR SOR MATERIALS DO			Contract ID 19219	Date Submitted 3-9-18
OR WATERIALS DO	COMEM 1 W.1	ION	Project No.	
Metric units	yes	√ no	STE CHBC	) - 00 <del>b</del>
metric times		<u></u>	Project Location PiNon CA	USEWAY TO ASPEN VILLAGE
Material Type VEHICL€ To	RA-CKING P	PAO	Field Lab phone	Cell Phone SUP.
Material Code (LIMS)	Item 20B	Class	Grading	Special Provisions yes .
Previously used on Project No.:		Previous CDOT Form	n #157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Ur</li> <li>Materials Documentation: Field insp</li> </ul>	nit of material submitte sected (describe appe	ed, describe tests require arance, weight/dimensio	ed, precise location s ns, model/serial nun	ample removed from ( stationing), etc. aber), COC &/or CTR provided , etc.
				PECTED AND APPROVED
FOR USE BY THE	PROJECT	ENGINEER.	. THE GRO	TEXTILE INSTALLED
15 ON THE NYDOT	APC. MA-	TERIAL DOCUMENT	UMENTATION IS AT A	TEXTILE INSTALLED IN IN INTALLED IN INTALLED IN THE CHED MANUFACTURER SUPPLIER
SEE FORM 473				
		V	•	
User ID				
				ı
Sample ID (#1)	Sampl	e ID (#2)		Sample ID (#3)
Sample ID (#4)	Sampl	e ID (#5)		Sample ID (#6)
				Dete charged
APL/QML Acceptance: APL Ref. No.	Product name:			Date checked:
APL/QML Acceptance: APt. Ref. No.	Product name:	1		Date checked:
Preliminary Constr	_	ance Emergency		Date needed
Contractor GOSSARE, LLC		Supplier	RITON ROSSFIRE L	LC & SICAPS INDUSTRIES
Sampled from (Pit, roedway, windrow,		Pit name		
stock, etc.)  Quantity represented  2 EA	Prev	ious quantity		Total quantity to date
	ed specified quantity to  Central lab		Via	Date
Sampled or inspected by (print name)  CLIFTON LEE PE	T	įtle	NEEQ E-n	nail
Supervisor (Pro./Res./Matis, Engr./Maint, Supt	.) (print name)	itle	Res	sidency
Mike DAVIS PE	₽	DESIDENT-L	JAVIC ENITIN	EFRING SERVICE.



#### CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

07/26/2017

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

**CDOT Project Code** 

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

OML Part/Sub-Part:

208-00070

APL Category:

Materials and Equipment

APL Sub-Category:

Geosythetics for Highway Construction

APL Base Category:

Geotextiles

APL Reference No.:

Found on the NYDOT - Approved Products List Website

Product Name:

Skaps GT-160

Manufacturer:

Skaps Industries

Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC

Paul Martin,

Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2 Each _ (quantity and units) of pay item: 208-00070 Skaps GT-160 Vehicle Tracking Pad

(Pay item # and description) that will be installed in Conformance with the plans

and specifications on Project No. STE C480-008, 19219

Contractor

				APPR	OVED	FOR <u>3</u> :	**************************************		
Skaps Industries	NTPEP (GTX)	AASHTO ₁ STRENGTH CLASS/ STRUCTURE	D	ST	S	SP	BD	TC	SF <u>4</u>
GC130	2015-01-142	3/NP - NW							US 4.0
GC140	2015-01-143	3/NP - NW							US 4.0
GT110	2015-01-139	1/NP - NW	АВС	X	X	ABC		X	US 4.0
GT112	2015-01-140	1/NP - NW	АВС	X	X	ABC		х	US 4.0
GT116	2015-01-141	1/NP - NW	ABC	X	X	ABC		X	US 4.0
GT131	2014-01-005	NA/NP - NW							S
GT135	2015-01-131	NA/NP - NW							S
GT140	2015-01-132	3/NP - NW							S
GT142	2015-01-133	3/NP - NW							US 4.0
GT150	2015-01-134	2/NP - NW	АВС	·	X			X	US 4.0
GT160	2015-01-135	2/NP - NW	АВС		X			х	US 4.0
GT170	2015-01-136	1/NP - NW	ABC	X	X	АВС		х	US 4.0
GT175	2014-01-017	1/NP - NW	АВС	х	X	АВС	·	Х	US 4.0
GT180	2015-01-137	1/NP - NW	АВС	X	X	АВС		Х	US 4.0
SW200	2013-01-185	3/SF - W					,		US 6.5
SW315	2013-01-183	1/SF - W	·	X	X				US 6.5
SW350	2014-02-016	1/SF - W		X	X				US 6.5
W100	2013-01-102	3/SF - W		17.00					US 6.5

((

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SUPPLIER: TRITON ENVIRONMENTAL, LLC.; 5433 NEWPORT STREET, COMMERCE CITY, CO 80022

CONTRACTOR: CROSSFIRE, LLC.

PROJECT: PINON CAUSEWAY TO ASPEN VILLAGE; CDOT PROJECT: STE C480-008

THIS LETTER IS TO VERIFY THAT THE CLASS II GEOTEXTILE SUBMITTED (SKAPS GT 160) IS IN FACT ON THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCTS LIST FOR GEOTEXTILES. NTPEP CODE: 2015-01-135

- GT 160 NON WOVEN CLASS II GEOTEXTILE
  - MANUFACTURER: SKAPS INDUSTRIES; ATHENS, GA

https://www.dot.ny.gov/divisions/engineering/technical-services/technical-services-repository/alme/pages/470-1a.html

Please let us know if any additional information is required.

ADAM BAPPE

**TECHNICAL SALES** 

TRITON ENVIRONMENTAL, LLC.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2 Each (quantity and units) of pay item 200-00070 Vehice yet Yet (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

Date



Sales Office: Engineered Synthetic Products, Inc. Tel (770) 564-1857 Fax (770) 564-1818 www.espgeosynthetics.com

#### **Geotextile Product Description Sheet**

#### SKAPS GT-160 Nonwoven Geotextile

SKAPS GT-160 is a needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, which are formed into a random network for dimensional stability. SKAPS GT-160 resists ultraviolet deterioration, rotting, biological degradation, naturally encountered basics and acids. Polypropylene is stable within a pH range of 2 to 13. SKAPS GT-160 conforms to the physical property values listed below:

PROPERTY	TEST METHOD	UNIT	M.A.R.V. (Minimum Average Roll Value)
Weight (Typical)	ASTM D 5261	oz/yd² (g/m²)	6.0 (203)
Grab Tensile	ASTM D 4632	lbs (kN)	160 (0.711)
Grab Elongation	ASTM D 4632	%	50
Trapezoid Tear Strength	ASTM D 4533	lbs (kN)	60 (0.267)
CBR Puncture Resistance	ASTM D 6241	lbs (kN)	410 (1.82)
Permittivity*	ASTM D 4491	sec ⁻¹	1.5
Water Flow*	ASTM D 4491	gpm/ft² (l/min/m²)	110 (4480)
AOS*	ASTM D 4751	US Sieve (mm)	70 (0.212)
UV Resistance	ASTM D 4355	%/hrs	70/500

P/	ACKAGING
Roll Dimensions (W x L) – ft	12.5 x 360 / 15 x 300
Square Yards Per Roll	500
Estimated Roll Weight – lbs	195

^{*} At the time of manufacturing. Handling may change these properties.

This information is provided for reference purposes only and is not intended as a warranty or guarantee. SKAPS assumes no liability in connection with the use of this information.

**SKAPS Industries,** 335 Athena Drive, Athens GA 30601 Phone:(706)-354-3700, Fax(706)-354-3737, **www.skaps.com** 

Made in U.S.A.

I hereby certify under penalty of perjury that the material listed in the Compliance represents 2 coch (quantity a item 2005-00030 Which Trek helpay item # and described to the complex of the complex o	nd units) of pay cription) that will
be installed in conformance with the plans and specifications on	
19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008	
Contractor Rep. Signature	Bloi 17

Region COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Date Submitted Contract ID 3-9-18 19219 OR MATERIALS DOCUMENTATION Project No. STE C480-008 ∡ no Metric units ves Project Location ASPEN VILLAGE DE PINON GAUSEWAY To Cell Phone Field Lab phone SEEDING -Material Type NATIVE Grading Special Provisions Class yes Item Material Code (LIMS) 212-Previous CDOT Form #157 F/S No.(s): CDOT Form #633 (sack) Previously used on Project No.: CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided THE SEED MIX ON THE PROJECT WAS FIELD INSPECTED PLACED THE PROJECT ENGINEER. CERTIFIED TEST REPORTS COC FROM THE MANUFACTURED IS ATTACHED. ALL SEEDS WERE TESTED WITHIN 13 MONTHS PRIOR TO THE DATE OF SEEDING, SEE FORM 473. ser ID Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date needed Emergency Maintenance Construction Preliminary 风 Supplier Contractor SEED OUTHWEST (NOSSFIRE Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity Quantity represented 2.37 ACRES .37 ACRES

MICE DAVIS VE

Obstribution: White copy - CDOT Central Laboratory

Jupervisor (Pro./Res./Matis. Engr./Maint. Supt.) (print name)

Sample submitted:

Yes

CUPTON LEE

Sampled or inspected by (print name)

(submit white copy only if sample or information is directed to Staff Materials)

Shipped specified quantity to:

☐ Central lab ☐ Region lab

PROJECT

Canary copy - Region Materials Engineer

Pink copy - Resident Engineer

Previous editions are obsolete and may not be used.

Via

ENGNEER

E-mail

ENGINEERIN

Residency

November 30, 2017

#### TO WHOM IT MAY CONCERN:

RE: Certificate of Compliance and Certified Test Report

CDOT Project No. STE C480-008

CDOT Project Code: 19219

Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC Supplier: Southwest Seed Inc.

Quantity: Three Seed Mixes - Details included with these documents.

Seed Mixes:

Lot No # 2017.0755

**Upland Pinon Causeway** Centennial Turf Mix

Lot No # 2015.0632

Wetlands Pinon Causeway

Lot No # 18330

#### Greetings;

This letter is to certify that all seed provided by Southwest Seed Inc. and used in the above referenced seed mixtures for Crossfire LLC have been tested at a Certified Seed Lab. Included with this letter is a copy of the seed tag showing seed quality and test dates. Also included are copies of the test analysis to validate each species of seed's viability within the last 13 months prior to the mixing of the seed mix. Questions can be directed to us at 970-565-8722.

Additionally, the following information is provided to complete a Certificate of Compliance as requested by CDOT.

1), CDOT Project No.

2). Manufacturer's Name

3). Address of Manufacturing facility

4). Laboratory name & address 5). Name of product or assembly

6). Complete description of the material See attached Seed Mix tags

7). Model No.

Suppliers Name: Southwest Seed Inc. 13514 Road 29, Dolores, CO 81323 Multiple Labs used. See individual tests Custom Mixes requested by Crossfire

Not Applicable

STE C480-008

8). Lot, heat, or batch number identifying the material delivered

9). Date(s) of laboratory testing

See attached See attached Not applicable

10). Applicable CDOT specifications

I hereby certify under penalty of perjury that the material listed in this Certified Test

Report represents the contents of the three contents of the contents of the three contents of the three contents of the conte Report represents the contents of the three seed mixes

Lot No # 2017.0755

Upland Pinon Causeway (45 PLS lbs)

Lot No # 2015.0632 Lot No # 18330

Centennial Turf Mix (56 BLK lbs) Wetlands Pinon Causeway (.21 PLS lbs)

Of seed, that will be installed on project number STE Ç480-008.

Supplier

Robby Henes Southwest Seed Inc. 13514 Rd. 29 Dolores, Colorado 81323

970-565-8722 swseed@southwestseed.com

Cc: Crossfire

Southwes Southwes Inc.

Dolores, J 81323

LOT NO: 2017.0755

Custom F. Seed Mixture Analysis

Test Date Bulk LBS PLS LBS Pure % 12/14/16 11/09/16 11/22/16 03/24/17 07/13/17 05/31/17 03/31/17 04/28/17 09/06/17 04/18/17 01/24/17 Variety: UPLAND PINYON CAUSEWAY 69.73 80.03 92.84 90.84 84.11 87.01 95.08 92.02 73.52 90.25 PLS Live Rstr Nox WEED CROP INERT 11.81 0.99 2.32 2.58 3.30 0.88 1.10 2.11 20.94 3.41 PURE 80.15 98.77 98.77 97.68 94.68 99.04 99.99 97.89 97.89 97.89 97.89 888¥888 88≸8 Ŕ 占 000 တပ Species: CROSSFIRE PASTURA APPAR EAGLE BOTTLEBRUSH RUIN CANYON RIMROCK FIRSTSTRIKE SHERMAN PRAIRIE ARRIBA Variety INDIAN RICEGRASS BLANKET FLOWER (GAILLARDIA) WESTERN WHEATGRASS WESTERN YARROW SQUIRRELTAIL BOTTLEBRUSH SLENDER WHEATGRASS LITTLE BLUESTEM Phone: 970-565-8722 **BIG BLUEGRASS** MUTTONGRASS BLUE GRAMA JUNEGRASS EWIS FLAX Species

7.86 3.81 3.91 3.91 3.97 3.97 1.90 1.90 2.88 9.83 9.83

9.47 .97 9.78 1.84 9.61 4.99

Grand Total

REMARK: 1 BAG CONTAINING 5.329 BULK #'S (45 PLS #'S) TO SEED 3 ACRES

Weed:

Inert: 4.43%

2017.0758

Pure:

2017.0388

2016.0435 2016.0471 2016.0522 2016.0860

2016.0335

2016.0082

2014.1018 2015.0816

Lot No

2016,0080 2016.0081 100.00%

Total:

Noxious Weeds (seeds/lb)

NOTICE TO BUYER. EXCLUSION OF WARRANTY AND LIMITATION. We warment that the sceed soil has been abshed as required in the Sane and Federal Sood Laws, and that it conforms to the label description within isolomnoss recognized by law. NO OTHER WARRANTY IS MADE, expressed or implied, INCLUDING without limitation, THE MENDING AND LIMITATION. We warment that the scene from any type of lass shall be limited soilely to the absorption of the passed or the scene from any type of lass shall be limited soilely to the absorption of the passed or the absorption of the passed or the absorption of purchase in the unspensed containers within 10 days. Under the "Colomdo Soed Act" arbitration is required as a perceptualistic to certain legal actions, counterchaints, or defenses against a saliar of sced. Information about this requirement may be obtained from the colomodo Connectionalities.

I hereby certify under penalty of perjury that the material listed in	n this Certified Test
Report represents 2.37-ACVES (quantity and 212-00000 6 Seeding (Native) (pay item # and desc	ription) that will be
installed in conformance with the plans and specifications of .19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-	on Project Number
.17217 Fillon Causeway to Aspen Village Drive Sor, STE C4804	<u>508</u> .
Contractor Rep. Signature	OI ZL IE

749 Road 9 Powell, WY 82435 Laboratory Report Of Analysis

-	-			
	Account No.	Date Received	Date Completed	Lab Number
	168	03/08/17	04/18/17	16-2096

Southwest Seed, Inc. 13514 Road 29 Dolores, CO 81323

Information Provided by Sender **VNS** Product Junegrass, prairie Kind Genus/Species Koeleria macrantha 2014.1018 Lot Number

Service

Purity Analysis	<u></u>		Via	ability Analys	sis	
Component Junegrass, prairie Koeleria macrantha	<u>Purity</u> -N-	Germ Date 04/18/17	<u>Germ</u> 87	<b>Dormant</b> 0	<u>Hard</u> -N-	<u>Viable</u> 87
		Other Deter	minations			

Class

Status:

Completed

Tests Requested:

Germination. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



# Report of Seed Analysis CFIA Accredited Laboratory No. 1215

LAB#: 13-50373 2014.1018

101, 5906-50 Street Leduc, Alberta T9E 0R6 Phone: (780) 980-8324 Fax: (780) 980-8375 www.seedcheck.net

Customer:	`.				Seed Type: Scientific N
					Scientific N
	4	•	:		Variety:

-	Sender Information:
Seed Type:	Junegrass
Scientific Name:	(Koelena macranthe)
Variety:	
Lots;	A1212
Reference#:	Lot size: 10,000 lbs.
APHIS:	SL-12-1820
Grower:	Anderseed

#### Analyzed According to AOSA Rules and Regulations

Date Received: Jan 03, 2013		Purity Date: Jan 03, 2013	
APHIS Federal Noxious Weeds:	Per 10.11g	Other Crop Seeds;	Per 1,043g
	***************************************	(hard/fine leaved/sheeps) Festuce sp.	7
talian and the same of the sam		(Phleum pratense) Timothy	T
		(Poa palustris) Fowl Bluegrass	1
		(Pos pretensis) Kentucky Bluegrass	1
		(Pos compressa) Canada Bluegrass	4
Total Federal Noxious Weeds:	0		9
Other Weed Seeds:			
Other Weeds found in:	1,043g		
(Hordeum jubatum) Wild barley	1		
ALL STATES NOXIOUS Except UGS and Hawaii in:	10.119		والكالأمانين
None found		Total Other Crop Seeds	14
		Percentage Test:	1.0430
	<del>(144 ) (144 ) (144 )</del>	Pure seed % Other grap %	80,15 0.63
		Weed Seed %	0.05
tak ber in		Inert matter%	19.07
			<del></del>
		Germination	2-0-mg
		A contract of the second of th	
	undistinum et elem		
		The state of the s	
			,

Advisory Tests & Remarks:

Tetrazolium % Viable: 90 / In 200 seeds tested Jan 04, 2013 SENIOR MEMBER OF



124 Lisa Greenan

749 Road 9 Powell, WY 82435

## Laboratory Report Of Analysis

Southwest Seed, Inc. Product 13514 Road 29 Kind Dolores, CO 81323

Account No.	Date Received	Date Completed	Lab Number
168	11/16/16	12/14/16	16-0855
Information Prov	vided by Sender		

Pastura Bluestem, little Schizachyrium scoparium

Genus/Species 2015.0816 Lot Number Certified Class

Purity Analysis			Via	ability Analys	sis	
Component	_	Germ Date	Germ	<u>Dormant</u>	<u>Hard</u> -N-	<u>Viable</u> 91
Bluestem, little Schizachyrium scoparium	-N-	12/14/16	90		-1/-	91

**Other Determinations** 

Completed Status:

Germination. No other tests requested. Tests Requested:

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Registered Seed Technologist Seal #45

749 Road 9 Powell, WY 82435

### Laboratory Report Of Analysis

	Account No.	Date Received	Date Completed	Lab Number
	168	12/14/15	12/16/15	15-1197
Southwest Seed, Inc. 13514 Road 29 Dolores, CO 81323	Information Product Kind Genus/Species	vided by Sender Pastura Bluestem, little Schizachyrium		

Lot Number 2015.0816 Class Certified

Purity Analysis		Vi	ability Analys	sis		
Component in 5.3429 grams		Germ Date	Germ	<u>Dormant</u>	<u>Hard</u>	<u>Viable</u>
Bluestem, little Schizachyrium scoparium	87.95%	-N-	-N-	-N-	-N-	-N-
Weed seed	0.13%					
Crop seed	0.11%	İ				
Inert matter	11.81%					

Other Crop Seeds in 5.3429 grams	# Seeds	# per lb	Noxious Weed Seeds in 50 grams		# Seeds	# per lb
Galleta grass Pleuraphis jamesii	2		For: All States*		_	
Grama, blue Bouteloua gracilis	1	85	Barnyardgrass Echinochloa crus-galli		7	64
			(P)Prohibited No	oxious	(R)Restricte	ea ivoxious

Weed Seeds	None Found	Other Determinations	
		TZ test Bluestem, little	93 %
	•	Bulk Exam for Annual Weedy Bromes: N	one found in 50 grams
		worked	

<u>.emarks</u>

*All States Noxious Exam: All States (except Alaska and Hawaii) as found in the State Noxious-Weed Seed Requirements recognized in the Federal Seed Act.

Status:

Completed

Tests Requested:

Noxious exam, Purity, TZ test, Weedy Brome Bulk Exam. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: De Local Hall Registered Seed Technologist Seal #45



NST LABS 340 N. Main Ave PO Box 100 Bridgewater, SD 57319

Phone: (605) 729-2000 Fax: (605) 729-2001

Date Received:

11/08/2016

Date Completed: Date of Report: 11/09/2016

Sample Number:

74944

Kind of Seed: Blue Flax

Variety: Appar

Boise RSW-BLM

Boise, ID 83705

1962 Commerse Ave

Lot Number: NBS-RR5-APP-1

2016,0080

Purity Results in Blue Flax (Linum spp.)	98,77 %	Other Crops Tall Fescue (Festuca arundi	naceá)	# Found 7	Per Pound 506
Other Crops:	0.24 %				+ 1
Inert Material:	, 0.99 %				
Weed Seeds:	0.00 %	1. The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of th			
	100.00 %	3 .			
6.20 grams tested		·		:	
			The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa		
		Weed Seeds * NONE FOUND		# Found	Per Pound

Germ% Hard% Dorm% Viable% #Tested Test Days Temp %PLS TZ% Blue Flax (Linum spp.)

Noxious Weeds
Not Requested

(All States Noxious)

#Found Per Pound

Additional Comments

SSID: 3296,3297

Not Requested

VENDOR: WESTERN RECLAMATION, INC.

Special Noxious Weeds

#Found Per Pound

UGS

#Found Per Pound

* NONE FOUND

61.30 grams tested Western States Noxious

Page I

ALL TESTS CONDUCTED ACCORDING TO AGSA RULES UNLESS OTHERWISE STATED.
VIABILITY OF UNGERMINATED SEEDS NOT DETERMINED.
DORMANCY DETERMINED BY SUBTRACTING GERM FROM TZ.

Kevin Stahl, RST NST LABS AUTHORIZED REGISTERSO SEED FECHIOLOGIST, III



## **Washington State Department of Agriculture**

21 North First Avenue Yakima, WA 98902

Laboratory Report of Analysis

2016,0080

North Basin Seed 3984 SR 21 North Odessa, WA 99159

Date Completed Lab Number Received Date Account No. 11/17/15 11/02/15 15-2931 2174

Information Provided by Sender Variety/Germplasm Appar Kind Flax, blue Genus/Species Linum lewisii

NBS-RR5-APP-1 Lot Number

Certified Class

40500 lbs

		4,0,00			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
Purity Analysis			Viability Analysis					
Component in 4.021 grams	A	Purity	Germ Date	Germ	<u>Dormant</u>	Hard	<u>Viable</u>	
Flax, blue Linum lewisil		99.26%	11/16/15	85	-N-	-N-	85	
	Weed seed	0.00%					•	
	Crop seed	0.12%						
	Inert matter	0.62%				Company of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the s		
Other Crop Seeds in 4.021 grams		# per lb	Noxious W	eed Seeds	in 40.17 grams	Non	e Found	
Fescue, tall Festuce arundinacea		113	For: Weste	m States				
Ryegrass Lollum spp.		113	(P	)Prohibited	Noxious in WA (i	R)Restricted	Noxious in WA	
Weed Seeds	None F	ound	Other Determinations					
		<del></del>	TZ test Flat	x, blue	٠.	.*	- 83 %	
			Inert metter:	Empty flore	ets, leaves, stem	s, chaff, othe	r plant material	

Remarks

Flax, blue - AOSA: Requirements (Purity: 4 grams; Noxious: 40 grams) Submitted: 371 grams

206 seed TZ test completed on November 04 2015.

Analyzed using AOSA rules as a guideline.

TZ - Flaccid, dead, light embryos. Broken or fractured embryos. Essential parts of embryo unstained. Damage to radical or

Germ-Missing hypocotyls, weak, stubby or missing primary root with weak secondary roots, dead seed

Additional Sender's Information*

Renegade Ranches: 14-1845-2174

Status:

Passed - Meets purity standards for the certified class. Meets the viability standards for the certified class.

Tests Requested:

Germination, Noxious exam - Western states, Purity, TZ test. No other tests requested.

Services Requested:

Rush

WARRANTY: We warrent that the lest results reported on this form have been corried out with AOSA rules used as a guideline unless otherwise specified. Test results reflect the condition of the seed to from which the sample was taken. Officially drawn samples represent the condition of the line of sampling.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

WASHINGTON STATE DEPARTMENT OF AGRICULTURE SEED PROGRAM, AN ISO 9001 CERTIFIED ORGANIZATION

749 Road 9 Powell, WY 82435

#### Laboratory Report Of Analysis

Lab Number Date Received **Date Completed** Account No. 16-0856 11/16/16 11/22/16 168

Southwest Seed, Inc. 13514 Road 29 Dolores, CO 81323

Information Provided by Sender

Product Eagle Kind

Yarrow, western Achillea millefolium Genus/Species

2016.0081 Lot Number Service

Class

Purity Analysis			Vi	ability Analys	sis	
Component Yarrow, western Achillea millefolium	<u>Purity</u> -N-	Germ Date -N-	<u>Germ</u> -N-	<u>Dormant</u> -N-	<u>Hard</u> -N-	<u>Viable</u> -N-
		Other Deter	rminations			
		TZ test Yar	row. western			93 %

Completed Status:

TZ test. No other tests requested. **Tests Requested:** 

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

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OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: . Registered Seed Technologist Seal #45

Page \$ 2



## Washington State Department of Agriculture

21 North First Avenue Yakima, WA 98902

Laboratory Report of Analysis

2016.0081

North Basin Seed 3984 SR 21 North Odessa, WA 99159

Account No. 2174	Received Date 10/12/15	Date Completed 10/28/15	Lab Number 15-2515
			,

Information Provided by Sender Variety/Germplasm Eagle

Kind

Yarrow, western

Genus/Species

Achillea millefolium var. occidentalis

Lot Number Class

NBS-CF5-EAG-2 Select Generation 4

Purity Analysis	Viability Analysis					
Component in 0.4483 grams Yarrow, western Achillea millefollum var. occidentalis	<u>Purity</u> 97.68%	Germ Date 10/28/15	<u>Germ</u> 95	Dormant -N-	Hard -N-	<u>Viable</u> 95
Weed seed	0.00%					
Grop seed Inert malter	0,00% 2,32%					

None Found Other Crop Seeds

Noxious Weed Seeds in 4.982 grams

None Found

93 %

For: Western States

(P)Prohibited Noxious in WA (R)Restricted Noxious in WA

Weed Seeds None Found: Other Determinations TZ test Yarrow, western

Inert matter: Broken seed, stems, chaff, other plant material

Remarks

Yarrow, western - AOSA:Requirements (Purity: 0.4 grams; Noxious: 4 grams) Submitted: 166 grams 206 seed TZ test completed on October 16 2015.

Analyzed using AOSA rules as a guideline.

Additional Sender's Information*

Cooper Farms: 14-1842-2174

Status:

Tests Requested:

Germination, Noxidus exam - Western states, Purity, TZ test. No other tests requested.

Services Requested:

Rush

WARRANTY: We warmed that the test include you think from here been carried out with AOSA hiles used as a guideline unless otherwise specified. Test registles relied this form here been carried out with AOSA hiles used as a guideline unless otherwise specified. Test registles relied the condition of the tot at the time of samples.

OBCLABARS OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

WASHINGTON STATE DEPARTMENT OF AGRICULTURE SEED PROGRAM, AN ISO 9001 CERTIFIED ORGANIZATION

749 Road 9 Powell, WY 82435

### Laboratory Report Of Analysis

Southwest Seed, Inc. 13514 Road 29 Kind Dolores, CO 81323

Account No.	Date Received	Date Completed	Lab Number
168	03/08/17	03/24/17	16-2082

Information Provided by Sender

Product

**VNS** 

Squirreltail, bottlebrush

Genus/Species

Elymus elymoides

Lot Number

2016.0082

Class

Service

Component Purity Germ Date Germ Dormant Hard Viable	Purity Analysis		Via	ability Analys	sis	
		-	<u>Germ</u> 74	<u>Dormant</u> 0		<u>Viable</u> 74

Other Determinations

TZ test Squirreltail, bottlebrush

89 %

Status:

Completed

**Tests Requested:** 

Germination, TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: <u></u> Registered Seed Technologist Seal #45



## **Washington State Department of Agriculture**

21 North First Avenue Yakima, WA 98902

## Laboratory Report of Analysis

2016.0082

North Basin Seed 3984 SR 21 North Odessa, WA 99159

Date Completed Lab Number Received Date Account No. 15-2774 10/25/15 11/10/15 2174 Information Provided by Sender

Variety/Germplasm VNS Kind

Bottlebrush-squirreltail*

Genus/Species

Elymus elymoides spp. elymoides

Lot Number

NBS-LH5-SQU-1

Class

Service

Purity Analysis		Viability Analysis					
Component in 9.100 grams Bottlebrush-squirreltall* Elymus elymoides spp.	<u>Purity</u> 94.50%	Germ Date 11/10/15	Germ 87	Dormant -N-	<u>Hard</u> -N-	<u>Viable</u> 87	
elymoldes  Weed seed  Crop seed Inert matter	0.00% 2.92% 2.58%	E .					

Other Crop Seeds	
Wheatgrass, slender Elymus trachycaulus	1.80
Wildrye, Canada Elymus canadensis	1.12

Noxious Weed Seeds in 90.10 grams None Found For: Western States

(P)Prohibited Noxious in WA (R)Restricted Noxious in WA

None Found Weed Seeds

Other Determinations TZ test Bottlebrush-squirrellail*

91 %

Inert matter: Empty florets, staminate seed, stems, chaff, <1/3 caryopsis

No firm ungerminated seed observed at end of germination test.

Remarks

Bottlebrush-squirreltail* - AOSA:Requirements (Purity: 9 grams; Noxious: 90 grams) Submitted: 194 grams 206 seed TZ test completed on October 29 2015.

Analyzed using AOSA rules as a guideline.

Germ-Soft dead moldy seed, insufficient roots and shoots

Status:

Completed

Tests Requested:

Germination, Noxious exam - Western states, Purity, TZ test. No other tests requested.

Services Requested:

Rush

WARRANTY: We warrant that the test results reported on this form have been carried out with AOSA rules used as a guideline unless otherwise specified. Test results reflect the condition of a submitted sample; and iney not reflect the condition of the seed lot from which the seniols was taken. Officially drawn samples represent the condition of the lot at the time of sampling.

DISCLAMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY. OR FITNESS FOR A PARTICULAR PURPOSE.

WASHINGTON STATE DEPARTMENT OF AGRICULTURE SEED PROGRAM, AN ISO 9001 CERTIFIED ORGANIZATION

749 Road 9 Powell, WY 82435

#### Laboratory Report Of Analysis

Account No.	Date Received	Date Completed	Lab Number			
168	06/20/17	07/13/17	16-2927			

Southwest Seed, Inc. 13514 Road 29 Dolores, CO 81323

168	06/20/17	07/13/17	16-2927
nformation Prov	ided by Sender		
Product	Ruin Canyon		
Kind	Muttongrass		
Genus/Species	Poa fendleriana		
Lot Number	2016.0335		
Class	Sel Gen 2		

Purity Analysis		Viability Analysis					
Component Muttongrass /		<u>Purity</u> -N-	<b>Germ Date</b> 07/13/17	<u>Germ</u> 81	<u>Dormant</u> 2	Hard -N-	<u>Viable</u> 83
,			Other Deter		<u> </u>		90 %
Status:	Completed						
Tests Reque	sted: Germination, TZ test.	No other tests r	equested.				

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the

Submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

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Signature: Registered Seed Technologist Seal #45

749 Road 9 Powell, WY 82435

Class

### Laboratory Report Of Analysis

168	06/07/16	06/09/16	15-2652
Information Prov	ided by Sender		
Product	Ruin Canyon		
Kind	Muttongrass		
Genus/Species	Poa fendleriana		
Lot Number	2016.0335		
Class	Sel Gen 2		

Account No. Date Received Date Completed

Southwest Seed, Inc. 13514 Road 29 Dolores, CO 81323

Purity Analysis			Viability Analysis				
Component in 1.7399 grams		<u>Purity</u>	Germ Date	Germ	<u>Dormant</u>	Hard	<u>Viable</u>
Muttongrass Poa fendleriana		96.68%	-N-	-N-	-N-	-N-	-N-
	Weed seed	0.02%	1				
	Crop seed	0.00%		•	•		
	Inert matter	3.30%					
Other Crop Seeds	None F	ound	Noxious We	eed Seeds	in 15 grams	None	e Found

None Found Noxious Weed Seeds in 15 grams Other Crop Seeds For: All States*

Lab Number

(P)Prohibited Noxious (R)Restricted Noxious Other Determinations # Seeds # per lb Weed Seeds in 1.7399 grams 91% 261 TZ test Muttongrass 1 Pigweed Amaranthus spp.

Remarks

Inert Matter: Chaff and floral parts.

*All States Noxious Exam: All States (except Alaska and Hawaii) as found in the State Noxious-Weed Seed Requirements scognized in the Federal Seed Act.

Status:

Completed

Tests Requested:

OR FITNESS FOR A PARTICULAR PURPOSE.

Noxious exam, Purity, TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

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Signature: 0

Registered Seed Technologist Seal #45

749 Road 9 Powell, WY 82435

### Laboratory Report Of Analysis

	Account No. 168	Date Received 12/09/16	Date Completed 01/06/17	Lab Number <b>16-1053</b>
Southwest Seed, Inc. 13514 Road 29 Dolores, CO 81323	Information Prov Product Kind Genus/Species Lot Number Class	rided by Sender Rimrock Ricegrass, Inc Achnatherum 2016.0435 Certified		

Purity Analysis		,	Viability Ar	alysis			
Component in 7.0233 grams	Purity	Germ Date	Germ	Dormant	<u>Hard</u>	<u>Viable</u>	<u>PLS</u>
Ricegrass, Indian Achnetherum hymenoides	99.04%	01/06/17	1	91	-N-	92	91.12
Weed seed	0.08%						
Crop seed	0.00%						
Inert matter	0.88%						
Other Crop Seeds None F	ound	Noxious W	eed See	<b>ds</b> in 70 grams		None F	ound
		For: All Sta	ates*			*	
				(P)Prohibited	d Noxious	(R)Restrict	ed Noxious
Weed Seeds in 7.0233 grams # Seeds	# per lb	Other Dete	rminatio	ns_			
Pigweed, redroot Amaranthus 4	258	TZ test Rid	egrass, Inc	lian		-	96 %

#### retroflexus **Remarks**

Inert Matter: Chaff and floral parts.

'All States Noxious Exam: All States (except Alaska and Hawaii) as found in the State Noxious-Weed Seed Requirements

recognized in the Federal Seed Act.

Completed Status:

Germination, Noxious exam, Purity, TZ test. No other tests requested. **Tests Requested:** 

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the Submitted sample and may not reflect the condition of the seed to from which the sample was taken.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Registered Seed Technologist'Seal #45

## **Colorado Seed Laboratory**

Dept of Soil & Crop Sciences, CSU Fort Collins, CO 80523

### Laboratory Report Of Analysis

Southwest Seed Inc. 13514 Road 29 Dolores, CO 81323

Account No.	Date Received	Date Completed	Lab Number
4	05/17/17	05/31/17	17-3670

Information Provided by Sender

Variety/Product

**VNS** 

Blanket-flower

Genus/Species

Gaillardia aristata

Lot Number

2016.0471

Ç	ass

Kind

Service

Purity Analysis	Viability Analysis					
Component Blanket-flower Gaillardia aristata	<u>Purity</u> -N-	Germ Date -N-	<u>Germ</u> -N-	<u>Dormant</u> -N-	<u>Hard</u> -N-	<u>Viable</u> -N-
		Other Deter	minations	<u> </u>		
		TZ test Blai	nket-flower			94 %
Status: Completed		lu				

Tests Requested:

TZ test. No other tests requested.

WARRANTY: The Association warrants that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the Condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

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## **Precision Seed Testing**

P.O. Box 693 - Wheat Ridge, CO 80034-0693 - USA Telephone (303) 431-9502 - FAX (303) 467-7886

2016.0471

SOCIETY OF COMMERCIAL SEED TECHNOLOGISTS

	Report of Se	eed Analysis $\sqrt{0/\log}$	044			
SAMPLE IDENTIFICA	NOITA	RECEIVED FROM				
	ZG11144	Distri	Daband			
Common Name	Blanketflower		Received 8/4/2017			
Scientific Name	Gaillardia aristata	Date	Reported 8/4/2017			
PURITY ANALYSIS	â	VIABILITY REPORT	95%			
Pure Seed	98.90%	Germination	0%			
Crop Seed	0.00%	Hard Seed	0%			
Inert Matter	1.10%	Dormant Seed	95%			
Weed Seed	0.00%	Total Viable Seed	01/18/2017			
No. of Grams Analyz	ed 7,3383	Test Date	01/10/2017			
Other Crop Seeds NONE FOUND	PER POUND 0	Tetrazolium Test				
Weed Seeds NONE FOUND	PER POUND 0	TESTING METHOD  No. of Seeds Germinated  Germ. Temp.  No. of Days Prechill  No. of Days Tested	400 20-30C 0 10			
Inert Matter flowerheads, sten	and pappuses	Comments  No dormant seed found at e	end of test.			
ALL STATES NOXIONO. of Grams Analyz NONE FOUND	OUS WEED EXAM zed 70.8583 0/LB	5	Agran 6			
Page 5	SIGI	NATURE Mary Lo	R.S.T oring CCHNOLOGIST - SEAL NO. 128 tered Member			

The purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified.

Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

# **Colorado Seed Laboratory**

ARDEC Headquarters Building Fort Collins, CO 80523 Regulatory Report

Inspection No.	Date Collected	Date Received	Date Reported	Lab Nu	mber
4528	03/22/17	03/21/17	03/31/17	R17-0	050
nc.; Dolores, CO					

Collected At

Sputhwest Seed In Southwest Seed Inc.: Dolores,CO

Labelled By Variety/Name

Lot Number

Arriba

2016.0522

299;

# of Bags Sampled 30

Kind

Wheatgrass, western Pascopyrum smithil

Class: Bag Weight Service 50lb

Amount Seed in Bulk

# of Bags Labeled Germ Date 09/01/16

# of Baga 29% # of Caga van Labeled Germ Date 09/01/16	think ha	menta <del>kir aksimin siya sa</del> ng	Origin	CC						
Purity Analysis	A Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Section of the Sect	A COLUMN TO			Vì	ability	Analys	ils.		
	Stated	Found		% Stai	led	himina		% Fou	no	
Components in 9.95 grams	%	%	Germ	Dormani	Hard	Viable	Germ	Dormant	Hard	Viable
Wheatgrass, western Fascopyrum smilhii	98.23	97.89		-N-	-1/1-	91	94	·-N-	-N-	94
Weed Seed	.01	0.00		,	•					
Other Crop Seed		0.00								

		Туре	Stated per lb.	Found per lb.
Noxious Weed Seeds in	lóő grams	- Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Section - Sect	0	and the same property of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the s
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inert Matter

Runty FOUND complies with that of GIVEN Live Seed FOUND complies with that of GIVEN

## **Wyoming Seed Analysis Laboratory**

749 Road 9 Powell, WY 82435

2016.0860

(P)Prohibited Noxious (R)Restricted Noxious

## Laboratory Report Of Analysis

Account No. 168	Date Received 01/06/17	Date Completed 01/24/17	Lab Number <b>16-1285</b>
Information Prov	ided by Sender		
Product	Alma		
Kind	Grama, blue		
Genus/Species	Bouteloua gra	cilis	

Southwest Seed, Inc. 13514 Road 29 Dolores, CO 81323

Lot Number 2016.0860
Class Certified

Viability Ans

Purity Analysis			Viability Analysis					
Component in 2.1571 grams Grama, blue Bouteloua gracilis	Weed seed Crop seed Inert matter	Purity 79.05% 0.01% 0.00% 20.94%	Germ Date 01/24/17	<u><b>Germ</b></u> 79	<u>Dormant</u> 14	<u>Hard</u> -N-	<u>Viable</u> 93	<u>PLS</u> 73.52
Other Crop Seeds None Found		ound	Noxious W		<b>ds</b> in 20 grams		None Fo	ound

Weed Seeds in 2.1571 grams	# Seeds	# per lb	Other Determinations	
Stinkgrass Eragrostis cilianensis	4	841	TZ test Grama, blue	95 %

#### Remarks

Inert Matter: Chaff and floral parts.

*All States Noxious Exam: All States (except Alaska and Hawaii) as found in the State Noxious-Weed Seed Requirements

7009/1120 ti 111 ti 10		
Status:	Completed	
Tests Requester	d: Germinatio	n, Noxious exam, Purity, TZ test. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: Dany Hall
Registered Seed Technologist Seal #45

Page 6



NST LABS 340 N. Main Ave PO Box 100 Bridgewater, SD 57319

Phone: (605) 729-2000 Fax: (605) 729-2001

Sender Information North Basin Seed 3984 SR 21 N

3984 SK 21 N Odessa, WA 99159 Date Received:

Date Completed:

Date of Report:

04/26/2017 04/28/2017 04/28/2017

Sample Number: 81860

20170388

Kind of Seed: Slender wheatgrass

Variety: First Strike

Lot Number: NBS-LH3-1STR-1

Purity Results In Not Requested	Other Crops Not Requested	# Found Per Pound
	Weed Seeds 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	#Found PerPound
Germ% Hard% Do Slender wheatgrass (Elymus/hachycaulus)	m% Vlable% #Tested Test Days	Temp: %PLS 72%
Noxious Weeds (Ali States Noxious) # Found Per Pound	Additional Comments	
Not Requested		
Special Noxious Weeds # Found Per Pound Not Requested	UGS Not Requested	# Found Per Pound

Dormancy determination was not conducted in accordance with the AOSA rules for testing seeds. Viability of unsperminated seed is to be determined at the end of the prescribed test period Dormancy on this report was determined as the difference between the Viable Tetrazollum percentage and the Normal germination percentage.

Kevin Stahl, RST. NST LABS 76 76

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# Washington State Department of Agriculture

21 North First Avenue Yakima, WA 98902 Laboratory Report of Analysis

2017.0388

North Basin Seed 3984 SR 21 North Odessa, WA 99159

Date Completed - Lab Number Account No. Received Date 02/27/15 14-4484 02/05/15 2174

Information Provided by Sender Variety/Germplasm FirstStrike

Wheatgrass, slender Kind Elymus trachycaulus Genus/Species

NBS-LH3-1STR-1 Lot Number

11950 lbs Certified Class

Purity Analysis	Viability Analysis					
Component in 7:000 grams	Purity	Germ Date	Germ	Dormant	<u>Hard</u>	<u>Viable</u>
Wheatgrass, slender Elymus trachycaulūs	96,55%	02/27/15	√96	-N-	-N-30	96 -
6	eed seed 0.01% op Seed 0.03% of Matter 3.41%					
Other Grop Seeds in 7,000 grams	# per lb	Noxious We	ed Seeds	in:70:12 grams	None	Found
Fescue, tall Festuca erundinacea	65	For:Westerr (門)	and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second o	loxious in WA (F	R)Restricted N	voxíous in WA
Weed Seeds in 7,000 grams;	# per lb	Other Deter	minations			
Henbit Lamium amplexicaule	65	TZ test Whea	fgrass, slende	c and $c$		95% 🗀 :
		Inert matter; than 1/3 can seed materia	opsis, ergo	ets, staminate )t scierotia and	seed, stems Lsimilar mat	, chaff, less ter, other

#### Remarks

Wheatgrass, slender - AOSA:Requirements (Purity: 7grams; Noxious: 70 grams) Submitted: 184 grams

206 seed TZ test completed on February 10 2015.

Previous lab number: 13-5956

Prechilled 4 days

No firm ungerminated seed observed at end of germination test.

Additional Sender's Information* Lucky H Farms: 12-0439-2174

Passed - Meets purity standards for the certified class. Meets the viability standards for the certified class. Status:

Tests Requested:

Germination, Noxious exam - Western states, Purity TZ test. No other tests requested

Services Requested:

Rush

WARRANTY: We warrant that the test results reported on this form trave been carried out with AOSA rules used as a guideline unless otherwise specified. The results reported on this form trave been carried out with AOSA rules used as a guideline unless otherwise specified. The results reported the condition of this seed for from which the semple was taken. Officially drawn samples represent the condition of this lot at the time of sampling.

DISCLAIMER OF WARRANTIES. WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUTINOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITTINESS FOR A PARTICULAR PURPOSE.

Signature: 7 WASHINGTON STATE DEPARTMENT OF AGRICULTURE SEED PROGRAM - ISO 9001:2008 CERTIFIED



## **Washington State Department of Agriculture**

21 North First Avenue Yakima, WA 98902

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2017.0758

Laboratory Report of Analysis

2017.0758

Rainier Seed Company P O Box 1064 Davenport, WA 99122

414	08/01/17	09/06/17	17-0403			
Account No.	Received Date	Date Completed	Lab Number			
	·					

Information Provided by Sender Variety/Germplasm Sherman

Kind Genus/Species Bluegrass, big Poa secunda

Lot Number

442-211-721A

Class

Registered

Purity Analysis			Viability Analysis				
Component in 1.217 grams		<u>Purity</u>	Germ Date	<u>Germ</u>	<u>Dormant</u>	<u>Hard</u>	<u>Viable</u>
Bluegrass, big Poa secunda		99.18%	09/05/17	91	-N-	-N-	91
	Weed seed	0.00%					
,	Crop seed	0.00%					
	Inert matter	0.82%					
Other Crop Seeds in 12.22 grams		# per lb	Noxious We	eed Seeds	in 12.22 grams	None	e Found
Bluegrass, Kentucky Poa pratensis		37	For: Wester	rn States			
			' (P,	)Prohibited I	Noxious in WA (F	R)Restricted I	Noxious in W

None Found

Other Determinations

Crop exam

12.22 Grams

TZ test Bluegrass, big

95 %

Inert matter: Stems, soil, ergot/similar matter, non-seed inert matter No firm ungerminated seed observed at end of germination test.

#### <u>.emarks</u>

Bluegrass, big - AOSA:Requirements (Purity: 1.2 grams, Noxious: 12 grams) Submitted: 650 grams

206 seed TZ test completed on August 03 2017.

Analyzed using AOSA rules as a guideline.

Bulk examination not reported according to AOSA Rules, results not reported under Other Determinations.

Prechilled 5 days

#### Additional Sender's Information*

Victory Farms: 16-0321-414

Status:

Passed - Meets purity standards for the registered class. Meets the viability standards for the registered

class.

Tests Requested:

Crop exam, Germination, Noxious exam - Western states, Purity, TZ test. No other tests requested.

Services Requested:

Rush

WARRANTY: We warrant that the test results reported on this form have been carried out with AOSA rules used as a guideline unless otherwise specified. Test results reflect the condition of a submitted sample and may not reflect the condition of the seed lot from which the sample was taken. Officially drawn samples represent the condition of the lot at the time of sampling.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature:

WASHINGTON STATE DEPARTMENT OF AGRICULTURE SEED PROGRAM, AN ISO CERTIFIED ORGANIZATION

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19219-212-2

COLORADO DEPARTMENT OF TRANSPORTATION			Region 5	Field shee	"# <del>266289</del>	
FIELD REPORT FOR S			Contaction	Date Sub	mitted 9-10	
OR MATERIALS DOC	JUMENTATI	ON	19219 Project No.	0 -	9-10	
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Material Code (LIMS)	Item 212	Class	Grading	Special F	Provisions yes	<del></del>
Previously used on Project No.:		Previous CDOT Form	1#157 F/S No.(s):	<del> </del> -	DOT Form #633 (sack) DOT Form #634 (can)	
<ul> <li>Sample Identification: Quantity &amp; Uni</li> <li>Materials Documentation: Field inspendent</li> </ul>				ample removed fro	m ( stationing), etc.	
LANA)						
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AND APPROVED B	Y THE PRO	JECT ENG	INEER, CE	ECTIFIED	TEST REPORT	ς
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Sample ID (#1)	Sample	ID (#2)		Sample ID (#3)	, , , , , , , , , , , , , , , , , , ,	
Sample ID (#4)	Sample	ID (#5)		Sample ID (#6)		
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Sampled or Inspected by (print name)	Title		E-m	ail		
Supervisor (Pro./Res./Matts, Engr./Maint, Supt.)  MICE DAVIS PE	(orini nama) Title		Reci	idency FEOIN Q SE	evlice	
Distribution: White copy - CDOT Central L	or many as transfer to be on a devoted which was a bid over your rest if of		A CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O		CDOT Form #157	3/15

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.

#### TO WHOM IT MAY CONCERN:

RE: Certificate of Compliance and Certified Test Report

CDOT Project No. STE C480-008

CDOT Project Code: 19219

Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC Supplier: Southwest Seed Inc.

Quantity: Three Seed Mixes - Details included with these documents.

Seed Mixes:

Lot No # 2017.0755

Upland Pinon Causeway

Lot No # 2015.0632

Centennial Turf Mix

Lot No # 18330

Wetlands Pinon Causeway

## Greetings;

This letter is to certify that all seed provided by Southwest Seed Inc. and used in the above referenced seed mixtures for Crossfire LLC have been tested at a Certified Seed Lab. Included with this letter is a copy of the seed tag showing seed quality and test dates. Also included are copies of the test analysis to validate each species of seed's viability within the last 13 months prior to the mixing of the seed mix. Questions can be directed to us at 970-565-8722.

Additionally, the following information is provided to complete a Certificate of Compliance as requested by CDOT.

- 1), CDOT Project No.
- 2). Manufacturer's Name
- 3). Address of Manufacturing facility
- 4). Laboratory name & address
- 5). Name of product or assembly
- 6). Complete description of the material See attached Seed Mix tags
- 7), Model No.
- 8). Lot, heat, or batch number identifying the material delivered
- 9). Date(s) of laboratory testing 10). Applicable CDOT specifications

STE C480-008

Suppliers Name: Southwest Seed Inc. 13514 Road 29, Dolores, CO 81323

Multiple Labs used. See individual tests

Custom Mixes requested by Crossfire

Not Applicable

See attached See attached

Not applicable



(970) 565-8722

I hereby certify under penalty of perjury that the material listed in this Certified Test
Report represents the contents of the three seed mixes

Lot No # 2017.0755

Upland Pinon Causeway (45 PLS lbs)

Lot No # 2015.0632

Lot No # 18330

Centennial Turf Mix (56 BLK lbs)
Wetlands Pinon Causeway (.21 PLS lbs)

Of seed, that will be installed on project number STE Ç480-008.

Hoberta (Robby) Henes
Supplier

Date

Robby Henes Southwest Seed Inc. 13514 Rd. 29 Dolores, Colorado 81323

970-565-8722 swseed@southwestseed.com

Cc: Crossfire

## **Wyoming Seed Analysis Laboratory**

749 Road 9 Powell, WY 82435

## Laboratory Report Of Analysis

Account No.

Southwest Seed, Inc.

168

06/20/17

07/27/17

16-2936

Information Provided by Sender
Product

CENTENNIAL MIX

Kind Mixture
Genus/Species Mixture
Lot Number 2015.0632
Class Service

Viability Analysis **Purity Analysis** <u>Viable</u> Dormant **Purity** Germ Date <u>Germ</u> <u>Hard</u> Component 86 -N--N-86 Bluegrass, Kentucky turf type Poa pratensis 07/27/17 -N--N-95 07/19/17 95 -N--N-Ryegrass, perennial Lolium perenne

Other Determinations

Date Received

Status: Completed

Tests Requested: Germination. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the seed lot from which the sample was taken.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY

OF STRINGES FOR A PARTICULAR PRIPAGE.

Signature: Of Many Hull Registered Seed Technologist Seal #45

Dolores, CO 81323

Date Completed

Lab Number

Contractor Rep. Signature

Date

RE: Lawn Seed Mix for Pinion Causeway

Southwest Seed Inc. proposes to provide "Centennial Mix" as a premium turf seed mix for the Pinion Causeway project. We created the Centenial Mix for the City of Cortez Parks and Recreation programs. This turf mix needs to be beautiful, very traffic tolerant, and have excellent growth potential so that the city parks are always at peak performance. This has been the mix for the City of Cortez for more than 30 years. Having said that – the state of Kentucky Bluegrasses has progressed dramatically since the early days of turf grasses, so the mix has remained true to a superior turf blend but the components themselves have changed over the years to take advantage of new releases and advances in KY Bluegrass development.

Currently, there are hundreds of turf-type Kentucky Bluegrasses on the market. There are not nearly that many with distinct differences and advantages – however, the nature of the turf industry dictates that each major turf grass producer has their own brands of Kentucky Bluegrass which makes comparing different Kentucky Bluegrasses difficult. There are obvious 'average' quality KY Bluegrasses and then there are superior types. Our Centennial mix is designed to be economical and still provide the most beautiful and durable turf for golf courses, and other administrative entities that have limited budgets. We purchase this mix from Mountain View Seeds in Oregon. I contacted Mountain View to make sure that our Centennial is a premium blend. They can make a blend that is even more premium if that is necessary. Please contact Robby Henes 970-565-8722.

Sincerely

Robby Henes, V. Pres

Southwest Seed Inc.



13514 BV 29 * DOLQRES-(OLORADO-81323

2015.0632

MIXTURE STD: CENTENNIAL MIX



SWS

#### EED INC

Species	Variety	Pure %	Germ %	Origin
<ul> <li>KENTUCKY BLUEGRASS</li> <li>KENTUCKY BLUEGRASS</li> <li>KENTUCKY BLUEGRASS</li> <li>PERENNIAL RYEGRASS</li> <li>KENTUCKY BLUEGRASS</li> </ul>	CORSAIR VOLT ARC GRAND SLA M ARROWHE AD	% 29.73 29.54 14.94 14.81 9.87	% 86 86 86 95 86	OR WA WA WA WA

Test	
Results:	

Pure: 98.89% Inert:

1.11% Crop: 0%

Weed: 0%

Noxious Weeds (seeds/lb): NF

Net Wt (lbs):

50 Test Date: 7/27/17

Southwest Seed, Inc., 13514 Road 29, Dolores, CO 81323

ETO BUYER - EXCLUSION OF WARRANTY AND LIM TATION. We warrant that the seed sold has been labeled as the State and Federal Seed Laws, and that it conforms to the label description within tolerances recognized by the State and Federal Seed Laws, and that it conforms to the label description within tolerances recognized by the RMARRANTY IS MADE, expressed or implied, INCLUDING without immalation, THE MERCHANT ABILITY, OF THE FITNESS FOR PARTICULAR PHRPOSES. It is agreed that the liability to the buyer or others from any type of lass small be limited solely to the amount of the severe of the seed. Seed not accepted on the above terms and conditions may be returned to the place of laws in the unoperated containers within 10 days. Noter the "Colorado Seed Act" shibtandin is required as a second container within 10 days. Order the "Colorado Seed Act" shibtandin is required and the colorado Commissioner of Agi culture.

H

COLORADO DEPARTMENT OF T		Region 5	Field sheet # 266299		
FIELD REPORT FOR SA		00114406112	Date Submitted		
<b>IOR MATERIALS DOCU</b>	IMENTATION	19219	3-9-18		
1	n ——	Project No.	80 - 00B		
Metric units	yes 📈 no				
		PINON CAR	BEWAY TO ASPEN VILLAGE DE		
Material Type SEED ING -	WETLAND	Field Lab phone	Cell Phone Su.P.		
Material Code (LIMS) Ite		Grading	Special Provisionsyes .		
Previously used on Project No.:		CDOT Form #157 F/S No.(s):	CDOT Form #633 (sack)		
Sample Identification: Quantity & Unit of	material submitted describe to	ests required precise location	sample removed from ( stationing), etc.		
Materials Documentation: Field inspecte	d (describe appearance, weigh	nt/dimensions, model/serial nu	mber), COC &/or CTR provided , etc.		
THE VSEED MIX	PLACED ON T	THE PROJECT	WAS FIELD INSPECTED		
AND APPROVED BY	THE PROJECT	ENGINEER. C	ECTIFIED TEST REPORTS		
ALE ATTACHEO. A		( F	· · · · · · · · · · · · · · · · · · ·		
ALL SEEDS WERE T	ESTED WITHIN	13 MONTHS	PRIOR TO THE DATE		
OF SEEDING, SEE FORM					
User ID		·			
O	Commis ID (#0)		Sample ID (#3)		
Sample ID (#1)	Sample ID (#2)		daniple ib (#9)		
Sample ID (#4)	Sample ID (#5)		Sample ID (#6)		
APL/QML. Acceptance: APL Ref. No.	Product name:	ranic angus amalan a-manunan akaba-ang i Mahada di Milang Panjunggi angung angung angung angung ang angung ang	Date checked:		
ADI (OMI A A A A A A A A A A A A A A A A A A A	D. dick name		Date checked:		
APL/QML Acceptance: APL Ref. No.	Product name:		. Date checked.		
Preliminary Construction	on Maintenance En	nergency	Date needed		
Contractor COOSSFIRE (LC SOUTHWEST SEED					
Sampled from (Pit, roadway, windrow, stock, etc.)  Pit name or owner					
Quantity represented  0.008 AELES	Previous quantily O		Total quantity to date (1,008 ACLES		
Sample submitted: Shipped s	pecified quantity to:	Via	Date		
Yes No		egion lab	moil		
Sampled or inspected by (print name)  CUFTON LEE PE  Supervisor (Pro./Res./Maint. Supt.) (print name)  MICE DAVIS PE  Title  Residency  PRESIDENT- DAVIS ENGINEERING SERVICE					
Supervisor (Pro./Res./Matts. Engr./Maint. Supt.) (prin	nt name) Title	AFT DAVIS FALS	isidency MEERING SERVICE		
Distribution: White copy - CDOT Central Labor		WIT WHYID WYYI	CDOT Form #157 3/1		

Distribution:

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(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

November 30, 2017

## TO WHOM IT MAY CONCERN:

RE: Certificate of Compliance and Certified Test Report

CDOT Project No. STE C480-008

CDOT Project Code: 19219

Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC Supplier: Southwest Seed Inc.

Quantity: Three Seed Mixes - Details included with these documents.

Seed Mixes:

Lot No # 2017.0755

**Upland Pinon Causeway** 

Lot No # 2015.0632

Centennial Turf Mix

Lot No # 18330

Wetlands Pinon Causeway

### Greetings;

This letter is to certify that all seed provided by Southwest Seed Inc. and used in the above referenced seed mixtures for Crossfire LLC have been tested at a Certified Seed Lab. Included with this letter is a copy of the seed tag showing seed quality and test dates. Also included are copies of the test analysis to validate each species of seed's viability within the last 13 months prior to the mixing of the seed mix. Questions can be directed to us at 970-565-8722.

Additionally, the following information is provided to complete a Certificate of Compliance as requested by CDOT.

1), CDOT Project No.

2). Manufacturer's Name

3). Address of Manufacturing facility

4). Laboratory name & address

5). Name of product or assembly

6). Complete description of the material See attached Seed Mix tags

7). Model No.

STE C480-008

Suppliers Name: Southwest Seed Inc. 13514 Road 29, Dolores, CO 81323

Multiple Labs used. See individual tests Custom Mixes requested by Crossfire

Not Applicable

8). Lot, heat, or batch number identifying the material delivered

9). Date(s) of laboratory testing

10). Applicable CDOT specifications

See attached See attached

Not applicable



FAX (970) 565-2576

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents the contents of the three seed mixes

Lot No # 2017.0755

Upland Pinon Causeway (45 PLS lbs) Centennial Turf Mix (56 BLK lbs)

Lot No # 2015.0632 Lot No # 18330

Wetlands Pinon Causeway (.21 PLS lbs)

Of seed, that will be installed on project number STE Ç480-008.

Hoberta (Botoy) Henes Supplier

Date

Robby Henes Southwest Seed Inc. 13514 Rd. 29 Dolores, Colorado 81323

970-565-8722 . swseed@southwestseed.com

Cc: Crossfire



## **Western Native Seed**

P.O. Box 188 Coaldale CO 81222 - Info@westernnativeseed.com - 719-942-3935

Wetlands Pinon Cause	Lot # 18330	0.21 PLS lb		
	Common Name	Lot# %Germ		Date
% Pure Species 84.91% Carex utriculata	Beaked Sedge	CARROS-16	83 UT	9/17
· · · · · · · · · · · · · · · · · · ·	Tuffed Halrgrass	017-8463 / 94	Can	3/17
11.14% Deschampsia cespitosa 13.78% Calamagrostis canadensis	Blue Joint Readgress	WSBJ2014A 76	Can	10/16

0.28 Bulk lbs

Novinus None

Crop.0.13% Weed 0.11%

212 - 6776 20 Seeding [Welland] (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature



## Idaho State Seed Lab

P. O. Box 790 Boise, ID 83701-0790 Laboratory Report Of Analysis C.L. "Butch" Otter Governor

> Celia R. Gould Director

Account No. <b>5675</b>	AA A MARIE AA A MARIE AA A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MARIE A MAR		Lab Number <b>\$18-1065</b>
Information Prov	ided by Sender		
Variety	VNS		
Kind	Sedge, beake	d	
Genus/Species	Carex rostrata	ì	
Lot Number	CARROS-16		

Service

Class Weight: 250 lbs

Purity Analysis		Viability Analysis				
Component Sedge, beaked Carex rostrata	Purity -N-	Germ Date -N-	Germ -N-	Dormant -N-	Hard -N-	<u>Viable</u> -N-
		Other Deter	minations			
		TZ test Sea	ge, beaked			83 %

Tests Requested:

TZ test. No other tests requested.

WARRANTY: We waitrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the lot from which the sample was taken.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: Stacy LaMastra, Principal Seed Analyst Haho State Seed Testing Laboratory



## Idaho State Seed Lab

2240 Kellogg Lane Boise, ID 83712 Laboratory Report Of Analysis C.L. "Butch" Otter Governor

Celia R. Gould Director

Account No. 5675	Date Received 09/08/16	Date Completed 09/12/16	Lab Number \$17-0708
Information Prov	ided by Sender		
Variety	VNS		
Kind	Sedge, beake	d	
Genus/Species	Carex rostrata	1	
Lot Number	CARROS-16		
Class	Service		

Purity Analys	is		Viability Analysis				
Component in 3.358 grams Sedge, beaked Carex rostrata		<u>Purity</u> 95.83%	Germ Date -N-	<u>Germ</u> -N-	Dormant -N-	Hard -N-	<u>Viable</u> -N-
	Weed seed Crop seed Inert matter	0.09% 0.03% 4.05%					
Other Crop Seeds in 3.358 grams	# Seeds	# per lb	Noxious W	eed Seeds	in 30,858 grams	Non	e Found
Juncus spp.	29	3917	For: All Sta	tes			
Spikerush, Common Eleocharis palustris	4	540					
Sedge, Analogue Carex simulata	2	270					
Weed Seeds	None F	ound	Other Deter	rminations	<b>.</b>		
Art and a state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of			TZ test Sed	fge, beaked			82 9

#### Remarks

nert Matter: Chaff, plant debris

All States Noxious examination excludes species declared undesirable grass seed by DE, MD, NJ, NH, PA, VA and WV.

Tests Requested:

All States Noxious, Purity, Purity - Other, TZ test. No other tests requested.

Services Requested:

Rush

WARRANTY: We watrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the lot from which the sample was taken.

DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Signature: Stacy LaMastra, Principal Seed Analyst Idaho State Seed Testing Laboratory



Report of Seed Analysis
CFIA Accredited Laboratory No. 1215.

LAB#: 17-78238

101, 5906-50 Street Leduc, Alberta T9E 0R6 Phone: (780) 980-8324 Fax: (780) 980-8375 www.seedcheck.net

40.					
			The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		Sender Information:
· en /			i.	SeedType:	Tuffed Hairgrass
Gustomer:		^-	Y	Scientific Name:	(Deschampsia cespitosa)
	••			Variety.	Uncertified Nortran
			•	Lot Size:	7500 lbs
				Sampler:	Terry Andersen
				Lot#:	A1608
				APHIS:	SL-17-2960
			•		the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s

## Analyzed According to AOSA Rules and Regulations

Tests: 400 Seed AOSA Germination, (Non-Tabled), AOSA F	urity, Tetra:	zolium,	
Date Received: Mar 03, 2017		Purity Date: Mar 03, 2017	
APHIS Federal Noxious Weeds:		Other Crop Seeds:	Per 1.011g
AND THE RESIDENCE AND ADDRESS OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY	10.04g	(Koeleria macrantha) Junegrass	2
		(Poa pratensis) Kentucky Bluegrass	5
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Total Federal Noxíous Weeds:	**		
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(Poa palustris) Fowl bluegrass	25		
ALL STATES NOXIOUS Except UGS and Hawaii in:	10 grams	Total Other Crop Seeds	7
None found	0	Percentage Test:	1.011g
	<u> </u>	Pure seed %	98.15
		Other crop %	0.28
		Weed Seed %	
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Advisory Tests & Remarks:

Tetrazolium % Viable: 95 Mar 06, 2017

SENIOR MEMBER



124 Lisa Greenan



# Report of Seed Analysis CFIA Accredited Laboratory No. 1215

101, 5906-50 Street Leduc, Alberta T9E 0R6 Phone: (780) 980-8324 Fax: (780) 980-8375 www.seedcheck.net

LAB#: 16-73584 Am(21/09/2016)

•	Sender Information:		
Customer:		SeedType: Bluejoint Reedgrass	
		Scientific Name: (Calamagrostis canadensis)	
		Lot#: WSBJ2014A	
	Test Results According t	o Canadian Methods & Procedures	
Date Received	_	o Canadian Methods & Procedures	
	Test Results According t Sep 09, 2016 Oct 12, 2016	o Canadian Methods & Procedures	
Date Received	Sep 09, 2016	o Canadian Methods & Procedures	
Date Received Date of Germination % GERMINATION Abnormal Seedlings%	Sep 09, 2016 Oct 12, 2016 76 1	o Canadian Methods & Procedures	
Date Received Date of Germination % GERMINATION	Sep 09, 2016 Oct 12, 2016 76 1 23	o Canadian Methods & Procedures	
Date Received Date of Germination % GERMINATION Abnormal Seedlings%	Sep 09, 2016 Oct 12, 2016 76 1	o Canadian Methods & Procedures	
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Date Received Date of Germination % GERMINATION Abnormal Seedlings% Dead Seed%	Sep 09, 2016 Oct 12, 2016 76 1 23	o Canadian Methods & Procedures	

SENIOR MEMBER

124

Lisa Greenan

7.



**NST LABS** 340 N. Main Ave PO Box 100 Bridgewater, SD 57319

Phone: (605) 729-2000 Fax: (605) 729-2001

Date Received:

03/02/2015

Date Completed:

03/23/2015

Date of Report:

03/23/2015

Sample Number:

55985

Kind of Seed: Bluejoint

Variety: VNS

Lot Number: WSBJ2014-A

Purity Results in Bluejoint (Calamagrostis canadensis) Other Crops:

Inert Material:

33.71 % 0.00 %

Weed Seeds:

0.50 grams tested

**Noxious Weeds** 

* NONE FOUND

5.40 grams tested

65.91 % 0.38 %

100.00 %

Other Crops Kentucky bluegrass (Poa pratensis) #Found Per Pound 1718

Weed Seeds

# Found Per Pound

* NONE FOUND

Bluejoint (Calemagrostis canadensis)

Germ%

Hard% Dorm%

Viable% #Tested Test Days

%PLS Temp

72% 89

(All States Noxious)

#Found Per Pound

**Additional Comments** 

Canada Standards: Canadian Standards: (5.4g search, Listed as

per 25g)

No (0) Brassica crops including S. Alba in 25g.

No (0) Sweetclover in 25g.

Found (28) Ergot bodies (0.042g) in 25g.

No (0) Soil in 25g.

No (0) Canadian Prohibited Noxious in 25g.

No (0) Canadian Primary Noxious in 25g.

No (0) Canadian Secondary Noxious in 25g.

Found (56) Other crop in 25g; (6) Slender wheatgrass,

(51)Kentucky bluegrass.

No (0) Other weed in 25g.

Seed count= 3,780,000 seeds/lb.

Origin= Washington. .

Special Noxious Weeds

#Found Per Pound

UGS

# Found Per Pound

Not Requested

Not Requested

ALL TESTS CONDUCTED ACCORDING TO AOSA RULES UNLESS OTHERWISE STATED. VIABILITY OF UNGERMINATED SEEDS NOT DETERMINED. DORMANCY DETERMINED BY SUBTRACTING GERM FROM TZ.

Kevin Stahl, RST NST LABS

Region 5 Field sheet# COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 3-9-18 OR MATERIALS DOCUMENTATION 19219 Project No. STE (480-008 no Metric units ves Project Location TO MERCY VILLAGE DI PINON CAUSEWAY Cell Phone Field Lab phone Material Type SOIL CONDITIONING -BOTILIZER. Grading Special Provisions Item yes Material Code (LIMS) 217 Previous CDOT Form #157 F/S No.(s): Previously used on Project No.: CDOT Form #633 (sack) CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided FERTILIZER USED ON THE PROJECT WAS FIELD INPECTED AND APPROVED FUR USE BY THE PROJECT ENGINEER. THE MANUFACTURERS ATTACHEO, FROM THE SUPPLIER user ID Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date needed Construction Maintenance Emergency Preliminary Supplier TRIVIN Contractor SUPPLY ORGANIX CROSSFIRE ( Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.) Total quantity to date Quantity represented Previous quantity 2.57 ALUES 0 2,57 ACRES Date Via Sample submitted: Shipped specified quantity to:

Distribution: White copy - CDOT Central Laboratory

upervisor (Pro./Res./Matls. Engr./Maint. Supt.) (print name)

Yes

MIKE DAVIS

Sampled or inspected by (print name)

CUPTON LEE PE

White copy - CDO1 Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)

Central lab.

Title

Canary copy - Region Materials Engineer Pink copy - Resident Engineer

Previous editions are obsolete and may not be used.

E-mail

ENGINEERING

Residency

__ Region lab

PROJECT ENGINEER



5433 NEWPORT STREET • COMMERCE CITY, CO 80022 • (303) 945-7588 OFFICE • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

**AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219** 

MANUFACTURER: ORGANIX SUPPLYL, LLC; 15121 WELD COUNTY ROAD 32 PLATTEVILLE, CO 80651

LABORATORY NAME/ADDRESS: MIDWEST LABORATORIES, INC.; 13611 B STREET OMAHA, NEBRASKA

TYPE OF MATERIAL: SILT RICHLAWN ORGANIC 5-3-2 - 40 LB BAG

THIS PRODUCT IS AN ALL NATURAL, ORGANIC FERTILIZER CONTAINING A SLOW RELEASE INTROGEN AND ORGANIC PHOSPHORUS. RICHLAWN 5-3-2 RESTORES DEPLETED SOILS BY AADDING ESSENTIAL NURTIENTS TO BUILD A SUSTAINABLE ENVIRONMENT IN WHICH TO ESTABLISH VEGETATION QUICKLY.

LOT/BATCH NUMBER: 10203

SPECIFICATIONS: SEE ATTACHED DATA SHEET AND TESTING DATA FROM RICHLAWN ORGANIX

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC, INC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF COOT SPEC SECTION 212 SEEDING, FERTILIZER, SOIL CONDITIONER AND SODDING. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Claina Dent Campbell

Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2.57 acres (quantity and units) of pay item 212-60032 Soil Conditioning (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

Date Date

I hereby certify under penalty of perjury that the material listed in this				
Certificate of Compliance represents(quantity and units) of				
pay item(pay item number and Description) that will be				
installed on project number STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE				





## RICHLAWN FERTILIZER

5-3-2

Richlawn 5-3-2 is a CDOT Approved Natural, Organic Fertilizer containing a slow release Nitrogen and organic phosphorus. Richlawn 5-3-2 restores depleted soils by adding essential nutrients to build a sustainable environment in which to establish vegetation quickly.

Manufactured by Richlawn Turf Food, LLC 15121 WCR 32, Platteville, CO 80651 Net Weight 50 Lbs (22.68 Kg.)

### **Guaranteed Analysis**

5.0%
3.0%
2.0%
4.0%

## Plant Nutrient Sources: Dried Poultry Manure.

# The Benefits of Richlawn 5-3-2

- Increases the Nutrient and water holding capacity of the existing soil.
- Increases Soil
   Porosity which
   promotes superior
   Root Establishment.
- Extended release nutrients allow for fertilization over a longer period of time.

DISTRIBUTED BY:
TRITON ENVIRONMENTAL
5433 NEWPORT STREET
COMMERCE CITY, CO 80022
303.945.7588 (O) 303.945.7579 (F)

^{*4.60%} Slowly Available Nitrogen from Poultry Manure.

# / Midwest / Laboratories, Inc.

13611 B Street Omaha, Nebraska 68144-3693 (402) 334-7770 FAX (402) 334-9121 www.midwestlabs.com

Lab#	2733113	Rep	ort of Analy	/sis	Report Numbe	er: 17-293-4044 V2
	Account:	MIKE HOOPS	100 C C C C C C C C C C C C C C C C C C	ACCUPATION OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE		
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初先的					Accou	nt Manager
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ס	ate Received:	2017-10-13			DEHYDRATED	POULTRY MANUR
	Sample ID:	: 5-3	3-2			
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ner cheratere en en en	Major and Second					3.000
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and and the second	Organic Ma	etter	% ************************************	64.60	67.57	1292.0
	Ash		2479 Z.S.	31/10	32.53	622.0
nersking de stations	C:N Ratio		THE SERVE THE SERVE THE	7:1		Berekalen bereken der
	Total Carbon			34/27	35.85	
der kannen er ker	Chloride		% ************************************	0.45	0.47	
	РП			6.8	Kenter (Sym	

Crossfires Certified Test Report Certification Statement on Bade

19219-212-5

FIELD REPORT FOR SAMPLE IDENTIFICATION		Region 5 Contract ID	Field sheet # 266289  Date Submitted	
OR MATERIALS DOCUME!  Metric units yes	MIATION No	Project No.  STE CHOO-  Project Location		
			WAY TO ASPEN VILLAGE DR	
Material Type SOIL CONDITIONIN	G-HUMATES	Field Lab phone	Cell Phone S. W.P.	
Material Code (LIMS) Item 212	Class	Grading	Special Provisions yes .	
Previously used on Project No.:	Previous CDOT Form	#157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)	
<ul> <li>Sample Identification: Quantity &amp; Unit of materia</li> <li>Materials Documentation: Field inspected (description)</li> </ul>	I submitted, describe tests required ibe appearance, weight/dimensions	, precise location sample s, model/serial number),	removed from ( stationing), etc.	
HUMATES USED ON TH			ECTED AND APPROVED	
FOR USE BY THE PRO	JECT ENGINEER	F		
SUPPLIERS 1 THE ALANDER CTURERS	COC IS ATTAC	HEO, A C	T REPORT THE 15 ALSO ATTACHED	
FROM THE MANNEACTURER	6			
l				
Jser ID				
Sample ID (#1)	Sample ID (#2)	Samp	le ID (#3)	
Sample ID (#4)	Sample ID (#5)	Samp	le ID (#6)	
APL/QML Acceptance: APL Ref. No. Produc	t name:	ki 44884 din terkinmin di sakradi musur mbaya melekanan di membunak darik makan di	Date checked:	
APL/QML Acceptance: APL Ref. No. Produc	t name:		Date checked:	
Preliminary Construction №	Aaintenance Emergency		Date needed	
Contractor CROSS FIRE, LLC	Supplier /	TRITON LESA VERLOE	RESOURCES	
Sampled from (Pit, roadway, windrow, stock, etc.)				
Quantity represented 2.57 ACNES	Previous quantity	To	tal quantity to date 2.57 ACLS	
Sample submitted:  Shipped specified of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the co		Vla	Date	
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upervisor (Pro./Res./Malls. Engr./Maint. Supt.) (print name)	TILLE PRESIDENT- DAV	Residency		

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Previous editions are obsolete and may not be used.



5433 Newport Street • Commerce City, CO 80022 • (303) 945-7588 Office • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FU ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 10	
PROJECT: CDOT STE C480-008	
LOCATION: ARCHULETA COUNTY, CO	
CONTRACTOR: CROSSFIRE, LLC	
AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219	
MANUFACTURER: MESA VERDE RESOURCES; P.O. BOX 1368 PLACITAS	, NM 87043
LABORATORY NAME/ADDRESS: TEXAS PLANT & SOIL LAB; 4915 W. MC	ONTE CRISTO EDINBRUG, TX
TYPE OF MATERIAL: HUMATE; 50 LB BAG	
THIS PRODUCT IS A IS A TYPE OF SOIL AMENDMENT COMPRISED OF H TO THE SOIL IN ADDITION TO PROMOTING SOIL POROSITY.	UMIC ACID AND FULVIC ACID WHICH ADDS ORGANIC MATTER
LOT/BATCH NUMBER: 10061	
DATE OF TEST: N/A	
SPECIFICATIONS: SEE ATTACHED SPECIFICATION SHEET	
WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIAL THE SPECIFIED REQUIREMENTS OF CDOT SPEC 212 SOIL CONDITIONER THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND MANUFACTURER.	R. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES
LAURA CAMPBELL	I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2.5 facres (quantity and units) of pay item 212-20032 Soil Conditioning (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

I hereby certify under penalty of perjury that the material listed in this

Certificate of Compliance represents _______(quantity and units) of

pay item _______(pay item number and Description) that will be

installed on project number _ STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE

Triton Environmental, LLC



#### **MESA VERDE RESOURCES**

PO Box 1368 Placitas, NM 87043

Jan 23, 2018

Triton Environmental 5433 Newport Street Commerce City, CO 80022

#### RE: Mesa Verde Humates - Certificate of Compliance

We hereby certify that Mesa Verde Humates comply with the following specifications:

Oxidized lignite (leonardite):

Bulk density:

Moisture:

Particle size:

Carbon Content:

Organic Matter:

Inert Ingredients:

pH:

Humic acid content:

All components are naturally-occurring materials

100%

47-55 lbs./cu. ft.

17-20%

-1/4"

38-54% (dry wt. basis)

80% minimum (dry wt. basis)

20% maximum (dry wt. basis)

3.7

55% minimum (dry wt. basis)

Sincerely,

Joel C. Reid Sales Manager

Joel C Reid



## www.tpsl.biz

# TEXAS PLANT & SOIL LAB

4915 W. Monte Cristo ♦ Edinburg, TX 78541-8852 ♦ (956) 383-0739 ♦ FX (956) 383-0730

	TOTAL	NUTRIENT ANA	LYSIS	
Date Sampled	Received	Reported	Lab#	
	4/10/2017	4/21/2017	37587	

Mesa Verde Resources 41 Cabezon Rd San Ysidro, NM 87053

janelle@humates.com; jeff@humates.com

Sample ID: 55 Chip

Vampio io, oo viiip				
		ANALYS	SIS RESULTS	
VARIABLE MEASURED	As Sent	Dry Wt.	lbs/ton Dry Wt.	Notations
Moisture (%)		ÜHHI	•	TMECC 03.09-A
Dry Matter (%)	100	1111111		TMECC 03.09-A
Humic Acid (% HA)		65.19		
pH ( Std Unit)		3.70		
Nitrogen (%N)	0.92	0.92	18.30	TMECC 04.02-A
Nitrate (ppm NO ₃ )	8	8.018	0.02	
Phosphorous (%P)	0.10	0.10	2.08	TMECC 04.12-B
Total Phosphate(% P ₂ O ₅ )	0.24	0.24	4.76	
Phosphate (ppm PO ₄ )	166	165.7143	0.33	
Potassium (% K)	0.01	0.01	0.19	TMECC 04.12-B
Total Potash(% K ₂ O)	0.01	0.01	0.23	
Sodium (% Na)	0.18	0.18	3.66	TMECC 04.12-B
Calcium (% Ca)	0.59	0.59	11.76	TMECC 04.12-B
Magnesium (% Mg)	0.10	0.10	2.02	TMECC 04.12-B
Zinc (ppm Zn)	33	33	0.07	TMECC 04.12-B
Iron (ppm Fe)	5357	5357	10.71	TMECC 04.12-B
Manganese (ppm Mn)	28	28	0.06	TMECC 04.12-B
Copper (ppm Cu)	30	30	0.06	TMECC 04.12-B
Boron (ppm B)	33	33	0.07	TMECC 04.12-B
Sulfur (% S)	0.40	0.40	7.92	TMECC 04.12-B
Interpretations & Recommendations	5 <i>:</i>			
Humic Acid (% HA)		65.19		
pH ( Std Unit)		3.70		
Nitrogen (% N)		0.92		
Phosphate (% P ₂ O ₅ )		0.24		
Potash (% K₂O)		0.01		

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COLORADO DEPARTMENT O	F TRANSPORTA	TION	Region _	Field sh	eet# 200000
FIELD REPORT FOR S	SAMPLE IDE	NTIFICATION	Contract ID	Date S	プロロスのサー
OR MATERIALS DO	CUMENTAT	ION	19219	Date o	3-9-18
Metric units	yes -	√ no	Project No. STE CL	180-008	•
	<u>                                     </u>	<u></u>	Project Location PINON CAU	SEWAY TO	ASPEN LILLAGE DR
Material Type MULCITING	(WEED FREE	(HAH)	Field Lab phone		Cell Phone S.U. A
Material Code (LIMS)	1tem 213	Class	Grading	Specia	Provisions yes
Previously used on Project No.:	have be week	Previous CDOT Form #	#157 F/S No.(s):		CDOT Form #633 (sack)
Sample Identification: Quantity 9 Lin	if of motorial automates				DDOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Un</li> <li>Materials Documentation: Field inspendent</li> </ul>	it of material submitted acted (describe appea	d, describe tests required, rance, weight/dimensions	precise location sa , model/serial num	ample removed f ber), COC &/or (	rom (stationing), etc. CTR provided, etc.
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APL/QML Acceptance; APL Ref. No.	Product name:				Date checked:
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Quantity represented	Previou	is quantity		Total quantity t	o date
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COLORADO DEPARTMENT OF TRANSPORTATION Field sheet Region FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted OR MATERIALS DOCUMENTATION 19219 Project No. C440-008 STE Metric units √ no Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR Material Type Field Lab phone MULCHING BLANKET Cell Phone SPRAY-ON Material Code (LIMS) Grading Special Provisions lves 213 Previously used on Project No.: Previous CDOT Form #157 F/S No.(s): CDOT Form #633 (sack) CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided THE SPRAY-ON MULCHING BLANKET WAS FIELD INSPECTED AND SUPPLERS?
APPROVED BY THE PROJECT ENGINEER. THE MANUFACTURER'S CO IS ATTACHED THIS PRODUCT WAS REVIEWED & APPROVED WITH CONTENVIRON MENTAL STAFF AND WITH THE PROJECT ENGINEER. SEE FORM 473 er ID Sample ID (#1) Sample ID (#2) Sample ID (#3) Sample ID (#4) Sample ID (#5) Sample ID (#6) APL/QML Acceptance: APL Ref. No. Product name: Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date checked: Preliminary Construction Maintenance Emergency Date needed Ň Contractor PRODUCTS LLC MOSSFILE Sampled from Pit name or owner (Pit, roadway, windrow, stock, etc.) Quantity represented Previous quantity Total quantity to date 257 ACRES ()257 Acres Sample submitted: Shipped specified quantity to: ⊠ No Yes . 🔲 Central lab . 🗕 🔲 Region lab Sampled or inspected by (print name) E-mail CLIFTON LEE DE ENGINFER Dervisor (Pro./Res./Matfs. Engr./Maint. Supt.) (print name) PRESIDENT. PLICE DAVIS `NEERING

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Canary copy - Region Materials Engineer Pink copy - Resident Engineer

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5433 NewPort Street • Commerce City, CO 80022 • (303) 945-7588 Office • (303) 945-7579 FAX

	(000,010,7070,720
MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS I ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION	FURNISHED FOR PROJECT: STE C480-008 PINON CAUSEWAY TO 106.011 OF THE CDOT SPECIFICATION BOOK
PROJECT: CDOT STE C480-008	
LOCATION: ARCHULETA COUNTY, CO	
CONTRACTOR: CROSSFIRE, LLC	
AUTHORITY CONTRACT NUMBER: CDOT PROJECT COD 19219	
MANUFACTURER: PROFILE; P.O. BOX 842365 BOSTON, MA 02284	
LABORATORY NAME/ADDRESS: TEXAS PLANT & SOIL LAB; 4915 W. M	∕ONTE CRISTO EDINBRUG, TX
TYPE OF MATERIAL: ECOFLEX; 50 LB BALE	
THIS PRODUCT IS A HYDROMULCH WHICH CLASSIFIES AS A SPRAY O HYDRAULICALLY APPLIED MATRIX CONTAINING FIBERS, WATER SOLOR SYNTHETIC INTERLOCKING FIBERS.	
LOT/BATCH NUMBER: 10413	•
DATE OF TEST: N/A	
SPECIFICATIONS: SEE ATTACHED SPECIFICATION SHEET	
WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIA THE SPECIFIED REQUIREMENTS OF CDOT SPEC 213 MULCHING. BY SI ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I R MANUFACTURER.	GNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE
LAURA CAMPBELL	I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2.57 acres (quantity and units) of paitem 2.13 - pool 2 Spran-On phulch, bil. (pay item # and description) that wi be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.
Triton Environmental, LLC	Contractor Rep. Signature Z1418

I hereby certify under penalty of perjury that the material listed in this

Certificate of Compliance represents _________(quantity and units) of
pay item ___________(pay item number and Description) that will be

installed on project number __STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



February 19, 2018

Clifton Lee
Davis Engineering Service, Inc.
188 S. 8th Street
P.O. Box 1208
Pagosa Springs, CO 81147

Re: Letter of Certification, Profile® EcoFlex™ High Performance Flexible Growth Medium™ (HP-FGM™) for Project: CDOT STE C480-008

Mr. Lee,

This letter is to certify that Profile Products, LLC manufactures the product marketed as EcoFlexTM HP-FGMTM. EcoFlex HP-FGM is made in the U.S.A. and has been subjected to Profile Product's Quality Assurance and Quality Control program and is manufactured to meet or exceed all technical and packaging requirements listed on the product datasheet.

Additionally, EcoFlex HP-FGM properties fall within the following 2017 CDOT section 213.02(f) Spray-on Mulch Blanket (Type 1) requirements:

A hydraulically applied matrix containing organic fibers, water soluble cross-linked tackifier, reinforcing natural and/or synthetic interlocking fibers.

	tacking, remotering natural and/or synthetic interlocking libers.						
•	Organic Fibers	71% Min.	per ASTM D2974*				
9	Cross linked Tackifiers	$10\% \pm 2\%$ Min.	•				
0	Reinforcing Interlocking Fibers	$10\% \pm 1\%$ Min.	· •				
0	Biodegradability	100%	per ASTM D5338*				
0	Ground Cover @ Application Rate	90% Min.	per ASTM D6567				

Functional Longevity

12 Months Min.

• Cure Time

< 8 hours

- Does not contain lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, or chlorine bleach.
- Organic fibers and reinforcing interlocking fibers are not produced from sawdust, cardboard, paper, or paper by-products.

*Water Tech Labs (P.O. Box 1056 Granite Falls, NC 28630) is utilized for Third-Party certifications. Testing conducted annually, most recent analysis Jan 20, 2018. Contact Profile for further information.

Please contact me at (847) 353-2164 or <a href="mailto:rhiggins@profileproducts.com">rhiggins@profileproducts.com</a> if you need additional information or have questions regarding this product.

Sincerely,

Rachel Higgins, CESSWI

Technical Services Associate

Profile Products LLC

This letter of certification or compliance has been specifically developed for the above referenced project or general specification. This document is not to be reproduced, modified, or used otherwise without the expressed written consent of Profile Products LLC.

Region 5 COLORADO DEPARTMENT OF TRANSPORTATION Field sheet # FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 19219 OR MATERIALS DOCUMENTATION Project No. STE C480-108 Metric units X no Project Location PINON CAUSEMAN TO ASPEN VILLAGE DR Material Type Field Lab phone Cell Phone Class 2 Material Code (LIMS) Grading Special Provisions Previous CDOT Form #157 F/S No.(s): Previously used on Project No .: CDOT Form #633 (sack) CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided CLUSS 6 ABC WAS PLACED IN LIEU OF CLASS Z AND APPROVED BY THE PROJECT ENGINEER. THE MATERIAL WAS PLACED AS SUBGROME STABILIZATION IN AREAS OF MUCK-EXCAVATION. SEE THE FORM 473 FOR ADDITIONAL INFORMATION. Sample ID (#1) Sample iD (#2) Sample ID (#3) Sample ID (#4) Sample ID (#5) Sample ID (#6) APL/QML Acceptance: APL Ref. No. Product name: Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date checked: Construction Preliminary Maintenance Emergency Date needed Contractor Supplier Crossfill LLC Sampled from (Pit, roadway, windrow, IN-PLACE (LOOSE LIFT) Quantity represented Previous quantity Total quantity to date Sample submitted: Shipped specified quantity to: Yes _ 🗌 Central lab ____ 🔲 Region lab X No

Distribution:

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Pink copy - Resident Engineer

ERIC HOWES TRAUTNER GEOTECH HVISOr (Pro./Res./Matls, Engr./Maint, Supt.) (print name)

Sampled or inspected by (print name)

LIPTON LEE PE

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(submit white copy only if sample or information is directed to Staff Materials)

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PROJECT.

E-mail

Residency

FIELD	TEST	SOF	BAS	OF TRANS E AGGRI LANEOU	EGAT	ES, FII		•			Project Lo	<u>19</u> o. J430-			- S.U.	Ρ.	Date Su	hmitted	)19; 1-20	
SMM/LIMS Sampler ID (or Test # [Date])			Station	Tons (t) or (Yards (m))	Field density	Lab max density	% Rel. Comp.	1 1					#4	#8	#30	#50	#100	#200	L.L.	P.I.
OAH1	.7 - 2C	)-17	24+54	1000	135,2	137.8	98 [′]	6.5	<i>.</i>											
QA#2	7-2	7-1-7	24+6	9 1000	133.2	137,8	97	7.7												
	7-2	5-17													r'i			,		
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d Andreas	Sheet T			2000	Specifications: 2957 50 to										<u> </u>					
Previous Total to				2000	9.0%							Final report: 🗹 yes 🗖 no							no	
Spec. deviations: yes and P				P=_	=% for lot #							PE Approved by (print name)  Project Tester (print name)  PA TESTER  PE Approved by (print name)								
Items: 206 Structure Backfill Class 1 206 Filter Material Class 304 ABC Class Z 307 Treated Subgrade 403 HMA Grading 403 SMA 409 Cover Coat Other Material:				Remarks Class & PLACED IN LIEU OF Class 2 FOR MUCK-ex FOR WALL FOOTING																
			Action taker	Action taken							PE Approved by (print name)  Devis Engineering  Project  Engineer									

	COLORAD	O DEPARTI	MENT OF 1	TRANSPOR	RTATION	Rroject No. STE- C40	0 - 00%	Region	Contract ID
		CLEAR SOILS		Project Location					
		P 25 PERCENT	RELATIVE C			Pine	a Cause	way To	AUDSU
	Name	Material em b	onlement		(a55 4/2	item Ili <i>Gornia</i> i Selem	100 mar 100	Date	10 17
	pple ID (Test#)	A The State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the	<u> </u>	Tested by (print	name)	307	₩ Station/offset	Elevation /	74U-17
	21	V W .		Ericl	1 4		Station/offset	منتنس	af ariad
Sau	ge ID	Moisture Standard	Count	Density Standard	Count	Transmission I	Depth, in.	Soil Classific	ation 201
MARK TO SERVICE	8771	#\Q Maximum Dry, Qer		Optimum Moist		AASHTO T99 o	(T100)		-A(0) F
3	16 1 - A	137,8	iaity		©	AASHIO 1990		Method A o	
	lass 6 - Cu ge Reading	(CV €   <u>Moisture</u>	Field Test [	Den A	sity		Wet Soil v		ure Check
1)	% Moisture	6.4	Wet Dens.	141,2	Dry Dens.	135.5	Dry Soil	wt. + pan	
2)	% Moisture	6.5	Wet Dens.	144.0	Dry Dens.	135.7		Pan w	rt.
3)	% Moisture	6.4	Wet Dens.	143.6	Dry Dens.	135.0		Dry soil w	t.
4)	% Moisture	6,6	Wet Dens.	143.9	Dry Dens.	135,8		Water w	t.
160	Average	6,51	Average	143,91	Average	135.9	√ %M	oisture =	
Manager W.	ggpgann and Arther the annual attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention and attention attention and attention attention and attention attention and attention attention and attention attention	Calculati	ions for Percei	nt Rock [Plus # Method A -	4 (Method A) Oven Dried	or 3/4 inch (	Method D)]		
ry v	vt. of rock		÷ Dry wt. tota		2		% Rock &		% Soil
		1		Method B - Us	ing Gauge MC				
	· \\/a	t weight of rock =		÷ (1+	2	bsorption ÷ 10	n)= dry weight	rack	- MOVE - MOVE
		et weight of soil –		÷ (1+	•	l/D Gauge MC	-		
v v		wt. of rock + Dry	wt. of soil) X 10	00% =			% Rock &		% Soil
				Correction Form		r se			·
		•	•	nsity of Soil) + ( %			()] ÷ 100		
	% Soil	FOF A	ASHTO T99, CF	N.S.	SHTO T180, CF Dry Density of :				Corrected
	% Rock	×	Х		Specific Gravit			1	Maximum
	, steed	Nacital California de maiole de Maria (Nacida California)	,			Sum ≂	÷	100 =	Dry Densit
-		Optimum M	oisture Correct	ion Calculations			1 Point Moi	sture Dete	rmination
	1/ %	Soil x OMC of Soi	I) + 1 % Rock v A	hsoration of Roc	k)] ÷ 100		+ pan		
	If No.	3011 X 01010 01 301	1) + ( 20 HOCK X 24	paor priori or moc			Dry Soil wt	. + pan	
	% Soil	x		Optimum MC of	Soil =			Pan wt.	
	% Rock	X		Absorption of			E	ory soil wt.	
				, about parion of	Sum =			Water wt.	2
h-m-		Corrected Optin	num Moisture	Content, %	÷ 100 =		% Mois	sture =	
	Gross wt.	•	1 Point Ch	eck Compaction	Cylinder Dens	ity Data			
	- Tare.wt.		Volume of	Wet Density					Dry Density
	···	<u>.</u>	IVIOIU	wet bensity	Mo	isture Content			ory Density
	Net wt.			100 to 1 0 ÷ (10	00 →	%H2	O)x100= _		
d D	ry Density	350 ÷1	cased of the	cent Compactio		100 9 9	g / % Rela	tive Compac	tion .
	Spec	ifications: Mois	ture I	or (Curve Maxim		100 = action			
	-		<u> </u>	1800 11000			0 25+02\	Minir	num 95.0 %
11K: 11F	odics. V	by Crafy o	CLUM WAS	MUCKEN	OUT AF	TEC MON	SOON RAI	NS ANO	TITE
	ELEVATI	ON FOR BUT	70m of for	TTIME WEIS	RE-ESTA	SUSHED	war ca	556/2	

54748 Contract ID Region 240 -00/2 COLORADO DEPARTMENT OF TRANSPORTATION 19219 CP 80 NUCLEAR SOILS MOISTURE/DENSITY TEST AND Project Location 10 **CP 25 PERCENT RELATIVE COMPACTION** rinon Irai Material Mucleex 伝記 Class Class Vol2For Item IN UDENTAL TO Pit Name Date ITEM·601-wall Piedra FIMBANICMENT EMBANKANGAT Station/offset イナム Elevation / Depth Sample ID (Test#) Tested by (print name) 200 2 Eric Howes Density Standard Count Gauge ID Moisture Standard Count Transmission Depth, in. Soil Classification -4·(,) 2877 A-1-010 Curve No. Maximum Dry Density Optimum Moisture Content AASHTO T99 or T180 Method A of D to Ö 3901-A Class 6- curve 1 M/D Gauge Moisture Check **Field Test Data** Moisture Density Gauge Reading Wet Soil wt. + pan 133. Dry Dens. Dry Soil wt. + pan % Moisture 6 Wet Dens. Dry Dens. 6 Wet Dens. % Moisture Pan wit 5 (3) % Moisture Wet Dens. Dry Dens. Dry soil wt. Wet Dens. Dry Dens. Water wt. % Moisture % Moisture = **Average** 133.9 Average Average Calculations for Percent Rock [Plus #4 (Method A) or 3/4 inch (Method D)] Method A - Oven Dried + Dry wt. total sample % Rock & Dry wt. of rock % Soil Method B - Using Gauge MC ÷ (1+ Wet weight of rock absorption ÷ 100)= dry weight rock ÷ (1+ M/D Gauge MC ÷ 100)= dry wt. soil Wet weight of soil % Soil % Rock & Dry wt. of rock  $\div$  ( Dry wt. of rock  $\div$  Dry wt. of soil) X 100% = **Rock Correction Formula and Calculations** [( % Soil x Max dry density of Soil) + ( % Rock x CF x 62.4 x Sp Gr Rock)] ÷ 100 For AASHTO T99, CF = 0,90 For AASHTO T180, CF = 0.95 Corrected % Soil Maximum Dry Density of soil = Maximum Х Specific Gravity of Rock = % Rock X. **Dry Density** ÷ 100 = Sum = Optimum Moisture Correction Calculations 1 Point Moisture Determination Wet Soil wt. + pan [( % Soil x OMC of Soil) + ( % Rock x Absorption of Rock)] ÷ 100 Dry Soil wt. + pan Pan wt. % Soil Optimum MC of Soil = Dry soil wt. % Rock Absorption of Rock = Water wt. Sum = ÷ 100 = % Moisture = Corrected Optimum Moisture Content, % 1 Point Check Compaction Cylinder Density Data Gross wt. Volume of Dry Density Wet Density - Tare wt Mold Moisture Content Net wt. ÷ (100+ %H2O)x100= Percent Compaction calculation Field Dry Density (Corrected Maximum dry density) x 100 % Relative Compaction or (Curve Maximum Dry Dens) x 100 = 9.0 TO. Compaction Specifications: Moisture Minimum 95.0 % REMARKS: NATIVE MATERIAL TESTED AT BOTTOWN OF FOOTING NEMOVED AS "MUCK EX" AND REPLACED WITH CLASS 6/2 ON J BY G. DENTER

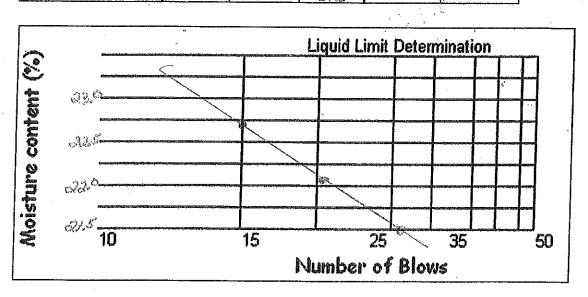
	ELD LESTS OF BASE AGGREGATES, FILLERS.											ct ID Region S Field sheet #101922						22/	
PAVING A							•		<	STE C450-008 3-9-18						හ			
User ID:				4 :	3"	2"	1.5"	·	7	roject Lo なんいん	cation CAUSE	WAY	TO ASP	en Viu	AJE De	Item 304 , S.U. f	j-cua:	SS 2 /	46C
SMM/LIMS Sam (or Test # [Da	pler ID ate])	Station	Tons (t) or Yards (m)	Field/ density	Làb máx density	% Rél. Cømp.	Total proist.	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	3/4"	1/2"	3/ව	#4	#8	#30	#50	#100	#200	L.L.	P.I.
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Spec. deviation	s: 🗖 yes	□ no		5.745	<u> </u>	or lot#					Source (	pit):	IEDO.	4 D-7	0	Noss	Gac		
Items: 206 Structure Backf 206 Filter Material C 304 ABC ClassZ	lass		Remarks MATERI	AL OU	7 OF 3	PEC	ON T	the #2	00 SIL	EVE	EUC	ester (pr	rint name	)		Title	TESTI		
307 Treated Subgra 403 HMA Grading 403 SMA 409 Cover Coat	de		Action taken PLICE LEG		HAPLIE	 5 - Sv	IE FUI	un 4	72	·	PE Approved by (print name) Deuts Engineering Clifton Lec Source, Inc. (LA)				4)	THE ROSECT Engineer			
Other Material:				•		- "	1 -		•••								y .		

	ANALYSIS				Project No. STE-0400-000 Contract to 19219  Project Location:   DC TO ALLO SUR DO								
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5474	8 mt	(3	777-A	)	رة يم (6) يم ع	304	g 2/8	Material 🖫	42	a b	(Cas		
Sampled Location	24446	a REI	maryu	IALL	)	Sampled		i della di territoria di t		<u></u>	gystania o o o o o o o o o o o o o o o o o o o		
Sample ID			manhee	QA#	T .	Location Sample ID	)	<u></u>	<del></del>		··············		
Specimen Dry Weight	В 2998.6	Date 7/	7	#VER		Specimen Dry Weigh	t B	Date			Test#		
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2"	0	O	100			2"							
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1"	0	0	100			1"							
3/4"	0	0	100	100	<del>)</del>	3/4"							
1/2"	169, 3	8,14	91.9%	/		1/2"							
3/8"	392.5	18.7	81,34			/ 3/8 ["]							
#4	831.7	39.61	60,4s	<del>30</del> -	ψ <del>'</del> ξ'	#4							
#8 / #10	1043.7	49,7	50.348,0	<del>25</del>	55°	- #8 / #10				,			
#16	1198.8	57.7/1	42.80			#16							
#30 / #40	1301.7	63.0/	37,00	,		#30 / #40					·····		
#50	1460.4	69.6	30.47			#50							
#100	1655.4	78.9	21.13			#100			<u> </u>		·		
#200	1738,7	82.91	17.19	3-4	3-15	#200					***************************************		
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- #200	31472 31472	[after wash] (1284 - 17	840)÷(1784	j 100) = "	206	- #200		[after wash	] }÷	11) 7 - <b>9</b> 1	00) =		
TSW	AFF.º					TSW			·	\^`	· · · · · · · · · · · · · · · · · · ·		
	Gradation S	Sample	Moisture	Samp	ole	·	Gradatio	n Sample	Mo	oisture	Sample		
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Wet Wt. , + Pan	2619 249	7,4	<i>268</i>			Wet Wt. + Pan							
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200 Mat ost Seive	314,5V	17841	% H₂O .	5. ?	<u></u>	#200 Ma Lost Seiv			% H ₂ O				
·	Vet Weight ÷ (100						Wet Weight ÷ (	(100 + % H ₂ O) >	100 = D	ry Weig	ht		
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RIC HOW	es	and by Crista Jal	eveli å	1 ( 1 to 1)	', ^s	Sampled By		Tested By		è			

### PROJECT NO: STE-C480-000/19219

#### TRAUTNER OFFOIEGING

Atterberg Limits - ASTM 4318 54748mt PROJECT: PINAN CLISCHELL
TO AND SUP ____ Date:____<del>7-1</del>0-17 PROJECT#: SAMPLE DESCRIPTION: 3/411-ABC SOURCE: Predra P.7 Lab Number: 39 PROPOSED CLOSS 6/2 LOCATION: Belt Sample, On-site Stockpile, Stockpile at Pit, Sample Prep: Wet or Dry (see ASTM) Windrow, Loose In-place, Jest Bore, Other: Moisture Condition By: GREW Jadrych Date: 07/20 //2 Liquid Limit Determination Minimum 3 Trials Required Blows 15 - 25 20 - 30 25 - 35  $LL = W\% \left(\frac{N}{25}\right)$ Can Number P [3 Wt. of Wet Soil + Can 28,75 27.79 Wt. of Dry Soil + Can 26.12 25.41 Z7,36 Liquid Limit: 20 Wt. of Can 14,54 14,62 14,51 Wt. of Dry Soil 11.581 10,79 12.75. **Plastic Limit:** Wt. of Moisture 2.631 2.741 2.38 Water Content, w% 227 32.M 21.51 **Plasticity** No. of Blows, N Sala Server A / Index:



Plastic Limit Determination	N	1inimum 3 Tri	ials		
Can Number:	<i>C</i>	E.			
Wt. of Wet Soil + Can	24,57	23.82			
Wt. of Dry Soil + Can	23,10	22.55			
Wt. of Can	14.59	14.55	/		,
Wt. of Dry Soil	8.511	8.001		٠,	
Wt. of Moisture	1.471	1.374			
Water Content, w%	17.37	1701		,	

Remarks: calcs. & by Collin Compbell

COLORADO DEPARTMENT OF TRAN		Region 5	Field sheet # 266289
FIELD REPORT FOR SAMP		Contract ID	Data Calandus I
OR MATERIALS DOCUME	ENTATION	19219	3 - 10 - 18
,		Project No.	$\alpha$
Metric units yes	s 💢 no	STE C480 - 00 Project Location	, , , , , , , , , , , , , , , , , , ,
		PINON CAUSEMAN	1 TO ASPEN VILLAGE DR.S.L
Material Type ABC		Field Lab phone	Cell Phone
Material Code (LIMS) Item 3D ^L	+ Class	Grading	Special Provisionsyes .
Previously used on Project No.:	Previous CDOT Form #	#157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Unit of mate</li> <li>Materials Documentation: Field inspected (de</li> </ul>			
CLASS 6 ABC INSTR	THE P	ROJECT WAS	TESTED BY
DA TESTIALS AND FIELD	O INSPECTED BY T	THE PROJECT	ENGINEER.
SEE THE FORM 473 1	FOR ADDITIONAL IN	SFORMATION.	
ser ID			
36 15	•	•	
Sample ID (#1)	Sample ID (#2)	Sample	ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample	ID (#6)
APL/QML Acceptance: APL Ref. No. Prod	duct name:		Date checked:
APL/QML Acceptance: APL Ref. No. Prod	duct name;		Date checked:
Preliminary Construction  ☐  ☐	Maintenance Emergency □ □		Date needed
Contractor CNOSSFINE: LLC	Supplier	SSFIRE LLC	
Sampled from (Pit, roadway, windrow, stock, etc.)  N-PCA-CE UNCOW	Pit name or	7	DEA PIT
Quantity represented 1402.4 CY	Previous quantity	Total	quantity to date 1402,4 cy
Sample submitted: Shipped specifie  Yes No Cen	d quantity to: htral lab	Via	Date
Sampled or inspected by (print name) TRAUTNER GEOTECH	Title QA TESTEUS	E-mail	
pervisor (Pro/Res/Matts, Engr/Maint, Supt.) (print name)	· · · · · · · · · · · · · · · · · · ·	Residency	

Distribution:

White copy - CDOT Central Laboratory
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Previous editions are ob

Previous editions are obsoleté and may not be used.

PROJECT: PINON CAUSEWAY TO ASPEN VILLAGE	SUBMITTAL NO: 304-06007.1
CLIENT'S PROJECT NO. STE C480-008	DATE: 6/22/2017
Project Code (SA) 19219	DATES OF PREVIOUS SUBMISSIONS:
CONTRACTOR: Crossfire, LLC	CATES OF TREVIOUS SUBMISSIONS.
SUPPLIER: Crossfire	MANUFACTURER: Crossfire
SPECIFICATION NO.: 304-06007	DRAWING NO.:
IS THIS A LONG LEAD TIME ITEM? YES NO X	
IS THIS ITEM ON THE APPROVED PRODUCTS LIST? YES	X NO 🗆
ARE THERE ANY DEVIATIONS FROM THE CONTRACT DO	DCUMENTS? YES □ NO X
Explain:	
	·
PRODUCT DESCRIPTION:	
Aggregate Base Class 6	
·	
CONTRAC	CTOR'S COMMENTS
	,
- PU	•
SIGNATURE: TAME	DATE: 6/22/2017
SUBMITTAL REVIEW	Engineer's Stamp and Review Comments
☐ FURNISH AS SUBMITTED ☐ REJECTED/RESUBMIT  \$\overline{A}_FURNISH AS CORRECTED \(\overline{A}_FURNISH AS CORRECTED\)  \$\o	* Comments - Liquid limit results not shown on
Corrections or comments made to the submitted documents during this review do not relieve the Contractor from compliance with	provided data sheets. Liquid limit shall not be
requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the	provided back stroops, bully and through street and the
project and general compliance with the information given in the	greater than 30.
Contract Documents. The Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication	
processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and	· ·
satisfactory monner.  Davis Engineering Service, Inc.	
By: CM = La Dale: 7/3/2017	
l .	
I hereby certify under perjury that the material	listed in this Certificate of Compliance
item # and description) that will be installed in	ay item (pay conformance with the plans and specifications
on Project Number STE C480-008	Assurance with the highs out shapingations
Contractor	Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Contro
Contractor	Date

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# TRAUTNERMANIE

Project:

**Crossfire Aggregates - Piedra Pit** 

Project No:

54589MT

	sieve	analysis o	ABC		
date	3/28/2017	3/30/2017		Specs	1
P. O. Number					1
sieve size				% paş <del>si</del> ng	1
3/4"	100	100		100/15	  - 1604
1/2"	90	93			
3/8"	78	84		VF-10-00 1-1-00-0-1-1-1-1-1-1-1-1-1-1-1-1-	
#4	57	62		30-65	1
#8	44	47		25-55	1
#10	41	44			
#16	35	38			
#30	28	31			
#40	25	28			ĺ
#50	21	25			ĺ
#100	14	16			
#200	9.7	11.0		(3-12) 6	-15
Liquid Limit	NV	NV		30 max	
Plastic Limit					
PI	NP	NP		6 max	
2 Fractured Faces +#4					
Lab No.	3874-A	3874-B			
location	Belt	Belt			

^{*} Per CDUT Standard Special Provision of Section 703, dated October 20,2016

FOR th' PETEKE	ENCE ONLY
Report represents	that the material listed in this Certified Test (quantity and units) of pay item (pay item # and description) that will be us and specifications on Project Number
Contractor Rep. Signature	G 01 /17

#### TRAUTNER THE THE HERE

GEOTECHNICAL ENGINEERING, MATERIAL TESTING AND ENGINEERING GEOLOGY

#### L.A. ABRASION ASTM C131

Grading <u>B</u>

After 500 total revolutions percent (R500) loss = 19%

Sample Identification: Class 6 ABC

Crossfire Aggregate Services-La Boca Pit

Project: Crossfire La Boca Gravel Pit Engineer Technician: G. Jadrych

Project Number: 54590MT

Date: 7/28/17

Laboratory Number: 3990-A



PROJECT: Crossfire Aggregate Services, LLC

LOCATION: Durango, CO MATERIAL: CDOT Class 6 SAMPLE SOURCE: La Boca Pit

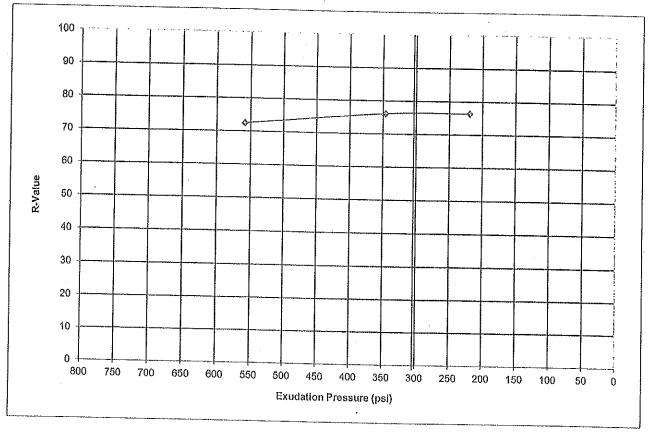
JOB NO: 16-519-01325

WORK ORDER NO: 1

LAB NO: 17-2121 DATE SAMPLED: 03/28/17

### RESISTANCE R-VALUE AND EXPANSION PRESSURE OF COMPACTED SOILS (AASTHO T190)

SPECIMEN ID	Α	В	C
Moisture Content Compaction Pressure (psi) Specimen Height (Inches) Dry Density (pcf) Horiz. Pres. @ 1000lbs (psi) Horiz. Pres. @ 2000lbs (psi) Displacement Expansion Pressure (psi) Exudation Pressure (psi) R Value	8.5% 275 2.47 136.1 11.0 20.0 5.45 0.0 219	7.5% 350 2.58 134.4 10.0 20.0 6.01 0.0 346 76	5.8% 350 2.30 133.1 12.0 20.0 5.53 0.0 558 72
		, ,	14

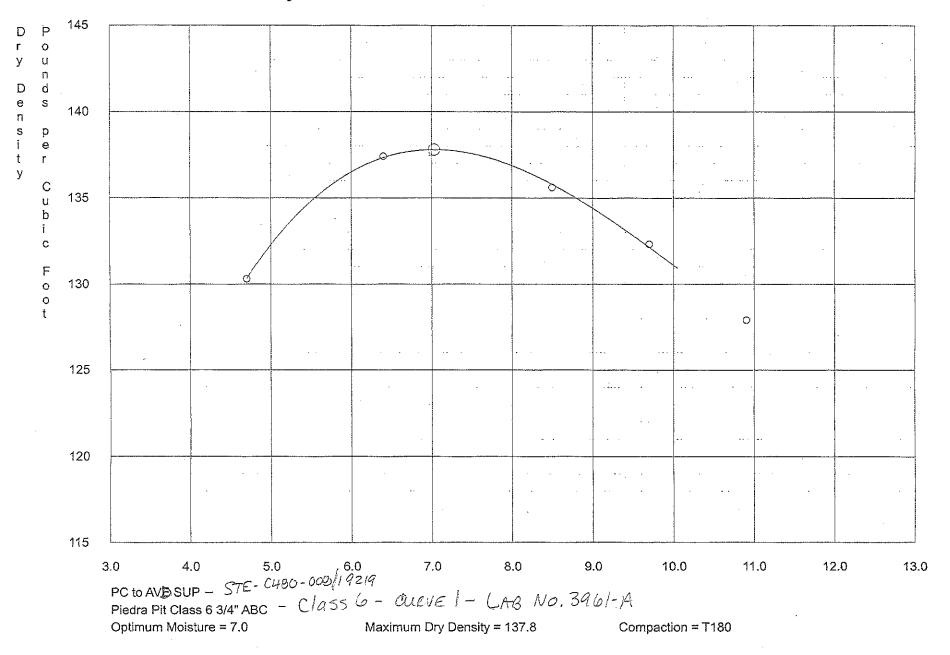


R Value at 300 PSI =

76

amec foster wheeler 3630 E Wier Ave. Phoenix, AZ 85040

#### Moisture Density Curve



COLOR	ADO DEPAI	RTMENT O	F TRANSPORTATION	Lab No. Field She	ab No. 3961-A Station 24+48 Contract ID 19219 Region 5 Date Tested 7-70-17 eld Sheet No. 3961-A Project No. STE C480-008							
Praon	Causains	ou 396.	2-11 / P1508a P17	Sample II	Class 6 - 8	aeve i			TO AVD S	UP- PAGIOSA	SPAINTS	
	of Compaction	Star on	dard AASHTO T 99	Method	% Soi	60	10% Pack	40	Soil class, total sar A - Z	mple 2-4 (0)	7.0 %	
Trial No.	Sample mass	Water added	Moisture samples	Percent moisture	Compacted wet mass	Density,	D Kg/m³	Sieve anal	ysis of - #4			
	111000	addcd .		moistare	wermass	Wet	Dry	Sieve	Mass	Indiv. %	% Pass.	
1			Wet <u> / 金マチ・</u> の Dry <u>/ ナタス -                                  </u>	V.		1	/	#4				
	5600	0	Loss 84.3/	4,7	10,22	136.4	1303	#10				
_			Wet_/633_4		Accounted years in the second	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		#40				
2 .	5600	100	Dry /534.6 Loss 98.46	EH	10.95	146,2	137,4	#200 - #200	,			
. 3	5600	200	Wet /84/./ Dry /696.9 Loss /44.2	8.5	11.02	144.	135, 6	Total Liquid limit Plastic index				
4	5600		Wet 2062.4 Dry 18 79.4 Loss 183.0	-9.7	10 87	1452 6	132,3	-#4 Soil clas	sification	on of rock		
5	5500		Wet /43/6 Dry /290.4 Loss /4/2 V	109	10,62	1448	127,9		dry Mass in air  D. Mass in air  & beaker			
6			VVet Dry Loss					Mass of bo				
Remarks	12.54 14	- 610	ig. MOLD			J GINA	New 1	WANTE TO THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL OF THE TOTAL	70,000	A ₁ =		
	.0749		region of the C			J	a A rangeral	Sp. Gr. X Pcf X .9 =		D lb/ft ^s Kg/m³ Pcf X .95		
	Print name) ケフタンベン	CH .		Title 3023	とする うちゅうこ Previous editions a	್ರ್ ಆಸ್ತ್ರಪ್ಪುಕ್ re obsolete and i	may not be used	Absorptio		X 100 =	% DOT Form #24 3/14	

TRANTNER CEOTECHNO: 54748mt 3977-B=LABNO.

COLORADO DEPARTMENT OF TRANSPORTATION
SIEVE ANALYSIS FOR AGGREGATES
NOT SPLIT ON THE NO. 4 SIEVE

DECEMBER 19402	207 1 1				01 %		
Project No.	STE	CUP	0- <i>06</i>	<u>ک</u> ر"	Contra	act ID	
Project Loca	ition: p	MOA	Count	eway	to i	AVD -	SUP
Pit Name:	Prede	a Pr	colori .				
£ 304		Class	- Ma	iterial 3/4/	1 · A	BC	

				Ē	IJ -	10 V	5/4	" Mis	gi <del>Managamanang managaman</del> g man
Sampled Location	Stockpul	k on	s rte		Sampled Location				
Sample ID	LAO NO.	3A77-C	)		Sample ID	1			
Specimen Dry Weigh	t B <i>Q 0 Q</i> 0.	Date ○ ₹ /	res fir	# VOU FRATE SAMPLE Z	Specimen Dry Weigh	t B	Date		Test
Sieve	Weight	Percent Retained	Percent Passing	Specs	Sieve	Weight	Percent Retained	Percent Passing	Specs
3"					3"				
2"					2"				
1 ⁻¹ /2"	A.				1 ¹ /2"				
1"	/	-			1"				
3/4"	0	Ç2	100	100	3/4"				
1/2"	255,8	12,7	87.31		¹ /2" .				
3/8"	510.4	25.3	74, 4.		. 3/8"				
#4	900.3	44,6	55,4v	50-65	#4				
(#8)#10	1092,2	5% # 56.00	45.2/11.0	25-55	#8 / #10				
#16	1230.0	.s» . 65s . 1	025 P. 3 3		#16				
#30 / #40	1336.206		33,8 31,4		#30 / #40				
#50	1460.4	72.3	27.7		#50				
#100	1637.6	941	18.9		#100	1			
#200	1707.2	84.5	15.5	3-12	#200				
Pan	1755.4	(Dry Wt T	SW)÷(Dry Wt.	) = % Diff.	Pan		(Drv Wt.	TSW)÷(Dry W	}. \ = % Diff.
- #200	264t	fafter washi		, S 100) =%	- #200		[after wash]	l	
TSW	1020:1 1935:1		X	100) =%	TSW			(بين)÷(بي	(100) =%
	Gradation S	Sample '	Moisture	Sample		Gradation	Sample	Moistur	e Sample
Pan ID:		}			Pan ID:			ļ	
Wet Wt. + Pan	262	11,2	275	6.4	Wet Wt. + Pan				
Dry Wt. + Pan:	<i>35</i> 3	0.2 V	264		Dry Wt, + Pan:				
Pan Wt:	500	,એ	497.	8	Pan Wt:				
Wet Wt,		1.01		******	Wet Wt.	A		*****	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
Dry Wt.	в ୌଡ଼ିଙ୍	0.0 V	avs.	1. F 1	Dry Wt.	В			
Washed Dry Wt. and pan	025.	ಎಂ೪ , ∟		07,8	Washed Dry Wt. and pan			H₂O Loss	
-#200 Mat Lost Seive	1 264.6	1755 # 1	% 12O €	5,01	-#200 Mat' Lost Seive	d ed		% H2O	
V	Vet Weight : (100	+ % H ₂ O) x 1	00 = Dry Weig	ht	V	Vet Weight ÷ (1	00 + % H ₂ O) x	100 = Dry Weig	ght
A STERVI		5.0	) x 100 = B ₹		А	÷ (100 +		) x 100 = B	
Sampled By EPRIC HOL	· Tes	ted By -次とG- JA、	ORYCH 🕏	G. Dent	Sampled By		Tested By	d	

#### TRAUTNEROGEOGECTE

CDOT NO: STEC480-008 5A: 19219

Atterberg Limits - ASTM 4318

PROJECT: Programme PROJECT#: 54748 mt Date: 7-26-17

SAMPLE DESCRIPTION: 31411 - ARC SOURCE: Predict pit Lab Number: 3977.B

LOCATION: Belt Sample On-site Stockpile Stockpile at Pit,

Sample Prep : Wet or Dry (see ASTM)

Windrow, Loose In-place, Test Bore, Other:

Moisture Condition By: May doday Date: 07/26/17 Tested By: May doday Date: 07/26/17

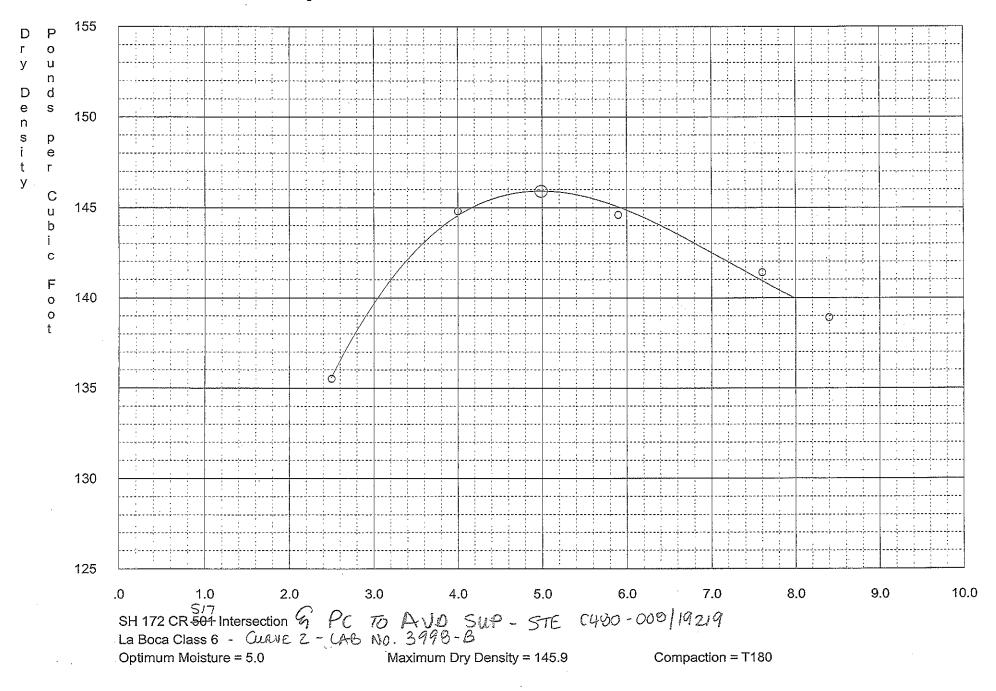
Liquid Limit Determination	M	inimum 3 Tria	ıls			<u>-</u>
Required Blows	15 - 25	20 - 30	25 - 35			$LL = W\% \left(\frac{N}{25}\right)^{-121}$
Can Number	ang. Essa	K	X			$LL = W\%\left(\frac{\pi}{25}\right)$
Wt. of Wet Soil + Can	66. FR	25,74	\$0.73		30	
Wt. of Dry Soil + Can	24,40	23.78	28,02			Liquid Limit:&/
Wt. of Can	14,26	14.57	14:67		<i>)</i> ' .	
Wt. of Dry Soil	10.14	9,011	13,375	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		Plastic Limit:/&
Wt. of Moisture	Q.32 J	1.96	2.71			
Water Content, w%	22.9	21,23 6				Plasticity 🚍 🖊
No. of Blows, N	18	24	29			Index:

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27 500 800	₹ ₹							
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Plastic Limit Determination	IV	linimum 3 Tri	]			
Can Number:	· San	E.				
Wt. of Wet Soil + Can	26.65	26.02				
Wt. of Dry Şoil + Can	24.82	24.28				
Wt. of Can	14.53	1455				
Wt. of Dry Soil	10.29.	1 9,73	/		,	
Wt. of Moisture	1,83v	1,74.				
Water Content, w%	17.80	17.90				

temarks: V. BY G. DENTEN

#### Moisture Density Curve



color MOIS	ADO DEPAR TURE -	RTMENT OF	F TRANSPORTATION TY RELATION	Field Sheet No. Project No. 515 C/160-2-00									
				Sample II	· · · · · · · · · · · · · · · · · · ·	25 % - (	uwe Projec	<u> </u>	Location & Product Chrisquete TO AMO - S.11 Location & Production Colorado Huy 172 CR 517				
Туре о	f Compactio	on .	dard AASHTO T 99	•	<u> </u>	31	% Rock density {	41 15.9	Soil class, total lb/ft ³ Kg/m ³	A - $l$ - $a$ $\ell$ Optimum moisture			
Trial No.	Sample mass	Water added	Moisture samples	Percent moisture	Compacted wet mass	Density,	☐ [lb/ft² ☐ Kg/m³	Sieve ana	lysis of - #4				
140.	mass		·	moisture	. Wet mass	Wet	Dry	Sieve	Mass	Indiv. %	% Pass.		
1			Wet <u>/ チ</u> チナ・/ Dry / ヲ ヨ サ ・ ″	· ~		V	<b>V</b>	#4		-			
	3600	0	Loss 43.01	2.5	20.40	138.9	135.5	#10					
			Wet 1982.5		***************************************			#40					
2	5600	100	Dry 1905.3 Loss 73.00	4.0	/ _/ /28	150-9	144.8	#200 -#200	· · · · · · · · · · · · · · · · · · ·				
3	5600	200	Wet /58% & Dry /5 00 ご Loss 85, 4 /	5.9	N.47	153.	1446)	Total Liquid limit	<u> </u>				
								Plasticindex					
4	.,	77.40	Wet <i>ネス5</i> 9.9 Dry マノロン・ミ	7/	/	/		-#4 Soil cla	ssification				
7.	5500	300	Loss259.4/	7.6	11.39	152.	141.41	Bulk sp. g	ır. and abso	orption of rock			
			Wet 2325.7			//	6	3 6 '	n dry Mass ir				
5	5600	400	Dry <u>S/45.3</u> Loss /80-5	8.4	11. 28	150.3	1389	3 3	D. Mass in	air			
			Wet			a	*/	Mass H ₂ C	& beaker				
6			Dry		-			Mass of b					
			Loss					IN - IVIGOS		A. =			
Remarks	6"D12"	مندانی دوسایش جامع در بیرد مندانی دوسایش جامع در بیرد	on a Sal		J 184 G.L	ENTEN!			CO 4 -	A ₁ = M			
			.0749 V		0 10 J 0, L	nuu (ruv		Sp. Gr. X Pcf X .9 =		☐ Kg/m² Pcf X .9	5 =		
Tested by (	Print name)	- 70		Title	4		<del></del>	Absorpti					
	1265 J	BORTCH	<i>i</i>	Souls	i lat sa	్రైస్ట్ స్ట్రా డిస్టర్ కే	die .	Losotha	7	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	%		
					Previous editions a	re obsolete and	may not be used			(	CDOT Form #24 3/14		

COLORADO FIELD TES							S		Contract / C Project N	1219		Re	gion 5		Field she	et# 1	191	12-
PAVING A					•		•		STE	C480	- 00	<u> </u>			Date Sur	omitted	7-14-	-17
User ID:									Project L P NON	ocation CPMSi	in Any	To ASP FJ	). Yuuac	u.r i	14	304		
SMM/LIMS Samp (or Test#[Da		Station	Tons (t) or ards (m)	Field density	Lab max density	1	Total moist.				#4	#8	#30	#50	#100	#200	L.L.	P.I.
QAH1 8	,-11-17	4+60	1000	132.4	137.8	96	5.7/			_		-						
	7-1-17	23576	1000	130.7	137.8	95	6.3/											:
oaha c	7-11-17:	371-23	1000	131.91	137.8	96	6.5						1,	-				
	7-27-17	11+10	1000	142.7/	145.9	98	3.1/										-	
	10-12-17	6+00	1000	145.4	145.9	100	3.7											
<del>- /-</del>	10-12-17	12+25	1000	140.7	145.9	96	3.9							,				ļ
WAH7 1	10-12-17	17+25	1000	140.0/	145.91	96	341											
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0A#9 1	10.24-17	1+91	1000	144.8	145.9	10091	4.71										·····	
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WAHI	10-26-17	0+11	.1000	138.7	145.9	95/	4.4/											
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	Sheet To		14,000	Spec	cifications:	<del>2</del> 95%	A SFE	5								<u> </u>	<u></u>	
	Previous Total to		D 14,000										Final r	eport:	Ď	₫ yes		no
Spec. deviations	s: □ yes	<b>M</b> no	P=		% i	for lot#			· —	Source	(pit): TE	STB	1-3-					
Items: 206 Structure Backfi	fill Class 1	Re	Remarks • TEST = 1 - 3 - 5.0% To 9.0%									丁华4-		- LAI	BOCA 1	AT_		
1206 Filter Material Class								Project East	Tester (pi HOW£	rint name ವಿ	)		Title QA 7.	ESTER				
307 Treated Subgrade 403 HMA Grading Action taken					····	PE Appr	oved by (	print nam	e). Winschil hc. (Ll	175	Title Project Grall	ziject vrginece						
409 Cover Coat Other Material:															¥.,			

COLORAD	O DEPARTMENT OF	TRANSPORTA	ATION	Rroject No.	480-001	Region	Contract ID
7	ICLEAR SOILS MOISTURE P 25 PERCENT RELATIVE	•	D	Project Location	*		
Pit Name	[Material	Class	 	tem 304	y Causcuti (	Date	
Predica Sample ID (Test#)	3/411 - ABC	Tested by (print nam	0)	509	Continue / offices	8-11	
· (restri)	QA#1	Eric How			Station/offset	Elevation /	Depth
Gauge ID スプチナリ	Moisture Standard Count	Density Standard Cou	nt	Transmission	Depth, in.	Soil Classific A-2	ation -4 (o)
Curve No. Class 6 - Curve	Maximum Dry Density	Optimum Moisture C	Content	AASHTO T99 o	(T180)	Method A of	<b>g</b> )
Gauge Reading	Moisture Field Tes	t Data  Density			M/D G Wet Soil v	auge Moist	
(1) % Moisture	5. Wet Dens.	139,9 Dr	y Dens.	132.4	<b>1</b> 100	vt. + pan	1449,4
(2) % Moisture	5.9 Wet Dens.	-	, y Dens,	132.2			t. 495,7
(3) % Moisture	ら、テ Wet Dens.	139,7 Dr	y Dens.	132.2		Dry soil w	-
(4) % Moisture	5,6 Wet Dens.	140.1 Dr	y Dens.	132.7	٠	Water wi	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
Average	ろ、子 Averag	e 139.9	Average	1324	% M	oisture =	4.71
	Calculations for Perc	ent Rock [Plus #4 (N Method A - Ove		or 3/4 inch (	Method D)]		
Dry wt. of rock	÷ Dry wt. to				% Rock &		% Soil
		Method B - Using	Gauge MC				
We	t weight of rock	÷ (1+	abs	orption ÷ 10	0)= dry weight i	rock	
W	et weight of soil ————	÷ (1+		D Gauge MC	÷ 100)= dry wt.		
Dry wt. of rock ÷ ( Dr	/ wt. of rock + Dry wt. of soil) X	100% =	E.		% Rock &		% Soil
		k Correction Formula					
		ensity of Soil) + ( % Roo		·	:)] ÷ 100		
% Soil	For AASHTO T99, C	F = 0.90 For AASHTI Maximum Dry E	O T180, CF = Depoity of so				Corrected
% Rock	X		cific Gravity				Maximum
		•		Sum =	÷	100 =	Dry Density
	Optimum Moisture Corre	tion Calculations			1 Point Moi	sture Deter	mination
[(%	Soil x OMC of Soil) + ( % Rock x	Absorption of Rock)] ÷	100		Wet Soil wt.	·	630.6
e/ E - 21			. •		Dry Soil wt.	+pan é	7493.4
% Soil	X	Optimum MC of Soil	<u> </u>		_	Pan wt.	424.9
% Rock	X ************************************	Absorption of Roc				ry soil wt.	2068.5 V
			Sum = - 100 =		% Mois	Water wt.	/37.8
	Corrected Optimum Moistur	e Content, %				No.	
Gross wt.	23.55	heck Compaction Cyli	nder Densit	y Data			
- Tare wt.	Volume of Mold	Wet Density	Mois	ture Content	1	D	ry Density
Net wt.	11,01 +,0749 =	147.0	÷ (100	. 600	r	)x100≃ <u>∠</u>	37.9
eld Dry Density	4 11 11 12 12 12	ercent Compaction cal Corrected Maximum dry or (Curve Maximum I	density) x 10 Dry Dens) x 1	00=	% Relat	ive Compacti	on
		7-10-1-175	Compa		•	A Company of the Company	um 95.0 %
narks:	5.	p to 9.0%			1 G. DE	enten	. 10004
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	(USS (O Sauge Rea		© ∮   <u>Moisture</u>	Field Test	Data <u>De</u>	nsity		M/D Ga Wet Soil w	uge Moist t. + pan	ure Check
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								Dry Soil wt. +	-	
	%	Soil	X		ptimum MC of S	oil=			Pan wt.	
	96 F	Rock	, X		Absorption of I	Rock =		Dry	soil wt.	
						Sum =			ter wt.	
		Co	rrected Optin	um Moisture C	Content, %	÷ 100 =		% Moistur	e =	
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	- Tare	wt.		Volume of Mold W	et Density	Negict	ure Content		Dry	Density
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LA	BOCH	3/4 - A	3C	Class 6.		1tem 304		1	27-17
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Gauge II ユピア		Moisture Standard	Count	Density Standard	Count	Transmission C	Pepth, in.	Soil Classific	ation
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3997	в - B	145.9		5.0	ure content	AA31110.193 07	1100	Method A o	(g)
( LAS: Gauge F	s (p - Cu Reading	<u>Moisture</u>	Field Test D	ata <u>De</u> n	nsity		M/D G Wet Soil	auge Mois wt. + pan	ture Check
(1) %	Moisture	4,2	Wet Dens.	147.1	Dry Dens.	[4].1	Dry Soil	wt. + pan	1740.8
(2) %	Moisture	4.2-	Wet Dens.	147,6	Dry Dens.	141,6		Pan v	***************************************
(3) %	Moisture	4.1	Wet Dens.	146,9	Dry Dens.	141.1	dt	Dry soil w	t. 1304.3
(4) %1	Moisture	4.2	Wet Dens.	146,8	Dry Dens.	140,9	AT 3.1%	Water w	t. 40.61
	Average	4.2	Average	147,1	Average	141,2		oisture =	3.10
		Calculati	ons for Percen		4 (Method A) Oven Dried	or 3/4 inch (f	Viethod D)]		
Dry wt. o	of rock	<u> </u>	÷ Dry wt. total		- Oven Dried =		% Rock &		% Soil
		*	·	Method B - Us	ine Gauee MC		70 HOCK &		70 SUII
		:	•	÷ (1+					
		t weight of rock — et weight of soil —	dis baganisa and analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and an analysis and	÷ (1+	-	osorption ÷ 100	· · ·		
and the set		et weight of son — wt. of rock + Dry	uct of coil\ V 10	` <del></del>	IV)	D Gauge MC + 9	+ 100)= dry wt. % Rock &	soil	% Soil
		[( % Soi	коск і x Max dry den	Correction Form		F .	11 - 100		
		•	ASHTO T99, CF =		SHTO T180, CF		/] + 100		A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA
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anamana apada kawasana w		Optimum Mo	oisture Correcti	on Calculations			1 Point Moi	sture Dete	rmination
	[{ % \$	Soil x OMC of Soil	) + ( % Rock x Ab	sorption of Rocl	k)] ÷ 100	-	Wet Soil wt.	+ pan	20520
			, ,	,			Dry Soil wt.	. + pan	1989.5
	% Soil	Х		ptimum MC of	Soil =			Pan wt.	519.0
	% Rock	хх		Absorption of				Pry soil wt.	1470.5
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AND CONTRACTOR			anima menganggapangga salah kancera pendangan	ck Compaction	Cylinder Densi	ity Data			
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-1	Tare.wt.	2.54	Mold · V	Vet Density	Moi	sture Content		ſ	Dry Density
	Net wt.	11.43 ÷ 0	<u>,0749 = </u>	152.6	÷ (10	(1)	%H ₂ (	O)x100=	146,31
eld Dry De	*	42.7 ÷ 1	45,9 (00	ent Compaction Prected Maximum or (Curve Maxim O TO 7,0	n calculation n dry density) x 1	00 97 100 =		tive Compact	
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La Boca		m ABC	Tested by (print r	name)	001	Station/offset	<u> </u>	
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28771		13	2177			ley	Method A or	
Curve No. 3998-B	Maximum I 145	Dry Density ,식	Optimum Moisti 5,0	ure Content	AASHTO T99 o			
Closs 6 - 0 Gauge Reading	LEILZ <u>Moistur</u>	Field Test D	ata <u>Den</u>	sity		M/D G Wet Soil v	auge Moist wt. + pan	ure Check
(1) % Moisture	3,7	Wet Dens.	150.8	Dry Dens.	145.5	Dry Soil	wt. + pan	****
(2) % Moisture		Wet Dens.	150.6	Dry Dens.	145.2		Pan w	t.
(3) % Moisture		Wet Dens.	150.4	Dry Dens.	145.1		Dry soil w	t.
(4) % Moisture		Wet Dens.	150.9	Dry Dens.	145,8		Water w	ŧ.
Avera	managaradian	Average	150.7	Average	145.47	% M	oisture =	
	Ca	iculations for Percer		\$ (Method A) Oven Dried	or 3/4 inch (	Method D)]	was quitable are settle.	ong purketid histories a service and
Dry wt. of rock		÷ Dry wt. total		Gaen buso		% Rock &	- dr. dr. 1	% Soil
ory wt. of fock		. 0.7 41. 000	Method B - Us	ing Gauge MC	the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	- to- To-th-		
		·	÷ (1+			0)= dry weight	rock	en-
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	Wet weight o		no/	IV.		% Rock &		% Soil
Iry wt. of Fock ÷	Dry Wt. of roc	k + Dry wt, of soil) X 10	026 = Correction Form	uda and Calcul	etiant			
		Nock ( % Soil x Max dry den				k)) ÷ 100		
		For AASHTO T99, CF =		SHTO T180, CF		,		
% Sc	oil	Х		Ory Density of s				Corrected Maximum
% Roc	k	х х		Specific Gravit	y of Rock =			Dry Density
-	,				Sum =	and the second second second	100 =	
	Optin	num Moisture Correcti	on Calculations			1 Point Moi		mination
ľ	(% Soll v OMC	of Soil) + ( % Rock x Al	sorotion of Rock	k)] ÷ 100		Wet Soil wt.	. → pan	gariatich open in width filt in Million and
•	( 70 00) X 01110	, , , , , , , , , , , , , , , , , , , ,	•			Dry Soil wt		
% Soi	il	Х	Optimum MC of	Soil = _			Pan wt.	
% Rocl	k	х	Absorption of				Ory soll wt.	
	,		•	Sum =			Water wt.	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10
	Corrected	Optimum Moisture	Content, %	÷ 100 =		% Mois	sture =	
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Gross wt.	•	Volume of	M. 18: 19				г	ry Density
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Net wt.	-	+ =		÷ (10	+00	%H21	O)x100=	
eld Dry Density	145.4		cent Compaction orrected Maximum or ( Curve Maxim	n dry density) x :	100 90	、ア ^V % Rela	tive Compact	ion
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(2)	% Moisture	3.7	Wet Dens.	146.4	Dry Dens.	141.1		Pan w	
(3)	% Moisture	4.0	Wet Dens.	-145.7	Dry Dens.	140.		Dry soil wi	
(4)	% Moisture	13.9	Wet Dens.	145.9	Dry Dens.	140.5		Water wi	<del>(************************************</del>
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		[( % So	il x Max dry den			,	c)] ÷ 100		CONTRACTOR CONTRACTOR CONTRACTOR
			ASHTO T99, CF :	= 0,90 For AA	SHTO T180, CF	= 0.95			
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(1)	% Moisture	3.6		Wet Dens.	144.6	Dry Dens.	139.6	Dry Soil 1	•	
(2)	% Moisture	3,3		Wet Dens.	.144.5	Dry Dens.	139.9		Pan wi	-
(3)	% Moisture	3.2		Wet Dens.	145.0	Dry Dens.	140,5		Dry soil wi	
4)	% Moisture	<b>/</b> 3,3		Wet Dens.	194.7	Dry Dens.	140.1		Water wt	
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(1)	% Moisture	30,9	Wet Dens.	147,4	Dry Dens.	141.7	Dry Soil	wt. + pan	Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling of the Carrolling o
(2)	% Moisture	4.2	Wet Dens.	147,7	Dry Dens.	141.7		Pan w	ń,
(3)	% Moisture	4,5	Wet Dens.	147.9	Dry Dens.	141.8		Dry soll w	rt.
(4)	% Moisture	14.0	Wet Dens.	148,1	Dry Dens.	142.4		Water w	rt.
	Average	4,1 /	Average	147,8	Average	141.4	% M	oisture =	
		Calculat	ions for Percer		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	or 3/4 inch (	Method D)]		
איי ע	wt. of rock	AND SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE SALES OF THE S	÷ Dry wt. total		- Oven Dried =	1	% Rock &		% Soil
	,				sing Gauge MiC				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
- ALMOST COLOR	18/2	t weight of rock-		÷ (1+		hearation ± 10	0)= dry weight	rock	
		et weight of soil-		÷ (1÷	•		+ 100)= dry wt.		
)rv v		-	v wt. of soil) X 10	0% =			% Rock &		% Soil
and the second				Correction Forn	nula and Calcul	ations			
		[{ % Sc	oil x Max dry den			٠,	k)] ÷ 100		
			ASHTO T99, CF =	= 0,90 For A/	ASHTO T180, CF	= 0.95			6
	% Soil	. )			Dry Density of				Corrected Maximum
	% Rock	). 	( )(		Specific Gravit	y on rock = Sum =	<u> </u>	100 =	Dry Density
Alexandria de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de la compan			A						
		-	floisture Correcti				1 Point Moi Wet Soil wt.	-	rmination
	[( % 5	Soil x OMC of So	il) + ( % Rock x Al	osorption of Roc	:k)] ÷ 100				
	% Soil	х			. •		Dry Soil wt	Pan wt.	
	% Rock	. X	American Hospital Marine (M.O.C.1704)	Optimum MC of			r	ran wt. Dry soil wt.	
	70 NOCK	. A	ONTHINITATION OF	Absorption o	of Rock = Sum =			Water wt.	
		Corrected Optio	mum Moisture	Content. %	÷ 100 =		% Mois	-	
*******				eck Compaction	Cylinder Dens	itv Data			
	Gross wt.		Volume of	eer entilbereist	, wysineer medi	1			
	- Tare.wt.		Mold Volume or	Net Density	Мо	isture Content		ı	Dry Density
	Net wt.	÷		, communication of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of th	÷ (10	00+	%H2	O)x100= _	
			Per	cent Compactio	n calculation				
eld D	ry Density	119 ÷ 4	5.9 10	orrected Maximu		2 ' /	2,3 V	tive Compac	tion
	Spec	ifications: Moi	sture 3.	or (Curve Maxir ころいしてのし	num Dry Dens) > Comp				OF C O
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<i> </i> -			•						2+66acq
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(	COLORADO	DEPART	MENT OF T	TRANSPO	RTATION	Project No. 多下的40	70-00°	Region	Contract ID
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M. ).	Name 4 Doc4	3/4"	- ABC	Liass	6	304		Date Co	-24-17
	nple ID (Test#)			Tested by (print	name)		Station/offset		Depth
Gau	ge ID	Moisture Standar	d Count	Density Standard	Maria de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya del companya de la companya de la companya del companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de l	Transmission [		Soli Classifi	cation
0	7771	705		2174		4	-	A-1-0	9.3.4
3	ie No. 490-л	Maximum Dry Dr 145.	ensity 	Optimum Moisi	ture Content	AASHTO 199 o	r 1180)	Method A	or(D)
	ASS 6 - Cull ge Reading	Moisture	Field Test E	Dei	<u>nsity</u>		Wet Soil	wt. + pan	ture Check
(1)	% Moisture	4.7	Wet Dens.	151.8	Dry Dens.	144,9	Dry Soil	wt. + pan	
(2)	% Moisture	4.6	Wet Dens.	152.0	Dry Dens.	145.4		Pan v	vt.
(3)	% Moisture	JI.X	Wet Dens.	151.3	Dry Dens.	194,4		Dry soil v	ve.
(4)	% Moisture	14,8	 Wet Dens.	151.5	Dry Dens.	144.6		Water v	vt.
	Average	4.71	Average	151,7	Average	144,81	% N	foisture =	
		Calcula	tions for Perce		4 (Method A) - Oven Dried	or 3/4 inch (	Method D)]		
Drv v	vt. of rock		÷ Dry wt. tota		- Ascii Nilea		% Rock &		% Soil
	<u> </u>	*	· ·		sing Gauge MC			, , , , , , , , , , , , , , , , , , , ,	
	·	t weight of rock	•	÷ (1+		bsorption ÷ 10	n)= dru weight	rock	
		et weight of soil		÷ (1+	•	I/D Gauge MC			·
Drv w		-	y wt. of soil) X 10	00% =			% Rock &		% Soil
			Rock	Correction For	nula and Calcul	ations	,		
		[( % S	oil x Max dry der	nsity of Soil) + ( 9	K Rock x CF x 62	2.4 x Sp Gr Rock	()] ÷ 100		
	% Soil		AASHTO T99, CF :	=0,90 For A/	ASHTO T180, CF	= 0.95			Corrected
					Dry Density of : Specific Gravit				Maximum
	% Rock		K X		Shecilic alani	y or nock = Sum =	-	100 =	Dry Density
		6-1							1
		-	vioisture Correct		-		1 Point Mo Wet Soil wt		mination
	[( % 5	Soil x OMC of So	il) + ( % Rock x A	bsorption of Ro	:k)] ÷ 100		Dry Soil wi		
	% Soil	х					DI Y 3011 W	v pan Pan wt.	
	% Rock	. X		Optimum MC of	Soil =	E C		Dry soil wt.	
	>0 HOCK	.,		Absorption o	of Rock = Sum =		- '	Water wt.	
		^		Cambant 0/	÷ 100 =		% Moi	sture =	
talisher was		corrected Opti	mum Moisture	eck Compaction	· Culinder Dens	ify Data			
	Gross wt.		Volume of	ente materialistatifica	a sultivenente proporto	g			-
	- Tare wt.		Mold	Wet Density	Мо	isture Content			Dry Density
	Net wt.	-	=	· · · · · · · · · · · · · · · · · · ·		DO +	%H2	O)x100= _	,
ield Di		4,7 ÷	145.9 10	cent Compactic Corrected Maximu or (Curve Maxim , O To 7, C	m dry density) x : mum Dry Dens) x	100 =	, 2 / % Rela	ative Compac	tion mum 95.0 %
marks	**************************************			Marie and State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of		7	1 By G.D.	The second second	
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La Boca	3KII- ABC	. 6	Item 304		10-2	24-17
Sample ID (Test #)	10	Tested by (print name)		Station/offset	Elevation /	
	Noisture Standard Count	Density Standard Count	Transmission	Depth, in.	Soil Classific	ation
2777 Durve No. N	705 Jaximum Dry Density	Q174 Optimum Moisture Content	AASHTO.T99 o	- 719A		a (0)
3998-A	145.9	S.O	AAJIIU.1990	1 120	Method A o	
Class G - CULV® Jauge Reading	Moisture Field Test	Density		Wet Soil v	auge Moist vt. + pan	ture Check
1) % Moisture	Ц, 2— Wet Dens.	151, 3 Dry Dens.	145.1	Dry Soil	vt. + pan	(Alexander Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of
2) % Moisture	식, Ś Wet Dens.	(S/, 9 Dry Dens.	144.6		Pan w	rt.
3) % Moisture	[설명 Wet Dens.	150, 6 Dry Dens.	1444		Dry soil w	t.
4) % Moisture 📝	Wet Dens.	15/, © Dry Dens.	145.0	_	Water w	t,
Average	4,3 V Average	e <u>  151,0</u> Averag	e 144.8v	% M	oisture =	Wine survey of the same
	Calculations for Perc	ent Rock [Plus #4 (Method Method A - Oven Dried		Method Dj]	,	
y wt. of rock	÷ Dry wt. to		=	% Rock &		% Soil
		Method B - Using Gauge I	мс			
Wet w	veight of rock-	÷ (1+	-absorption ÷ 10	n troiew vrb =(0	nck	
	weight of soil	÷ (1+	- M/D Gauge MC			
y wt. of rock ÷ ( Dry w	t. of rock + Dry wt. of soil) X	100% =		% Rock &		% Soil
•	Roc	k Correction Formula and Cal	culations			
	[( % Soil x Max dry d	ensity of Soil) + ( % Rock x CF >	( 62.4 x Sp Gr Rock	k)] ÷ 100	1	
% Soil	For AASHTO T99, CI	F = 0,90 For AASHTO T180,	CF = 0.95			Correcte
% Rock		Maximum Dry Density  X Specific Gra	of soil = wity of Rock =			Maximun
70 NOCK	A Statistical and Associate Communication (Communication Communication C	A Specific Gre	vity or Nock = Sum = [™]	<u>*</u> '	100 =	Dry Densit
	Optimum Moisture Correc	wien Calculations				4
	•	-	9000	1 Point Moi: Wet Soil wt.		mination
[( % Soi	I x OMC of Soil) + ( % Rock x	Absorption of Rock)] ÷ 100		Dry Soil wt.	· •	
% Soil	x		-	Dry Don we.	Pan wt.	<u>+</u>
% Rock	, X	Optimum MC of Soil =		D	ry soil wt.	
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Co	rrected Optimum Moistun	e Content, % ÷ 100 =	=	% Mois		
	1 Point C	heck Compaction Cylinder De	ensity Data			
Gross wt.	Volume of					
- Tare.wt.	Mold	Wet Density	Vioisture Content		D	ry Density
Net wt.			(100 ÷		)x100=	
I Dry Density (44)	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	ercent Compaction calculation Corrected Maximum dry density)	×100 90	), 2 8 Relat	ive Compact	ion
Specific	ations: Moisture	or (Curve Maximum Dry Dens	) x 100 = E mpaction		B #!!	00 00 00 00 00 00 00 00 00 00 00 00 00
rks:				121.	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	num 95.0 %
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COLORA	ADO DEPA	ARTMENT OF	TRANSPO	RTATION	Project No.	'0 - 00)E	Region	Contract ID
CP 80		SOILS MOISTURE KCENT RELATIVE		AND	Project Location			
Pit Name La Baca	Material	ABC	Class		Item 304		Date 10-	26-17
Sample ID (Test#	SAR11		Tested by (print			Station/offset		Depth Jergnada
Gauge ID クアネテ/		Standard Count	Density Standard	Count	Transmission (	Depth, in.	Soil Classifica	etion (
Curve No. 3990-0		Dry Density 45,9	Optimum Moist		AASHTO T99 o	(180)	Method A o	<u>o</u> )
Class 6 - C Gauge Reading	ひくべき マン <mark>Moistu</mark> i	Field Tes	t Data <u>De</u> r	ısity		M/D G Wet Soil v	auge Moisti vt. + pan	ure Check
(1) % Moisture	4.2	Wet Dens.	144.6	Dry Dens.	138.8	Dry Soil v		
(2) % Moisture	4.7	Wet Dens.	and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of th	Dry Dens.	138:2	·	Pan wi	
(3) % Moisture	4.1	Wet Dens.	145,0	Dry Dens.	/39,3		Dry soll wi	
(4) % Moisture	14,5	Wet Dens.	144.5	Dry Dens.	138.3		Water wt	•
Avera	nge 4,4	Averag	e 144,7	Average	138.71	% M	oisture =	HILL STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE
<b>***</b> *********************************	Ca	lculations for Perc		4 (Method A) Oven Dried	or 3/4 inch (i	Method D)]		
ry wt. of rock	A CONTRACTOR OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF TH	÷ Dry wt. to		6		% Rock &	,	% Soil
	Sand Combined to the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete Service on the Complete	*	Method B - U	ing Gauge MC				
•	Wet weight of	rock	÷ (1+		sorption ÷ 100	))= dry weight :	rock	
	_	f soil	. ÷ (1+	•	/D Gauge MC ·	÷ 100)= drv wt.		
rv wt. of rock ÷ (	Dry wt. of roc	k + Dry wt. of soil) X	100% =			% Rock &	ANTONIO MARIA MARIA MARIA	% Soil
		Roc	k Correction Forn	ula and Calcula	ations			
	]	[(% Soil x Max dry d	ensity of Soll) + ( 9	6 Rock x <b>C</b> F x 62	.4 x Sp Gr Rock	)] ÷100	8	
% So	il	For AASHTO T99, C	F-00092	SHTO T180, CF				Corrected
% Roc		X	. Maximum I X	Dry Density of s Specific Gravity				Maximum
		The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa		- p	Sum ≂ \	÷ ;	100 =	Dry Density
	Optin	num Moisture Corre	ction Calculations			1 Point Mois	sture Detar	nination
r.						Wet Soil wt.		111111111111111111111111111111111111111
11	% SOII X OIVIC	of Soil) + ( % Rock x	Absorption of Roc	K)] + 100		Dry Soil wt.	+ pan	
% Soi	l	х	Optimum MC of	Soil =			Pan wt.	
% Rock		. X	Absorption of			D	ry soil wt.	<u> </u>
			7.000 phon of	Sum =		- 1	Water wt.	
	Corrected	Optimum Moistur	e Content, %	÷ 100 =		% Mois	ture =	
Gross wt.	•	1 Point C	keck Compaction	Cylinder Densi	ty Data	-		
- Tare.wt,		- Volume of	Wet Density				, De	y Density
Net wt.		Mold + =	7222 2010113	Moi ÷ (10	sture Content	0/ LL_C		y Density
,		Pt.	ercent Compactio		V (	/orizc	))x100= 	
d Dry Density	138,7	÷ 145.9 (	Corrected Maximum or ( Curve Maxim	n dry density) x 19 num Dry Dens) x 1	100 =	, / 🗸 % Relat	ive Compaction	οn
Sį	pecifications:	Moisture 2	1.0 to .7,0.2	Compa	ection		Minim	um 95.0 %
arks:						1 By C	i-1)12-576	/
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COLORADO								
CP 80 NUC	LEAR SOILS R 25 PERCENT I	//OISTURE/D	ensity test	AND	Project Locati		Aus	
	Material		Idass		  Item	. 1 - 10	AVD Date	SUP
La Doca	-3/4/1-	ABC	1 6	)	304			0-26-1
Sample ID (Test#)	H12		Tested by (print			Station/offset	Elevation	
	Moisture Standard C	Count	Density Standard	Count	Transmission		Soil, Classifi	10.7
2877/	699		2163		4		A-1-	a(0)
3998-A	Maximum Dry Dens 145. 9	ny	Optimum Mojs	ture Content	AASHTO T99 o	(T180)	Method A	(D)
CLOSS to CLANY lauge Reading	パープノ <u>Moisture</u>	Field Test D	)ata <u>De</u> i	nsity		M/D Ga Wet Soll v	uge Mois	ture Check
l) % Moisture	4.8	Wet Dens.	145.9	Dry Dens.	139.3	Dry Soil v	vi. 4 pan	1330
!) % Moisture	4,3	Wet Dens.	145.7	Dry Dens.	139.6	, 2., 00k t	Pan v	. <u>1295</u> m. 497
) % Moisture	11.7	Wet Dens.	145,9	Dry Dens.	139,4		Dry soll v	
) '% Moisture	4,7	Wet Dens.	45.41	Dry Dens.	139.0		Water w	7171
Average	4.6 J	Average	145.7	Average	139.31	% Ma	vvacei v visture =	4,6
	Calculatio	ns for Percen	nt Rock [Plus #		or 3/4 inch (	Method D)]		
y wt. of rock		Dry wt. total		Oven Dried		2/0 1 4		
Y TOUR		DIY WI. LOLAI		ing Gauge MC		% Rock &		% Soil
		***	MICHIUU D O.	nik gouke me				
•		•	Alex Salvana Control of Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Security Securi					
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	weight of soil-	rt. of soil) X 10	÷ (1+ ÷ (1+	. · · · · · · · · · · · · · · · · · · ·	bsorption ÷ 100	0)= dry weight re ÷ 100)= dry wt. : % Rock &		% Soil
Wet v wt. of rock ÷ ( Drv w % Soil	weight of soil— rt. of rock + Drv w [( % Soil : For AAS	rt. of soil) X 100 Rock ( x Max dry den: HTO T99, CF =	÷ (1+ ÷ (1+ 0% = Correction Form sity of Soil) + (% 0.90 For AA Meximum 1	alla and Calcul 6 Rock x CF x 62 SHTO T180, CF Dry Density of s	bsorption ÷ 10 I/D Gauge MC lations 2.4 x Sp Gr Rock = 0.95 soil =	÷ 100)= dry wt. : % Rock &		Correcte
Wet v	weight of soil — A. of rock + Dry w [( % Soil : For AAS	rt. of soil) X 10 Rock ( x Max dry den	÷ (1+ ÷ (1+ 0% = Correction Form sity of Soil) + (% 0.90 For AA Meximum 1	alla and Calcul 6 Rock x CF x 62 SHTO T180, CF	bsorption ÷ 10 M/D Gauge MC ations 2.4 x Sp Gr Rock = 0.95 soil = y of Rock =	÷ 100)= dry wt. : % Rock & (;)] ÷ 100	soli	% Soil  Correcte Maximur Dry Densi
Wet v wt. of rock ÷ ( Drv w % Soil	weight of soil— rt. of rock + Dry w [( % Soil : For AAS . X	t of soil) X 100 Rock ( X Max dry den: HTO T99, CF = X	÷ (1+ ÷ (1+ 0% = Correction Form sity of Soil) + (% 0,90 For AA Maximum I	alla and Calcul 6 Rock x CF x 62 SHTO T180, CF Dry Density of s	bsorption ÷ 10 I/D Gauge MC lations 2.4 x Sp Gr Rock = 0.95 soil =	÷ 100)= dry wt. : % Rock &	iosi 00 =	Correcte Maximur Dry Densi
Wet v vwt. of rock ÷ ( Drv w % Soil % Rock	weight of soil  A. of rock + Dry w  [( % Soil : For AAS X  Optimum Moi	Rock (  Rock (  X Max dry density T99, CF =  X  Sture Correction	÷ (1+ ÷ (1+ 0% = Correction Form sity of Soil) + (% • 0.90 For AA Meximum I	aula and Calcul 6 Rock x CF x 62 SHTO T180, CF Dry Density of s Specific Gravit	bsorption ÷ 10 M/D Gauge MC ations 2.4 x Sp Gr Rock = 0.95 soil = y of Rock =	÷ 100)= dry wt. : % Rock & (i)] ÷ 100 + 1	soil 00 = ture Dete	Correcte Maximul Dry Densi
Wet v vwt. of rock ÷ ( Drv w % Soil % Rock	weight of soil— rt. of rock + Dry w [( % Soil : For AAS . X	Rock (  Rock (  X Max dry density T99, CF =  X  Sture Correction	÷ (1+ ÷ (1+ 0% = Correction Form sity of Soil) + (% • 0.90 For AA Meximum I	aula and Calcul 6 Rock x CF x 62 SHTO T180, CF Dry Density of s Specific Gravit	bsorption ÷ 10 M/D Gauge MC ations 2.4 x Sp Gr Rock = 0.95 soil = y of Rock =	÷ 100)= dry wt. : % Rock & (:)] ÷ 100 + 1 1 Point Mois Wet Soil wt	ooil 00 = ture Dete	Correcte Maximul Dry Densi
Wet w wt. of rock ÷ ( Drv w % Soil % Rock [( % Soil	weight of soil  A. of rock + Dry w  [( % Soil   For AAS  X   Optimum Moi: I x OMC of Soil) -	Rock of soil) X 100 Rock of X Max dry dense HITO T99, CF =  X  Sture Correction  4 % Rock x Ab	÷ (1+  ÷ (1+  0% =  Correction Form sity of Soil) + (9:  0.90 For AA  Maximum I	Aula and Calcul G Rock x CF x 62 SHTO T180, CF Dry Density of s Specific Gravit	bsorption ÷ 10 M/D Gauge MC ations 2.4 x Sp Gr Rock = 0.95 soil = y of Rock =	÷ 100)= dry wt. : % Rock & (i)] ÷ 100 + 1	ooil 00 = ture Dete pan	Correcte Maximul Dry Densi
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3490-A	145.9	Optiment Mos		AASHTO.T99 o		Method A o		
CLASS 6 - CU Gauge Reading	Moisture Fix	eld Test Data <u>De</u>	nsity	·	Wet Soil v		ture Check	
(1) % Moisture	4,6 We	t Dens. 146,1	Dry Dens.	139.7	Dry Soil	wt. + pan		
(2) % Moisture	4.7 We	t Dens. 146. 6	Dry Dens.	140,9		Pan w	rt.	
(3) % Moisture 4, 9 Wet Dens. 146,4 Dry Dens. 139.5 Dry soil wt.							rt.	
(4) % Moisture	% Moisture $A=+$ Wet Dens. $46, 7$ Dry Dens. $40.0$ Water wt.							
Average	4.7 V	Average 146.5	Average	1,39,8	7 % M	oisture =		
	Calculations fo	r Percent Rock [Plus a Method A	#4 (Method A) - Oven Dried	or 3/4 inch (1	Method D)]	-	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	
ry wt. of rock	÷ Dry	wt. total sample		, (	% Rock &	<u></u>	% Soil	
		Method B - L	Ising Gauge MC					
Wet	weight of rock	÷ (1+		bsorption ÷ 10	D)= dry weight i	rock		
	t weight of soil ———	÷ (1+	•	/D Gauge MC	÷ 100)= dry wt.			
rv wt. of rock ÷ (Drv	wt. of rock + Dry wt. of	soil) X 100% =			% Rock &		% Soil	
	•	Rock Correction For	mula and Calcul	ations				
	[( % Soil x Ma	x dry density of Soil) + (	% Rock x CF x 62	2.4 x Sp Gr Rock	)] ÷100			
% Soil	For AASHTO	1220	ASHTO T180, CF				Corrected	
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Flex/Cyl PSI				nd milioniscophish she Viliant a a command a milinament and		-na-ain-teat/-		
Other:								
Note; Record "Test	No." of the correspo	nding Sample ID (S	M/LIMS).		Remarks (below):			
oxal Insering			Local balancy		erne en en en en en en en en en en en en e	Doto	l Time	
GDOT Orint name			GĐĐ∓ (sign năn	ne)		Date 9 6 2017	7ime 2:36 PM	
Contractor's Repre	on lee esentative (print n	ame)	Contractors Representative (sign name)  Q 10 1201 f  Q all of 1201 f			Time		
10 11	AURTO		Confidence in the presentative (sign finance)			9-6-17	2:29:37	
		All management approximations.	editions are of	solete and may	not be used.	egyesygggggggaaanamamatalistika	DOT Form #626 6/14	
Original - 📙 Con	tractor				- ***			

Copy 1 - Tester
Copy 2 - Project Engineer

# Colorado Department of Transportation Calculations for Price Reduction

roje	ct Number: ct Code (SA): Description: on:	STE C480-008 19219 Pagosa PC to AVD 5	Shared l	Jse Path	Date: 5/16/2018 Data from CDOT Form No.: 626 Field Sheet No.:	
	Item Lot No. Element Name Number of Tests	304 1 No. 200 sieve 3				
	Upper Spec Limit Lower Spec Limit	12 3				
	Test Results	17.10 15.40 13.30	Xn a R Tu TL F	15.27 0.45 3.8 12 3 6.00	Average of the samples Variable factor for "n" samples Difference between the high and low value Upper Tolerance of Spec Lower Tolerance of Spec Price reduction factor for Item	S
	P = Multiplier P * Multiplier	29.860 0.6 17.916	(Xn+	aR-Tu)*F		
•	Unit Price	\$41.75				
	Price Adjustment	\$7.48				
	Quantity in Lot	1500				
	Price Reduction	\$11,219.90				
	Total P = :	29.860	Tota	l Price Re	eduction = \$11,219.90	
	Notes:					
	Calculations by: Je	ssica Ebel		Date:	<u> </u>	
	Resident Engineer/F	Project Engineer		Date:	<u>-</u>	

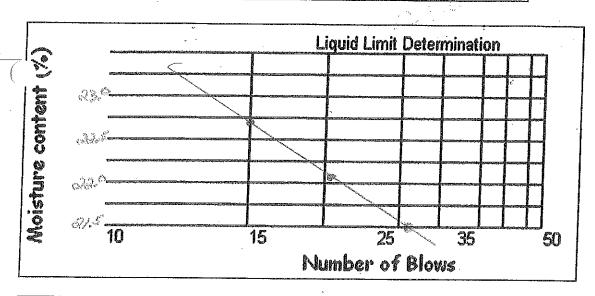
	DO DEPARTIV ANALYSIS			TION Proje	ect No. STE	-0+80-00	) <i>(</i> )	Contract ID	19219
	PLIT ON TI			Ргоје	ect Location:	tom DI De	PC TO	AVD.	SUP Pagi
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5474	18 mt	3	777-A	item	304	se 2/6	Material 3	42 a b	Cas
Sampled Location	24441	7.0	phing u		Sampled Location				
Sample ID		C. Inh	nixastser	WATE OA		)			
Specimen Dry Weigh	t B <i>Z098.6</i>		20/17	#VERIFICAT	<u> </u>	nt B	Date		#se#
Sieve	Weight	Percent Retained	Percent Passing	Specs	Sieve	Weight	Percent Retained	Percent Passing	Specs
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2"					2"				
1 ¹ /2"					1 1/2"		,		
1"	0	0	100	100	1"				
3/4"	0	0	100 9	5100	3/4"				
¹/2"	127. 3	8.11	91.91		1/2"				
3/8"	3925	18.7	81,31		3/8"				
#4	831.7	39,61	6048	30-60	#4				
#8 / #10	1043.3	49.7 52.9	- 53 S	25-55	#8 / #10				
#16	1199.8	57,21	42,81		#16				
#30 / #40	(201. 201. 产	63.05.8	37.0 34.3	-	#30 / #40				
#50	1460.4	69,6	30.4		#50				
#100	1655.4	78.9	21.1		#100				
#200	1738.7	82.91	17.1	3-12	#200				
Pan	1784,0	(Dry Wt T	SW)÷(Dry Wt	) = % Diff.	, Pan		(Dry Wt T	SW)÷(Dry Wt	.) = % Diff.
- #200	3147,5 -2040,50	[after wash]	0116.,1784	ر 100) =%	- #200		(after wash)		
TSW	77070	U113F 170	27/) - ( X	100) =%	TSW		<b> </b>	)÷(x	100) =%
	Gradation S	Sample	Moisture	Sample		Gradation S	Sample	Moisture	Sample
Pan ID:					Pan ID:				
Wet Wt. , + Pan	2619	7,4	F 35		Wet Wt. + Pan				•
Dry Wt. + Pan:	349.	5.6	256	5.5	Dry Wt. + Pan:				,
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Wet Wt.	A 223	2.41		*****	Wet Wt.	А		**********	
	в <i>209</i>	18.61	\$0\$	6.4	Dry Wt.	В			
Vashed Dry Vt. and pan	2/8/	1,00° J	12O _oss /	20.71	Washed Dry Wt. and pan			l ₂ O .oss	
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V	Vet Weight ÷ (100	+ % H ₂ O) x 1	00 = Dry Weig	ht		Vet Weight : (100		· · · · · · · · · · · · · · · · · · ·	ht
। दश्दर	₹ ÷ (100 + ₹	5.9	) x 100 = B		Α	÷ (100 +		) x 100 = B	
impled By ERIC House	CS C	ted By Seco-Jadi	rob S	(Parisi Candobell	Sampled By	Tes	sted By	à	

## PROJECT NO: STE-C480-000/19219

Index:

#### TRAUTNER OFFICE OFFICE

Atterberg Limits - ASTM 4318 PROJECT: Pinan CousLikey 54748 Mt PROJECT#: Date: 7-20-17 TO AVO SUP SAMPLE DESCRIPTION: 3/41 ABC SOURCE: Predra P. Lab Number: 3977 - A VERIFICATION DATE PROPOSED CLASS 6/2 LOCATION: Belt Sample, On-site Stockpile, Stockpile at Pit, Sample Prep: Wet or Dry (see ASTM) Windrow, Loose In-place, Jest Bore, Other: Moisture Condition By: GREG Jadrych Date: 07 /00 //9 Liquid Limit Determination Minimum 3 Trials Required Blows 15 - 25 20 - 30 25 - 35 $LL = W\% \left(\frac{N}{2}\right)$ Can Number B Wt. of Wet Soil + Can 28,75 27.79 30,00 Wt. of Dry Soil + Can 26.12 25.4 V7.26 Liquid Limit: 22 Wt. of Can 14.54 14,62 14,51 Wt. of Dry Soil 11.581 10,79 12,75 Plastic Limit: / */ Wt. of Moisture 2.63 1 238 2.74 Water Content, w% A. 7 Q). N 01.5 1 **Plasticity** 



A.

Plastic Limit Determination	IV	linimum 3 Trí	ials		
Can Number:	C	kan kan			
Wt. of Wet Soil + Can	24,57	23,92		1	
Wt. of Dry Soil + Can	23,10	22.55			
Wt. of Can	14.59	14.55			
Wt. of Dry Soil	8.511	8.001			•.
Wt. of Moisture	1.471	1.37 /			
Water Content, w%	17.31	1700			

Remarks: cales. & by Coding Campbell

مستقي وتجي

No. of Blows, N

4016-A

<b>COLORADO DEPARTMENT OF TRANSPORTATIO</b>	NC
SIEVE ANALYSIS FOR AGGREGATE	S
NOT SPLIT ON THE NO. 4 SIEVE	

	STE 480-		Contract ID 19219
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Sieve	Weight	Percent Retained	Percent Passing	Specs	Sieve	Weight	Percent Retained	Percent Passing	Specs	
3"					3"					
2"			,		2"					
1 ¹ /2"	A				1 ¹ /2"			-		
1"	0 ′	0	100	100	1"			`		
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¹ /2"	239.5	12.1	87.9		1/2"					
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#16	1135.5	57,2	42.84 36.67	1	#16		W			
#30 / #40	1257 3 14.5	63:4664	36.67 33.6		#30/#40				<u> </u>	
#50	1397.6	70.5	29,5%	7	<b>#</b> 50	i i				
#100	1595.3	80,4	19,6%		#100					
#200	1678.7	84.6		3-12	#200					
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- #200	3631	[after wash]			- #200		(Dry Wt TSW)÷(Dry Wt.) = % Diff. [after wash]			
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Wet Wt.	A 2/02	6 V		********	Wet Wt.	A	-	~~~b~~~		
Dry Wt.	в 1980	3,6 V	Q15°E	1.12	Dry Wt,	В				
Washed Dry Wt. and pan	215	4,9	H ₂ O Loss /	30.1	Washed Dry Wt. and pan	<del>4-44,-20</del>		H ₂ O Loss		
-#200 Mat Lost Seive	7/24	1718.5		, 0 V )	-#200 Mat	i ed	C-3/2 (- 10 ) 1	% H ₂ O		
Wet Weight ÷ (100 + % H ₂ O) x 100 = Dry Weight					Wet Weight : (100 + % H ₂ O) x 100 = Dry Weight					
A 2/02. 4 (100 + 6:0 ) x 100 = B /983.6					÷ (100 + ) x 100 = B					
						mpled By Tested By				
ote: Save all material until calculations are complete  Previous editions are obsolete and may not be used  CDDT Form #555 5/44										

## COOT PROJECT #: STE 480-608/19279 TRAUTNER GEOLEGIE

Water Content, w%

Remarks:

QA#Z

<del></del> C	Atterberg	ı Limits - /	ASTM 43°	18		267
ROJECT: PC-AVD	) SUP		PROJECT#	:54:	748 mt	Date:
			_SOURCE:_	Pindra 1.25+	32	Lab Number: 4016-A
Sample Prep : Wet or Dry	(see ASTM)			Windrow, I	Loose In-place)Te	est Bore, Other:
Moisture Condition By:	reg Sashy	ech Date:	09/01/1	17	J BY G. DE	Tested By: S.Chiavita 9/5/17
Liquid Limit Determination	M	inimum 3 Tria	als		Ų	<b>€</b>
Required Blows	15 - 25	20 - 30	25 - 35		<i>f</i>	Ar \ .121
Can Number	Q1	U1_	NA.	,		$LL = W\% \left(\frac{N}{25}\right)^{.121}$
Wt. of Wet Soil + Can	28,75			·		
Wt. of Dry Soil + Can						Liquid Limit: <u>NO L_L</u>
Wt. of Can	11.03	11.10	11,26			
Wt. of Dry Soil				w.,		Plastic Limit: <u>N/OPL</u>
Wt. of Moisture	,	·				
Water Content, w%		<u></u>				Plasticity
No. of Blows, N	15	45	Ĥ			Index: Non Plastic
•	4 NOT	E," TESTER	Could Not	DEVELO	P SOIL PATI	UTH DRIER MATERIAL. DETERMINED  MATERIAL TO BE
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1/2"	2/6.8	9.5 /	90.5%	/	1/2"				
3/8"	433.9	190	81,0%	/	3/8				
#4	943.5	464	58.6	30-65	#4				
#8 / #10	1336.4.5	53.3	16.243.5	25-55	#8 / #10				-300E1
#16	1426.5	62.6/	37.4	<i></i>	#16				· · · · · · · · · · · · · · · · · · ·
#30 / #40	1576,3	69.2	30.95	/	#30 / #40				
#50	1724.7	75.7	24,31		#50				
#100	1897.6	83.3	16,7		#100	,			
#200	1975.3	86.71	13.31	3-12	#200				
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# COUT PRODECT NO: STE 480-008 | 19219 TRAUTNER GEOREGIEGE

ROJECT: PC to	Atterberg	Limits - ル リア	ASTM 43 _ PROJECT#	18 : 547	48	Date: 9-25-17
SAMPLE DESCRIPTION:	3/411-	ABC	_SOURCE:	La Boo	<u> </u>	Date: <u>9-25-17</u> Lab Number: <u>4034</u> -A
	· · · · · · · · · · · · · · · · · · ·		- LOCATION:	Belt Sample, Ol	n-site Stockpile,	Stockpile at Pit,
Sample Prep : Wet or Dry	(see ASTM)	ed JAMMO	X <del>!</del>	Windrow, Loos	se In-place,Test	Bore, Other:
Sample Prep : Wet or Dry Moisture Condition By:	GJOR	Date	9/26/1	7	Water State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the	Tested By: <u>FH</u> , 9/27//
Liquid Limit Determination		inimum 3 Tria				Tested By: <u>IEH</u> , 9/27//
Required Blows	15 - 25	20 - 30	25 - 35	Å.		121
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Wt. of Wet Soil + Can	J. W.				*/	(25)
Wt. of Dry Soil + Can		,			,	Liquid Limit: 10 LC
Wt. of Can	11,12	11,24	10.63		<i>)</i>	
Wt. of Dry Soil			·			Plastic Limit: <u>취 영 구(</u>
Wt. of Moisture	700-1-1	,				
Water Content, w%						Plasticity
No. of Blows, N						Index: <u>Aon p</u> lasti

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Wt. of Wet Soil + Can					
Wt. of Dry Soil + Can					
Wt. of Can	11.26	11,15			
Wt. of Dry Soil					
Wt. of Moisture					
Water Content, w%					]

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(A) 1- 80,001 LBS AND UP			03-477-4220	Services
(B) 30,001 THRU 80,000 LBS	(F) – (G)	76 THRU 450 LBS 4 THRU 75 LBS	(K)	FABRIC METER
(C) 10,001 THRU 30,000 LBS	(H)	LESS THAN 4 LBS	(L) (M)	CORDAGE METER  GRAIN MOISTURE METER / PROTEIN ANALYZER
(E) 1,001 THRU 10,000 LBS 451 THRU 1,000 LBS	(I)	BELT CONVEYOR  IN-MOTION R.R. SC	(N)	MASS FLOW METER
LA B	OCA PIT MILE	CROSSFIRE LLC@ MARKER 4 STATE I IGNACIO, CO 81137	IWY 17	ΙΤ
THIS LICENSE EXPIRES 12/31/2017			Issued; License Fees; Penally Fees; Total Fees;	1/3/2017 \$200.00 \$0.00 \$200.00 PAID

### Commissioner of Agriculture Don Brown

### STATE OF COLORADO MEASUREMENT STANDARDS LICENSE

License Number 3-49500-17

Department of Agriculture - Division of Inspection and Consumer Services 3125 Wyandot * Denver, Co 80211 * 303-477-4220

( , )	1- 80,001 LBS AND UP	(F) _	76 THRU 450 LBS	(K)	FABRIC METER
(B)	30,001 THRU 80,000 LBS	(G) _	4 THRU 75 LBS	(L)	 CORDAGE METER
(C)	10,001 THRU 30,000 LBS	(H)	LESS THAN 4 LBS	(M)	 GRAIN MOISTURE METER / PROTEIN ANALYZER
(D)	1,001 THRU 10,000 LBS	(1)	BELT CONVEYOR	(N)	MASS FLOW METER
(E)	451 THRU 1,000 LBS	(J) _	IN-MOTION R.R. SCALES		
	CROSSEIR	E ACCE	DECATE CEDUICED I I CC	~ ~ ~ ~ ~	

## CROSSFIRE AGGREGATE SERVICES LLC@PIEDRA PIT 12577 US HWY 151 PAGOSA SPRINGS, CO 81147

THIS LICENSE EXPIRES 12/31/2017

Issued: 1/3/2017
License Fees: \$200.00
Penalty Fees: \$0.00
Total Fees: \$200.00
PAID

Notice: This license is not transferable

THIS Certificate IS NOT TRANSFERABLE

#### Coy, Shawndris

Doing Business As Name(s) (DBA)

Coy, Shawndris

PO Box 5405

Pagosa Springs CO 81147

**Effective Date** 

**Expires Date** 

Apr 14, 2017

Dec 31, 2017

Certified Weigher Certificate AgLicense ID # ØØ2ØØF

Established to 14 Martine equal legit is Southerned a respect and particles and considering the second considering

Don Brown

Commissioner of Agriculture

April 14, 2017





THIS Certificate IS NOT TRANSFERABLE

#### GUILLIAMS, KYLE

Doing Business As Name(s) (DBA)

GUILLIAMS, KYLE

148 SPRUCE WAY BAYFIELD CO 81122

Certified Weigher Certificate AgLicense ID # ØØ1G32

**Effective Date** 

**Expires Date** 

Jan 01, 2017

Dec 31, 2017

Don Brown

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m s}$  and  $m_{
m s}$ 

Commissioner of Agriculture

December 09, 2016





THIS Certificate IS NOT TRANSFERABLE

#### Arnold, Alexandria M

Doing Business As Name(s) (DBA)

Arnold, Alexandria

PO Box 6342 Navajo Dam NM 87419

**Effective Date** 

**Expires Date** 

Certified Weigher Certificate AgLicense ID # ØØ2HØH

Sep 27, 2017

Dec 31, 2017

Pursuant to § 35-14-101 through 134, C.R.S., the Commissioner authorizes the above-named person to act as a certified weigher.

Don Brown

September 27, 2017

Commissioner of Agriculture





THIS Certificate IS NOT TRANSFERABLE

#### HOTT, RICHARD

<u>Doing Business As Name(s) (DBA)</u> HOTT, RICHARD

> 962 East Oak Bayfield CO 81122

> > **Effective Date**

**Expires Date** 

Certified Weigher Certificate AgLicense ID # ØØ1C94

Jan 01, 2017

Dec 31, 2017

Pursuant to § 35-14-101 through 134, C.R.S., the Commissioner authorizes the above-named person to act as a certified weigher.

Don Brown

Commissioner of Agriculture

January 19, 2017



19219-403-1

	- TD & LIODAD	TATION:	I Dogion	Field choot #
COLORADO DEPARTMENT OF		Region 5	Field sheet # 265289	
OR MATERIALS DO			Contract ID 19 21 9	Date Submitted 3 - 10-10
•			Project No.	4.00
Metric units	yes	no	STE C 480 - Project Location	008
	L;	<del></del>		TO ASPEN VILLAGE DR S.U.P.
Material Type HMA - P	ATCHIN	G	Field Lab phone	Cell Phone
Material Code (LIMS)	Item 403	Class	Grading SX	Special Provisions yes .
Previously used on Project No.:		Previous CDOT Form	#157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Un</li> <li>Materials Documentation: Field inspendent</li> </ul>	it of material subn ected (describe ap	nitted, describe tests required opearance, weight/dimension	l, precise location sample s, model/serial number),	removed from ( stationing), etc.
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ALL INFORMATION				<i></i>
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Sample ID (#4)	San	nple ID (#5)	Samp	le ID (#6)
APL/QML Acceptance: APL Ref. No.	Product name	9:		Date checked:
APL/QML Acceptance: APL Ref. No.	Product name	<b>9</b> :		Date checked:
Preliminary Construc	ction Mainte	enance Emergency		Date needed
CONTRACTOR  CAUSSFILE LLC		Supplier	TROHECIGER	DANIME
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Sample submitted: Shipped  Yes M No	I specified quantity Dentral lab		Via	Date
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.pervisor (Pro./Res./Matts, Engr./Maint, Supt.) (	print name)	Title	Residency	
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19219-403-2

COLORADO DEPARTMENT OF TRA		Region S Field sheet # 200293		
FIELD REPORT FOR SAM		Contract ID Date Su	ıbmitted	
OR MATERIALS DOCUM	MENTATION	19219 3 Project No.	-10-10	
<u></u> .		STE C480-008		
Metric units y	res no	Project Location		
	·	PINON CAUSEWAY TO A	Spen Llume Dr. Sup	
Material Type A F A A A A		Field Lab phone	Cell Phone	
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40	3/608	· · · · · · · · · · · · · · · · · · ·	Provisionsyes	
Previously used on Project No.:	Previous CDOT Form #		CDOT Form #633 (sack) CDOT Form #634 (can)	
<ul> <li>Sample Identification: Quantity &amp; Unit of ma</li> <li>Materials Documentation: Field inspected (</li> </ul>	describe appearance, weight/dimensions	, model/serial number), COC &/or C	CTR provided , etc.	
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APL/QML Acceptance: APL Ref. No. Pt	roduct name:		Date checked:	
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	ified quantity to: entral lab	Via	Date	
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ervisor (Pro/Res/Matls, Engr/Maint, Supl.) (print nar		Residency		

#### COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 3621-16

Product Evaluation Coordinator	Material code:
olorado Department of Transportation	401.09.01.00
4670 North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	Bituminous Mixture, Release Agent

PΑ	RT	1
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PART 1	•				
Product name:	Product category:				
8277 Product Representative (name & address):	Asphalt\Asphalt Release Agent\Truck & Equipment				
Attn: Katie Overton	Manufacturer (name & address): Attn: Derek Noll				
ChemStation	ChemStation of the Rockies				
3400 Encrete Lane	5015 Paris St.				
Dayton, OH 45439	Denver, CO 80239				
Phone: (800) 554-8265 E-mail; koverton@chemstation.com	Phone: (303) 288-8500 E-mail: dnoll@chemstation.com				
Web-site address: www.chemstation.com	Web-site address: www.chemstation.com				
Description of the product: (Include specific quantifiable details from tech data she					
biodegradable surfactants. It is safe and effective, containing no petroleum di	with a pH of 10.4 and a Specific Gravity of 1.026. When used at recommended				
CDOT accepted dilution rate of 4:1 per NTPEP testing.					
Restrictions, (installation and/or use):					
Dilution rate of 4:1	•				
of the product, (be specific to CDOT highway activities only): 77 is primarily used as an asphalt release agent. It can also be used to prevent	vent asphalt from sticking to pavers, rollers, and conveyors.				
Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):  *100% Biodegradable - *Minimizes wastewater and environmental concerns					
*NO VOCs					
*Non-toxic *Convenient to use and control					
Specifications: (listing those applicable is required)					
☑ CDOT : NTPEP Tested & TX DOT Approved					
ASTM :	·				
AASHTO:	,				
☐ FHWA :					
parameter .					
☐ other : ☐ Certificate of Compliance (COC) provided ☐ Certificate	of Marification (COM) and the description of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the co				
	of Verification (COV) provided for select categories ONLY				
Product Testing: (National/Independent laboratories or universities with Repo					
☑ NTPEP-AASHTO: ARA-2015-04-006 (Report date: 6/14/2016	3)				
☐ FHWA :					
other :					
Other :					
other :					
State DOT Approvals, (current documentation required):	Re-submittal Cycle: 3 years				
Sample submitted:  yes no no n/a Safety Data Sh	neets (SDS): 🛮 yes 🔲 no 🔲 n/a				
`Iternate Product Category:					
Itional Comments:					
State DOT Approvals referenced but not documented: CT, IA, IL, IN, KS, MA	NE.				



#### **Certificate of Compliance Letter**

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date:

2/20/2018

**Project Number:** 

STE C480-008

**Project Code & Name:** 

19219 Pinon Causeway to Aspen Village

Manufacturer's Name:

ChemStation

**Manufacturing facility Address:** 

4800 Lima St, Denver CO 80239

**Laboratory Name and Address:** 

5015 Paris St, Denver CO 80239

**Product Name or Assembly:** 

2217-B

**Description of Material:** 

Asphalt Release Agent

Model, Catalog, Stock Number:

3501088-4

Lot / batch number:

8227-01

Date or Frequency of Lab Testing:

NTPEP's ARA program. This work plan consists of three test

procedures: a stripping test, a mixture slide test and an asphalt

performance test.

**Applicable Specifications:** 

The material above has been reviewed according to subsection

608 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

Item 403-00720 Hot Mix Asphalt (Patching) (Asph.), 4tons Item 608-01500 Bituminous Bikeway (Special), 650 tons

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Necaect (quantity and units) of pay item See to the wint left (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

31618



ChemStation of the Rockies - 4800 Lima St - Denver CO 80239
Phone: (303)288-8500 - Fax: (303)288-5449 - E-mail: gbabb@chemstation.net

SOLD TO:	8227 Strohecker 37801 HWY Bayfield, CO Strohecker 300 County Pagosa Spri	/, 160 ) 81122 Asphalt P Road 302	aving 2			<b>Delive</b> Numbine Date Forms  Route	er: rinted: !	ket 7872 07/30/20 Net 30 I-25 SOU		
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19219-411-1

COLORADO DEPARTMENT OF TRANS FIELD REPORT FOR SAMPL	Region 5	Field sheet # 266289			
OR MATERIALS DOCUME		Contract ID 1921 9	Date Submitted 3-10-18		
Metric units yes	√ino	Project No. STE C 400-00	8		
wette times yes		Project Location PINON CANSEWAG	y TO ASPEN VILLAGE DR. SU		
Material Type BINDEC		Field Lab phone	Cell Phone		
Material Code (LiMS)	Class	Grading 50-28	Special Provisions yes		
Previously used on Project No.:	Previous CDOT Form	L	CDOT Form #633 (sack) CDOT Form #634 (can)		
<ul> <li>Sample Identification: Quantity &amp; Unit of materia</li> <li>Materials Documentation: Field inspected (description)</li> </ul>	al submitted, describe tests required oribe appearance, weight/dimensions	, precise location sample r s, model/serial number), C	emoved from ( stationing), etc.		
THE ASPHALT CEMENT					
WAS APPROVED BY THE	PREDECT ENGINEE	R. THE MATI	ENIAC IS ON THE		
APL. THE MANUFACTE	in's COE FOR EAC	H DELIVERY	15 ATTACHED.		
NO INDEPENDENT VERIFIC	ATION SAMPLE WI	AS COLLECTED	FOR TESTING		
DUE TO MINIMUM QUAN	STITIES AND USE ON	ITEM 60B. S	EE Gam 473.		
User ID .					
Sample ID (#1)	Sample ID (#2)	Sample	e ID (#3)		
Sample ID (#4)	Sample ID (#5)	Sample	e ID (#6)		
4128-17 PG	ct name: 58-28 (2017)		Date checked:		
APL/QML Acceptance: APL Ref. No. Produ PG	thame: 58-28 (2017)	,	Date checked:		
Preliminary Construction ☐ ☐-	Maintenance Emergency	· ·	Date needed		
CONTRACTOR SUPPLIER PAVING					
Sampled from (Pit, roadway, windrow, stock, etc.)					
Quantity represented 650 Tons	Previous quantity	Tot	al quantity to date 650		
Sample submitted: Shipped specified  Yes No Cent	· · · <u>—</u>	Via	Date		
Sampled or inspected by (print name)	Title PROJECT ENGINE	E-mail	,		
Supervisor (Pro./Res./Matts, Engr./Maint, Supt.) (print name)  MICE DAVIS. CE	Title PRESIDENT - DAVI	Residency			

Distribution:

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.



#### CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

11/30/2017

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to Aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:	702-01.01.01 Asphalt Cement,	702-01.01.01 Asphalt Cement,			
	Binder	Binder			
APL Category:	Asphalt	Asphalt			
APL Sub-Category:	Binder	Binder			
APL Base Category:	PG 58-28	PG 58-28			
APL Reference No.:	4128-17	4153-17			
Product Name:	PG 58-28 (2017)	PG 58-28 (2017)			
Manufacturer:	Suncor Energy Grand Junction	Suncor Energy Fruita			
Date of Web Site Review &	11/03/17	11/03/17			
Selection:					

Crossfire, LLC

Paul Martin,

Project Manager

I hereby certify under penalty of perjury that the material listed in th	is Certificate of
Compliance represents 650 lens (quantity and units) of par	y item:
Compliance represents 650 tens (quantity and units) of par 608-01500 Bituminous Bikeway (Special) 4-tons 403-00720	IMA (Patch.) (apph.)
(Pay item # and description) that will be installed in Conformance wi	th the plans
and specifications on Project No. STE C480-008, 19219	
1 a h h	1 26 18
Contractor	Datė '

### COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 4128-17

Product Evaluation Coordinator Colorado Department of Transportation	Material code: 702.01.01.01
4670 North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	Asphalt Cement, Binder, PG58-28

Denver, Colorado 80216	Asphalt Cement, Bilder, P000-20				
PART 1					
Product name:	Product category:				
PG 58-28 (2017)	Asphalt\Binder\PG 58-28				
Product Representative (name & address): Attn: Jim Hazell	Manufacturer (name & address): Attn: Jake Neitsch				
Suncor Energy (USA) Inc.	Suncor Energy - BKEP				
717 17th Street; Suite 2900	202 Fourth Avenue				
Denver, CO 80202	Grand Junction, CO 81501				
Phone: (303) 793-8009 E-mail: jhazell@suncor.com	Phone: (970) 241-1135 E-mail: jneitsch@bkep.com				
Web-site address: www.suncor.com	Web-site address: www.suncor.com				
Description of the product: (Include specific quantifiable details from tech data she	et. Advertising generalities are not appropriate.)				
Performance Grade asphalt cement designated as PG 58-28.					
Source Facility: Manufacturing Terminal					
Blue Knight Energy Partners LP (BKEP) manufactures and stores products on	behalf of Suncor Energy (USA) Inc.				
Restrictions, (installation and/or use):					
Jse of the product, (be specific to CDOT highway activities only):					
HMA  Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):					
Specifications: (listing those applicable is required)	·				
☑ CDOT : Standard Specifications; Section 702; Table 702-1					
☐ ASTM :					
AASHTO:					
FHWA:					
Other:	· · · · · · · · · · · · · · · · · · ·				
	of Verification (COV) provided for select categories ONLY				
Product Testing: (National/independent laboratories or universities with Repo	nt Date.) Certified Test Report (CTR) provided to validate all claims.				
☐ NTPEP-AASHTO:					
☐ FHWA :					
other : CDOT Bituminous Laboratory					
I I Athor					
other :					
other :					
	Re-submittal Cycle: Expires on 2-01-2018				
other :					
☐ other :  State DOT Approvals, (current documentation required):  Sample submitted: ☑ yes ☐ no ☐ n/a Safety Data Statemate Product Category:					
☐ other       :         State DOT Approvals, (current documentation required):         Sample submitted:       ☑ yes       ☐ no       ☐ n/a       Safety Data St					

### COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 4153-17

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code:
702.01.01.01

Material code description full name:
Asphalt Cement, Binder, PG58-28

PART 1							
Product name:	Product category:						
PG 58-28 (2017)	Asphalt\Binder\PG 58-28						
Product Representative (name & address); Attn: Jim Hazell	Manufacturer (name & address): Attn: Doug Pumphrey						
Suncor Energy (USA) Inc.	Suncor Energy (USA) Inc.						
717 17th Street; Suite 2900	1493 Hwy 6 & 50						
Denver, CO 80202	Fruita, CO 81521						
Phone: (303) 793-8009 E-mail: jhazell@suncor.com	Phone: (970) 245-0880 E-mail: dpumphrey@suncor.com						
Web-site address: www.suncor.com	Web-site address: www.suncor.com						
Description of the product: (Include specific quantifiable details from tech data sheet	et. Advertising generalities are not appropriate.)						
Performance Grade asphalt cement designated as PG 58-28.							
Source facility: Storage Terminal							
	•						
Restrictions, (installation and/or use):							
se of the product, (be specific to CDOT highway activities only):							
HMA							
Specifications: (listing those applicable is required)	Specifications: (listing those applicable is required)						
☑ CDOT : Standard Specifications; Section 702; Table 702-1							
☐ ASTM :							
🗖 AASHTO:							
☐ FHWA :							
☐ other :							
	of Verification (COV) provided for select categories ONLY						
Product Testing: (National/independent laboratories or universities with Repor	t Date.) Centified Test Report (CTR) provided to validate all claims.						
☐ NTPEP-AASHTO:							
FHWA :							
☑ other : CDOT Bituminous Laboratory	j						
☐ other ;							
other :							
State DOT Approvals, (current documentation required):	Re-submittal Cycle: Expires 2-01-2018						
Sample submitted: 🗹 yes 🔲 no 🔲 n/a Safety Data Sha							
Alternate Product Category:							
Additional Comments:							

by placement STRAIGHT BILL OF LADING on 0a/1a/2017 In Emergency call Chemtrec at: (800) 424-9300 Reference ERG for Emergency Response Information	Suncor Energy (U.S.A.) Inc. 1493 Hwy 6 & 50 Fruita, CO 81521 (970) 245-0880
This is to certify that the below named materials are properly classified, described, packaged, marked, and described in proper condition for transportation according to the ple regulations of the Department of Transportation.  Signature By	ID 1905 GROSS 31160 ID INSTAND
If this shipment is to be delivered to the consignee without recourse on the consignor, the cosignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and other lawful charges.	10 1905
Signature of Cosingnor	GROSS 84260 lb
Cargo Tank Supplied By Carrier/Carrier Complience to Laws - Where the cargo tank is supplied by the carrier, the carrier hereby certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this commodity. This is to acknowledge that the carrier has in his possession or has been offered and accepted the required hazard materials placards and/or emergency response information.	TARE 31160 16 RECALLED
The property described herein in apparent good order is received by the carrier shown on this Bill of Lading and the carrier agrees to transport the property to the consignee and the destination set forth herein subject to the classifications and tariffs, and the terms and conditions of the Uniform Domestic Straight Bill of Lading found in National Motor Frieght Classification, in effect on the date of issuance of this Bill of Lading or the applicable contract with shipper. It is further agreed by the carrier that the transportation of this shipment will be performed in compliance with all applicable rules, regulations and laws.	01:53:61 08:709/2017
Signature of World Carrier 17 7772-31	
ORIGIN SHIPPER SUNCOR ENERGY (U.S.A.)	INC. CARRIER
Product: PG 64-22 PG 58-28	2/8/5 DM (4.6.5) (9/10/) 2 300/400 PEN
	I WMA %
TRACTOR #:TRAILER #:	8276
TEMP:LOADING #: _	2007589
This is to certify that the materials provided under this bill of lading shall meet the state Control Plan that Company or it's affiliates provided to the State and thereby conformifications. Per the Agency Plan provided to the State, "We will follow procedures that materials, and inquire as to the contents of our customers' tank trucks or cars." The dependent of the processes of manufacturing, shipping and had	ns to either CDOT, FAA, FHWA or applicable project spec make a reasonable attempt to prevent contamination of densities and Specific Gravity denoted are typical results.
Authorized Signature:	
CONTAINER PROPER SHIPPING D	DESCRIPTION
UN3257, Elevated Temperature Liquid, N.Q.S. (Asphalt), 9, PG	
	ulated Measured @ 60F Sp Gr @ 60F
PG 64-22 8.66 4.	.82 1.038

Crossfire's Certified Test Report Certification Statement on Back

1.034

1.020

8.62

8.50

PG 58-28

300/400 PEN

5.35

7.29

1 hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 650 bus (quantity and units) of pay item 608 P 500 Bituvings Blue, pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01 210 18 Date

24 tons 403-00720 HMA (patch.) (asph.)

BOL fir	trail pl	aciw	ud XX	MĀ	LÄÄÄ
on 10/2	13 4 10	124	111/0	×	

CONTROL STRAIGHT BILL OF LADING In Emergency call Chemtrec at: (800) 424-9300 NOT A BILL OF LADING MUTURE Reference ERG Guide #128 for emergency response information Is is to certify that the below named materials are property classified, described, packaged, marked; and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. t is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement; The carrier shall not make delivery of this shipment without payment of freight and other lawful charges Signature of Consignor argo Tank Supplied by Carrier/Carrier Compliance to Laws - Where the cargo tank is supplied by the carrier hereby certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this immodity. This is to acknowledge that the carrier has in his possession or has been offered and accepted the required hazard materials placards and/or emergency response information. te property described herein in apparent good order is received by the carrier shown on this Bill of Lading and the carrier agrees to transport the property to the consignee and the destination set forth herein subject to the classifications of the terms and conditions of the Uniform Domestic Straight Bill of Lading found in National Motor Freight Classification, in effect on the date of issuance of this Bill of Lading of the applicable contract with shipper. It is further preed by the carrier that the transportation of this shipment will be performed in compliance with all applicable rules, regulations and laws. Signature of Motor Carrier SHIPPER CARRIER Grand Junction FLT: Suncor Energy (U.S.A.) Inc. Common Carries. OT QUÇ Strobecker Strohecker Grand Jet PLT CO LL OF LADING SHIP DATE FREIGHT 54013-17-000926 10/20/2017 driginal Rol: Cryry Tima In: 04:01 Agrosment #: 33 Detatl Ref: Time Out: 04:29 Customer 90 #: 2007584 Order Level Comments CHENTREC CCY: Tank #:107 Trailer #:683330 Truck #:1889 Frat Kane: KALUTABIG : Product/Allac Gross Vol Bat Vol PG 58-28 .3% grass 94040 LBE 305 K 6455.31 GAL 5920 96 GAL 152 C 24435.7 LT 22410.91 LT Pare 32800 · LBS · 51200 LES: 23242,07 KG 23.24 M Proper Shipping Description . UN3257; Elevated Temperature Liquid, h.o.a., (Asphalt), 8, TII T/T Founda par Gallen: 8 654 / Kilograms per Liter. 1 037 Specific Grivity & 60.67; 1.038 This is to wortify that the especials provided under this bill of lading shall mest the standards of and were tested in accord with the Quality Control Plus that Company or ive sifiliates provided to the State and thereby conforms to the State of Colorado's: specifications. Fer the Agency Plan provided to the State: "We will follow procedures that

make a reprincible appears to prevent contamination of materials, and inquire as to the convenes of out costomers's bank brucks or cars". The describes and Specific Seavity denoted are typical results. Froduct densities can vary through the processes of manufacturing, shipping and handling.

åktdortred stypetære.

Crossfire's Certified Test Report Certification Statement on Back

9 4 tons 403-04720 HMA (patch.) (asph.)

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION			Region 5	Sontract ID Date Submitted			
.,			19219 3-18-18				
<u> </u>			<del>/-</del> 1	Project No. STE C40	h()~ ()1	) (P)	
Metric units	yes	ΙŻ	() no	Project Location	1		
				PINON CAU	SEWAL	i Tu	ASPEN VILLAGE DE-S.U
Material Type EMULSIFIE	o AspH	MLT		Field Lab phone		ĺ	Cell Phone
Material Code (LIMS)	Item 411		Class	Grading ·		Specia	al Provisionsyes
Previously used on Project No.:			Previous CDOT Form #	#157 F/S No.(s); CDOT Form #633 (sack)  CDOT Form #634 (can)			
<ul> <li>Sample Identification: Quantity &amp; Uni</li> <li>Materials Documentation: Field inspendent</li> </ul>	it of material su ected (describe	ıbmitted, appeara	, describe tests required, ance, weight/dimensions	precise location , model/serial nu	sample re mber), CC	moved C &/or	from ( stationing), etc. CTR provided , etc.
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SEE FORM 473,							
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Sample ID (#1)	S	Sample II	D (#2)	· <u> </u>	Sample	ID (#3)	
Sample ID (#4)	S	Sample II	D (#5)		Sample	D (#6)	
APL/QML Acceptance: APL Ref. No.	Product na		200				Date checked:
4145-17 APL/QML Acceptance: APL Ref. No.	SS = / Product na		2017)				Date checked:
							Date checked.
Preliminary Construc	ction Maiı	ntenan	ce Emergency				Date needed
Contractor CNOSSFILE, LLC			Supplier	NCOR E	NERR	И	
Sampled from (Pit, roadway, windrow, stock, etc.)			Pit name or o	owner	Ų	)	
Quantity represented AS NEOFO			s quantity		Total		v to date NEEQEA
☐ Yes	Specified quan Central la	ab	_ Region lab	/ia			Date
Sampled or inspected by (print name) CLIFTON LEE PE		Title Phu	NECT ENTINE		nail		
rvisor (Pro./Res./Matls. Engr./Maint. Supt.) (p	orint name)	Title Pa	ESTOENT-DE		sidency		

Distribution:

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer

Previous editions are ob

Previous editions are obsolete and may not be used.

CDOT Form #157 3/15



#### CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

2/20/2018

**CDOT Project No:** 

STE C480-008

**CDOT Project Location:** 

Pinon Causeway to aspen Village

**CDOT Project Code:** 

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

608-01500

APL Category:

Asphalt

APL Sub-Category:

Emulsion

**APL Base Category:** 

**Emulsion SS-1h** 

APL Reference No.:

4145-17

**Product Name:** 

SS-1h

Manufacturer:

Suncor Energy - BKEP

Date of Web Site Review & Selection: 2/20/18

1

Crossfire,

Paul Martin, Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As Needed (quantity and units) of pay item: 608-01500 Bituminous Bikeway (Special), 650 tons & 403-00720 HMA (Patching) (Asphalt), 4 tons (Pay item # and description) that will be installed in Conformance

with the plans and specifications on Project No. STE C480-008, 19219

Contractor

3/16/18

820 Airport Rd, Durango, CO 81137 p(970) 884-4869 f(970) 403-1129

### COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No.

4145-17

700		
•	Product Evaluation Coordinator	Material code:
	Colorado Department of Transportation	702.03.12.00
	4670 North Holly Street, Unit A	Material code description full name:
	Denver, Colorado 80216	Emulsion SS-1h

PART 1	
Product name:	Product category:
SS-1h (2017)	Asphalt\Emulsion\SS-1h
Product Representative (name & address): Attn: Jim Hazell	Manufacturer (name & address): Attn: Jake Neitsch
Suncor Energy (USA) Inc.	Suncor Energy - BKEP
717 17th Street; Suite 2900	204 Fourth Avenue
Denver, CO 80202  Phone: (303) 796-2683  F-mail: [wilkins@suncor.com	Grand Junction, CO 81501
	Phone: (970) 241-1135 E-mail: jneitsch@bkep.com
Web-site address: www.suncor.com	Web-site address: www.suncor.com
Description of the product: (Include specific quantifiable details from tech data sheet	at. Advertising generalities are not appropriate.)
Emulsified asphalt cement designated as SS-1h.	
Source Facility: Manufacturing Terminal	
Blue Knight Energy Partners LP (BKEP) manufacturers and stores product on t	pehalf of Suncor Energy (USA) Inc.
	<b>3</b> , (, )
Restrictions, (installation and/or use):	
'se of the product, (be specific to CDOT highway activities only):  ack Coat, Fog Seal	
Benefits to CDOT, (how will your product enhance quality, improve safety, sa	ve money, be a better value then other manufacturer's products):
Specifications: (listing those applicable is required)	
☑ CDOT : Standard Specifications; Section 702; Table 702-2	
☐ ASTM :	
AASHTO:	
□ FHWA :	
Other:	
	f Varification (COV) provided for all the COV
Certificate of	f Verification (COV) provided for select categories ONLY
Product Testing: (National/Independent laboratories or universities with Report NTPEP-AASHTO:	Date.) Certified Test Report (CTR) provided to validate all claims.
FHWA:	
☑ other : CDOT Bituminous Laboratory	
other :	
other :	
State DOT Approvals, (current documentation required):	Re-submittal Cycle: Expires on 2-01-2018
Sample submitted: 🔽 yes 🔲 no 🔲 n/a   Safety Data Shee	
Alternate Product Category: Additional Comments:	
ASSESSED OF THE OTHER OFFICE OF THE OTHER OFFICE OF THE OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHER OTHE	
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COLORADO DEPARTMENT OF TRANS FIELD REPORT FOR SAMPI OR MATERIALS DOCUME	LE IDENTIFICATION	Region 5 Contract ID	Field sheet # 266289  Date Submitted 3-10-18			
Metric units yes	s 💢 no	Project No. STE- C400 = ( Project Location				
Material Type GEOGUD REINFOR		Fleld Lab phone	Cell Phone			
Material Code (LIMS) Item 506	Class	Grading	Special Provisions yes .			
Previously used on Project No.:	Previous CDOT Form #1	·	CDOT Form #633 (sack) CDOT Form #634 (can)			
<ul> <li>Sample Identification: Quantity &amp; Unit of materia</li> <li>Materials Documentation: Field inspected (description)</li> </ul>	al submitted, describe tests required, particle appearance, weight/dimensions,	orecise location sample re model/serial number), CC	emoved from ( stationing) etc			
GEOGNO PLACED ON TI	GEOGNO PLACED ON THE PROJECT WAS FIELD INSPECTED AND CONTRACTORS & SUPPLIERS, THE MANUFACTURESS.					
APPROVED FOR USE BY TO	HE PRODECT ENGIL	NEER. THE	MANUFACTURES,			
COC'S IS ATTACHED. FOR	COC'S 15 ATTACHED. FOR TENSAR TRIAX TX140 & HANES TERRAGRID RX 1200					
	<u> </u>					
Jser ID						
Sample ID (#1)	Sample ID (#2)	Sample	ID (#3)			
Sample ID (#4)	Sample ID (#5)	Sample	ID (#6)			
APL/QML Acceptance: APL Ref. No. Produc	uct name:	the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	Date checked:			
APL/QML Acceptance; APL Ref. No. Produc	uct name:		Date checked:			
Preliminary Construction I	Maintenance Emergency	Jacob Carl to a comment of the Carl to a comment of the Carl to a comment of the Carl to a comment of the Carl	Date needed			
CONTRACTOR COLOSSFILE, LLC	Supplier M (A	Water ITENSAR WES GEO COMF	PUNENTS/TENSAR			
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or ow					
Quantity represented 902 54	Previous quantity O	Total	I quantity to date 962 SY			
	quantity to: Vi ral lab D Region lab	/ia	Date .			
Sampled or inspected by (print name) CUFTON LEE, PE	TITLE PROJECT ENGIN	VER E-mail				
Upervisor (Pro./Res./Matls. Engr./Maint. Supt.) (print name)  MICE DAVIS, PE	Title PRESIDENT-DAY	Residency				



#### **Certificate of Compliance Letter**

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date:

1/17/2018

Project Number:

STE C480-008

Project Code & Name:

19219 Pinon Causeway to Aspen Village

Manufacturer's Name:

Tensar TriAx TX140

Manufacturing facility Address:

2500 Northwinds Parkway, Suite 500 Alpharetta, Georgia 30009

**Laboratory Name and Address:** 

2500 Northwinds Parkway, Suite 500 Alpharetta, Georgia 30009

**Product Name or Assembly:** 

TriAx TX140

**Description of Material:** 

Subgrade and pavement stabilization are their primary mechanisms, are predetermined by ground or foundation

support.

Model, Catalog, Stock Number:

300889

Lot / batch number:

436

Date or Frequency of Lab Testing:

Monthly

**Applicable Specifications:** 

The material above has been reviewed according to subsection

506 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

# - 962 s.g. is the total quantity paid for the line item 506-01020 geogrid reinforcement (secial).

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 962 S.M. K (quantity and units) of pay item SOb-OND20 Geogrid Reinf (SOC.) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008

Contractor Rep. Signature

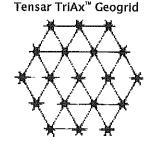


#### Product Specification - TriAx[™] TX140 Geogrid

Tensar International Corporation reserves the right to change its product specifications at any time. It is the responsibility of the person specifying the use of this product and of the purchaser to ensure that product specifications relied upon for design or procurement purposes are current and that the product is suitable for its intended use in each instance.

#### General

- 1. The geogrid is manufactured from a punched polypropylene sheet, which is then oriented in three substantially equilateral directions so that the resulting ribs shall have a high degree of molecular orientation, which continues at least in part through the mass of the integral node.
- 2. The properties contributing to the performance of a mechanically stabilized layer include the following:



Index Properties	Longitudinal	Diagonal	Transverse	General
<ul> <li>Rib pitch⁽²⁾, mm (in)</li> <li>Mid-rib depth⁽²⁾, mm (in)</li> <li>Mid-rib width⁽²⁾, mm (in)</li> <li>Nodal thickness⁽²⁾, mm (in)</li> </ul>	40 (1.60) - -	40 (1.60) 1.2 (0.05) 1.1 (0.04)	1.2 (0.05) 1.1 (0.04)	2.1 (0.12)
Rib shape Aperture shape				3.1 (0.12) rectangular triangular
Structural Integrity				
<ul> <li>Junction efficiency⁽³⁾, %</li> <li>Aperture stability⁽⁴⁾, kg-cm/deg @ 5.0kg-cm</li> <li>Radial stiffness at low strain⁽⁵⁾, kN/m @ 0.5% strain</li> <li>(lb/ft @ 0.5% strain)</li> </ul>				93 3.0 225 (15,430)
Durability				
<ul> <li>Resistance to chemical degradation⁽⁶⁾</li> <li>Resistance to ultra-violet light and weathering⁽⁷⁾</li> </ul>				1 0 0 % 1 0 0 %

#### **Dimensions and Delivery**

The TX geogrid shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring 3.8 meters (12.5 feet) and/or 4.0 meters (13.1 feet) in width and 75 meters (246 feet) in length.

#### Notes

- Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-02. Brief descriptions of test
  procedures are given in the following notes.
- 2. Nominal dimensions
- 3. Load transfer capability determined in accordance with GRI-GG2-87 and GRI-GG1-87 and expressed as a percentage of ultimate tensile strength.
- In-plane torsional rigidity measured by applying a moment to the central junction of a 225mm x 225mm specimen restrained at its perimeter in accordance with U.S. Army Corps of Engineers Methodology for measurement of Torsional Rigidity, (Kinney, T.C. Aperture stability Modulus ref 3, 3.1.2000).
- 5. Radial stiffness is determined from tensile stiffness measured in any in-plane axis from testing in accordance with ASTM D6637-01.
- Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
- Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-05.

Tensar International Corporation 5883 Glenridge Drive, Suite 200 Atlanta, Georgia 30328-5363 Phone: 800-TENSAR-1 www.tensar-international.com This specification supersedes any and all prior specifications for the product designated above and is not applicable to any product shipped prior to November 13, 2009. Tensar and TriAx are trademarks of Tensar International Corporation or its affiliates in the US and many other countries. TriAx" geogrid and the use thereof are protected by U.S. Patent No. 7,001,112. Patents or patent applications also exist in other countries. Final determination of the suitability of the above-mentioned information or product for the use contemplated, and its manner of use are the sofe responsibility of the user. Tensar International Corporation disclaims any and all express, implied or statutory warranties, including but not limited to, any warranty of merchantability or fitness for a particular purpose regarding this product or the Company's other products, technologies or services. The information contained herein does not constitute engineering advice.

GRAND JUNCTION

# MINISTE SOMPANY

7/19/2017

Contractor: Crossfire LLC

Project: Pinon Causeway to Aspen Village Shared Use Path Project

Project #: STE C480-008 Reference Order #: 044606-00

This letter is to certify that we supplied Crossfire LLC TerraGrid RX1200 Geogrid on the above referenced project. The TerraGrid RX1200 Geogrid was manufactured in accordance to the attached materials data sheet.

TerraGrid RX1200 Geogrid Quantity - 1 roll (13.1 x 164', 238sy) Item Number - RX1200

Please contact me with any questions.

Casey Kenney

Sales Manager Grand Junction Winwater 819 21 1/2 Road Grand Junction CO, 81505 Ph: 970-255-9015

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 462.5.4. (quantity and units) of pay item 50c 0.020 Geogrid Keive (section) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

8 Ol f

A 9625.0 is the total quantity
Paid for the line item
506-01020 Gegrid Reinforcement
(Special).



11/14/2017

Contractor: Crossfire LLC

Project: Pinon Causeway to Aspen Village Shared Use Path Project

Project #: STE C480-008 Reference Order #: 045498-00

This letter is to certify that we supplied Crossfire LLC with TerraGrid RX1200 on the above referenced project. The geogrid was manufactured to meet the properties listed in the attached materials data sheet.

TerraGrid RX1200 Geogrid Quantity - 2 Roll (13.1'x164') Item Number - RX1200 (458738377)

Please contact me with any questions.

Casey Kenney

Grand Junction Winwater

Grand Junction CO, 81505 Ph: 970-255-9015 Fax: 970-255-9018

A- 962 s.y. is the total quantity paid for the line item 506-01020 Geogrid Reinforcement (special).

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 4254, 8 (quantity and units) of pay item 500 01020 George Reinf (Geo.) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

3/4/18



February 1, 2018

TO:

Grand Junction Winwater Works

REF:

TerraGrid® RX1200 Certificate of Compliance Lot: 94970 Ticket: 41706123192 3 rolls (13'x164')

CDOT Project No. STE C480-008 Address of Manufacturing facility: 1210 Citizens Parkway Morrow, GA

Date(s) of laboratory testing: 04/2017 :

This is to certify that the TerraGrid RX1200 meets the standards for 'Type 2' biaxial geogrids. Produced in an ISO9002 certified facility, RX1200 is composed of quality polypropylene resin without post-consumer recycled resin inclusion. This certifies that TerraGrid RX1200 meets or exceeds the following interrelated performance characteristics.

		U.S. S	tandard	Me	etric
PROPERTY	PROCEDURE	MD	XMD	MD	XMD
Geometric ¹					AIND
Aperture Dimensions	Measured	1.0 inch	1.5 inch	25 mm	37 mm
Open Area	Measured		9/		37 111111
Rib Thickness	Measured	0.07 inch	0.05 inch	1.9 mm	1.2 mm
Mechanical ^{2,3}				1.0 ((11))	1.231111
Tensile Strength - Ultimate	A DTM DOOGT OO	1310 lbs/ft	2000 lbs/ft	19.2 kN/m	29.1 kN/m
Tensile Load @ 2% Strain	ASTM D6637-09	410 lbs/ft	616 lbs/ft	6.0 kN/m	9.0 kN/m
Tensile Load @ 5% Strain	Procedure B	808 lbs/ft	1340 lbs/ft	11.8 kN/m	19.6 kN/m
Junction Efficiency ⁴	GRI-GG2-05		93		19.0 (19/11)
Flexural Rigidity	ASTM D1388 mod		1,200,000	-	
Aperture Stability ⁵	US COE		6.5 cm-kg		
Durability ¹			0.0 0.11 1.0	racgree	
UV Degradation Resistance	ASTM D4355/D6637		100	0/.	
Chemical Damage Resistance ⁷	EPA 9090A		100		
Installation Damage Resistance ^{1,8,9} SM - Silty sand, GP1 - Poorly graded	ASTM D5818/D6637		SM >95% GP. >9		<del></del>

Poorly graded gravel with sand, GP2 - Course, poorly graded gravel Width Length Width Length

Packaging 13 ft 3.95 m 164 ft 50 m (+0.16)(-0.00)(+0.05)(-0.00)

Note: TerraGrid RX1200 is produced with a Carbon Black content ≥ 0.5%

#### Footnotes:

Nominal Values

 2  All Mechanical properties are based on the manufacturer's laboratory test results at 20  $\pm 1^{\circ}$  C

³ All Mechanical properties are calculated as the lower 95% confidence limit in accordance with ISO 2602-198

Expressed as a percentage of Ultimate Tensile Strength

5 Resistance to in-plane rotational moment of 20 kg-cm

500 hour exposure, value expressed as a percentage of Ultimate Tensile Strength

Micro-Biological for 16 weeks, Chemical Method A: Inorganic Acid, Method B: Inorganic Base (% of Ultimate Tensile Strength)
 Expressed as a percentage of Ultimate Tensile Strength

⁹ SM – Silty sand, GP1 – Poorly graded gravel with sand, GP2 – Course, poorly graded gravel

Sincerely,

l, Karen W Cromer, Notary, hereby acknowledge that Keith Harris personally appeared before me this day and signed the foregoing instrument.

Technical Director

Notary: Kamw Clom Expiration: June 2, 2018

KAREN W CROMER NOTARY PUBLIC FORSYTH COUNTY, NO MY COMMISSION EXPIRES 06/02/2010

					19219-601-
COLORADO DEPARTMENT	OF TRANSF	PORTATION	Region	ļF	Field sheet # 266289
FIELD REPORT FOR	. SAIVIPLI	E IDENTIFICATION	COMMICTOR	1	Date Submitted
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f	F	<del>-/-</del> -	Project No.	1120 2000	2
Metric units	yes	🗹 no	Project Locat	1 <u>80-008</u>	
			PINON C	4USEMAN	1 TO ASPEN VILLAGE DE
Material Type CONCRETE	- CIA	< B	Field Lab phor	1	Cell Phone
Material Code (LIMS)	Item	Class			
	601	$\beta$	Grading	8	Special Provisionsyes .
Previously used on Project No.:	102.	Previous CDOT For	m #157 E/S No (e)	·	
		11011000011011	m #107 170 140.(S)	·   [	CDOT Form #633 (sack)
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Materials Documentation: Field ins	pected (describ	e appearance, weight/dimension	ns, model/serial n	umber), COC	&/or CTR provided , etc.
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		(1.2)		Sample ID (	#3)
Sample ID (#4)		Sample ID (#5)		0 1 10 /	
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Contractor				· · · · · · · · · · · · · · · · · · ·	
Chossfire, LLC		Supplier	EM		
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Pit, roadway, windrow, stock, etc.)			ANIMAS	GLAF	IEO
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pervisor (Pro./Res./Matls. Engr./Maint. Supt.) (	print name)	Title	Res	idency	
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Distribution:

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.

CDOT Form #157 3/15

9219-601-2 Field sheet # Region < COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 3-10-18 OR MATERIALS DOCUMENTATION 19219 Project No. STE C480-008 1 no Metric units yes Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR.-SUIP. Cell Phone Field Lab phone Material Type CLASS P CONCLETE  $\overline{^{\text{Class}}}\rho$ Special Provisions Grading Material Code (LIMS) Item 60 i 604,608,609 Previous CDOT Form #157 F/S No.(s): CDOT Form #633 (sack) Previously used on Project No.: CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided CONCRETE WAS FIELD INSPECTED AND APPROVED FOR USE THE PROJECT ENSINEER. THE MIX IS ON THE PRE-APPROVED CONCREDE MIX ORSIGNS LIST. ALL COMPONENTS OF THE MIX ARE ON APL AND ARE FILED UNDER THIS SECTION. RESULTS ARE ATTACHED, SEE FORM 473. SEE LETTER DATED 09-08-2017 IN THE CHANGE ORDERS/105 SECTION Sample ID (#3) | DATE CHECICEO | -Sample 10 (#2) PRODUCT NAME Sample 10 (#47) AR/OML ACCEPT, / REF. NO. 7-14-17 MASTERFIBER F 70 3192-16 Sample ID (#6) [DATE (HECKED) Sample ID (#5) PRODUCT NAME Sample ID (114) APULUML ACCEPT / REF. NO. FOUR CORNERS CL F F.A. / PUNT 19 1147-14-17 7-14-17 2302-16/ 2949-16 Date checked APL/QML Acceptance: APL Ref. No. Product name: MASTERPOLYHEED 997/MASTERAIR AE 200 7-14-171 2095-14 / 2067-14 APL/QML Acceptance: APL Ref. No. Date checked: Product name: MASTERSET AC S34 7-14-17 7-14-17 MASTERSE7 .2063-14 | 2091-14 Date needed Maintenance Emergency Construction Preliminary Supplier Contractor FCM CROSSFILE LLC Pit name or owner Sampled from GUACIER (Pit, roadway, windrow. ANIMAS Total quantity to date 176m 601 - 36 C4 Quantity represented ITEM 601 - 36 cy Previous quantity TEM 604-3 ER 608-133.25 SY 609 - 76 LF 17Em 604-3 EA/60B-133.25 SY/609-76 LF Date Via Shipped specified quantity to: Sample submitted: 内 No ☐ Central lab __ 🔲 Region lab Yes E-mall Sampled or inspected by (print name)

Pink copy - Resident Engineer

TRAUTNER GEOTECH

CUPTON LEE PE

Supervisor (Pro./Res./Malls, Engr./Maint, Supt.) (print name)

White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials) Canary copy - Region Materials Engineer

Previous editions are obsolete and may not be used.

Residency

QA TESTELS

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CDOT Form #157

#### **COLORADO DEPARTMENT OF TRANSPORTATION**

### **Pre-Approved Concrete Mix Designs**

These concrete mix designs meet the requirements of CDOT Standard Specifications and the CDOT Field Materials Manual CP 62. Inclusion on the APL does not guarantee that a mix will be approved for use on a project.

Please contact the Concrete & Physical Properties Unit at 303-398-6549 for more information on these mix

designs.

Updated: 8/7/2017

#### **Everist Materials, LLC**

CDOT Mix Number	Supplier Mix ID			Expiration Date
2016123	645109D	Concrete, Class D/P	Class 1 Sulfate Resistance	11/01/2017

#### **Four Corners Materials**

Г	CDOT Mix Number	Supplier Mix ID			Expiration Date
	2016106	37023347	Concrete, Class D	Class 2 Sulfate Resistance	01/20/2018
F	2016107	36923347	Concrete, Class BZ	Class 2 Sulfate Resistance	01/20/2018
۶Ė	2017069	37523344	Concrete, Class P	Class 2 Sulfate Resistance	11/24/2018
ľ	2017094	38023344	Concrete, Class E	Class 2 Sulfate Resistance	10/10/2018
	2017122	38023347	Concrete, Class E	Class 2 Sulfate Resistance	11/24/2018
r	2017123	37523347	Concrete, Class P	Class 2 Sulfate Resistance	11/24/2018
a	2017125	38023347	Concrete, Class E	Class 2 Sulfate Resistance	11/24/2018
-	2017130	38523605	Shotcrete	Class 2 Sulfate Resistance	11/24/2018
T	2017173	36923344	Concrete, Class BZ	Class 2 Sulfate Resistance	11/24/2018

#### Four Corners Materials Animas-Glacier pit

CDOT Mix Number	Supplier Mix ID	Washington and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco	·	Expiration Date
2017174	37023344	Concrete, Class D	Class 2 Sulfate Resistance	11/24/2018

#### Fremont Paving And Redi-Mix, Inc.

CDOT Mix Number	Supplier Mix ID	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s		Expiration Date
2017139	CCDP20F16	Concrete, Class D/P	Class 2 Sulfate Resistance	06/01/2018
2017162	PWDP20F17	Concrete, Class D/P	Class 2 Sulfate Resistance	02/01/2019
2017163	PWDP20F17AC	Concrete, Class D/P	Class 2 Sulfate Resistance	11/01/2018
2017164	PWBZ20F17	Concrete, Class BZ	Class 2 Sulfate Resistance	11/01/2018

#### **Green Brothers Ready Mix**

CDOT Mix Number	Supplier Mix ID		and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t	Expiration Date
2017041	3165002E	Concrete, Class D	Class 2 Sulfate Resistance	01/15/2018
2017042	3165002F	Concrete, Class E	Class 2 Sulfate Resistance	01/12/2018

#### Halde Readi-Mix, Inc.

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CDOT Mix Number	Supplier Mix ID	<u> </u>		Expiration Date
2017150	T16062-425	Concrete, Class D	Class 0 Sulfate Resistance	12/13/2017

#### **Hard Rock Concrete**

CDOT Mix Number	Supplier Mix ID	and the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a second of the latter was a		Expiration Date
2017170	HRDP20F17	Concrete, Class D/P	Class 2 Sulfate Resistance	02/01/2019
2017171	HRBZ20F17	Concrete, Class BZ	Class 2 Sulfate Resistance	02/01/2019











#### OLDCASTLE SW GROUP, INC.

Submittal # 17-355-002

Version 1

6/22/2017

CROSSFIRE LLC 1800 Hughes Landing Blvd Ste 500 THE WOODLANDS TX 77380

Job: CDOT STE C480-008

Job Description: Pinion Causeway & Aspen Village, Pagosa Springs CO

Attn: Paul Martin

All materials and concrete delivered to this project conform to ASTM C-94, ACI 301 and ACI 318 Specifications for Ready Mixed Concrete. Four Comers Materials will not be responsible for concrete compromised by the addition of water, improper placing, finishing or curing techniques.

This submission contains the following mix designs:

-					
Mix Code	Mix Description	Usage			
37523344	CLASS P GCC FC	CONCRETE PAVEMENT			

Please have your personnel place the order for concrete using the designated mix number. The concrete will come from Plant 355. The phone number is (505) 324-3900.

PLEASE NOTIFY THIS OFFICE AS TO THE ACCEPTANCE OR REJECTION OF THIS MIX SUBMITTAL. LACK OF RESPONSE PRIOR TO FIRST POUR SHALL RESULT IN ACCEPTANCE.

NOTE: ALL CONCRETE MUST BE ORDERED BY THE APPROVED MIX DESIGN NUMBER. EVALUATION OF THIS CONCRETE MUST BE CONDUCTED ACCORDING TO ASTM AND ACI STANDARDS.

Thank you for giving us this opportunity to be of service to you, feel free to contact me if you should need any further assistance.

Sincerely yours,

Ray Taulli











#### OLDCASTLE SW GROUP. INC.

#### Concrete Mix Design Submittal

Date:

06/22/2017

No.

17-355-002

Version 1

Mix Code: 37523344 Description:

CLASS P GCC FC

Customer

CROSSFIRE LLC

Tolerance

Contact

Air Content

6

Paul Martin

Slump

3

Design

Office Phone

970-828-2864

Design Strength

4200 psi

Project Name Project Description **CDOT STE C480-008** Pinion Causeway & Aspen Village, Pagosa Spring:

Unit Weight

139.3 lb/ft3

Usage/ Placement

CONCRETE PAVEMENT

W/C Ratio

0.42

Material	Material	Material	Standard	Design	Specific	Volume
Description	Supplier	Source	Standard .	Quantity	Gra vity	(ft3)
ANIMAS GLACIER # 67	FCM	ANIMAS GLACIER	C-33	1682 lb	2.66	10.14
ANIMAS GLACIER SAND	FCM	ANIMAS GLACIER	C-33	1077 lb	2.66	6.49
GCC CEMENT	GCC	PUEBLO	C-150	565 lb	3.15	2.87
FOUR CORNERS FLYASH	SRMG	4 CORNERS	C-618	141 lb	1,99	1.14
MasterAir AE200	BASF	BASF DENVER		7 lq oz	-	-
MIDRANGE WATER REDUCER	BASF	BASF DENVER	C-494	56 lq oz	-	
WATER	WATER	WATER	C-1602	35.5 gal	1.00	4.75
			Air Content	6.00 %	_	1.62
		·	Yield	3761 lb	-	27.01
	Description ANIMAS GLACIER # 67 ANIMAS GLACIER SAND GCC CEMENT FOUR CORNERS FLYASH MasterAir AE200 MIDRANGE WATER REDUCER	Description Supplier  ANIMAS GLACIER # 67 FCM  ANIMAS GLACIER SAND FCM  GCC CEMENT GCC  FOUR CORNERS FLYASH SRMG  MasterAir AE200 BASF  MIDRANGE WATER REDUCER BASF	Description Supplier Source ANIMAS GLACIER # 67 ANIMAS GLACIER SAND FCM ANIMAS GLACIER GCC CEMENT GCC FOUR CORNERS FLYASH MasterAir AE200 BASF BASF DENVER MIDRANGE WATER REDUCER BASF SOURCE SOURCE ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER ANIMAS GLACIER BASF DENVER BASF DENVER	Description Supplier Source Standard  ANIMAS GLACIER # 67 FCM ANIMAS GLACIER C-33  ANIMAS GLACIER SAND FCM ANIMAS GLACIER C-33  GCC CEMENT GCC PUEBLO C-150  FOUR CORNERS FLYASH SRMG 4 CORNERS C-618  MasterAir AE200 BASF BASF DENVER  MIDRANGE WATER REDUCER BASF BASF DENVER C-494  WATER WATER C-1602  Air Content	Description Supplier Source Standard Quantity  ANIMAS GLACIER # 67 FCM ANIMAS GLACIER C-33 1682 lb  ANIMAS GLACIER SAND FCM ANIMAS GLACIER C-33 1077 lb  GCC CEMENT GCC PUEBLO C-150 565 lb  FOUR CORNERS FLYASH SRMG 4 CORNERS C-618 141 lb  MasterAir AE200 BASF BASF DENVER 7 lq oz  MIDRANGE WATER REDUCER BASF BASF DENVER C-494 56 lq oz  WATER WATER C-1602 35.5 gal  Air Content 6.00 %	Description         Supplier         Source         Standard         Quantity         Gravity           ANIMAS GLACIER # 67         FCM         ANIMAS GLACIER         C-33         1682 lb         2.66           ANIMAS GLACIER SAND         FCM         ANIMAS GLACIER         C-33         1077 lb         2.66           GCC CEMENT         GCC         PUEBLO         C-150         565 lb         3.15           FOUR CORNERS FLYASH         SRMG         4 CORNERS         C-618         141 lb         1.99           MasterAir AE200         BASF         BASF DENVER         7 lq oz         -           MIDRANGE WATER REDUCER BASF         BASF DENVER         C-494         56 lq oz         -           WATER         WATER         C-1602         35.5 gal         1.00           Air Content         6.00 %         -

NOTES

Prepared By:

Paul Appel

## **Concrete Aggregate Test Report**



**ASTM C33** 

Project: Supplier Information

Client: Four Corners Materials

Address: PO Box 16

Farmington, NM 87499

Sample Date: 11/24/2016 Sample received: 11/24/2016

Laboratory #: ALB 269-16

Report Date: 3/9/17

Sampled By: Client

Material Tested: Concrete Sand

Date Tested: 12/2-12/16/16

Tested By: Mary /Annikah

Sample Location: Stockpile

Sample Source: Animas Glacier Pit

#### Sieve Analysis

#### **Test Results**

C-117 & C136/T-11 & T-27 ASTM C33

Sieve Size	% Passing	Specs
,	· · ·	<del></del>
1/2" (12.5mm)		
3/8" (9mm)	100	100
#4 (4.75mm)	100	95-100
#8 (2,36mm)	90	80-100
#10 (2mm)		
#16 (1.18mm)	73	50-85
#30 (0.6mm)	54	25-60
#40 (0.425mm)		
#50 (0.3mm)	27	5-30
#80 (0.18mm)		
#100 (0.15mm)	8	0-10
#200 (0.075mm)	2.4	0-3
Fineness Modulus	2.49	

Standard	Pl	hysical Properties		Results	Specs
C-128	Fine	8	ulk Specific Gravity	2.626	
	Specific	Bulk Sp	ecific Gravity, SSD	2.661	
T-84	Gravity &	Appar	ent Specific Gravity	2.721	
	Absorption		Absorption, %	1.3	
CP37	Sand Equiv.	;	Sand Equivalent, %	90	> 80
Zarianna zana				-	
C-142	Clay/Friable		Fine Aggregate, %	0.2	< 3.0
T-112	Particles				
C40	Organic		Organic Impurities	N/I	
	Impurities				
C-88	Soundness	Fine S	oundness Loss, %	6.3	< 15
T-104		5 cycles	MgSO₄		
C-29	Unit Weight	U	nit Weight, (lbs/ft3)	105.7	
T-19	& Voids		Voids. %	35.4	
	S	hoveling			

Respectfully Submitted,

Reports to:

fax/email

Paul Appel

Paul.Appel@oldcastle-materials.com

Rick Morris

rmorris@4cornersmaterials.com

9430 San Mateo Blvd. NE

Albuquerque, NM 87113 505-503-6670

## Alkali-Silica Reaction Analysis Report



	Four Corners Materials	Date Reported: 1/2/2017 Revised
Address:	PO Box 16	Project: Vanous
	Farmington, NM 87499	Project #: Various
		Aggregate Source(s): Animas Glacier, Concrete Sand
		Cement Source: GCC Pueblo I/II
Test requested by:	Rick/Paul	Admixture Source: SRM Four Corners Cl. F Flyash
Samples Received:	11/24/2016	Admixture Percentage 25% by whol cement or
Laboratory #:		20% by wt of cementitious

Standard Test Method for Determining the Potential Alkali Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar Bar Method) ASTM C1567-13

-								To .	
Batch date	11/29/2017	Reading	Bar A	Bar B	Bar C	Catibration	Avg Bar	expansion	Specs
Test Date	11/30/17	Initial	0.3561	0.3123	0.2995	0,0713	0.3226		
(0), 00,0	12/1/17	Zero	0.3614	0.3177	0.3048	0.0712	0.3280		
	12/5/17	4	0.3625	0.3188	0,3063	0.0714	0 3292		
			0 009%	0.009%	0.013%			0.0103%	
	12/8/17	7	0.3632	0 3195	0.3062	0.0712	0 3296		
			0.018%	0.018%	0.014%			0.0157%	
	12/12/17	11	0.3638	0.3197	0.3068	0.071	0.3301		
			0 026%	0.022%	0 022%			0.0233%	
	12/15/17	14	0.3645	0.3212	0.3082	0.0712	0 3313		
			0.031%	0.035%	0 034%			0.03%	< 0.10
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Respectfully Submitted.

Lea Ann Marguez, PE

3-2-1

## **Concrete Aggregate Test Report**



Project: Supplier Information

Client: Four Corners Materials

Address: PO Box 16

Farmington, NM 87499

Sample Date: 11/24/2016

Sample received: 11/24/2016 Laboratory #: LL659-16 Report Date: 3/9/17

Sampled By: Client

Material Tested: #67 Stone

Date Tested: 12/2-12/16/16

Tested By: Pedro

Sample Location: Stockpile

Sample Source: Animas Glacier Pit

#### Sieve Analysis

C-117 & C136/T-11 & T-27 ASTM C33, Size #67

**Test Results** 

ASTM C33

Sieve Size	% Passing	Specs
		1
2" (50mm)		
1.5" (37.5mm)		
1" (25mm)	100	100
3/4" (19mm)	95	90-100
ļ ' '	58	
1/2" (12.5mm)		20-55
3/8" (9mm)	36	
#4 (4.75mm)	6	0-10
#8 (2,36mm)	2	0-5
#10 (2mm)		
#16 (1.18mm)	2	
#30 (0.6mm)	1	
#40 (0.425mm)		
#50 (0.3mm)	1	
#80 (0.18mm)		
#100 (0.15mm)	1	
#200 (0.075mm)	8.0	0-1.5
Fineness Modulus	4.99	

Standard	Physical Properties			Results	Specs
C-127	Coarse	Bulk Specific Gravity		2.625	
	Specific	Bulk Spa	ecific Gravity, SSD	2.657	
T-85	Gravity &	Apparent Specific Gravity		2.711	
	Absorption		Absorption, %	1.2	***
C-142	Clay/Friable	Co	arse Aggregate, %	0.5	< 3.0
T-112	Particles				74.00 TO THE REAL PROPERTY.
D5821	Fractured		1 face	94	No req
	Faces		2 faces	90	
C-131	L.A.		LA Wear, %	21	< 50
T-96	Abrasion		Grading	В	
C-88	Soundness	Coarse S	oundness Loss, %	1.7	< 18
T-104	5 cycles		MgSO₄		
C-123	Lightweight		Light Wt Pieces %	N/T	< 0.5
-	Pieces		Type of Solution		hloride - lignite
C-123	Lightweight		Light Wt Pieces %	1.6	< 3.0
	Pieces		Type of Solution	Zinc Bron	ide - Chert
Total Dele	Fotal Deleterious			2.9	< 3.0
C-29	Unit Weight	U	nit Weight, (lbs/ft3)		ļ
T-19	& Voids		Voids, %	39.2	
		Rodded	L. C. L. wilto d		

Respectfully Submitted,

Reports to:

fax/email

Paul Appel

Paul.Appel@oldcastle-materials.com

Rick Morris

rmorris@4cornersmaterials.com

Léa Ann Marquez, PE 4-5-17

30 San Mateo Blvd. NE

Unit H

Albuquerque, NM 87113 505-503-6670

414 Bibb Industrial Dr. P.O.Box 1228 Las Vegas, NM 87701 505-718-3030

Concrete, Aggregate and Asphalt Testing, LLC

### Alkali-Silica Reaction Analysis Report

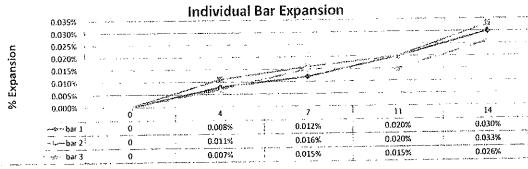


Client:	Four Corners Materials	Date Reported: 1/2/2017 Revised
	PO Box 16	Project: Various
	Farmington, NM 87499	Project #: Various
		Aggregate Source(s): Animas Glacier, Coarse Aggregate
		Cement Source: GCC Pueblo I/II
Test requested by:	Rick/Paul	Admixture Source: SRM Four Corners CI F Flyash
Samples Received:		Admixture Percentage 25% by who feement or
Laboratory #:	743-16	by wt of cementitious

Standard Test Method for Determining the Potential Alkali Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar Bar Method) ASTM C1567-13

								73	
Batch date:	11/29/2017	Reading	Bar A	Bar B	Bar C	Calibration	Avg Bar	expansion	Specs
Test Date	11/30/17	Initial	0.3645	0.3155	0.2966	0.0713	0 3255		
	12/1/17	Zero	0.3704	0.3210	0.3025	0.0712	0 3313		
	12/5/17	4	0 3713	0.3222	0.3033	0.0713	0 3323		
			0 008%	0.011%	0.007%			0.0087%	
	12/8/17	7	0.3727	0.3237	0.3051	0.0723	0 3338		
			0.012%	0.016%	0.015%	1		0.0143%	
	12/12/17	11	0.3722	0.3228	0.3038	0.071	0.3329		
			0.020%	6.020%	0.015%	l		0.0183%	
	12/15/17	14	0.3735	0.3244	0.3052	0.0713	0 3344		
			0.030%	0.033%	0 026%			0.03%	< 0.10
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Respectfully Submitted.

Lea-Ann Marquez, PE

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#### GCC of America

Cherry Creek Plaza 1, 600 S. Cherry Street, 10th Floor, Glendale, CO 80246 Sales (303) 739-5900 Customer Service (800) CALL GCC

#### **MATERIAL CERTIFICATION REPORT**

Plant: Pueblo Address: 3372 Lime Road Pueblo, CO 81004

Contact: Urs Fuchs
Phone: (719) 647-6821

Cement Type: 1/II, Low Alkali, GU
Date Issued: 19-Dec-16
Production Period: 1-Nov-16
To: 30-Nov-16

#### STANDARD REQUIREMENTS ASTM C150/AASHTO M85/ASTM C1157

	CHEMICAL	
ltem	ASTM C150 Spec. Limit	Test Result
SiO₂ (%)	Α	20.1
Al ₂ O₃ (%)	6.0 max	4.4
Fe ₂ O ₃ (%)	6.0 max	3.3
ÇaO (%)	. A	63,2
MgO (%)	6.0 max	1.1
SO ₃ (%)	3.0 max ^B	3.3
Loss On Ignition (%)	3.5 max	2.9
Na₂O {%)	A	0.22
K₂O (%)	A	0.53
Insoluble Residue (%)	1.5 max	0.9
CO ₂ (%)	A	1.5
Limestone (%)	5.0 max	3.9
CaCO₃ in Limestone (%)	70.0 min	89
Potential Phase Composition	n C	
C₃S (%)	Α	55
C₂S (%)	A	15
C ₃ A {%}	8.0 max	6
C ₄ AF {%}	۸	10

Item	ASTM C150 Spec. Limit	ASTM C1157 Spec, Limit	Test Result
Air Content (% vol)	12 max	12 max	8
Blaine Fineness (m²/kg)	260 min	A	402
Residue 45 μm (No.325) Sieve (%)	A	D	2,1
Autoclave Expansion (%)	0.80 max	0.80 max	-0.02
Compressive Strength			•
3 days, MPa (psi)	12.0 (1740) min	13.0 (1890) min	30.0 (4360)
7 days, MPa (psi)	19.0 (2760) min	20.0 (2900) min	36.5 (5290)
28 days, MPa {psi} [€]	A	28.0 (4060) min	43.9 (6360)
Time of Setting, Initial Vicat (min)	45min / 375 max	45 min / 420 max	111
Mortar Bar Expansion C-1038 (%)	0.020 max ^B	0,020 max	-0.002

Туре	Limestone	inorganic Processing Addition	Base Phase Cement Composition		
SiO ₂ (%)	5.5	N/A	C₃S (%)	58	
Al ₂ O ₃ (%)	1.2	N/A	C2S (%)	16	
Fe ₂ O ₃ (%)	0.9	N/A	C ₃ A (%)	6	
CaO (%)	50,2	N/A	C4AF (%)	10	
503 (%)	0.2	N/A	///www.a./		

#### OPTIONAL REQUIREMENTS ASTM C150/AASHTO M85/ASTM C1157

	CHEMICAL	10 (a) (a) (b)
ltem	ASTM C150 Spec. Limit	Test Result
Equivalent Alkalies (%)	0.60 max	0.57

Constitution of the second second	PHYSICAL		640 (340)
ltem	ASTM C150	ASTM C1157	Test Result
100(11	Spec, Limit	Spec. Limit	rest result
False Set (%)	50.0 min	50.0 min	71

GCC of America Cement is warranted to conform at the time of shipment with current ASTM C150/AASHTO M85/ASTM C1157. No other warranty is made or implied. Having no control over the use of its cements, GCC of America does not guarantee finished work. GCC is not responsible for any additives not stated in the Certificate of Compliance. GCC of America certifies that the data described above under "Processing Addition" represents the materials in the cement manufactured during the production period indicated.

A Not applicable

⁸ It is permissible to exceed the specification limit provided that ASTM 1038 Mortar 8ar Expansion does not exceed 0.020 % at 14 days.

^C Adjusted per Annex A1.6

^D No limit specified, data reported for information purpose only.

^E Test result of prior month



#### Bryan Patterson, Technical Services Manager

600 S. Cherry Street • Suite 1000 • Denver, CO 80246 Email: Desk Phone: 303 • 739 • 5916

bpatterson@gcc.com Cell Phone: 720 • 413 • 8077

www.gccusa.com Fax: 303 • 739 • 5940

July 7, 2016

GCC Pueblo Plant Type I/II Portland Cement, Pueblo, CO.

#### **COMPLIANCE AFFIDAVIT**

Portland Cement, Type I/II, Low-Alkali as manufactured by GCC, at Pueblo, Colorado is warranted to conform at the time of shipment to current ASTM Specification C-150.

No other warranty is made or to be implied.

Sincerely,

Bryan Patterson

Technical Services Manager

Byan Patterson

GCC

303-739-5916



100% AMERICAN

Four Corners Materials Attn: Rick Morris PO Box 2707 Durango, CO 81302-2707

Product: ASTM C618 Class F, Four Corners Fly Ash

AASHTO M295

2-22-17 POZZOLAN TEST REPORT

Ctl#: 127966

Clarkdale Cement Plant

1802 W. Lower Buckeye Rd

601 N. Cement Plant Rd

Clarkdale, AZ 86324

19th Ave. Terminal

Phoenix, AZ 85007

Lower Buckeye Terminal
1941 W. Lower Buckeye Rd
Phoenix, AZ 85007

21st Ave. Terminal

1325 N. 21st Ave. Phoenix, AZ 85009

54th Ave. Terminal 5402 W Buchanan St.

Phoenix, AZ 85043

**Denver Terminal** 

Denver, CO 80216

220 East 54th Avenue

Lot: 6	443	Results	Specifica	tions	<b>Dobson Storage</b> 9595 E. McKellips Rd. Scottsdale, AZ 85250
Chemic	al Analysis (C311 / C114 / D4326)				Cholla Fly Ash Plant
5	Silicon Dioxide, SiO ₂	60.96 %			4801 Frontage Rd. Joseph City, AZ 86032
	Aluminum Oxide,Al ₂ O ₃	23.85 %			Four Corners Fly Ash Plant
	Ferric Oxide, Fe ₂ O ₃	4.54 %			End of County Road 6675
9	$SiO_2 + Al_2O_3 + Fe_2O_3$	89.35 %	70.00	Min	Fruitland, NM 87416
	Calcium Oxide, CaO	1.94 %	570		San Juan Fly Ash Plant
	Magnesium Oxide, MgO	1.15 %			End of County Road 6800
	Sulfur Trioxide, SO ₃	0.28 %	5.00		Waterflow, NM 87421
-	Moisture Content	0.08 %	3.00	Max	Escalante Fly Ash Plant
	Loss on Ignition	0.25 %	6.00	Max	County Road 19
	Sodium Oxide, Na ₂ O	1.45 %			Prewitt, NM 87405
	Potassium Oxide, K ₂ O	1.25 %			Gallup Transfer Terminal 900 N 9th St.
	Total Alkalis (%Na ₂ O + 0.658% K ₂ O				900 N 9th St. Gallup, NM 87301
•	Available Alkalis as Na ₂ O Equivalent	0.74 %	, <del></del>		San Diego Terminal 920 Bay Marina Dr.
•	l Analysis				National City, CA 91950
. '	Fineness, amount retained on	19.50	24.00	Mass	Fontana Budway Terminal
	#325 sieve, % (c430) variation, points from average	0.84	34.00 5.00	Max	13600 Napa St.
	Density, g/cm ³ (c188)	1.93	5.00	אמויו	Fontana, Ca 92335
Ł	Variation from average, %	0.03	5.00	Max	Bakersfield Terminal
. 9	Strength Activity Index	0.05	3.00	ייומג	32535 7th Standard Rd. Bakersfield, CA 93314
	with Portland Cement (C311 / C109)				Stockton Terminal
	at 7 days, % of cement control	79.20			1300 N. Gertrude Ave.
	at 28 days, % of cement control	88.34	75.00	Min	Stockton, CA 95215
. 1	Water Requirement (C311)				Sacramento Terminal
_	% of cement control	95.87	105.00	Max	4520 50th St. McClellan Park, CA 95652
5	• • • • • • • • • • • • • • • • • • • •	11 / C151)			Panaca Pozzolan Plant
-	or contraction, %	-0.02	0.80	Max	333 Hansen St. Panaca, NV 89042

All tests have been made in strict accordance with the current standards of the American Society for Testing and Materials covering the type of material specified.

Lee Gorby, Quality Assurance Manager 03 APR 2017



PRESMIXCEMENT



100% AMERICAN"

December 27, 2016

Four Corners Materials PO Box 16 Farmington, NM 87499

PRODUCT: Four Corners Class F Fly Ash from Fruitland, New Mexico

This letter serves as certification that all **Four Corners Class F Fly Ash** (pozzolan) sold by Salt River Materials Group to Four Corners Materials meets the requirements of the latest revision of ASTM Specification C618 for Class F Fly Ash (pozzolan).

We appreciate your interest in our product. If we can provide additional information or technical assistance, please contact us.

Respectfully,

Jeff Jeanne

Jeff Hearne

Director of Quality Assurance





Bayfield, Colorado

May 24, 2017

Four Corners Materials, Inc. PO Box 1969 Bayfield, CO 81122

Attn:

Mr. Ray Taulli

Re:

Redi-Mix Concrete Additives

**Four Corners Materials** 

This letter serves as a review of the additives listed below to be added to the approved concrete mix designs for Cortez Plant 347, Animas Glacier Plant 344, and Pagosa Springs Plant 355 operated by Four Corners Materials.

- BASF MasterFiber F70
- BASF MasterFiber F100
- BASF MasterSet Delvo
- BASF MasterGlenium 3030
- BASF MasterGlenium 7500
- BASF MasterGlenium 7700
- BASF MasterAir AE 200
- BASF MasterRheobuild 1000
- BASF MasterColor
- BASF MasterSet AC 534
- BASF MasterPolyHeed 997

These products are intended to enhance concrete performance and strength. The compatibility of the additives are listed on the technical data sheets for use in the concrete mix designs at the recommended dosages. The dosage rate, dispensing and mixing procedures shall be closely adhered to during production as stated on the technical data sheets.

Reviewed By:

Paul Appel

**Quality Control Manager** 

Four Corners Materials

AR A TENEDANT CHE

Daniel T. Flack
DTF Engineering
Principal Engineer



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$\cap$	03 40 00	Precast Concrete
ک	03 70 00	Mass Concrete

# MasterAir® AE 200

## Air-Entraining Admixture

Formerly Micro Air*

#### Description

MasterAir AE 200 airentraining admixture provides concrete with extra protection by creating air bubbles that are ultrastable, small and closely spaced – a characteristic especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired.

Even when used at a lower dosage than standard airentraining admixtures, MasterAir AE 200 admixture meets the requirements of ASTM C 260, AASHTO M 154, and CRD-C 13.

### **Applications**

Recommended for use in:

- Concrete exposed to cyclic freezing and thawing
- Production of high-quality normal or lightweight concrete (heavyweight concrete normally does not contain entrained air)

#### **Features**

- Ready-to-use in the proper concentration for rapid, accurate dispensing
- ☐ Greatly improved stability of air-entrainment
- ☑ Ultra stable air bubbles

#### **Benefits**

- Increased resistance to damage from cyclic freezing and thawing
- Increased resistance to scaling from deicing salts
- Improved plasticity and workability
- Improved air-void system in hardened concrete
- Improved ability to entrain and retain air in low-slump concrete, concrete containing high-carbon content fly ash, concrete using large amounts of fine materials, concrete using high-alkali cements, high-temperature concrete, and concrete with extended mixing times
- Reduced permeability increased watertightness
- Reduced segregation and bleeding

#### **Performance Characteristics**

Concrete durability research has established that the best protection for concrete from the adverse effects of freezing and thawing cycles and deicing salts results from: proper air content in the hardened concrete, a suitable air-void system in terms of bubble size and spacing and adequate concrete strength, assuming the use of sound aggregates and proper mixing, transporting, placing, consolidation, finishing and curing techniques. MasterAir AE 200 admixture can be used to obtain adequate freezing and thawing durability in a properly proportioned concrete mixture, if standard industry practices are followed.



**Air Content Determination:** The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method" or ASTM C 173/C 173M, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method."

The air content of lightweight concrete should only be determined using the Volumetric Method. The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138/C 138M, "Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete." If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1.5%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.

#### Guidelines for Use

Dosage: There is no standard dosage for MasterAir AE 200 admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete varies because of differences in concrete making materials and ambient conditions. Typical factors that might influence the amount of air entrained include: temperature, cementitious materials, sand gradation, sand-aggregate ratio, mixture proportions, slump, means of conveying and placement, consolidation and finishing technique.

The amount of MasterAir AE 200 admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mixture, use 0.125 to 1.5 fl oz/cwt (8-98 mL/100 kg) of cement. In mixtures containing water-reducing or set-control admixtures, the amount of MasterAir AE 200 admixture needed is somewhat less than the amount required in plain concrete. Due to possible changes in the factors that can affect the dosage of MasterAir AE 200 admixture, frequent air content checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air required in the mixture at the point of placement. If an unusually high or low dosage of MasterAir AE 200 admixture is required to obtain the desired air content, consult your Local sales representative. In such cases, it may be necessary to determine that, in addition to a proper air content in the fresh concrete, a suitable air-void system is achieved in the hardened concrete.

Dispensing and Mixing: Add MasterAir AE 200 admixture to the concrete mixture using a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount. For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate or with the initial batch water. If the concrete mixture contains lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

#### Precaution

In a 2005 publication from the Portland Cement Association (PCA R&D Serial No. 2789), it was reported that problematic air-void clustering that can potentially lead to above normal decreases in strength was found to coincide with late additions of water to air-entrained concretes. Late additions of water include the conventional practice of holding back water during batching for addition at the jobsite. Therefore, caution should be exercised with delayed additions to air-entrained concrete. Furthermore, an air content check should be performed after post-batching addition of any other materials to an air-entrained concrete mixture.

#### **Product Notes**

**Corrosivity - Non-Chloride, Non-Corrosive:** MasterAir AE 200 admixture will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. No calcium chloride or other chloride-based ingredients are used in the manufacture of this admixture.

**Compatibility:** MasterAir AE 200 admixture may be used in combination with any BASF admixture, unless stated otherwise on the data sheet for the other product. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mixture.

#### Storage and Handling

Storage Temperature: MasterAir AE 200 admixture should be stored and dispensed at 35 °F (2 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If it freezes, thaw and reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

**Shelf Life:** MasterAir AE 200 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your Local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterAir AE 200 admixture has been exceeded.

**Safety:** MasterAir AE 200 admixture is a caustic solution. Chemical goggles and gloves are recommended when transferring or handling this material. (See SDS and/or product label for complete information.)

#### **Packaging**

MasterAir AE 200 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

#### **Related Documents**

Safety Data Sheets: MasterAir AE 200 admixture

#### Additional Information

For suggested specification information or for additional product data on MasterAir AE 200 admixture, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

#### **Limited Warranty Notice**

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

Micro Air became MasterAir AE 200 under the Master Builders Solutions brand, effective January 1, 2014.

BASÉ Corporation 2015 □ 01/15 □ PRE-DAT-0009





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$\sim$	03 40 00	Precast Concrete
<u>ح</u>	03 70 00	Mass Concrete

# MasterPolyheed® 997

Mid-Range Water-Reducing Admixture

Formerly PolyHeed 997*

#### Description

MasterPolyheed 997 admixture is a patented multi-component, midrange water-reducing admixture. MasterPolyheed 997 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

#### **Applications**

Recommended for use in:

- All concrete applications where superior workability, pumpability and finishability qualities are desired, in particular, flatwork, pumped concrete and pervious concrete
- Concrete containing manufactured sand and harsh concrete mixtures

#### **Features**

- True mid-range water reduction (5-15%) and excellent performance across a wide slump range, especially the difficult slump range of 5-8 in. (125-200 mm)
- Superior workability, pumpability and finishability qualities even in concrete mixtures containing low amounts of cementitious materials
- Superior finishing characteristics for residential/commercial flatwork and formed surfaces

#### **Benefits**

- Significantly reduced placement and finishing time resulting in lower in-place concrete costs
- Higher strength at all ages
- Enhanced concrete durability
- Increased service life of concrete structures

#### **Performance Characteristics**

Mixture Data: 500 lb/yd³ (295 kg/m³) of Type I cement; slump 6-7 in. (150-180 mm); 5-6% air; concrete temperature 70 °F (21 °C); ambient temperature, 70 °F (21 °C).

#### Setting Time Performance¹

	Initial Set	Difference	
Mixture	(h:min)	(h:min)	
Reference	6:01	<del></del>	
MasterPolyheed 997 admixture @			
5 fl oz/cwt (325 mL/100 kg)	6:22	+0:21	
10 fl oz/cwt (650 mL/100 kg)	6:57	+0:56	
15 fl oz/cwt (980 mL/100 kg)	7:31	+1:30	



#### Compressive Strength, psi (MPa)

Mixture	7-Day	28-Day
Plain	2360 (16.3)	3320 (22.9)
MasterPolyheed 997 admixture @		
5 fl oz/cwt (325 mL/100 kg)	3060 (21.1)	3930 (27.1)
10 fl oz/cwt (650 mL/100 kg)	3740 (25.8)	4610 (31.8)
15 fl oz/cwt (980 mL/100 kg)	4620 (31.9)	5460 (37.7)

¹Note: The data shown are based on controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete making materials and jobsite conditions.

#### **Guidelines for Use**

**Dosage:** MasterPolyheed 997 admixture has a recommended dosage range of 3-15 fl oz /cwt (195-980 mL/100 kg) of cementitious material for most concrete mixes.

As the dosage of MasterPolyheed 997 admixture increases to 15 fl oz/cwt (980 mL/100 kg) of cementitious materials, normal concrete setting characteristics are maintained and early and ultimate compressive strengths increase.

BASF does not recommend the use of dosages outside the recommended range without trial testing. Consult your local sales representative for assistance in determining the dosage for optimum performance.

#### **Product Notes**

Corrosivity - Non-Chloride, Non-Corrosive: MasterPolyheed 997 admixture will neither initiate nor promote corrosion of reinforcing or prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. MasterPolyheed 997 admixture does not contain intentionally added calcium chloride or other chloride-based ingredients.

**Compatibility:** MasterPolyheed 997 admixture may be used in combination with any BASF admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

#### Storage and Handling

**Storage Temperature:** If MasterPolyheed 997 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.** 

**Shelf Life:** MasterPolyheed 997 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterPolyheed 997 admixture has been exceeded.

#### **Packaging**

MasterPolyheed 997 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

#### **Related Documents**

Safety Data Sheets: MasterPolyheed 997 admixture

#### Additional Information

For additional information on MasterPolyheed 997 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

#### **Limited Warranty Notice**

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

Polyheed 997 became MasterPolyheed 997 under the Master Builders Solutions brand, effective January 1, 2014.

3 BASF Corporation 2015 

■ 01/15 

PRE-DAT-0060

Certified to NSF/AtiSI 61



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03 70 00	Mass Concrete	

# MasterFiber® F 70

# Fibrillated Microsynthetic Fiber

#### Description

MasterFiber F 70 product, a microsynthetic fiber, is a fibrillated polypropylene fiber manufactured from 100% virgin homopolymer polypropylene resins. MasterFiber F 70 product meets the requirements of ASTM C 1116/C 1116M, Section 4.1.3, Type III, and Note 2 and the requirements of ICC ES AC32 Sections 3.1.1 (plastic shrinkage reinforcement) and 3.1.2 (shrinkage and temperature reinforcement),

#### **Applications**

Recommended for use in:

- Residential and commercial slabs-onground
- Ultra-thin whitetopping
- Bonded overlays
- Architectural precast products and ornamental elements
- Slope stabilization
- Water treatment plants
- Irrigation ditches/ channels

#### **Features**

- Excellent distribution
- Excellent shrinkage and temperature reinforcement

#### **Benefits**

- Replacement for typical light gauge welded-wire reinforcement [6 x 6 W1.4 x W1.4 (152 x 152 MW9.1 x MW9.1)], depending on the application
- Modifies macro-cracking and micro-cracking mechanisms
- Reduces plastic settlement
- Extends service life with reduced maintenance
- Enhances fatigue strength
- Enhances impact, pullout and surface abrasion resistance
- ≅ Reduces permeability

#### **Performance Characteristics**

#### **Physical Properties**

Specific Gravity	тельного при при при при при при при при при при
Melting Point	320 °F (160 °C)
Ignition Point	1,094 °F (590 °C)
Absorption	NII
Alkali Resistance	Excellent
Tensile Strength	44,000 psi (300 MPa)
Modulus of Elasticity	780 ksi (5.38 GPa)
Available Lengths	0.75 in. (19 mm) and 1.5 in. (38 mm)
Equivalent Diameter	0.026 in. (0.66 mm)



#### **Guidelines for Use**

**Dosage:** The recommended dosage of MasterFiber F 70 product is 1.5 lb/yd³ (0.9 kg/m³).

In accordance with the recommendations of the Steel Deck Institute, fibrillated microsynthetic fibers, including MasterFiber F 70 product, should not be used to replace welded-wire reinforcement in composite metal decks.

**Mixing:** The bags can be introduced at any time during the mixing cycle, except at the same time as the cement. Three to five minutes of mixing will be required to disperse the fibers depending on when the product is added to the mixer.

#### **Engineering Specifications**

MasterFiber F 70 product, at 1.5 lb/yd³ (0.9 kg/m³), is an option to conventional secondary reinforcement in structural plain concrete. MasterFiber F 70 product outperforms other microsynthetic fibers in providing an optimum three-dimensional shrinkage and temperature reinforcement system in concrete.

MasterFiber F 70 product meets the requirements of ASTM C 1116/ C 1116M, Section 4.1.3, Type III, and Note 2, and ICC ES AC32, Sections 3.1.1 and 3.1.2.

#### **Product Notes**

MasterFiber F 70 product is not a replacement for structural steel reinforcement and therefore, should not be used to replace any of the load-carrying steel reinforcement in a concrete element.

#### **Packaging**

MasterFiber F 70 product is packaged in pre-weighed degradable 1.0 lb (0.45 kg), 1.5 lb (0.7 kg) and 7.5 lb (3.4 kg) bags that can be added directly to the mixing system.

#### **Related Documents**

Safety Data Sheets: MasterFiber F 70 product

#### **Additional Information**

For additional information on MasterFiber F 70 product, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

#### **Limited Warranty Notice**

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Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments, The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.



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	03 30 00	Cast-in-Place Concrete
`	03 40 00	Precast Concrete
Ź	03 70 00	Mass Concrete

# MasterSet® DELVO

# Hydration Controlling Admixture

Formerly DELVO Stabilizer*

#### Description

MasterSet DELVO readyto-use, liquid admixture is used for making more uniform and predictable high-performance concrete. MasterSet **DELVO** admixture retards setting time by controlling the hydration of portland cement and other cementitious materials while facilitating placing and finishing operations. MasterSet DELVO admixture meets ASTM C 494/C 494M requirements for Type B, retarding, and Type D, water-reducing and retarding, admixtures.

#### **Applications**

Recommended for use in:

- Stabilization of concrete washwater
- Stabilization of returned plastic concrete
- Stabilization of freshly batched concrete for long hauls
- 4x4™ Concrete
- Pumped concrete, shotcrete (wet mix) and conventionally-placed concrete
- Plain, reinforced, precast, prestressed, lightweight and normal weight concrete
- Pervious concrete

#### **Features**

- Reduced water content required for a given workability
- Retarded setting time characteristics
- ☐ Improved workability

#### **Benefits**

- Provides flexibility in the scheduling of placing and finishing operations
- Offsets the effects of slump loss during extended delays between mixing and placing
- Reduces waste associated with concrete washwater and returned concrete
- Increased strength compressive and flexural

#### **Performance Characteristics**

**Rate of Hardening:** The temperature of a concrete mixture and the ambient temperature (forms, earth, air, etc.) affect the hardening rate of concrete. At higher temperatures, concrete hardens more rapidly which may cause problems with placing and finishing.

One of the functions of MasterSet DELVO admixture is to retard the set of concrete. Within the normal dosage range, it will generally extend the working and setting times of concrete containing normal portland cement, fly ash, slag cement and silica fume approximately 1 hour to 5 hours compared to a plain concrete mixture. This depends on job materials and temperatures. Trial mixtures should be made under approximate job conditions to determine the dosage required.

Compressive Strength: Concrete produced with MasterSet DELVO admixture will develop higher early (within 24 hours) and higher ultimate strengths than plain concrete when used within the recommended dosage range and under normal, comparable curing conditions. When MasterSet DELVO admixture is used in heat-cured concrete, the length of the preheating period should be increased until the initial set of the concrete is achieved. The actual heat-curing period is then reduced accordingly to maintain existing production cycles without sacrificing early or ultimate strengths.



#### **Guidelines for Use**

**Dosage:** MasterSet DELVO admixture is recommended for use at a dosage of  $4\pm1$  fl oz/cwt (260  $\pm$  65 mL/100 kg) of cementitious materials for most concrete mixtures using average concrete ingredients. Because of variations in job conditions and concrete materials, dosages other than the recommended amounts may be required. In such cases, contact your local sales representative. For concrete washwater and returned concrete stabilization, utilize MasterSet DELVO charts to determine the appropriate dosage rates.

#### **Product Notes**

**Corrosivity - Non-Chloride, Non-Corrosive:** MasterSet DELVO admixture will neither initiate nor promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally-added calcium chloride or other chloride-based ingredients.

**Compatibility:** MasterSet DELVO admixture may be used in combination with any BASF admixture. When used in conjunction with another admixture, each admixture must be dispensed separately into the mixture.

#### Storage and Handling

**Storage Temperature:** MasterSet DELVO admixture should be stored above freezing temperatures. If MasterSet DELVO admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

**Shelf Life:** MasterSet DELVO admixture has a minimum shelf life of 12 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterSet DELVO admixture has been exceeded.

#### Packaging

MasterSet DELVO admixture is supplied in specially designed 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

#### **Related Documents**

Safety Data Sheets: MasterSet DELVO admixture

#### Additional Information

For more information on MasterSet DELVO admixture, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

#### **Limited Warranty Notice**

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

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**BASF Corporation** Admixture Systems

www.master-builders-solutions.basf.us

United States 23700 Chagrin Boulevard Cleveland, Ohio 44122-5544 Tel: 800 628-9990 IF Fax: 216 839-8821 Canada 1800 Clark Boulevard Brampton, Ontario L6T 4M7 Tel: 800 387-5862 # Fax: 905 792-0651



^{*} Delvo Stabilizer became MasterSet DELVO under the Master Builders Solutions brand, effective January 1, 2014.

We create chemistry

03 30 00 Cast-in-Place Concrete
03 40 00 Precast Concrete

# MasterSet® AC 534

# **Accelerating Admixture**

Formerly Pozzolith NC 534*

#### Description

MasterSet AC 534
patented, ready-touse, liquid admixture is
formulated to accelerate
time of setting and to
increase early concrete
strengths. MasterSet AC
534 admixture does not
contain calcium chloride
and is formulated to comply
with ASTM C 494/C 494M
Type C, accelerating,
admixture requirements.

### **Applications**

Recommended for use in:

- Reinforced, precast, pumped, flowable, lightweight or normal weight concrete and shotcrete (wet mix)
- Concrete placed on galvanized steel floor and roof systems which are left in place
- Prestressed concrete
- Fast-track concrete construction
- Concrete subject to chloride ion constraints
- Self-consolidating concrete (SCC)
- Pervious concrete

#### **Features**

- Accelerated setting time across a wide range of temperatures
- Increased early compressive and flexural strengths

#### **Benefits**

Setting time

- Reduced or eliminated heating and protection time in cold weather
- Earlier stripping and reuse of forms
- ☑ Superior finishing characteristics for flatwork and cast surfaces

#### **Performance Characteristics**

Mixture Data: 453 lb/yd³ (269 kg/m³) of Type I cement; 3-4 in. (75-100 mm) slump; concrete temperature 74 °F (23 °C); ambient temperature 50 and 75 °F (10 and 24 °C); non-air-entrained concrete.

@ 50 °F (10 °C)

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> 20 fl oz/cwt (1,300 mL/100 kg)	7:11	- 6:33	
> 40 fl oz/cwt (2,600 mL/100 kg)	6:05	- 7:39	

Setting time	@ 75 °F (	24 °C)
1000/	Initial Set (h:min)	Difference (h:min))
Plain	8:18	REF
MasterSet AC 534 admixture @	to the property of the party of	THE THE PROPERTY OF THE PARTY O
> 20 fl oz/cwt (1,300 mL/100 kg)	4:59	- 3:19
> 40 fl oz/cwt (2,600 mL/100 kg)	4:18	- 4:00



#### **Guidelines for Use**

**Dosage:** The recommended dosage range for MasterSet AC 534 admixture is 10-45 fl oz/cwt (0.65 - 2.9 L/100 kg) of cementitious materials for most concrete mixtures using average concrete ingredients. Because of variations in job conditions and concrete materials, dosage rates other than the recommended amounts may be required. In such cases, contact your local sales representative.

The maximum dosage of MasterSet AC 534 in potable water applications that require the use of NSF Certified products is 30 fl oz/cwt (2.0 L/kg) of cementitious materials. For specialty concrete mixtures such as 4x4 Concrete, dosages up to 100 fl oz/cwt (6.5 L/100 kg) may be required.

#### **Product Notes**

**Corrosivity - Non-Chloride, Non-Corrosive:** MasterSet AC 534 admixture will neither initiate nor promote corrosion of reinforcing steel in concrete.

**Compatibility:** MasterSet AC 534 admixture may be used in combination with any BASF admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mixture.

### Storage and Handling

**Storage Temperature:** MasterSet AC 534 admixture should be stored above freezing temperatures. If MasterSet AC 534 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.** 

Shelf Life: MasterSet AC 534 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterSet AC 534 admixture has been exceeded.

#### **Packaging**

This product is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

#### **Related Documents**

Safety Data Sheets: MasterSet AC 534 admixture

#### Additional Information

For additional information on MasterSet AC 534 admixture or its use in developing a concrete mixture with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

### **Limited Warranty Notice**

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

ASF Corporation 2015 # 01/15 # PRE-DAT-0080

BASF Corporation Admixture Systems

www.master-builders-solutions.basf.us

United States 23700 Chagrin Boulevard Cleveland, Ohio 44122-5544 Tel: 800 628-9990 ज Fax: 216 839-8821

Canada 1800 Clark Boulevard Brampton, Ontario L6T 4M7 Tel: 800 387-5862 ≅ Fax: 905 792-0651



^{*} Pozzolith NC 534 became MasterSet AC 534 under the Master Builders Solutions brand, effective January 1, 2014.

## Certificate of Contractor's Compliance for APL/QML Selection



Date:

07-14-2017

**CDOT** Contract ID:

STE C480-008

**CDOT Project Number:** 

19219

**CDOT Project Location:** 

Archuleta, County

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specifications for Road and Bridge Construction, and the 2017 Field Materials Manual.

## Four Corners Materials Class P – Material List

OME D. 1/Cl. Douts	709.04.02.00	701.02.02.00	711.02.01.00	711.02.01.00	
QML Part/Sub Part: 709.04.02.00  APL Category: Concrete		Concrete	Concrete	Concrete Admixture	
APL Sub Category:	D. I.O. J. Pil.		Admixture		
APL Base Category:	Plastic	Fly Ash, Class F	Water Reducing, HR	Air Entraining	
APL Reference Number:	3192-16	2302-16	2085-14	2067-14	
Product Name:	MasterFiber F 70	Four Corners Class F Fly Ash	MasterPolyheed 997 [Type F]	MasterAir AE200	
Manufacturer:	BASF Corporation	SRMG [Four Corners]	BASF Corporation	BASF Corporation	
Date of Website Review & Selection:	7/14/2017	7/14/2017	7/14/2017	7/14/2017	

OME B. (C) Posts	711.02.01.00	711.02.01.00	701.01.01.00	
QML Part/Sub Part:		Concrete	Concrete	
APL Category:	Concrete	Concrete		
APL Sub Category:	Admixture	Admixture	Cement	
APL Base Category:	Water-Reducing	Accelerating	Portland Cement (ASTM C150)	
APL Reference Number:	2083-14	2091-14	2949-16	
Product Name:	MasterSet DELVO	MasterSet AC 534	Pueblo Plant, Type I/II, Low Alkali	
Manufacturer:	BASF Corporation	BASF Corporation	GCC of America (Pueblo)	
Date of Website Review & Selection:	7/14/2017	7/14/2017	7/14/2017	

Crossfire, LLC.

Name: Paul Martin

Title: Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 360.4. (quantity and units) of pay item 601-01000 Concrete Class B (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/26/18

## COLORADO DEPARTMENT OF TRANSPORTATION

Product Evaluation Coordinator

# PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

Material code:

APL Reference No.

3192-16

Product Evaluation Coordinator	709.04.02.00
Colorado Department of Transportation	Material code description full name:
4670 North Holly Street, Unit A Denver, Colorado 80216	Concrete, Reinforcing Fiber, Plastic
PART 1	Product category:
Product name: MasterFiber F 70	Concrete\Fiber\Micro Fiber
Product Representative (name & address):	Manufacturer (name & address):
Attn: Mark Piechuta	Attn: Mark Piechuta
BASF Corporation	BASF Corporation
23700 Chagrin Blvd.	23700 Chagrin Blvd.
Cleveland, OH 44122-5554	Cleveland, OH 44122-5554 Phone: (216) 839-7072 E-mail: mark.piechuta@basf.com
Phone: (216) 839-7072 E-mail: mark.piechuta@basf.com	Web-site address; www.master-builders-solutions.basf.us/en-us
Web-site address: www.master-builders-solutions.basf.us/en-us	
Description of the product: (Include specific quantifiable details from tech data	a sheet. Advertising generalities are not appropriate.)  opylene fiber, manufactured from 100% virgin homopolymer polypropylene resins.
1 The reserved and decrease for MasterFiber F 70 is 1.5 lb /GI VO	orinkage and temperature reinforcement and has excellent distribution properties in I. MasterFiber F 70 is packaged in 1.0 lb., 1.5 lb. and 7.5 lb. degradable bags using of MasterFiber F 70 optimizes the mechanical bond between the mortar matrix
Restrictions, (installation and/or use):	
None known	
Jse of the product, (be specific to CDOT highway activities only): Use in white topping and overlays, waterway channels, architectural preca Benefits to CDOT, (how will your product enhance quality, improve safe	est concrete products, and shotcrete applications, such as slope stabilization.
MasterFiber F 70 provides optimum three-dimensional shrinkage and temperature re enhances impact and surface abrasion resistance of concrete.	einforcement, reduces plastic settlement, extends service life, reduces permeability, and
Specifications: (listing those applicable is required)	
☑ CDOT : Standard Specification, Section 601	
☑ ASTM : C 1116; D 7508	
AASHTO:	
☐ FHWA :	
Other:	the Mark (COM) and the description ONLV
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Product Testing: (National/independent laboratories or universities with  ☐ NTPEP-AASHTO: ☐ FHWA ☐ other : TEC Services (February 15, 2016) ☐ other : Fabpro Polymers (September 29, 201) ☐ other :	Report Date.) Certified Test Report (CTR) provided to validate all claims.
State DOT Approvals, (current documentation required):	Re-submittal Cycle: 4 years
	ata Sheets (SDS): 🛛 yes 🔲 no 🔲 n/a
Alternate Product Category: Additional Comments:	
A sample can be submitted upon request. State DOT Approvals refere Local Colorado BASF Sales representative is Brandon Cook; cell phon	enced without documentation: PennDOT, IL DOT, TX DOT ne # (303) 704-3849

Material code:

APL Reference No.

2302-16

Product Evaluation Coordinator	701.02.02.00
Colorado Department of Transportation	Material code description full name:
4670 North Holly Street, Unit A Denver, Colorado 80216	Fly Ash, Class F
PART 1 Product name:	Product category:
Four Corners Class F Fly Ash	Concrete\Pozzolan\Fly Ash, Class F
Product Representative (name & address): Attn: Jeff Hearne, Vice President of Quality Assurance	Manufacturer (name & address): Attn: APS Four Comers Power Plant
Salt River Materials Group 8800 East Chaparral Road Suite 155 Scottsdale, Arizona 85250	Four Comers Fly Ash Facility End of County Road #6675 / P.O. Box 1007 Fruitland, New Mexico 87416
Phone: (480) 850-5757 E-mail: jhearne@srmaterials.com	Phone: (505) 598-8557 E-mail: Web-site address:
Web-site address: www.srmaterials.com  Description of the product: (Include specific quantifiable details from tech data st	
Four Corners Fly Ash is a by-product from the burning of pulverized coal to p	Noutro electricity at the 7th C 1 street 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leaves 1 leave
Restrictions, (installation and/or use):  Use of the product, (be specific to CDOT highway activities only):  Used in Portland cement concrete and concrete products. It is also used in a Benefits to CDOT, (how will your product enhance quality, improve safety It is an effective means of providing improved concrete properties such as mitigation of resistance and reduced permeability.	soil cement bases, subgrade stabilization, and asphalt.  I save money, be a better value then other manufacturer's products):  I alkali aggregate reactivity, improved long term durability, improved strengths, improved sulfate
Product Testing: (National/independent laboratories or universities with Re  NTPEP-AASHTO:	ate of Verification (COV) provided for select categories ONLY eport Date.) Certified Test Report (CTR) provided to validate all claims. terials Group AAP(CCRL/AMRL) accredited laboratory (7-19-2016)
State DOT Approvals, (current documentation required): AZ, CA, NM	1, TX Re-submittal Cycle: 4 years
	a Sheets (SDS): 🗸 yes 🔲 no 🚨 n/a
Sample submitted:  yes  no  n/a Safety Data  Alternate Product Category: Additional Comments:	10000 (CC = 7) Ex. 7 Initial 110 Types 11000

((

APL Reference No. 2085-14

	Material code:
Product Evaluation Coordinator	711.02.01.00
Colorado Department of Transportation 4670 North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	Concrete, Admixture
ART 1	Product category:
Product name: MasterPolyheed 997 (previously: PolyHeed® 997)	Concrete\Admixture\Water Reducing  Water Reducing, High Range
MasterPolyheed 997 (previously: PolyHeed® 997)  Product representative (name & address):	Manufacturer (name & address):
Attn: Mark Piechuta	Attn: Mark Piechuta
BASF Corporation	BASF Corporation 23700 Chagrin Blvd.
23700 Chagrin Blvd.	Cleveland, OH 44122-5554
Cleveland, OH 44122-5554	Phone: (216) 839-7072 FAX: (216) 839-8821
Phone: (216) 839-7072 FAX: (216) 839-8821 Web-site address:	Web-site address:
www.masterbuilders.com	www.masterbuilders.com
Description of the product: (Include specific quantifiable details from tech data she MasterPolyheed 997 admixture is a patented multi-component, non-chloride, mid-ran 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing New product name became effective January 15, 2014. There is absolutely no change	ing partitions.
Restrictions, (installation and/or use): None known.  Jse of the product, (be specific to CDOT highway activities only): Water-Reducing or High-Range Water-Reducing admixture.  Benefits to CDOT, (how will your product enhance quality, improve safety, 1) Provides superior pumping and finishing characteristics. 2) Provides improved durability. 3) Will not initiate or promote corrosion of reinforcing steel.	, save money, be a better value then other manufacturer's products):
Specifications, (listing those applicable is required) & Certificate of Comp	pliance (required to certify compliance with listed specifications):
ASTM: C 494, Type A & Type F	
AASHTO: M 194, Type A & Type F	
☐ FHWA :	
☑ other : CRD-C 87	
<b>22</b> 0000	0.1. 0.1.
Product testing, (from national/independent laboratories or universities) &   NTPEP-AASHTO: CADD (2006)-08-14  FHWA:  other: TEC Services (June 9, 2011) (October other)	
State DOT Approvals, (current documentation required):	
State DOT Approvais, fourtest accommondation 12-4-	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
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to be provided appeared at no cost Technical data sheets are included	led which outline specific dosage information.
A sample can be provided upon request at its State DOT, MO DOT, MO DOT, APPROVED BY 39 OTHER STATE DOT'S, INCLUDING AZ DOT, MO DOT, Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 70	OK DO I
Local Colorado BASF Sales representative is brandon Cook, cen photo # (505) re	
•	

APL Reference No. 2067-14

	Material code:
Product Evaluation Coordinator	711.02.01.00
Colorado Department of Transportation	Material code description full name:
4670 North Holly Street, Unit A Denver, Colorado 80216	Concrete, Admixture
PART 1	Durkust actorary
Product name:	Product category: Concrete\Admixture\Air Entraining
MasterAir AE 200 (previously: Micro Air)	Manufacturer (name & address):
Product representative (name & address):	Manufacturer (name & address). Attn: Mark Piechuta
Attn: Mark Piechuta BASF Corporation	BASF Corporation
23700 Chagrin Blvd.	23700 Chagrin Blvd.
Cleveland, OH 44122-5554	Cleveland, OH 44122-5554
Phone: (216) 839-7072 FAX: (216) 839-8821	Phone: (216) 839-7072 FAX: (216) 839-8821
Web-site address:	Web-site address: www.masterbuilders.com
www.masterbuilders.com  Description of the product: (Include specific quantifiable details from tech data sh	WWW.masterounders.com
MasterAir AE 200 is an Air-Entraining Admixture for concrete exposed to cyclic free New product name became effective January 15, 2014. There is absolutely no change	
Restrictions, (installation and/or use): none known  Jse of the product, (be specific to CDOT highway activities only): MasterAir AE 200 is recommended for production of high-quality normal of the behavior of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for production of high-quality normal of the commended for prod	cave money he a better value then other manufacturer's products).
Specifications, (listing those applicable is required) & Certificate of Com	
<u></u> ASTM : C 260	
☑ AASHTO: M 154	
☐ FHWA :	
other : CRD-C 13	
	(OTD who die willdele all plaime)
Product testing, (from national/independent laboratories or universities) & NTPEP-AASHTO: CADD 06-10  FHWA: other: TEC Services (June 25, 2012)	Certified Test Report (CTR required to Validate an Octobro).
State DOT Approvals, (current documentation required):	(AL Data Shadia (MSDS): Ves no n/a
Sample submitted:  yes I no n/a Materials Sat	fety Data Sheets (MSDS): 🔳 yes 🔲 no 🔲 n/a
N. C. W. Williams I. Commonto	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s
A sample can be provided upon request at no cost. Technical data sheets outline sp. APPROVED BY 40 OTHER STATE DOTs. Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 70	

APL Reference No. 2083-14

To the Man Convenience	Material code:					
Product Evaluation Coordinator	711.02.01.00					
Colorado Department of Transportation 4670 North Holly Street, Unit A	Material code description full name:					
Denver, Colorado 80216	Concrete, Admixture					
PART 1	Product category:					
Product name:  MasterSet DELVO (previously: Delvo Stabilizer)	Concrete\Admixture\Water-Reducing & Retarding					
Master Sev S 2	Manufacturer (name & address):					
Product representative (name & address): Attn: Mark Piechuta	Attn: Mark Piechuta					
BASF Corporation	BASF Corporation					
23700 Chagrin Blvd.	23700 Chagrin Blvd. Cleveland, OH 44122-5554					
Cleveland, OH 44122-5554						
Phone: (216) 839-7072 FAX: (216) 839-882I	Phone: (216) 839-7072   FAX: (216) 839-8821   Web-site address:					
Web-site address:	www.masterbuilders.com					
	the appropriate (					
MasterSet DELVO ready-to-use, liquid admixture is used for making more uniform an time by controlling the hydration of portland cement and other cementitious materials plastic concrete and concrete washwater to reduce waste. MasterSet DELVO admixtu water-reducing and retarding, admixtures.  New product name became effective January 15, 2014. There is absolutely no change						
Restrictions, (installation and/or use): none known  Jse of the product, (be specific to CDOT highway activities only):						
- to the Community Downson concrete shotcrete (well mix) and conventionally to	laced concrete.					
Benefits to CDOT, (how will your product enhance quality, improve safety, 1. Provides flexibility in the scheduling of placing and finishing operations.  2. Offsets the effects of slump loss during extended delays between mixing and plac.  3. Reduces waste associated with concrete washwater and returned concrete.	ing.					
Specifications, (listing those applicable is required) & Certificate of Composition CDOT : Standard Specifications 711.03	liance (required to certify complicates with listed approximation)					
ASTM : C 494, Type B & Type D						
AASHTO: M 194, Type B & Type D	,					
☐ FHWA :						
Other:						
•						
Product testing, (from national/independent laboratories or universities) & €  NTPEP-AASHTO: CADD (2008) -18  FHWA:  other: TEC Services (August 25, 2011) (Integration of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of						
State DOT Approvals, (current documentation required):						
Sample submitted.	ety Data Sheets (MSDS):					
Notes/Additional Comments A sample can be provided upon request at no cost. Technical data sheets are included APPROVED BY 39 OTHER STATE DOTs. Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704						

APL Reference No. 2091-14

Product Evaluation Coordinator	Material code:
Colorado Department of Transportation	711.02.01.00
4670 North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	Concrete, Admixture
PART 1	
	Product category:
Product name:  MasterSet AC 534 (previously: Pozzolith NC.)	534) Concrete\Admixture\Accelerating
Product representative (name & address):	Manufacturer (name & address):
Attn: Mark Piechuta	Attn: Mark Piechuta
BASF Corporation	BASF Corporation
23700 Chagrin Blvd.	23700 Chagrin Blvd.
Cleveland, OH 44122-5554	Cleveland, OH 44122-5554
Phone: (216) 839-7072 FAX: (216) 839-8821	Phone: (216) 839-7072 FAX: (216) 839-8821
Web-site address:	Web-site address: www.masterbuilders.com
www.masterbuilders.com  Description of the product: (Include specific quantifiable details from tech da	
does not contain calcium chloride and complies with ASTM C 494/C 494M Type New product name became effective January 15, 2014. There is absolutely no contain the contain calcium chloride and complies with ASTM C 494/C 494M Type New product name became effective January 15, 2014.	
Restrictions, (installation and/or use):	
none known	
Use of the product, (be specific to CDOT highway activities only):  Accelerating admixture for concrete.	
Renefits to CDOT /how will your product enhance quality, improve sa	afety, save money, be a better value then other manufacturer's products):
*Earlier finishing of slabs — reduced labor costs	
*Reduced in-place concrete costs	
*Reduced or eliminated heating and protection time in cold weather	
*Earlier stripping and reuse of forms	th file Leastfrotions):
Specifications, (listing those applicable is required) & Certificate of C	Compliance (required to certify compliance with listed specifications).
X CDOT : Standard Specifications 711.03	
X ASTM : C 494 Type C	
AASHTO: M 194 Type C	
☐ FHWA :	
☑ other : CRD-C 87	
Product testing, (from national/independent laboratories or universities	s) & Certified Test Report (CTR required to validate ail claims):
Product testing, (from national/independent laborations of different la	5, 2 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -
☐ FHWA	
THE SECURE OF A STATE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE SECURE OF THE S	
▼ other : TEC Services (October 9, 2012)	
other : TEC Services (October 9, 2012)	
State DOT Approvals, (current documentation required):	
State DOT Approvals, (current documentation required):	

APPROVED BY 35 OTHER STATE DOT'S, INCLUDING CALTRANS, MO DOT, MI DOT Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-3849

APL Reference No. 2949-16

Product Evaluation Coordinator	Material code: 701.01.01.00
Colorado Department of Transportation	Material code description full name:
4670 North Holly Street, Unit A	Cement, Portland
Denver, Colorado 80216	
PART 1	
Product name:	Product category: Concrete\Cement\Portland Cement [ASTM C 150]
Pueblo Plant, Type I/II, Low Alkali	Manufacturer (name & address):
Product Representative (name & address): Attn: Bryan Patterson	Attn: Joe Finnegan
GCC of America	GCC of America
600 S Cherry St, Suite 1000 Glendale, CO 80246	3372 Lime Road Pueblo, CO 81004
Phone: (303) 739-5900 E-mail: bpatterson@gcc.com	Phone: (303) 739-5900 E-mail: jfinnegan@gcc.com
Web-site address: www.gccusa.com	Web-site address: www.gccusa.com
Description of the product: (Include specific quantifiable details from tech data sh	
Pueblo Plant, Type I/II, Low Alkali is a Hydraulic, low alkali (<0.60%) cement cement meets the optional sulfate resistance of ASTM C-150 Table 4, "Option accordance with ASTM C-452. Other than being a low alkali portland cement differentiation.	conforming to the requirement specified in ASTM C-150 for Type I/II cement. This half Physical Requirements" with an expansion of less than 0.04% when tested in the tand meeting the optional sulfate resistance criteria, there is no product
Restrictions, (installation and/or use):  Provide adequate protection from extreme conditions.	
se of the product, (be specific to CDOT highway activities only):	
General use cement for all cement concrete and paving applications.	
Benefits to CDOT, (how will your product enhance quality, improve safety, A portland cement manufactured in Colorado, meeting low alkali and optional sulfate res	save money, be a better value then other manufacturer's products): istance requirements and competitively priced.
Specifications: (listing those applicable is required)	
✓ CDOT : Standard Specifications, Section 701.01	
✓ ASTM : C-150	
ASHTO: M85	
☐ FHWA :	
other:	e of Verification (COV) provided for select categories ONLY
Product Testing: (National/independent laboratories or universities with Rep	on Date.) Certified Test neport (OTA) provided to validate all claims.
☐ NTPEP-AASHTO:	
FHWA :	
other : CTL Group (April 23, 2015 - ASTM C-45;	
other : GCC of America, Internal Material Certific	cation Reports (February 15, 2015 - January 15, 2016)
other :	
State DOT Approvals, (current documentation required): IA, MN, NM,	OK, TX Re-submittal Cycle: 4 years
Sample submitted:  ves  no  n/a Safety Data S	Sheets (SDS): 🔽 yes 🔲 no 🔲 n/a

Alternate Product Category: \dditional Comments:

N/A

🛛 no

☐ n/a

		101		Contract ID	10010	R	egion	Fie	old Sheet#	183911	
CONCRETE SPECIMEN TRANSP	ANSN		<b>.L.</b>	Project No.	Project No. STE 480-008 Project No. Te 280-17						
Ready Mix Supplier:	Si Z	uppliers tic	ket#:		roject Location  Piñan Causeway  Item & Description  601 - Footing					19	And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s
					Station Resident Engineer Robert Sh			Shanks 2017069			
Slump 31/2 inches (mm) Entrained a	ir <i>f</i>	) a 72	Unit	tweight 139.4	lbs/ft³ (l	kg/m³) Yield	i i	1.00		74	°F (°C)
Cylinders for design adequacy	Da	te moided	25-17	T	23	Cured hrs.	Days in molds	27 1	Damp sand Water	at Temp.	°F (°C)
Cylinders for structural strength information	n Da	te molded		Time		Cured hrs.	Days in molds	Days at struc site	ture Shipped to	☐ Central la ☐ Region la	B
M. J. C. linders as indicated		Set no.	Conc. class	Days cured	Break date	No. of cyli	nders		boratory test re		Prock
Mark Cylinders as indicated Sample ID			Р	7	8-1	2	Age	(beam - H x V	N)	PSI/MPa	Break Type
Sample ID	<u>                                      </u>	1	p	28	8-22		7	800×40	50,730	3960	5
Sample ID	<u> b</u>		<u> </u>				7	809×493 1	2.31 48,860	3810	4
	OA/OC :	specifica	ation (broke @	0 28 days)		□ yes □	1 no 2			5/20	<u>-</u>
4200	2/1/3/0	орооли					2			5030	4
Specimen type: 4 x 8 cylinder  6 x 12 cylinder	☐ Bea		☐ Splitting Tensile	☐ Cub	e		2		3 63690	4970	4
	***		This placement	·····	To date						
Quantity represented Previous cubic yards/meters	۵		100		10	0					
Field Comments: W/CM = 0.43	2_						Lab comme	ents:			
AMOI T=7.52 V= 0.249	7 c=	TARE	+SAMPCE =	42.24 16	5			······································			
AMON 1075 V ST.	· • · · · · · · · · · · · · · · · · · ·	(iii	ure Box 7E	MP-NOT	RECORDE	9				· · · · · · · · · · · · · · · · · · ·	<u></u>
I.A.T./Remarks:								41.			
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Cast by: (print name)  Eric Howes  Title  Tester	ransporte	ed by:(Na Howes	me/Title/Compar / Tester/				9-4241	E-mail add	nten@trau	thergest	ech. con
Distribution:			Project File		Region (only if l	AT sample)	Previo	us editions are obs	solete and may not b	e usea. CDOTFO	nni#0∠ 1/1

Date of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process of the process o		ANIODOD	TATION	Project	No 1174	Project	code (SA#) 2 19		Proj. location	CRUSENEU	accentrate and
English	COLORADO DEPARTMENT OF TH CONCRETE SPECIMEN	TRANS	SMITTAL	Date		Bosion Beside	nt Engineer	 Vτ	CDOT Mix #		
Jump 31/2 inches (mm) Entrainedair  31/2 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  31/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrainedair  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (mm) Entrained  32/3 inches (m						S KOBE	CT SMAN	<u>7                                    </u>	Item & Descrip		
Specimen light life comments:	Ready Mix Supplier:		Applicable CDOT For OR Suppliers ticket #	rm #281 Field Shed :: 355   99	et# 35			<u> </u>	601-5	tructural	
Date molded   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previous   Previo	Slump 31/	inches	(mm) Entrained air			5.~%			Down of	6. 7.7.7	
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Specimen Identification   2   P   28   8.25   3   7   4.03   59.280   42.50	Cylinders for structural strength infor	mation	Date molded	Time		00.00			to	☐ Rec	
Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Identification  Specimen Identification  Identification  Specimen Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identification  Identificat	Mark Cylinders as indicated	Set no	Conc. class	Days cured	Break date	No. of cylinder	s		<u> </u>	est results	
Specimen Identification   2				7	8.4	2	Specimen	age		Total load	PSI/MPa
Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  Specimen Identification  OA/QC specification (broke @ 28 days)	Specimen Identification		<del>                                     </del>		-	3	7		4,03	<i>5438</i> 0	4250
Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:   Cast by:	Specimen Identification	<u> </u>		Page 4			7		4,03	54070	4229
Specimen type:    A x 8 cylinder   Beam   Splitting   Cube   28   4.03   67070   5370     6 x 12 cylinder   Tensile:   28   4.03   67030   5300     Guantity represented public yards/meters   100   100   200			OA/QC specifica	ation (broke @	28 days)	□ yes □ no	28	•	4,03	69630	5440
Transported by: (Name/Title/Company)  For I A x 8 cylinder				es, e se l'est, de l'est, de l'est, de l'est, de l'est, de l'est, de l'est, de l'est, de l'est, de l'est, de l	Mariana Mariana Mariana Mariana Mariana Mariana Mariana Mariana Mariana Mariana Mariana Mariana Mariana Marian		28	8	4.03	69070	5390
Quantity represented public yards/meters  100  100  100  200  Field Comments: WICM = 0.41  EY = 1.00  CONCRETE TEMP = 75° F  Lab comments:  AMO 1 T = 7.52  V = 0.249  W = 42.35  CARE BOX TEMP; MIN: 66° F  Max: 76° F  LAT./Remarks:  Cast by:  ETIC Howes  Transported by:(Name/Title/Company)  ERIC HOWES / TESTER / TRANTAGE Proper of the second party of be used CODT Form #82	4 x 8 cylinder			F	Cube				4.03	67830	5300
Field Comments: W/CM = 0.41 Py = 1.00 CONCRETE TEMP = 75° F Lab comments:  AMO 1 T = 7.52 V = 0.249 W = 42.3 \( \frac{1}{2} \)  CURE Box TEMP; MIN: 66° F M9x: 76° F  I.A.T./Remarks:  Cast by:  For Howes  Transported by: (Name/Title/Company)  ERIC HOWES I TESTER/TRATIVES 970-749-2428 3 denter of the decretance of the second content and may not be used COOT Form #82	Previ	ous	This pla	acement	To date						
AMOI T= 7.52 V=0.249 W= 42.35  CURE BOX TEMP: MIN:66°F M9x: 76°F  I.A.T./Remarks:  Cast by:  Epic Hawes  Transported by:(Name/Title/Company)  Epic Howes TESTER/TRANSER 970-749-2428 3 denter processes and may not be used CDOT Form #82	Quantity represented cubic yards/meters	) O	\	00	20	0					
Cure Box Temp: min:66° F 109x:76° F  I.A.T./Remarks:  Cast by:  Enc Howes  Transported by:(Name/Title/Company)  ERIC HOWES / TESTER/TRAUTHER 970-749-2428 3 denter and may not be used CDOT Form #82	Field Comments: W/Cm = 0,	41 P	-Y = 1.00	CONCRET	ETEMP = 79	SOF Lab	comments:				
I.A.T./Remarks:  Cast by:  Estic Howes  Transported by:(Name/Title/Company)  Estic Howes  Transported by:(Name/Title/Company)  Estic Howes  Transported by:(Name/Title/Company)  Estic Howes  Transported by:(Name/Title/Company)  Estic Howes  Phone number  970-749-2428 3 denter of the started by:(Name/Title/Company)  Estic Howes  Province editions are obsolete and may not be used CDOT Form #82	AMOI T=7.52 V=0	1,249	W = 42.3	3 5					- 1764		
Cast by:  Cast by:  Enc Howes  Transported by:(Name/Title/Company)  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number  FAX number	CURE BOX TEMP: MIN: 6	006 1	vax: 76° F								
Cast by: Fric Howes FRIC HOWES / TESTER/TRAUTNER 970-749-2428 3 denter Office deriver #82	I.A.T./Remarks:										
Cast by: Fric Howes FRIC HOWES / TESTER/TRAUTNER 970-749-2428 3 denter Office deriver #82											
Cast by: Fric Howes FRIC HOWES / TESTER/TRAUTNER 970-749-2428 3 denter Office deriver #82											
Eric Howes Eric Howes TESTER/ IRANIA Provious editions are obsolete and may not be used CDOT Form #82	Cast by:	Transp	orted by:(Name/Title	/Company)				240	-242X	AX number A NenTenC	Frendaescei
	Eric Howes			Project File P	トメ/(尺) ink - Region (only if	ACCATION (ACCATION IN ACCATION	Previous edition	ns are o	Assert Assert	and a	

FIELD SHEET NO. 120591/

COLORADO DEPARTMENT OF TRANSPORTING CONCRETE SPECIMEN TRAN	ISMITTAL	Date 8		Project con 198 Region Resident R	19 Engineer	Proj. location Pinon CDOT Mix#	Cauceuna 2017069	
Ready Mix Supplier: FC M/ Pagosa	Applicable CDOT Form #2 OR Suppliers ticket #: 3:	281 Field Sheet 5 <i>5 19</i> 9 <i>6</i> 9	#	Station 367.32-3	446/340	Item & Descrip	P Lowb	
Slump $2^{3}/4$ inches				5.3%	weight in Days in	□_Damp sa	1	os/ft³ (kg/m³) Temp.
Cylinders for design adequacy	Date molded 8-16-17 Date molded	Time /	1.42AM	리 mold Cured hrs. Days	s / 27 in Days at	Water structure Ship		73 °F (°C)
Cylinders for structural strength information		Nonette of		mold	s site	to	☐ Reg	ion lab
Mark Cylinders as indicated Set no.	Conc. class E	Days cured	8-23 - 17	No. of cylinders	Specimen age	Diameter (beam - H x W)	est results  Total load	PSI/MPa
Specimen identification 2		28	9-13-17		7	4,03	54230	4230
Opediment definitional of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro		<u> </u>			7	4.03	55030	4300
Specimen Identification Required strength (PSI/MPa)	QA/QC specification	(broke @ 2	28 days)	☐ yes ☐ no	28	4,03	73270	5720
Specimen type:  4 x 8 cylinder  6 x 12 cylinder  Quantity represented cubic yards/meters	Beam D Splitti Tensi This placement	ile: ent	To date	)	28	4.03	72300	5640 / 5960 /
Field Comments: (ONUVETE TEMP  AMOS 1=7.64 V=0.248  16 g water added per stave  1.A.T./Remarks:	Kotzet via ph	none wi		Phoner		‡ 4844 FA	AX number	
FRIC HOWES  tribution: White - (Original with sample) - Central/Reg	c Howes, CA Fe contains Canary - Project	STEC 16	CAUNEL GE C-Region (only if IAT	Sample) Prev	ious editions are ob	solete and may no	t be used CD	OT Form #82 4/0

FIELD SHEET NO. 120592

COLORADO DEPARTMENT OF TRANSPORTATION  CONCRETE SPECIMEN TRANSMITTAL  □ English □ Metric				Project No. STE 480-008 Project code (SA#)  19219  Date Region Resident Engineer  8-24-17 S Robert Shanks		Proj. location PC-AVD SUP S CDOT Mix # 2017069			
Ready Mix Supplier: FCM / Pagasa		Applicable CDOT F OR Suppliers ticke	orm #281 Field Shee #: 3552001	t# 3	Station curb range 1+5209		Item & Description - 35+76 (3)		
Slump 3'/4 inches (mm) Entrainedair			ir :		5.8 % Ur	nit weight	5-7; ************************************	<del>*</del> -	os/ft³ (kg/m³)
Cylinders for design adequacy			4-17 Time	3:00 PM	24 mc	bys in Days in 27	✓ Water		Temp. 76 #** °F (°C)
Cylinders for structural strength information		Date molded	Time		1 '	ys in Days at site	structure Ship to	^{ped} □ Cen □ Reg	E E
Mark Cylinders as indicated Set no.		Conc. class Days cured		Break date	No. of cylinders		Laboratory test results		707
Specimen Identification	4	Р	7	8-31-17	2	Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	4	Р	28	9-21-17	3.	7	4.63	56600	4420 4
Specimen Identification	<u>.</u>					7	41.03	58600	4530 4
Required strength (PSI/MPa)	QA/QC specification (broke @ 28 days)			□ yes □ no 2₹		4.03	73220	5720 / 4	
Specimen type:			☐ Splitting ☐ Cube Tensile:			28 28	4, 93 4, 93	74190 71880	5790 4 5610 4
Quantity represented cubic yards/meters	• • • • • • • • • • • • • • • • • • • •		This placement		To date				
Field Comments: (on CRETE TEMP = 82°F W/cm = 0.42 RY = 1.00  AMOI T= 7.64 V=0.248 W=42.05						omments:	4865	54746 mt	o#
CURE BOX; MIN= 74°F MAX=80°F									
I.A.T./Remarks:									4.
Cast by: ERIC HOUES	Transpo Eric	rted by:(Name/Title Hours / Tesive	Company)  Trautner	79		number 0 - 749-424 (	FA. Go	X number Venten OTraci	thorge otechican

FIELD SHEET NO. 120595

COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL				Date Region Res			ede (SA#)	CDOT Mix #	Proj. location PC TO AVD 50P CDOT Mix # 2017069		
English	ric	Applicable CDOT F	్ orm #281 Field Shee		Station Curl	b +0~	PT 5 HANK	d Item & Descript	tion		
FCM/PA	GOSA		#: 35520046		cw/	b tok	np 01-0-819	608-	CURB RA	4~~~	
Slump	21/2 inches	(mm) Entrained a	ir		5.7 %	%	weight 			s/ft³ (kg/m³)	
Cylinders for design adequacy		Date molded  Z-30  Date molded	17 Time 7.	03 PM	Cured hrs.	Days mold Days	s   27	Damp sa Water  structure Shipp	•	Temp. <b>7</b> 分 °F (°C) tral lab	
Cylinders for structural strength	information	Datemolided	Tane			molds		to	☐ Regi	i i	
Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylin	nders		Laboratory to		DOI/0.50 -	
Specimen Identification	5_	ρ	7	9-6	2		Specimen age	(beam - H x W)	Total load	PSI/MPa	
Specimen Identification	<u> </u>	Ρ	28	9-27	3		7	4.03		4770	
Specimen Identification		00/00	cation (broke @	38 dave)	u yes u	no.	28		59050 77040	4615 6010	
Required strength (PSI/MPa)	****	QAVQC specific	**************************************	- 199	u you w	110	27	4.03 4.03	76650	5780	
Specimen type: 4 x 8 cylin				Cube			28	4.03	75490	5890	
☐ 6 x 12 cy			Tensile:	To date			1	7,000			
Quantity represented	Previous 400	Inisp	liacement Liono	500	1 -						
cubic yards/meters	400		100							MARKET TO A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE	
Field Comments:	wlom=	0.43 Ry	= 0.98	A A A A A A A A A A A A A A A A A A A	L	.ab co	mments: lab a	F 4886			
AMOI T= 7.50	V=0.249	T=4:	2,40								
1st TRUCK RES											
CURE BOX: 760-	-80°					······					
I.A.T./Remarks:							with the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second				
								<u>.</u>			
			-/Company #		l r	Phonen	umber	FA	X number		
Cast by: ERIC HOWE-	S FRIC	orted by:(Name/Title	TESTER!	TRANTAGE	6827F66		ious editions are ob			OT Form #82 4/0	
Distribution: White - (Original with sam	ple) - Central/Regio	n Lab Canary	- Project File / Pin	k - Region (only if IA	(i sample)	Prev	ious editions are of	isorete and may no	, be used OD	O FOR #02 4/0	

COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL				Contract ID	19219	F	Region	5		Field Sheet # 100011/			
□ English □ Metric	V-1140	IVII I <i>F</i>		Project No.	STE 4	180-00	- >8			Date Su	hmitted	3-/ <b>7</b>	
Ready Mix Supplier: FCM / Pagosa	S	Suppliers tid 155 みのし	cket#: 56	Project Locat	ion PC to	- Ave	SU F	>	****	Item & E	Description - CURB RAW	***************************************	CLAB S
\ \	1 -	•		Station Curb erg staig	1420 # 36+53	Resident E	ngineer	shan k	<u> </u>	2017069			
Slump 21/2 inches (mm) Entrained	lair	I	4.8 % Uni	tweight	[©] ∕ lbs/ft³ (l	Viol	1	0,98			Concrete tem	nperature 77	°F (°C)
Cylinders for design adequacy	Da	ate molded ∤0 -	-03-17	Time	3 5	Curedhrs.	Days molds	sin / Daysin		☐ Dar Æ⁄Wa	mp sand iter	at Temp.	°F (°C)
Cylinders for structural strength informat	ion ^{Da}	ate molded		Time	Cured hrs. Days in Days molds site			Days at str site					
Mark Cylinders as indicated		Set no.	Conc. class	Days cured	Break date	No. of cylin	nders		L	aborat	ory test resu	ılts	
Sample ID		6	P	7	101/0	2		Age	Diame (beam - H	í	Total load	PSI/MPa	Break Type
Sample ID		6	Δ	28	10/31	3		7	4.0	3	74920	5850	5
Sample ID								7	4.6	23 .	73070	5700	4
Specified strength (PSI/MPa)	ition (broke @	28 days)		☐ yes ☐	no	28	4.07		77660	6840-	5		
Specimen type: 4 x 8 cylinder	☐ Bea	am	□ Splitting	☐ Cube	)			28	40	arth	88100	6880 -	5
☐ 6 x 12 cylinder	☐ Cor		Tensile					28	40	)	86060	67201	4
Quantity represented Previous			This placement		To date								
cubic yards/meters	0		160		600	l							
Field Comments: W/cm= 0.42					Win A	η L	ab cor	nments	: <u>ii</u> <	0 14	- TRAUTNI	ER GENTS	
AMOI T= 7.50 120,249	سانهما	42.85	5	ř	cure boy	64-7-2			7 11 6,,,,,,	, y ,	LAB NO	. Ovalie	:Ci+i
				insticl m	+ 4.9								
Clifton W/ Davis Eng. according to 1 bag added ofte 2st	Inetic	ol of	3.5 - S	EE FORM	473								
I.A.T./Remarks:													
							***			······································			
										····			
Cast by: (print name) Title T  ENIC HOWES TESTER			e/Title/Company)		Phone n	umber		DQ1	E-mail add			ا دا يسي	
Distribution: Central/Region Lab	U !- '		roject File		gion (only if IAT						タイトなけん d may not be use		

### **COLORADO DEPARTMENT OF TRANSPORTATION**

Approved for use on SA 19219 by CDOT CPP Unit on 7/18/17.

# **Concrete Mix Design Report**

Reviewed by: Val Niculae

R. Ebel

Concrete Supplier	: Four C	orners Mate	rials	CDOT Mix Number :	2017069	)
Supplier Mix ID :	37523	344		Item 601 Class P	Cond	crete
Field Compressive	Strength:	: 4500	psi	Class 2 Sulfate Resistance	and lower	.*
				*Class 3 Sulfate resistance re	equires a 1	w/cm ratio ≤0.40
		Concre	te Mix Proport	ions (SSD Batch Weights for 1	Cubic Y	/ard)
Cement:	565	Pounds	GCC (Pueblo)			
ocincin,	000	, canas	Type I/II Co	ment		
Fly Ash:	141	Pounds	SRMG (4-Corner	s)		
11,710111	• • •	, canas	Class F Fly As	h		
Silica Fume		Pounds				
Coarse Aggregate 1	1682	Pounds	Animas Glacier F	Pit; #67		
Coarse Aggregate 2		Pounds				
Coarse Aggregate 3		Pounds				
Fine Aggregate	1077	Pounds	Animas Glacier f	Pit		
Admixture	7.0	Ounces	BASF - MasterAi	AE 200		
Admixture	56.0	Ounces	BASF - MasterPo	lyheed 997		
Admixture		Ounces	•			
Admixture		Ounces				
Water	295.9	Pounds				·
				Trial Batch Properties		
				7-Day Compressive Strength :	4485	psi
Unit Weight:	140.8	PCF		14-Day Compressive Strength:	5255	psi
W / Cm Ratio:	0.42			28-Day Compressive Strength:	6950	psi
Slump:	2.25	Inches		56-Day Compressive Strength:		psi
Air Content :	4.70	%		7-Day Flexural Strength:	723	psi
Relative Yield :	0.99			28-Day Flexural Strength:	770	psi ⁻
			Α	ggregate Test Results		
		Specifi	c Gravity (SSD)	Absorption		. '
Coarse Aggregate	1:		2.66	1.2 %		
Coarse Aggregate	2:			%		
Coarse Aggregate	3:			%		
Fine Aggregate :			2.66	1.3 %		
				Comments:		
Y						
						•
				D	L ONT	loo.

Review date: 3/17/2017

#### **Gina Denten**

From:

Clifton Lee <clifton@daveng.com>

Sent:

Thursday, August 24, 2017 4:59 PM

To:

Eric Howes; Gina Denten

Subject:

19219 PC to AVD SUP - 08-24-2017 Concrete Placement

Good Afternoon Eric & Gina

(4P

Here's a summary of line items associated with today's concrete placement for the subject project:

#### <u>Item 604-19000 Inlet (Special) - 3 each</u>

-STA 31+53.61

-STA 34+08.54

-STA 35+76.18

#### Item 608-00012 Curb Ramp (Special) - 27.51 square feet

-STA 1+62.09

#### Item 609-21900 C&G Type 2 (18 inch Pan Special) - 22 lineal feet

- STA 36+92 (plus/minus)

Let me know if you have any questions regarding today's placement and associated line items.

#### Regards,

Clifton Lee



Davis Engineering Service, Inc. 188 S. 8th Street - P.O. Box 1208 Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105

Fax: (970) 264-9210 E-mail: clifton@daveng.com Pinon Causeway to Aspen Village Shared Use Path Crossfire LLC

Project No: STE C480-008 Project Code: 19219 Trautner Proj No: 54748 MT

Supplier: FCM CDOT Mix ID: 2017069 CDOT Class P

			T	T		2, 100. 0777	7 101 1	,						CDOT CIA	SS P
placement date	Item No.	placement location	QA No.	CDOT Form 82	Lab no. / truck #	concrete temp. (°F)	slump (in.)	air content (%)	unit weight (pcf)	Cal'd W/C ratio	cal'd yield	field cures (psi)	avg. 7 day break (psi)	avg. 28 day breaks (psi)	Ticket No.
7/25/2017	601	retaining wall - footing - sta. 24+26 to 25+03	1P	165911	4781/truck #1	74	3.5	6.7	139.4	0.42	1.00		3890	5040	35519914
7/25/2017	601	retaining wall - footing - sta. 24+26 to 25+03 and at 3+69 to 3+81			truck #2	72	2.5	5.4	142.3	0.42	0.98				35519916
7/28/2017	601	retaining wall - sta. 24+26 to 25+03	,		truck#1	76	3.25	6.3	139.3	0.43	1.00				35519933
7/28/2017	601	retaining wall - sta. 24+26 to 25+03 and at 3+69 to 3+81	2P	120587	4796/truck #2	-75	3.5	6.2	139.9	0.41	1.00		4240	5380	35519935
8/16/2017	608	Curb Ramp #3 & #4 - sta. 3+69.52 and sta. 4+48.66	3P	120591	4844/truck# 1	85	2.75	5.5	139.8	0.45	1.01		4270	5770	35519964
8/24/2017	604 608 609	Inlet at St. 31+53.61, sta. 34+08.54, sta. 35+76.18 // Curb ramp #2 at sta. 1+52.09 // C&G Type 2 at sta. 36+92	4P	120592	4865/truck# 1	82	3.25	5.8	138.8	0.42	1.00		4480	5710	35520013
8/30/2017	608	Curb Ramp #1 & #10 - sta. 0+81.97 & 36+94.08	5P	120595	4886/truck# 1	86	2.5	5.7	140.2	0.43	0.99		4690	5960	35520046
10/3/2017	608 609	Curb Ramp #7 - sta. 23+58.91 and C&G Type 2 - sta. 24+20, 36+53.30	6P	166001	5041/truck #1	77	2.5	*4.8	142.0	0.42	0.98		5780	6810	35520156
10/12/2017	608	Curb Ramp #8 & #9 - sta. 24+20 & 36+47.34	7P	166003	5055/truck #1	60	2.5	5.7	141.8	0.42	0.98		5100	6410	35520173
	<u></u>														
		_													
		*see form 473 for additional info												TRAUTHE	RAHAMEHTO

note: this spreadsheet displays the pertinent data from the concrete tested in general accordance with ASTM procedures. Additional information is available upon request for compressive strength results per ASTM C 39.

# FOUR CORNERS

**DELIVERY INVOICE** 

#### PAGOSA

601

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7)	1/0	and shall indemnify	and hold harmless Fo	OUR CORNERS M	ATERIALS and its employee	es from any loss, cost, dama	ge, or expense in	
JMP 🔔 NC. TEMP.	I AIR%		authorized and directe				handre of	ARRIVE JOB
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	KEN ZYES	to which water or of	her material has been	n added at the insis	tence of the Purchaser after	the strength and consistency r it leaves the plant. Any sam	pling and testing	FINISH POURING
x 5	"```'} ⊿ YES □ NO	of this concrete mus	t be in strict accordar	nce with ASTM proc	edures.			
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STE 480-008



Truck 2 of 2 sta 24+26 -25+03

# **C U** MATERIALS

**DELIVERY INVOICE** 

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Wkm= 0.424/ Ry=0.98

# sta: 24+26 = -25+03

**DELIVERY INVOICE** 

## PAGOSA

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SPECIAL INSTRUCTIONS

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STE 480-008

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# FOUR CORNERS

DELIVERY INVOICE

PAGOSA

601

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EL	AIR ENTRAIN	SUPER PLAS.		% %			CITY TAX	

TEAR HERE

No.053230

RESECTEP

**新国际基础**的是《法庭的知识和》。1

317152

# FOUR CORNERS

**DELIVERY INVOICE** 

PAGOSA

601-STRUCTURAL

	ANT: 970-73 FAX: 970-73	1-5197	0 (A-147 e	P.O. BOX 1 BAYFIELD, CO	81122				3231	
AMO TEST RESULTS SLUMP CONC. TEMP. 75 CYLINDERS TA	31/2 AIR % 6.2	or the event or delivery and shall indemnify making delivery as  This concrete will return to which water or control or which water or control or the water or control or which water or control or which water or control or water or control or water or control or water or control or water or control or water or control or water or control or water or control or water or control or water or control or water or control or water or control or water or control or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or water or	very beyond the curro into a r and hold harmless FO authorized and directed neet the specifications to FOUR CORNERS Nather material has been	ob site premises of prope UR COANERS MATERIA i, for the working strength n MATERIALS will not acce	can be liability and responsibility adjacent thereto as a material and its employees from the delivery slip if of responsibility for the street the Purchaser after it leaves	eans of access any loss, cost, properly pour noth and consi	to the distantage, of and curstency of a	scharge area or expense in ed but is not any concrete	ARRIVE JOB	<b>3</b>
1234115201452115347A	owes	TERMS: Net due attorney fees and any outstanding ba	l/or court costs as m lance.	ay be deemed reasona	assessed on past due acc ble in the event legal ac	ion becomes	necessa	ry to collect	LEAVE JOB	
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PECIAL INSTRI	UCTIONS					<u> </u>				
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No.053231

Ny = 1.00



### **DELIVERY INVOICE**

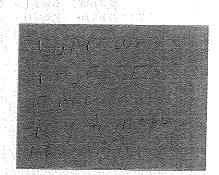
### PAGOSA

BATCH PLANT: 970-731-5194 FAX: 970-731-5197

P.O. BOX 1969 BAYFIELD, CO 81122 No. 053263

EST RESULTS LUMP ONC. TEMP.	AIR %	CORNERS MATER and shall indemnify making delivery as a This concrete will m otherwise warranted to which water or of	IALS to travel of and hold harmle authorized and c eet the specific I. FOUR CORN her material has	on the job ess FOUI directed. ations for IERS MA s been ac	site premises CORNERS A the working s TERIALS will	of property a MATERIALS a trength marke not accept resistence of the	ability and responsibility for diacent thereto as a mear and its employees from any don the delivery slip if pro- ponsibility for the strength Purchaser after it leaves ti	les of access to the loss, cost, damage perly poured and and consistency	e, or expense in cured but is not of any concrete	LEAVE PLANT ARRIVE JOB FINISH POURING
ESTED BY	□ NO	of this concrete mus	00 days 1 1/2%	ner m	ooth /18 % oc	or vear) asse	ssed on past due accou n the event legal actior	nts. Purchaser a	grees to pay all	LEAVE JOB
VATER ADDED	AT	any outstanding bal	ance.	BY:				ALLOWAR TIME: 7 M	LE UNLOADING INUTES PER	ARRIVE PLANT
USTOMER'S RI USTOMER ID	and the first of the second second	). NUMBER	GALLONS	C	USTOME	ZONE	TIME	CUBIÇ YA	HD.	TICKET
OLD TO				DEI	IVER TO			DRIVER		
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HIS LOAD	ORDERED	DELIVERED	CODE		DESCRIPTION			MEASURE	PRICE	PRICE
RUCK	PLANT	SLUMP	DUE AT JOB		USE OF CON	RETE			SUB TOTAL STATE TAX	·
CCEL	AIR ENTRAIN	SUPER PLAS,	CAL. CHLORI	DE %	HOT WATER	RETARDEF			COUNTY TAX	
DELIVERY INST	RUCTIONS			40.00					TOTAL	
SPECIAL INSTR	UCTIONS							L		

No.053263



# FOUR CORNERS

## **DELIVERY INVOICE**

#### PAGOSA

BATCH PL			, , , ,	P.O. BAYFIEL ), 30 UU	BOX 1969 .D, CO 81	122			No. 0	33265
EST RESULTS SLUMP DONG, TEMP.	23/4   AIR%	and shall indemnify making delivery as	RIALS to travel on the and hold harmless F authorized and direct	e job site premise: FOUR CORNERS ted.	s of property a MATERIALS a	ability and respons djacent thereto as nd its employees fr	a means of a om any loss, o	ccess to the	truck(s) of FOUR e discharge area ge, or expense in	LEAVE PLANT
85 YUNDERS TAK	5,5 EN @ YES □ NO	to which water or of of this concrete mus	neet the specification d. FOUR CORNERS ther material has bee st be in strict accorda	on added at the ins ince with ASTM pro	not accept re- istence of the ocedures.	sponsibility for the Purchaser after it l	strength and o eaves the plar	consistency nt. Any san	y of any concrete opling and testing	ARRIVE JOB FINISH POURING
ESTED BY ERIC	Hauses	TERMS: Net due : attorney fees and, any outstanding bal	30 days-1 1/2% per /or court costs as ance.	month (18 % p may be deemed	er year) asse reasonable i	ssed on past due n the event legal	action beco	mes nece	ssary to collect	LEAVE JOB
VATER ADDED A LUSTOMER'S RE LUSTOMER ID	QUEST	( <del>l</del>	GALLONS BY	: CUSTOMEI	R SIGNAT			TIME: 7 M CUBIC YA	BLE UNLOADING IINUTES PER .RD.	
OLD TO				DELIVER TO	ZONE	TIME	DAT			TICKET
							<b>DHI</b>	VER		
UANTITY HIS LOAD	QUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT CODE	PRODUCT DESCRIPTION				NIT OF SEASURE	UNIT PRICE	EXTENDED PRICE
auck -	PLANT	SLUMP	DUE AT JOB	USE OF CONC	RETE				SUB TOTAL	
CCEL ELIVERY INSTRU	AIR ENTRAIN	SUPER PLAS.	CAL, CHLORIDE	HOT WATER % %	RETARDER				STATE TAX COUNTY TAX CITY TAX	
PECIAL INSTRUC									TOTAL	

TEAR HERE

No.053285

wlom= 0.4501 Ry= 1.01

= 35+7615

**DELIVERY INVOICE** 

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FA)	T: 970-731 X: 970-731	-5194 -5197 V = 0,248 on the event of delive	ω=42,	05	F-43/FIF1 F	OX 1969 O, CO 811	22			No. 05	3316
	<u> 2005 - 200 (200 - 200 )</u>	n the event of delive	ry beyond the t		, the undersigne	ed assumes lial	ility and responsib	oility for authorizing means of acce	ing the tr	uck(s) of FOUR discharge area	LEAVE PLANT
RESULTS	3 1 // 1	CORNERS MATERI and shall indemnify a	ALS to travel o	ss FOU	R CORNERS N	Of property au IATERIALS an	d its employees fro	m any loss, cos	t, damage	e, or expense in	
MP .	J 6 8 12	naking delivery as a	uthorized and o	irected.							ARRIVE JOB
C. TEMP.	AIR % 7	This concrete will me	eet the specific	ations fo	or the working s	trength marked	on the delivery sli	ip if properly pos	ured and	cured but is not	
10~	· · · · · · · · · · · · · · · · · ·	This concrete will me otherwise warranted o which water or oth	FOUR CORN	IERS M	ATERIALS will a	not accept responds	onsibility for the s urchaser after it le	aves the plant.	Any samp	oling and testing	FINISH POURING
	El les la	of this concrete must	t be in strict acc	cordance	With AS I M pro	ceuures.			ili ta ka		
Bank Tennenger	□ NO □	renms: Net due 3	0 days-1 1/2%	ь per п	nonth (18 % pe	er year) asses	sed on past due	accounts. Purc	haser ag	rees to pay all	LEAVE JOB
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1615 115	3 ra 6 m	any ouistanting bata	11 ICG.					AL	LOWABI	E UNLOADING	ARRIVE PLANT
ER ADDED AT		1	$\cap$	BY: -	CUSTOMER	SIGNAT	URF		ME: / MI JBIC YAI	NUTES PER RD.	
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ICK F	PLANT PLANT	SLUMP	DUE AT JOE		USE OF CON	CRETE			xò () vù ()	SUB TOTAL	
JOK F		SLUMP	DUE AT JOE		USE OF CON	CHETE			xò () vù ()	SUB TOTAL STATE TAX	
		SLUMP SUPER PLAS.	DUE AT JOE		USE OF CON	CRETE  RETARDER			xò () vù ()	<del>-</del>	
	PLANT			RIDE	HOT WATER	RETARDER			xò () vù ()	STATE TAX	
	PLANT				HOT WATER				xò () vù ()	STATE TAX COUNTY TAX	

W/cm = 0.426

### MATERIALS PAGOSA

608

BATCH PLANT: 970-731-5194

FAX: 970-731-5197

P.O. BOX 1969 BAYFIELD, CO 81122

**DELIVERY INVOICE** 

	AMOI 1=	, In the event of deliv	on bound the	سر <i>ب</i> مراز طوره		od accumac li	ahility and racons	ibility for out	norizina the	truck(s) of FOLIR		
TEST RESULTS		CORNERS MATER and shall indemnify	RIALS to travel of and hold harmle	on the joi	b site premises	of property a	diacent thereto as	a means of	access to the	e discharge area	LEAVE PLANT	1 % 2 % 1 %
SLUMP CONC. TEMP,	I AIR %	making delivery as	authorized and (	pirected.							ARRIVE JOB	13.5
		This concrete will motherwise warrante	d. FOUR CORN	IERS M/	ATERIALS will	not accept re	sponsibility for the	strength and	d consistency	of any concrete		01
CYLINDERS TA	KEN ØYES S ØNO	to which water or of of this concrete mus	ther material ha st be in strict acc	s been a cordance	dded at the insi with ASTM pro	istence of the ocedures.	Purchaser after it I	eaves the p	lant. Any sam	pling and testing	FINISH POURING	
	HOWES	TERMS: Net due attorney fees and any outstanding bal	or court costs	6 per m as may	onth (18 % po y be deemed	er year) asse reasonable	ssed on past due in the event lega	accounts. I action be	Purchaser a comes nece	grees to pay all ssary to collect	LEAVE JOB	
WATER ADDED				BY:_						LE UNLOADING	ARRIVE PLANT	**
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THIS LOAD	ORDERED	DELIVERED	CODE		DESCRIPTION				MEASURE	PRICE	PRICE	
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					ENGLIN		ál bar i					
rruck	PLANT	SLUMP	DUE AT JOB		USE OF CONC	RETE				SUB TOTAL		
ACCEL	AIR ENTRAIN	SUPER PLAS.	CAL, CHLORI	ne .	HOT WATER	RETARDER			-	STATE TAX		
1UUEL	AIR ENTRAIN	OUPEN FLAS.	OAL, UNLOH	UL.	IN WATER	PEINIDER				COUNTY TAX		
				%	<u> </u>	%				CITY TAX		
DELIVERY INST	RUCTIONS									TOTAL		

SPECIAL INSTRUCTIONS

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STE-480-008 19219 TRUCK 10+1 CWB tamp 10,36491981

# FOUR CORNERS

### **DELIVERY INVOICE**

				PAG	206	A	608	•	
	ANT: 970-7 FAX: 970-7 イェネギロ	731-5194 731-5197 イェロ・249 しん ー In the event of delive	-42.40	P.O. E BAYFIELI () ພຸ ≈  4(0)	3OX 1969 D, CO 8112	2		No. O	3348
ST RESULTS	21/2	CORNERS MATERI and shall indemnify a	ALS to travel on the nd hold harmless F	e job site premises OUR CORNERS M	or propeny adia	cent inereto as a m	ieans of access to the	usullarye area	LEAVE PLANT
_UMP ONG, TEMP. 86	AIR % 5.7	othonuise warranted	et the specification	s for the working st	not accept respo	ensibility for the stre	f properly poured and ngth and consistency	of any concrete	ARRIVE JOB
YLINDERS TAK	EN ØYES 5 🗆 NO	to which water or oth of this concrete must	er material has bee be in strict accorda	on added at the insi ince with ASTM pro	stence of the Pu cedures.	rchaser after it leav	es the plant, Any sam	pling and testing	FINISH POURING
STED BY	HOWES	TERMS: Net due 3 attorney fees and/o any outstanding bala	or court costs as	month (18 % pe may be deemed	er year) assess reasonable in	ed on past due acc the event legal ac	counts. Purchaser a tion becomes nece	grees to pay all ssary to collect	LEAVE JOB
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RUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONC	PRETE			SUB TOTAL	
YCEI	AID ENTRAIN	SUPER PLAS	CAL CHLORIDE	HOT WATER	IRETARDER			STATE TAX	

DELIVERY INSTRUCTIONS
SPECIAL INSTRUCTIONS

TEAR HERE

No.058348

W/cm= 0.428 Ry= 0.99

CITY TAX

TOTAL

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r-Marka E. J. r. J. Karilley B. R. y

CHG sta: 24+20 truck 1cf1 19219 STE 480-008

QUANTITY Q	OUANTITY ORDERED	QUANTITY DELIVERED	PRODUCT		PRODUCT DESCRIPTION			UNIT			EXTENDED PRICE
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CUSTOMER'S REQUI		D. NUMBER	GALLONS	CI	USTOMEF	R SIGNA ZONE	TUHE	DATE	IC YARD.		TICKET
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ESTED BY	□ио	of this concrete mus	it be in sinci acci	MOZNCE V	WILLYOUNS PRO			ie accounts. Purcha al action becomes	ser agrees	to pay all	LEAVE JOB
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AMOIT	1: 970-73 (: 970-73 <u>: 4:5 V</u>	1-5197 (0, 249 t. In the event of delive	15 42,8 ery beyond the co	ے urb line, i	BAYFIELD ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	0 d assumes l	ability and respon	sibility for authorizing s a means of access	the truck(s	) of FOUR	AASS

DELIVERY INSTRUCTIONS SPECIAL INSTRUCTIONS

PLANT

AIR ENTRAIN

TRUCK

ACCEL

TEAR HERE

RETARDER

USE OF CONCRETE

HOT WATER

DUE AT JOB

CAL CHLORIDE

No.053478

SUB TOTAL

STATE TAX

CITY TAX TOTAL

COUNTY TAX

WICM = 0.42 RY = 0.99

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SUPER PLAS.

## **DELIVERY INVOICE**

EAVE JOB

	PAGOSA 608 Curb rump	
BATCH PLANT: 970-7	31-5194 P.O. BOX 1969 No (1)	33475
FAX: 970-7	31-5197 BAYFIELD, CO 81122 IVO. いっては、 しょうしょう はいましま はいましま は しゅうしょう は the event of delivery beyond the curb line, the undersigned assumes liability and responsibility for authorizing the truck(s) of FOUR	
AMOLTS 7,500 TEST RESULTS 0116	COHNERS MATERIALS to travel on the job site premises of property adjacent thereto as a means of access to the discharge area	ILEAVE PLANT
SLUMP 21/2	and shall indemnify and hold harmless FOUR CORNERS MATERIALS and its employees from any loss, cost, damage, or expense in making delivery as authorized and directed.	
CONC. TEMP.   AIR %	This concrete will meet the specifications for the working strength marked on the delivery slip if properly poured and cured but is not	ARRIVE JOB
CYLINDERS TAKEN OFFES	otherwise warranted. FOUR CORNERS MATERIALS will not accept responsibility for the strength and consistency of any concrete to which water or other material has been added at the insistence of the Purchaser after it leaves the plant, Any sampling and testing	
5 (INO	of this concrete must be in strict accordance with ASTM procedures.	r ir dor i i Corillad

Howes any outstanding balance. ALLOWABLE UNLOADING ARRIVE PLANT WATER ADDED AT TIME: 7 MINUTES PER CUSTOMER'S REQUEST **CUSTOMER SIGNATURE** GALLONS CUBIC YARD. CUSTOMER ID P.O. NUMBER TICKET DATE

TERMS: Net due 30 days-1 1/2% per month (18 % per year) assessed on past due accounts. Purchaser agrees to pay all attorney fees and/or court costs as may be deemed reasonable in the event legal action becomes necessary to collect

DEGVERTO & SOLD TO DRIVER QUANTITY QUANTITY QUANTITY PRODUCT PRODUCT UNIT EXTENDED UNIT OF ORDERED DELIVERED CODE DESCRIPTION MEASURE PRICE THIS LOAD PRICE

TRUCK PLANT SLUMP DUE AT JOB USE OF CONCRETE SUB TOTAL STATE TAX ACCEL AIR ENTRAIN SUPER PLAS. CAL, CHLORIDE HOT WATER RETARDER COUNTY TAX CITY TAX DELIVERY INSTRUCTIONS TOTAL

SPECIAL INSTRUCTIONS

TESTED BY

□ NO

TEAR HERE

No.053475

W/cm= 0.42 Ry= 0.45

White copy - CDOT Central Laboratory

(submit white copy only if sample or information is directed to Staff Materials)

Canary copy - Region Materials Engineer

Pink copy - Resident Engineer

CDOT Form #157









Maysor

#### OLDCASTLE SW GROUP. INC.

Submittal # 17-355-003

Version 1

8/4/2017

ONE TOUCH ELECTRIC, INC 3228 RD 21 CORTEZ CO 81321

Job: CDOT STE C480-008

Job Description: Pinion Causeway & Aspen Village, Pag Sprgs CO

Attn: Dick Giesler

All materials and concrete delivered to this project conform to ASTM C-94, ACI 301 and ACI 318 Specifications for Ready Mixed Concrete. Four Corners Materials will not be responsible for concrete compromised by the addition of water, improper placing, finishing or curing techniques.

This submission contains the following mix designs:

Mix Code	Mix Description	Usage		
37023344	CLASS D AG GCC	VARIOUS USES		
36923344	CLASS BZ AG GCC	VARIOUS USES		
30023344	AG CDOT FLOW FILL GCCP	FLOW FILL		

Please have your personnel place the order for concrete using the designated mix number. The concrete will come from Plant 355. The phone number is (505) 324-3900.

PLEASE NOTIFY THIS OFFICE AS TO THE ACCEPTANCE OR REJECTION OF THIS MIX SUBMITTAL. LACK OF RESPONSE PRIOR TO FIRST POUR SHALL RESULT IN ACCEPTANCE.

NOTE: ALL CONCRETE MUST BE ORDERED BY THE APPROVED MIX DESIGN NUMBER. EVALUATION OF THIS CONCRETE MUST BE CONDUCTED ACCORDING TO ASTM AND ACI STANDARDS.

Thank you for giving us this opportunity to be of service to you, feel free to contact me if you should need any further assistance.

Sincerely yours,

Ray Taulli









#### OLDCASTLE SW GROUP, INC.

### Concrete Mix Design Submittal

Date: 08/04/2017

No. 17-355-003 Version 1

Mix Code: 36923344 Description: CLASS BZ AG GCC

Customer

ONE TOUCH ELECTRIC, INC.

Tolerance

Contact

Dick Gesler

Air Content

1.5

Office Phone

Slump

7

Project Name

970-565-9684 CDOT STE C480-008

Design Strength

4200 psi

Project Description

Pinion Causeway & Aspen Village, Pag Sprgs CO

Unit Weight

147.8 lb/ft3

Usage/ Placement

VARIOUS USES

W/C Ratio

0.45

Design

Material Code	Material Description	Material Supplier	Material Source	Standard	Design Quantity	Specific Gravity	Volume (ft3)
AG-#67	ANIMAS GLACIER # 67	FCM	ANIMAS GLACIER	C-33	1800 lb	2.66	10.86
AG-SND	ANIMAS GLACIER SAND	FCM	ANIMAS GLACIER	C-33	1301 lb	2.66	7.84
GCC-VII	GCC CEMENT	GCC	PUEBLO	C-150	490 lb	3.15	2.49
4-CRNRS	FOUR CORNERS FLYASH	SRMG	4 CORNERS	C-618	125 lb	1,99	1.01
GLEN7500	GLENIUM 7500 HRWR	BASE	BASF DENVER	C 494	0 lq oz	-	
WATER	WATER	WATER	WATER	C-1602	33.0 gal	1.00	4.41
				Air Content	1.50 %	_	0.41
				Yield	3991 lb	_	27.01

NOTES

Prepared By:

Paul Appel

#### COLORADO DEPARTMENT OF TRANSPORTATION

# **Pre-Approved Concrete Mix Designs**

These concrete mix designs meet the requirements of CDOT Standard Specifications and the CDOT Field Materials Manual CP 62. Inclusion on the APL does not guarantee that a mix will be approved for use on a project.

Please contact the Concrete & Physical Properties Unit at 303-398-6549 for more information on these mix designs.

Updated: 8/7/2017

#### **Everist Materials, LLC**

CDOT Mix Number	Supplier Mix ID			Expiration Date
2016123	645109D	Concrete, Class D/P	Class 1 Sulfate Resistance	11/01/2017

#### **Four Corners Materials**

CDOT Mix Number	Supplier Mix ID			Expiration Date
2016106	37023347	Concrete, Class D	Class 2 Sulfate Resistance	01/20/2018
2016107 ,	36923347	Concrete, Class BZ	Class 2 Sulfate Resistance	01/20/2018
2017069	37523344	Concrete, Class P	Class 2 Sulfate Resistance	11/24/2018
2017094	38023344	Concrete, Class E	Class 2 Sulfate Resistance	10/10/2018
2017122	38023347	Concrete, Class E	Class 2 Sulfate Resistance	11/24/2018
2017123	37523347	Concrete, Class P	Class 2 Sulfate Resistance	11/24/2018
2017125	38023347	Concrete, Class E	Class 2 Sulfate Resistance	11/24/2018
. 2017130	38523605	Shotcrete	Class 2 Sulfate Resistance	11/24/2018
2017173	36923344	Concrete, Class BZ	Class 2 Sulfate Resistance	11/24/2018

## Four Corners Materials Animas-Glacier pit

CDOT Mix Number	Supplier Mix ID	799-199-199-199-199-199-199-199-199-199-		Expiration Date
2017174	37023344	Concrete, Class D	Class 2 Sulfate Resistance	11/24/2018

#### Fremont Paving And Redi-Mix, Inc.

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017139	CCDP20F16	Concrete, Class D/P	Class 2 Sulfate Resistance	06/01/2018
2017162	PWDP20F17	Concrete, Class D/P	Class 2 Sulfate Resistance	02/01/2019
2017163	PWDP20F17AC	Concrete, Class D/P	Class 2 Sulfate Resistance	11/01/2018
2017164	PWBZ20F17	Concrete, Class BZ	Class 2 Sulfate Resistance	11/01/2018

### **Green Brothers Ready Mix**

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017041	3165002E	Concrete, Class D	Class 2 Sulfate Resistance	01/15/2018
2017042	3165002F	Concrete, Class E	Class 2 Sulfate Resistance	01/12/2018

### Halde Readi-Mix, Inc.

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017150	T16062-425	Concrete, Class D	Class 0 Sulfate Resistance	12/13/2017

#### **Hard Rock Concrete**

CDOT Mix Number	Supplier Mix ID			Expiration Date
2017170	HRDP20F17	Concrete, Class D/P	Class 2 Sulfate Resistance	02/01/2019
2017171	HRBZ20F17	Concrete, Class BZ	Class 2 Sulfate Resistance	02/01/2019



OLDÇASTLE SW GROUP, INC.

FOUR CORNERS MATERIALS PO Box 16 Farmington, New Mexico 87499

Tel: 505 324 3910

Mix:

36923344 - CLASS BZ AG GCC

Period:

05/23/2017 to 05/23/2017

Specified Strength 4200	Strength Type	Compressive Test	28 Day	
Number of Tests 1	Over Design Type	, ,	Within Test CofV Factor	1.693
Average Strength 7420	SD Correction Factor	0.000	Within Test SD	140
Standard Deviation	Corrected SD		Within Test CofV	1.89
Degree of Control	Corrected CofV		Within Test CofV Control	EXCELLENT
Coefficient of Variation	f'c + 1200	5400	Batch-to-Batch SD	
	f'c + 1200	5400	Batch-to-Batch CofV	
	Required Strength	5400	Cem entitious Content	615
Maximum fc for Mix 6220	Safety Factor	2020	Cementitious Efficiency	12.1

Date	Sam ple	Strength28	Air Content %	Slump in	Concrete Temp deg F
05/23/2017	34407140	7420	1.50	7.75	74

# Concrete Aggregate Test Report



Supplier Information	Report Date	3/9/17	
Four Corners Materials			
PO Box 16	Sampled By	Client	
Farmington, NM 87499	Material Tested.	Concrete Sand	
	Date Tested.	12/2-12/16/16	
11/24/2016	Tested By.	Mary /Annikah	
11/24/2016	Sample Location:	Stockpile	
ALB 269-16	Sample Source:	Animas Glacier Pit	
	Supplier Information Four Corners Materials PO Box 16 Farmington, NM 87499  11/24/2016 11/24/2016 ALB 269-16	Four Corners Materials           PO Box 16         Sampled By           Farmington, NM 87499         Material Tested           Date Tested         Date Tested By           11/24/2016         Sample Location:	Four Corners Materials           PO Box 16         Sampled By Client           Farmington, NM 87499         Material Tested. Correcte Sand           Date Tested. 12/2-12/16/16         11/24/2016           Tested By. Mary/Annikah         Mary/Annikah           11/24/2016         Sample Location: Stockpile

#### Sieve Analysis

#### **Test Results**

C-117 & C136/T-11 & T-27 ASTM C33

ASTM C33

	Sieve Size	% Passing	Specs
	1/2" (12.5mm)		
	3/8" (9mm)	100	100
	#4 (4.75mm)	100	95-100
	#8 (2.36mm)	90	80-100
	#10 (2mm)		
	#15 (1 18mm)	73	50-85
	#30 (0.6mm)	54	25-60
	#40 (0 425mm)		
1	#50 (0 3mm)	27	5-30
	#80 (0.18mm)		
	#100 (0.15mm)	8	0-10
,	/200 (0.075mm)	2.4	0.3
F	neness Modulus	2.49	

Standard	P	hysical Pro	perties	Results	Specs
C-128	Fine	. 1	Julk Specific Gravity	2.626	
	Specific	Buk S	pecific Gravity, SSD	2.661	
T-84 '	Gravity &	eqqA	ent Specific Gravity	2.721	
	Absorption		Absorption, 35	1.3	
CP37	Sand Equiv.		Sand Equivalent, %	90	> 80
C-142	Clay/Friable		Fine Aggregate, %	0.2	< 3.0
T-112	Particles				
C40	Organic		Organic Impunities	N/I	
	Impurities				
C-83	Saundness	Fine 8	Soundness Lass, ¾	6.3	< 15
T-104		5 cycles	MgSO,		
C-59	Unit Weight	Ų	nit Weight, (lbs:ft3)	105.7	
T-19	& Voids		Vo:ds %	35.4	
shoveling					

Respectfully Submitted.

Reports to Paul Appel fax/email

Rick Morris

Paul.Appel@oldcastle-materials com

morris@4cornersmatenals.ccm

Albuquerque, NM 87113

505-503-6670

414 Bibb Industrial Dr. P.O.Box 1228 Las Vegas, NM 87701 505-718-3030

Concrete, Aggregate and Asphalt Testing, LLC

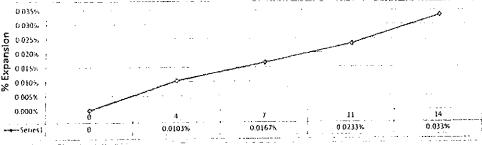
### Alkali-Silica Reaction Analysis Report

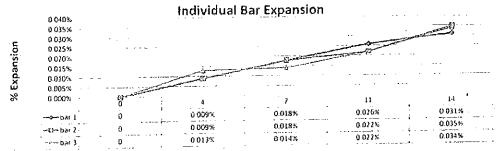


Clien	: Four Corners Materials	Date Reported: 1/2/2017 Dremsed
Address	: PO Box 16	Project: Various
	Farmington, NM 87499	Project #: Vanous
		Aggregate Source(s): Animas Glacier, Concrete Sand
		Cement Source: GCC Pueblo I/II
Test requested by	: Rick/Paul	Admixture Source: SRM Four Corners CI F Flyash
Samples Received		Admixture Percentage 25% by wt of cement or
Laboratory #	742-16	20% by wt of cementations

Standard Test Method for Determining the Potential Alkali Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortal Bar Method) ASTM C1567-13

alch date	11/29/2017	Reading	Bar A	Bar B	Bar C	Calibration	Avg Bar	expansion Spe
est Date	11/30/17	Initia!	0.3561	0 3 1 2 3	0 2995	0.0713	0 3226	
4001-	12/1/17	Zero	0,3614	0 3177	0 3048	0.0712	0 3280	
	12/5/17	4	0,3625	0.3188	0.3063	0 0714	0 3292	
			0.009%	0.009%	0.013%			0.0103%
•	12/8/17	7	0.3632	0.3195	0 3062	0 0712	0,3296	
			0018%	0.018%	0.014%			0.0167%
	12/12/17	11	0.3638	0.3197	0.3068	. 0 071	0 3301	
			0 026%	0.022%	0 022%			0.0233%
	12/15/17	14	0.3645	0 3212	0.3082	0.0712	0 3313	
			0.031%	0.035%	0.034%	, , , , , , , , , , , , , , , , , , , ,		0.03% < 0.10
		•				-	eff	ectively mitigated





Respectfully Submitted

Lea Ann Marquez PE

3-2-1

39043

# Concrete Aggregate Test Report



1	•			,
Project	Supplier Information	Report Date.	3/9/17	
Client:	Four Corners Materials			
Address:	PO Box 16	Sampled By.	Client	
ļ	Farmington, NM 87499	Material Tested:	#67 Stone	
1		Date Tested:	12/2-12/16/15	
Sample Date	11/24/2016	Tested By	Pedro	
Sample received:	11/24/2016	Sample Location	Stockpile	
Laboratory #:	LL659-16	Sample Source	Animas Glacier Pit	

#### Sieve Analysis

#### **Test Results**

C-117 & C136/T-11 & T-27 ASTM C33, Size #67

ASTM C33

	Sieve Size	% Passing	Specs		St
-					
		,			
	21(50mm)			ĺ	
	1.5" (37.5mm;				
	11(25mm)	100	100		١ ,
	3/4" (19mm)	95	90-100		
	1/2" (12 5mm)	58			C
ı	3/8' (9mm)	36	20-55		L
	#4 (4 75mm)	6	0-10		0
Ì	#8 (2 36mm)	2	0-5		
1	#10 (2mm)				,
Ì	#16 (1 18mm)	2		i	ī
	#30 (0.6mm)	1			С
	#40 (0 425mm)				
1	#50 (0.3mm)	1			
	#80 (û 18mm)				c
	#100 (0.15mm)	1			
1	#200 (0.075mm)	0.8	0-1.5		
Ĺ	Fineness Modulus	4.99		Ì	Tota
_				Į	C

Standard	Physical Properties			Results	Specs
C-127	Coarse	Be	ulk Specific Gravity	2.625	
	Specific	Bulk Sp	ecitic Gravity, SSD	2.657	]
T-85	Gravity &	Appare	ot Specific Gravily	2.711	
	Absorption		Absorption %	1.2	
C-142	Clay/Friable	Cc	arse Aggregate, %	0.5	< 3.0
T-112	Particles				
D5821	Fractured		1 face	94	No reg
	Faces		2 faces	90	
C-131	LΑ		LA Wear 1%	21	< 50
T-95	Abrasion		Grading		
C-88	Soundness	Cearse S	oundness Loss %	1.7	< 18
T-104	5 cycles		MgSO,		
C-123	Lightweight	l	ight Wt Pieces %	N/T	< 0.5
	Pieces		Type of Solution		hloride - lignite
C-123	Eightweight	Ł	ogni Wi Pieces %	1.6	< 3.0
	Pieces		Type of Solution	Zinc Brom	ide - Chert
Total Delet	erious			2 9	< 3.0
C-29	Unit Weight	Uni	t Weight, (lbs:/ft3)	99.5	
T-19	& Voids		Voids %	39.2	
		Rodded			

Reports to Paul Appel fax/email

Paul Appel@olccastle-materials.com

Rick Morris

PO Box 1228

rmorris@4comersmaterials com

Respectfully Submitted.

Unit H Albuquerque, NM 87113 505-503-6670

414 Bibb Industrial Dr Las Vegas NM 87701 505-718-3030

Concrete, Aggregate and Asphalt Testing, LLC

### Alkali-Silica Reaction Analysis Report

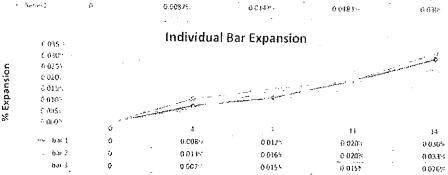


14

Address:	Four Corners Materials PO Box 18 Farmington, NM 87499	Oate Reported; Project Project #3	Various
Trans and a second of the		Aggregate Source(s): Cement Source:	Animas Glacier, Coarse Aggregate GCC Pueblo I/II
Test requested by: Samples Received.	11/24/2016		SRM Four Corners CL F Flyash 25% by Ivit of cement or
Laboratory #:	743-16		20% by wt of comenhious

Standard Test Method for Determining the Potential Alkah Reactivity of Combinations of Gementikous Materials and Aggregate. (Accelerated Mortar Bar Method) ASTM C1567-12.

•									
Batch date	11/29/2017	Reading	Bar A	Bar B	Bar C	Calibration	Avg Bar	expansion	Specs
Test Date	11/35/17	Initial	0 3645	0 3155	0 2965	0.0713	0 3255	CAPS COST	apecs
	12-1/17	Zero	0.3704	0 3210	0.3025	0 0712	0.3313		
	12:5 17	đ	0 3713	0 3222	0 3033	0 0713	3 3323		
			<b>%800 0</b>	0.015.	0.007%	,		0.0087%	
	12:8:17	7	0 3727	0 3237	0 3051	0 0723	0 3338		
			0.0123	0.016~	0.0155	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		0.0143%	
	12-12/17	11	0.3722	0 3228	0 3038	0 071	5 3329	0.014073	
			0.020%	0.026 9	3,315%			0.0183%	
	12:15:17	14	0 3735	0 3244	0 3052	0 0713	0.3344	2.0.0013	
			0 030%	0.0334	5.0201.			0.03%	< 0.10
						•		<u> </u>	ively mingate
0.0353			· · · · · · · · · · · · · · · · · · ·						orally manyora
3 030									
8 0.0255									
<b>2</b> 66754							سر	November 2 22	
00254 00254 00254						was well and the same of the same of			
U.J					The state of the state of				
2 0 0 14. 2 0 0 1 1.									



Respectfully Submitted

NARO

Lea-Arm Marquez PE

39043

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#### GCC of America

Cherry Creek Plaza 1, 600 S. Cherry Street, 10th Floor, Glandale, CO 80246 Sales (303) 739-5900 Customer Service (800) CALL GCC

#### MATERIAL CERTIFICATION REPORT

Plant: Pueblo Address: 3372 Lime Road Pueblo, CO 81004 Contact: Urs Fuchs Phone: (719) 647-6821 Cement Type: 1/!!, Low Alkali, GU Date Issued: 10-Jul-17 Production Period: 1-Jun-17 To: 30-Jun-17

#### STANDARD REQUIREMENTS ASTM C150/AASHTO M85/ASTM C1157

ASSESSED AND ASSESSED.	CHEMICAL	
ltem .	ASTM C150	Test Result
KeRi	Spec. Limit	ter result
SiO ₂ (%)		19.9
Al ₂ O ₃ (%)	6.0 max	4.6
Fe ₂ O ₃ {%	6,0 max	3.1
CaO (%)	۸.	63.3
MgO (%)	6.0 max	1.0
SO ₃ (%)	3.0 max ⁸	3.3
Loss On Ignition (%)	3.5 max	3.1
Na ₂ O (%)	*	0.29
K ₁ O (%)	A	0.61
Insoluble Residue (%)	1.5 max	1.0
CO2 (%)	A	1.7
Limestone (%)	5.0 max	4.2
CaCO ₃ in Limestone (%)	70.0 min	90
Potential Phase Composition	· ·	
C ₂ S (%)	*	56
C,S (%)	^	14
C ₃ A (%)	8.0 max	7
C.AF (%)	A	9

ltem	ASTM C150 Spec. Limit	ASTM C1157 Spec. Umit	Test Result
Air Content (% vol)	12 max	12 max	8
8laine Fineness (m²/kg)	260 min	A	401
Residue 45 µm (No.325) Sieve (%)		D	2.9
Autoclave Expansion (%)	0.80 max	0.80 max	0.01
Compressive Strength			
3 days, MPa (psi)	12.0 (1740) min	13,0 (1890) min	31.3 (4540)
7 days, MPa (psi)	19.0 (2760) min	20.0 (2900) min	36.8 (5330)
28 days, MPa (psi) ^E	٨	28.0 (4060) min	43.8 (6350)
Time of Setting, Initial Vicat (min)	45min / 375 max	45 min / 420 max	105
Mortar Bar Expansion C-1038 (%)	0.029 max ⁸	0.020 max	0.005

Туре	Limestone	Inorganic Processing Addition	Base Phase Cem	ent Composition
S(O ₂ (%)	5.2	N/A	C ₃ 5 (%)	58
Al,O, (%)	1.2	N/A	C,5 (%)	15
Fe ₂ O ₃ (%)	0.9	N/A	C,A (%)	7
CaO (%)	50.5	N/A	C4AF (%)	10
50, (%)	0.1	N/A		

#### OPTIONAL REQUIREMENTS ASTM C150/AASHTO M85/ASTM C1157

	- GEWCAL	医腹腔肌
ltem	ASTM C150 Spec. Limit	Test Result
quivalent Alkalies (%)	0.60 max	0,60

	РИУЫСАЦ		
ltem:	ASTM C150 Spec. Limit	ASTM C1157 Spec. Limit	Test Result
False Set (%)	50,0 min	50.0 mîn	69

GCC of America Cement is warranted to conform at the time of shipment with current ASTM C150/AASHTO M85/ASTM C1157. No other warranty is made or implied. Having no control over the use of its cements, GCC of America does not guarantee linished work. GCC is not responsible for any additives not stated in the Certificate of Compliance. GCC of America certifies that the data described above under "Processing Addition" represents the materials in the cement manufactured during the production period indicated.

^a Not applicable

Rit is permissible to exceed the specification limit provided that ASTM 1038 Mortar Bar Expansion does not exceed 0.020 % at 14 days.

f Adjusted per Annex A1.6

ONo limit specified, data reported for information purpose only.

¹ Test result of prior month





July 27, 2017

#### GCC Pueblo I/II LA Portland Cement, Pueblo, CO

#### **COMPLIANCE AFFIDAVIT**

Portland Cement, Type I/II, Low-Alkali as manufactured by GCC, at Pueblo, Colorado is warranted to conform at the time of shipment to current ASTM Specification C-150.

No other warranty is made or to be implied.

Sincerely,

Bryan Patterson

Technical Services Manager

GCC

303-739-5916



100% AMERICAN

Clarkdale Cement Plant 601 N. Cement Plant Rd

1802 W. Lower Buckeye Rd Phoenix, AZ 85007

Lower Buckeye Terminal 1941 W. Lower Buckeye Rd Phoenix, AZ 85007 21st Ave. Terminal 1325 N. 21st Ave

Clarkdale, AZ 86324

19th Ave. Terminal

Phoenix, AZ 85009

54th Ave. Terminal

220 East 54th Avenue

Denver, CO 80216

Four Corners Materials Attn: Rick Morris PO Box 2707 Durango, CO 81302-2707

Product: ASTM C618 Class F, Four Corners Fly Ash

AASHTO M295

5402 W Buchanan St. POZZOLAN TEST REPORT Phoenix, AZ 85043 <u>5-19-1</u>7 Ct#: 131214 Dobson Storage 9595 E. McKellips Rd. Lot: 6452 Results **Specifications** Scottsdale, AZ 85250 Cholla Fly Ash Plant Chemical Analysis (C311 / C114 / D4326) 4801 Frontage Rd Silicon Dioxide, SiO2 62.77 % Joseph City, AZ 86032 Aluminum Oxide, Al 203 23.15 % Four Corners Fly Ash Plant 4.03 % Ferric Oxide, Fe₂O₃ End of County Road 6675 SiO₂+Al₂O₃+Fe₂O₃ 70.00 89.95 % Min Fruitland, NM 87416 Calcium Oxide, CaO 1.21 % San Juan Fly Ash Plant 1.20 % Magnesium Oxide, MgO End of County Road 6800 Sulfur Trioxide, SO3 0.23 % 5.00 Max Waterflow, NM 87421 Moisture Content 0.05 % 3.00 Max Escalante Fly Ash Plant County Road 19 Loss on Ignition 0.30 % 6.00 Max Prewitt, NM 87405 Sodium Oxide, Na 20 1.63 % Galfup Transfer Terminal 1:42 % Potassium Oxide, K₂O 900 N 9th St 2.56 % Total Alkalis (%Na 2O + 0.658% K 2O) Gallup, NM 87301 Available Alkalis as Na 20 Equivalent 0.81 % San Diego Terminal 920 Bay Marina Dr Physical Analysis National City, CA 91950 Fineness, amount retained on Fontana Budway Terminal 25.70 34.00 Max #325 sieve, % (C430) 13600 Napa St variation, points from average 2.47 5.00 Max Fontana, Ca 92335 Density, g/cm³ (c188) 1.92 **Bakersfield Terminal** 5.00 Max Variation from average, % 0.03 32535 7th Standard Rd Bakersfield, CA 93314 Strength Activity Index with Portland Cement (@11/ C109) Stockton Terminal 1300 N. Genrude Ave. at 7 days, % of cement control 76.14 Stockton, CA 95215 at 28 days, % of cement control 83.26 75.00 Min Sacramento Terminal Water Requirement (C313) 4520 50th St % of cement control 96.69 105.00 Max McClellan Park, CA 95652 Soundness, autoclave expansion (C311/C151) Panaca Pozzolan Plant or contraction, % -0.030.80 Max 333 Hansen St Panaca, NV 89042 Denver Terminal

All tests have been made in strict accordance with the current standards of the American Society for Testing and Materials covering the type of material specified.

Lee Gorby, Quality Assurance Manager

05 JUL 2017







July 25, 2017

Four Corners Materials PO Box 16 Farmington, NM 87499

PRODUCT:

Four Corners Class F Fly Ash from Fruitland, New Mexico

This letter serves as certification that all **Four Corners Class F Fly Ash** (pozzolan) sold by Salt River Materials Group – Phoenix Cement Company to Four Corners Materials meets the requirements of the latest revision of ASTM C618 for Class F Fly Ash (pozzolan).

We appreciate your interest in our product. If we can provide additional information or technical assistance, please contact us.

Respectfully,

Jeff Fkame

Jeff Hearne

Vice President of Quality Assurance



We create chemistry

	03 30 00	Cast-In-Place Concret	
_	03 40 00	Precast Concrete	
<b>3</b> :	03 70 00	Mass Concrete	

# MasterAir® AE 200

# Air-Entraining Admixture

Formerly Micro Air*

#### Description

MasterAir AE 200 airentraining admixture provides concrete with extra protection by creating air bubbles that are ultrastable, small and closely spaced – a characteristic especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired.

Even when used at a lower dosage than standard airentraining admixtures, MasterAir AE 200 admixture meets the requirements of ASTM C 260, AASHTO M 154, and CRD-C 13.

#### **Applications**

Recommended for use in:

- Concrete exposed to cyclic freezing and thawing
- Production of high-quality normal or lightweight concrete (heavyweight concrete normally does not contain entrained air)

#### **Features**

- Ready-to-use in the proper concentration for rapid, accurate dispensing
- Greatly improved stability of air-entrainment
- Ultra stable air bubbles

#### **Benefits**

- Increased resistance to damage from cyclic freezing and thawing
- Increased resistance to scaling from deicing salts
- Improved plasticity and workability
- Improved air-void system in hardened concrete
- Improved ability to entrain and retain air in low-slump concrete, concrete containing high-carbon content fly ash, concrete using large amounts of fine materials, concrete using high-alkali cements, high-temperature concrete, and concrete with extended mixing times
- Reduced permeability Increased watertightness
- Reduced segregation and bleeding

#### **Performance Characteristics**

Concrete durability research has established that the best protection for concrete from the adverse effects of freezing and thawing cycles and deicing salts results from: proper air content in the hardened concrete, a suitable air-void system in terms of bubble size and spacing and adequate concrete strength, assuming the use of sound aggregates and proper mixing, transporting, placing, consolidation, finishing and curing techniques. MasterAir AE 200 admixture can be used to obtain adequate freezing and thawing durability in a properly proportioned concrete mixture, if standard industry practices are followed.



Air Content Determination: The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method" or ASTM C 173/C 173M, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method."

The air content of lightweight concrete should only be determined using the Volumetric Method. The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138/C 138M, "Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete." If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1.5%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.

#### **Guidelines for Use**

**Dosage:** There is no standard dosage for MasterAir AE 200 admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete varies because of differences in concrete making materials and ambient conditions. Typical factors that might influence the amount of air entrained include: temperature, cementitious materials, sand gradation, sand-aggregate ratio, mixture proportions, slump, means of conveying and placement, consolidation and finishing technique.

The amount of MasterAir AE 200 admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mixture, use 0.125 to 1.5 fl oz/cwt (8-98 mL/100 kg) of cement. In mixtures containing water-reducing or set-control admixtures, the amount of MasterAir AE 200 admixture needed is somewhat less than the amount required in plain concrete. Due to possible changes in the factors that can affect the dosage of MasterAir AE 200 admixture, frequent air content checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air required in the mixture at the point of placement. If an unusually high or low dosage of MasterAir AE 200 admixture is required to obtain the desired air content, consult your Local sales representative. In such cases, it may be necessary to determine that, in addition to a proper air content in the fresh concrete, a suitable air-void system is achieved in the hardened concrete.

Dispensing and Mixing: Add MasterAir AE 200 admixture to the concrete mixture using a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount. For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate or with the initial batch water. If the concrete mixture contains lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

#### Precaution

In a 2005 publication from the Portland Cement Association (PCA R&D Serial No. 2789), it was reported that problematic air-void clustering that can potentially lead to above normal decreases in strength was found to coincide with late additions of water to air-entrained concretes. Late additions of water include the conventional practice of holding back water during batching for addition at the jobsite. Therefore, caution should be exercised with delayed additions to air-entrained concrete, Furthermore, an air content check should be performed after post-batching addition of any other materials to an air-entrained concrete mixture.

#### **Product Notes**

Corrosivity – Non-Chloride, Non-Corrosive: MasterAir AE 200 admixture will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. No calcium chloride or other chloride-based ingredients are used in the manufacture of this admixture.

**Compatibility:** MasterAir AE 200 admixture may be used in combination with any BASF admixture, unless stated otherwise on the data sheet for the other product. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mixture.

#### Storage and Handling

Storage Temperature: MasterAir AE 200 admixture should be stored and dispensed at 35 °F (2 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If it freezes, thaw and reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life: MasterAir AE 200 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your Local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterAir AE 200 admixture has been exceeded.

**Safety:** MasterAir AE 200 admixture is a caustic solution. Chemical goggles and gloves are recommended when transferring or handling this material. (See SDS and/or product label for complete information.)

#### Packaging

MasterAir AE 200 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

#### Related Documents

Safety Data Sheets: MasterAir AE 200 admixture

#### **Additional Information**

For suggested specification information or for additional product data on MasterAir AE 200 admixture, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

#### **Limited Warranty Notice**

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

Micro Air became MasterAir AE 200 under the Master Builders Solutions brand, effective January 1, 2014.

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BASE Corporation
Admixture Systems
www.master-builders-solutions.basf.us

United States 23700 Chagnin Boussvard Olivestand Otro 44121-55-51 Ten 500 678 9390 F. Lax 210 839 8523 Canada 18/0 Cask Buckevard Bramoton, Ontanol, 61 4M7 fer Soc (897 68/07 5 Fax, 905 792 065)





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	03 30 00	Cast-in-Place Concrete
$\circ$	03 40 00	Precast Concrete
3	03 70 00	Mass Concrete

# MasterPolyheed® 997

# **Wid-Range Water-Reducing Admixture**

Formerly PolyHeed 997*

#### Description

MasterPolyheed 997 admixture is a patented multi-component, midrange water-reducing admixture. MasterPolyheed 997 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

#### Applications

Recommended for use in:

- All concrete applications where superior workability, pumpability and finishability qualities are desired, in particular, flatwork, pumped concrete and pervious concrete
- Concrete containing manufactured sand and harsh concrete mixtures

#### **Features**

- True mid-range water reduction (5-15%) and excellent performance across a wide slump range, especially the difficult slump range of 5-8 in. (125-200 mm)
- Superior workability, pumpability and finishability qualities even in concrete mixtures containing low amounts of cementitious materials
- Superior finishing characteristics for residential/commercial flatwork and formed surfaces

#### **Benefits**

- Significantly reduced placement and finishing time resulting in lower in-place concrete costs
- ⊞ Higher strength at all ages
- E Enhanced concrete durability
- Increased service life of concrete structures

#### **Performance Characteristics**

Mixture Data:  $500 \text{ lb/yd}^3$  (295 kg/m³) of Type I cement; slump 6-7 in. (150-180 mm); 5-6% air; concrete temperature 70 °F (21 °C); ambient temperature, 70 °F (21 °C).

#### Setting Time Performance¹

	Initial Set	Difference	
Mixture	(h:min)	(h:min)	
Reference	6:01		
MasterPolyheed 997 admixture @			
5 fl oz/cwt (325 mL/100 kg)	6:22	+0:21	
10 fl oz/cwt (650 mL/100 kg)	6:57	+0:56	
15 fl oz/cwt (980 mL/100 kg)	7:31	<b>+1:30</b>	



#### Compressive Strength, psi (MPa)

Mixture	7-Day	28-Day
Plain	2360 (16.3)	3320 (22.9)
MasterPolyheed 997 admixture @	•	
5 fl oz/cwt (325 mL/100 kg)	3060 (21.1)	3930 (27.1)
10 fl oz/cwt (650 mL/100 kg)	3740 (25.8)	4610 (31.8)
15 fl oz/cwt (980 mL/100 kg)	4620 (31.9)	5460 (37.7)

'Note: The data shown are based on controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete making materials and jobsite conditions.

#### **Guidelines for Use**

**Dosage:** MasterPolyheed 997 admixture has a recommended dosage range of 3-15 fl oz /cwt (195-980 mL/100 kg) of cementitious material for most concrete mixes.

As the dosage of MasterPolyheed 997 admixture increases to 15 fl oz/cwt (980 mL/100 kg) of cementitious materials, normal concrete setting characteristics are maintained and early and ultimate compressive strengths increase.

BASF does not recommend the use of dosages outside the recommended range without trial testing. Consult your local sales representative for assistance in determining the dosage for optimum performance.

#### **Product Notes**

Corrosivity - Non-Chloride, Non-Corrosive: MasterPolyheed 997 admixture will neither initiate nor promote corrosion of reinforcing or prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. MasterPolyheed 997 admixture does not contain intentionally added calcium chloride or other chloride-based ingredients.

Compatibility: MasterPolyheed 997 admixture may be used in combination with any BASF admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

#### Storage and Handling

Storage Temperature: If MasterPolyheed 997 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

**Shelf Life:** MasterPolyheed 997 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterPolyheed 997 admixture has been exceeded.

#### **Packaging**

MasterPolyheed 997 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

#### **Related Documents**

Safety Data Sheets: MasterPolyheed 997 admixture

#### **Additional Information**

For additional information on MasterPolyheed 997 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

#### Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASE WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

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Polyhaed 997 become MasterPolyheed 997 under the Master Bolders Solutions brand, effective January 1, 2014

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Canada



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Cast-in-Place Concrete	03 30 00	:
Precast Concrete	03 40 00	-3
Mass Concrete	03 70 00 .	
Masonry Grouting	04 05 16	4.

## MasterGlenium® 7500

## Full-Range Water-Reducing Admixture

Formerly GLENIUM 7500*

### Description

MasterGlenium 7500 full-range water-reducing admixture is very effective in producing concrete mixtures with different levels of workability including applications that require self-consolidating concrete (SCC). MasterGlenium 7500 admixture meets ASTM C 494/C 494M compliance requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

### **Applications**

Recommended for use in:

- Concrete with varying water reduction requirements (5-40%)
- Concrete where control of workability and setting time is critical
- Oncrete where high flowability, increased stability, high-early and ultimate strengths, and improved durability are needed
- Producing selfconsolidating concrete (SCC)
- Strength-on-demand concrete, such as 4x4[™]
   Concrete
- □ Pervious concrete

#### **Features**

MasterGlenium 7500 full-range water-reducing admixture is based on the next generation of polycarboxylate technology found in all of the MasterGlenium 7000 series products. This technology combines state-of-the-art molecular engineering with a precise understanding of regional cements to provide specific and exceptional value to all phases of the concrete construction process.

- Dosage flexibility for normal, mid-range and high-range applications
- Excellent early strength development
- □ Controls setting characteristics
- Optimizes slump retention/setting relationship
- ☐ Consistent air entrainment

#### Benefits

- Faster turnover of forms due to accelerated early strength development
- Reduces finishing labor costs due to optimized set times
- Use in fast track construction
- Minimizes the need for slump adjustments at the jobsite
- ☐ Fewer rejected loads
- Optimizes concrete mixture costs

### **Performance Characteristics**

Concrete produced with MasterGlenium 7500 admixture achieves significantly higher early age strength than first generation polycarboxylate high-range water-reducing admixtures. MasterGlenium 7500 admixture also strikes the perfect balance between workability retention and setting characteristics in order to provide efficiency in placing and finishing concrete. The dosage flexibility of MasterGlenium 7500 allows it to be used as a normal, mid-range, and high-range water reducer.



#### **Guidelines for Use**

Dosage: MasterGlenium 7500 admixture has a recommended dosage range of 2-15 fl oz/cwt (130-975 mL/100 kg) of cementitious materials. For most mid- to high-range applications, dosages in the range of 5-8 fl oz/cwt (325-520 mL/100 kg) will provide excellent performance. For high performance and producing self-consolidating concrete mixtures, dosages of up to 12 fl oz/cwt (780 mL/100 kg) of cementitious materials can be utilized. Because of variations in concrete materials, jobsite conditions and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local sales representative.

**Mixing:** MasterGlenium 7500 admixture can be added with the initial batch water or as a delayed addition. However, optimum water reduction is generally obtained with a delayed addition.

#### **Product Notes**

Corrosivity - Non-Chloride, Non-Corrosive: MasterGlenium 7500 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressing steel or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterGlenium 7500 admixture.

Compatibility: MasterGlenium 7500 admixture is compatible with most admixtures used in the production of quality concrete, including normal, mid-range and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

Do not use MasterGlenium 7500 admixture with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced.

### Storage and Handling

**Storage Temperature:** MasterGlenium 7500 admixture must be stored at temperatures above 40 °F (5 °C). If MasterGlenium 7500 admixture freezes, thaw and reconstitute by mechanical agitation.

**Shelf Life:** MasterGlenium 7500 admixture has a minimum shelf life of 9 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterGlenium 7500 admixture has been exceeded.

#### **Packaging**

MasterGlenium 7500 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

### **Related Documents**

Safety Data Sheets: MasterGlenium 7500 admixture

### **Additional Information**

For additional information on MasterGlenium 7500 admixture or on its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

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Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

* GLENIUM 7500 became MasterGlenium 7500 under the Master Builders Solutions brand, effective January 1, 2014

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Mar.

### Certificate of Contractor's Compliance for APL/QML Selection

Date:

01-16-2018

**CDOT Contract ID:** 

STE C480-008

**CDOT Project Number:** 

19219

**CDOT Project Location:** 

Archuleta, County

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specifications for Road and Bridge Construction, and the 2017 Field Materials Manual.

### Four Corners Materials Class BZ Supplier Mix ID: 36923344 CDOT Mix Number: 2017173 **Material List**

QML Part/Sub Part:	701.01.01.00	701.02.02.00	711.02.01.00	711.02.01.00
APL Category:	Concrete	Concrete	Concrete	Concrete
APL Sub Category:	Cement	Pozzolan	Admixture	Admixture
APL Base Category:	Portland Cement	Fly Ash, Class F	Fly Ash, Class F Water Reducing, High Range	
APL Reference Number:	2949-16	2302-16	2914-14	2083-14
Product Name:	Pueblo Plant, Type I-II, LA	Four Corners Class F Fly Ash	BASF MasterGlenium 7500	MasterSet DELVO
Manufacturer:	GCC of America [Pueblo]	SRMG APS Four Corners Power Plant, Four Corners Fly Ash Facility	BASF Corporation	BASF Corporation
Date of Website Review & Selection:	1/16/2018	1/16/2018	1/16/2018	1/16/2018

Crossfire, LLC.

Name: Paul Martin

Title: Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 34-each (quantity and units) of pay item 613-40012 Light Standard Falm. (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

## COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 2949-16

Product Evaluation Coordinator Colorado Department of Transportation	Material code: 701.01.01.00
4670 North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	Cement, Portland
PART 1	
Product name:	Product category:
Pueblo Plant, Type I/II, Low Alkali	Concrete\Cement\Portland Cement [ASTM C 150]
Product Representative (name & address): Attn: Bryan Patterson	Manufacturer (name & address): Attn: Joe Finnegan
GCC of America 600 S Cherry St, Suite 1000 Glendale, CO 80246	GCC of America 3372 Lime Road Pueblo, CO 81004
Phone: (303) 739-5900 E-mail: bpatterson@gcc.com	Phone: (303) 739-5900 E-mail: jfinnegan@gcc.com
Web-site address: www.gccusa.com	Web-site address: www.gccusa.com
Description of the product: (Include specific quantifiable details from tech data she Pueblo Plant, Type I/II, Low Alkali is a Hydraulic, low alkali (<0.60%) cement c	onforming to the requirement specified in ASTM C-150 for Type I/II cement. This al Physical Requirements" with an expansion of less than 0.04% when tested in

Provide adequate protection from extreme conditions. Ise of the product, (be specific to CDOT highway activities only): General use cement for all cement concrete and paving applications. Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products): A portland cement manufactured in Colorado, meeting low alkali and optional sulfate resistance requirements and competitively priced. Specifications: (listing those applicable is required) : Standard Specifications, Section 701.01 ASTM : C-150 AASHTO: M85 T FHWA other Certificate of Verification (COV) provided for select categories ONLY Certificate of Compliance (COC) provided Product Testing: (National/independent laboratories or universities with Report Date.) Certified Test Report (CTR) provided to validate all claims. ☐ NTPEP-AASHTO: ☐ FHWA : CTL Group (April 23, 2015 - ASTM C-452) : GCC of America, Internal Material Certification Reports (February 15, 2015 - January 15, 2016) d other other State DOT Approvals, (current documentation required): IA, MN, NM, OK, TX Re-submittal Cycle: 4 years Safety Data Sheets (SDS): 7 yes 🔽 no ∏ n/a _ n/a Sample submitted: yes Alternate Product Category: Additional Comments:

N/A

## COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

Product Evaluation Coordinator

Material code:

APL Reference No. 2302-16

Colorado Department of Transportation	701.02.02.00						
4670 North Holly Street, Unit A	Material code description full name:						
Denver, Colorado 80216	Fly Ash, Class F						
Deliver, Colorado Cozro							
PART 1							
Product name:	Product category:						
Four Corners Class F Fly Ash	Concrete\Pozzolan\Fly Ash, Class F						
Product Representative (name & address): Attn: Jeff Hearne, Vice President of Quality Assurance	Manufacturer (name & address): Attn: APS Four Corners Power Plant						
Salt River Materials Group	Four Corners Fly Ash Facility						
8800 East Chaparral Road Suite 155	End of County Road #6675 / P.O. Box 1007						
Scottsdale, Arizona 85250	Fruilland, New Mexico 87416						
Phone: (480) 850-5757 E-mail: jhearne@srmaterials.com	Phone: (505) 598-8557						
Web-site address: www.srmaterials.com	Web-site address:						
Description of the product: (Include specific quantifiable details from tech data she	et. Advertising generalities are not appropriate.)						
Four Corners Fly Ash is a by-product from the burning of pulverized coal to pro	oduce electricity at the APS Power Plant in Fruitland, New Mexico.						
, , , , , , , , , , , , , , , , , , , ,	·						
•							
Restrictions, (installation and/or use):							
'se of the product, (be specific to CDOT highway activities only):	Learnent become subgrade stabilization, and asphalt						
Jsed in Portland cement concrete and concrete products. It is also used in soil cement bases, subgrade stabilization, and asphalt.							
Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):							
It is an effective means of providing improved concrete properties such as mitigation of all	rave money, be a better value then other manufacturer's products):  (ati aggregate reactivity, improved long term durability, improved strengths, improved sulfate						
It is an effective means of providing improved concrete properties such as mitigation of all							
It is an effective means of providing improved concrete properties such as mitigation of all resistance and reduced permeability.							
It is an effective means of providing improved concrete properties such as mitigation of all resistance and reduced permeability.  Specifications: (listing those applicable is required)							
It is an effective means of providing improved concrete properties such as mitigation of all resistance and reduced permeability.  Specifications: (listing those applicable is required)  CDOT: Standard Specification 701.2							
It is an effective means of providing improved concrete properties such as mitigation of all resistance and reduced permeability.  Specifications: (listing those applicable is required)  CDOT: Standard Specification 701.2  ASTM: C618							
It is an effective means of providing improved concrete properties such as mitigation of all resistance and reduced permeability.  Specifications: (listing those applicable is required)  CDOT: Standard Specification 701.2							
It is an effective means of providing improved concrete properties such as mitigation of all resistance and reduced permeability.  Specifications: (listing those applicable is required)  CDOT: Standard Specification 701.2  ASTM: C618							
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# COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY 2914-14

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Product Evaluation Coordinator	Material code:
Colorado Department of Transportation	711.02.01.00
4670 North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	Concrete, Admixture
	-

Denver, Colorado 80216	Concrete, Admixture
PART 1	
Product name:	Product category:
MasterGlenium 7500 (previously: Glenium 7500)	Concrete\Admixture\Water-Reducing  Water-Reducing, High Range
Product representative (name & address): Altn: Mark Piechuta	Manufacturer (name & address):
Attn: Mark Piechuta  BASF Corporation	Attn: Mark Piechuta
23700 Chagrin Blvd.	BASF Corporation
Cleveland, OH 44122-5554	23700 Chagrin Blvd. Cleveland, OH 44122-5554
Phone: (216) 839-7072 FAX: (216) 839-8821	
Web-site address:	Phone: (216) 839-7072 FAX: (216) 839-8821 Web-site address:
www.masterbuilders.com  Description of the product: (Include specific quantifiable details from tech data:	www.masterbuilders.com
levels of workability including applications that require Self-Consolidating Concret	on polycarboxylate technology. It is very effective in producing concrete with different ete (SCC), 4 x 4 Concrete, and Pervious Concrete. Meets the provisional qualification of eing, high-range admixtures based on the 6 month compressive strength criteria established in the formulation of the product.
Restrictions, (installation and/or use):	
Do not use in combination with naphthalene based water-reducing admixtu	ares.
se of the product, (be specific to CDOT highway activities only): .cecommended for use in ready-mix applications and precast concrete struc	ctures where it provides optimum slump retention and consistent air entrainment.
controlled setting characteristics reduces finishing labor costs. Optimum slump reteresults in fewer rejected loads.	igh-range water reduction. Excellent strength development leads to faster tumover of forms. tention minimizes the need for slump adjustments at the job site. Consistent air entrainment
Specifications, (listing those applicable is required) & Certificate of Comp  © CDOT : Standard Specifications 711.03	pliance (required to certify compliance with listed specifications):
ASTM : C 494, Type A & Type F	
AASHTO: M 194, Type A & Type F	
FHWA:	
other : CRD-C 87	
Product testing, (from national/independent laboratories or universities) &	Certified Test Report (CTR required to validate all claims):
NTPEP-AASHTO: CADD(2007) -08-11 (submitted Fall)	2007)
L FHWA	
other : TEC Services (October 20, 2011) (No	vember 16, 2011)
other :	
State DOT Approvals, (current documentation required):	
	percent formers benefit
Sample submitted: yes no n/a Materials Safet	ety Data Sheets (MSDS): 🔳 yes 🔲 no 🔲 n/a
Notes/Additional Comments  A sample can be provided upon request at no cost. Technical data sheets outline spec PPROVED BY 40 OTHER STATE DOTs.  Local Colorado BASF Sales representative is Brandon Cook; cell phone # (303) 704-	

## COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 2083-14

Product Evaluation Coordinator	Material code:
Colorado Department of Transportation	711.02.01.00
4670 North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	Concrete, Admixture

		Concrete, Flammature						
PART 1								
Product name:		Product category;						
MasterSet DELVO	(previously: Delvo Stabilizer)	Concrete\Admixture\Water-Reducing & Retarding						
Product representative (name Attn: Mark Piechuta	e & address):	Manufacturer (name & address):						
BASF Corporation		Attn: Mark Piechuta						
23700 Chagrin Blvd,		BASF Corporation						
Cleveland, OH 44122-	5554	23700 Chagrin Blvd.						
Phone: (216) 839-7072		Cleveland, OH 44122-5554						
Web-site address:	FAX: (216) 839-8821	Phone: (216) 839-7072 FAX: (216) 839-8821 Web-site address:						
www.masterbuilders.com	(Include specific quantifiable details from tech data she	www.masterbuilders.com						
plastic concrete and concrete was water-reducing and retarding, ad	of portland cement and other cementitious materials shwater to reduce waste. MasterSet DELVO admixtu	nd predictable high-performance concrete. MasterSet DELVO admixture retards setting while facilitating placing and finishing operations. It can be used to stabilize returned re meets ASTM C 494/C 494M requirements for Type B, retarding, and Type D, to the formulation of the product.						
Restrictions, (installation and/	/or uso):							
none known	or use):							
'Ise of the product, (be spec	ific to CDOT highway activities only):							
4x4 TM Concrete, Pumped con-	crete, shotcrete (wet mix) and conventionally-pl	aced concrete.						
Offsets the effects of slump lo     Reduces waste associated wit.	eduling of placing and finishing operations.  oss during extended delays between mixing and placin  h concrete washwater and returned concrete.							
Specifications, (listing those a CDOT : Sta	applicable is required) & Certificate of Compliandard Specifications 711.03	ance (required to certify compliance with listed specifications):						
✓ ASTM : C4	194, Type B & Type D							
☑ AASHTO: M	194, Type B & Type D							
☐ FHWA :								
$\square$ other :								
Product testing, (from national  NTPEP-AASH  FHWA	Vindependent laboratories or universities) & Cer ITO: CADD (2008) -18	rtified Test Report (CTR required to validate all claims):						
	;							
	: TEC Services (August 25, 2011) (Interim	Report - December 10, 2014)						
☐ other	:							
State DOT Approvals, (curren	t documentation required):							
Sample submitted:  yes	no n/a Materials Safety I	Data Sheets (MSDS): yes no no						
lotes/Additional Comments	1	11/a						
A sample can be provided upon req APPROVED BY 39 OTHER STAT	puest at no cost. Technical data sheets are included wh TE DOTs. entative is Brandon Cook; cell phone # (303) 704-384							

FIELD SHEET NO. 120596/

CONCRETE SPECIMEN TRANSMITTAL				310 400 000 19219				PC to AVP SUP		
☐ ☐ English ☐ Metric P-31-17						Engineer AV SRANK-		2017/73		
Ready Mix Supplier: FC M/PAGOS A Applicable CDOT Form #281 Field Sheet # OR Suppliers ticket #: 35520053						4/38332+4 8	ltem & Descri		BASE	
Slump 5 1/2 inches (mm) Entrained air						weight			bs/ft³ (kg/m³)	
Cylinders for design adequacy		Date molded	17 Time 2	1:20	Cured hrs. Days mold		□ Damps ☑ Water	and a	t Temp. #4 °F (°C)	
Cylinders for structural strengtl	n information	Date molded	Time		Cured hrs. Days mold:		structure Ship to		ntral lab gion lab	
Mark Cylinders as indicated	Set no.	Conc. class	Days cured	Break date	No. of cylinders		Laboratory t			
Specimen Identification	11.7	BZ	7	9-7-17	2	Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa	
Specimen Identification	ी म	37	93	9-28-17	3	7	4.03	70140	5480	
Specimen Identification	·····		-			#	4.03	69000	5390	
	4000 K	QA/QC specifica	tion (broke @ 2	28 days)	Ø yes Ø no.	27	4,03	44300	7360	
Specimen type: 4 x 8 cyli	nder 🗆 E	Beam □ S	plitting 🗆 C	Cube		23	4.03	90700	7090	
☐ 6 x 12 cy			ensile:	,		23	7.03	87120	6880	
Ougatik	Previous ·	This pla	cement	To date	-		-			
Quantity represented cubic yards/meters	100		٥	100						
Field Comments: W/Co	1 = 0.46	RY= 1.00			Lab cor	nments:	4488	Z		
AMOI T=7,50	1=0,249	W= 44.2	5			7.5				
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Cast by: ERIC HOUE-	-	ted by:(Name/Title/C 21c HOWE		R/TRAUT	VER 97	mber 0 - 7419 - 4		X number denten @T	restar gester	
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COLORADO DEPARTMENT OF TRANSPOR CONCRETE SPECIMEN TRAN  English  Metric	57 <i>E</i> Date	Project No. 5 TE 480 - 00 8  Date 9-6-17 Region 5		Project code (SA#) 19219  PRESIDENT Engineer ROBERT SHANKS		CDOT Mix #	PC to AVP SOF		
Ready Mix Supplier: FCM / PAGOSA	Applicable CDOT Fo OR Suppliers ticket	Station 27=, 24=26+	29+51/2 -91 23=2	5-27+3° 5-14 <u>5</u>	Item & Descrip	tion IGHT B	ASE		
Slump ( // /4 inches	(mm) Entrained air			1,7 %				,,,,	bs/ft³ (kg/m³)
Cylinders for design adequacy	Date molded 9 -6 -	Time.	3:40 _{pm}		Days in molds		_ Water		Temp. 73 °F (°C)
Cylinders for structural strength information	Date molded	Time		Cured hrs.	Days in molds	Days at site	structure Ship to		ntral lab gion lab
Mark Cylinders as indicated Set no.	Conc. class	Days cured	Break date .	No. of cylin	nders		Laboratory to	est results	
Specimen Identification 2	BZ	7	9-13-17	2	Specim	nen age	Diameter (beam - H x W)	Total load	PSI/MPa
7	BZ	28	10-4-17		-	7	4.03	60710	4740
Оресинен искановают	102	,	, ,			7	4,03	58740	4590
Specimen Identification  Required strength (PSI/MPa)  4000 DSi M	QA/QC specifica	ation (broke @ 2	28 days)	☐ yes ଔ			4.03	79970	6240
Specimen type:	∃eam □ S	Splitting 🗆 C	uho		2	8	4,03	77040	6020
4 x 8 cylinder		Splitting 🛚 C Fensile:	ube		2	8	4.03	79970	6240
Quantity represented too loo	This pl	acement	To date						0 2 9 0
Field Comments: $W/cm = 0.45$	24 = 1.01		red	207 La	ab commen	ts:		LAB共	4907
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Cast by:  ELIC HOWGS  Transport  FUL  Distribution: White - (Original with sample) - Central/Region	orted by:(Name/Title/ Hous   QA n Lab Canary -	TIESTER /TRU	UNT NEW GEO - Region (only if IA)	MECH	Phone number  Previous editi	ions are ob	FA	X number	OOT Form #82 4/04

FIELD SHEET NO. 120598

COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL			roject No. 5TE 480-	code (SA#)	219 PC-+0 AVF 30F			
☑ English ☐ Metric	Second Section 1 to 1 to 1 to 1 to 1 to 1 to 1 to 1	Da	9-11-17	Region Resident 5 ROBE	tEngineer ENT SHANは	CDOT Mix #	017173	1
Ready Mix Supplier: FCM/PAGDSA	Applicable CDOT Fo OR Suppliers ticket #	rm #281 Field #: 35524	id Sheet # \( \alpha \alpha \)	Station 20 - 21+6 21-13+53/2	4/31-32+61 T-35-38	Linear C. D	tion GHT BAS	565
Slump 7" inche	s (mm) Entrainedair			2,  % Unit	t weight		H7,211	os/ft³ (kg/m³)
Cylinders for design adequacy	F	1-17 Tim	9130	Cured hrs. Day mole	ds   27	□ Damp sa ✓ Water		Temp. #4 °F (°C)
Cylinders for structural strength information	Date molded	Tim	me (	Cured hrs. Day mole	"	structure Shipp to	ped 🔲 Cer 🔲 Reg	
Mark Cylinders as indicated Set no	. Conc. class	Days cure	red Break date	No. of cylinders		Laboratory te	st results	PORT
Specimen Identification 3	BZ	7	9-18-17	2	Specimen age	Diameter (beam - H x W)	Total load	PSI/MRa
Specimen Identification 3	BZ	28	10-9-17	3	7 7	4.03	67540	5270 ⁴
Specimen Identification				·	7	4.03	68370	5340 9
Required strength (PSI/MPa) 4000 551	QA/QC specifica	ition (broke	ce @ 28 days)	⊃ yes ⊡ no	28	4.03	86750	6770 4
Specimen type:		plitting	□ Cube		28	4,03	86640	6760 4
☐ 6 x 12 cylinder		ensile:	Ca Odbo		22	4.03	90670	7080 J
Previous	This pla	cement	To date					
Quantity represented cubic yards/meters Zoo	)	100	300	)		***************************************		
Field Comments: W/cm : 0.46	RY = 1.0Z			Lab co	omments:	B# 40	123	
AMOI T= 7.50 V=0,2	99 W= 44	<u>5</u>						
2.5 gallons of super								
- 1		we bo	0x temp 72°-7	7 <i>7</i> °				
I.A.T./Remarks:						-		
<b>&gt;</b>								
Cast by: ERIC HOUES FO	sported by:(Name/Title/C		a)Travinira GE				(number	
Distribution: White - (Original with sample) - Central/Re	nion Lah Ganary - E	roject File	Pink - Region (only if IAT s	sample) Prev	ious editions are obse	olete and may not	be used CD	OT Form #82 4/04

FIELD SHEET NO. 120599

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	COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL			SE 484-1008		08 P	Project code (SA#)  19219		Proj. location	o AVE	SUP
Z English D Met		onie e var		Date 4-12-17 Region 5		Region R	esident∃ Çpß&	Engineer . ET SHANKS	CDOT Mix #	017/731	
Ready Mix Supplier: FC M / PAG	OS A	Applicable CDOT Fo OR Suppliers ticket	orm #281 f #: 3 <i>5_</i>	ield Sheet :	<del>*</del>	Station LB [9,/	8,17,	16,15	Item & Descrip	10 17/ 75 v Notion 16 HT BAS	<i>5</i> 5
Slump	g inches	(mm) Entrained air			- Cardinary and Cardinary Cardinary (1995) and Secular Institution of primary (1995).	2,0	Unit v	weight		F ( 😊 "	bs/ft³ (kg/m³)
Cylinders for design adequacy		Date molded Q -12-1	7	Time /Z	30	Curedhrs. スサ	Days molds		□ Damp s ☑ Water	and a	tTemp. FÜ °F (°C)
Cylinders for structural strength	information	Date molded		Time		Cured hrs.	Days molds		structure Ship to		ntral lab gion lab
Mark Cylinders as indicated	Set no.	Conc. class	Days	cured	Break date	No. of cyli	nders		Laboratory t	est results	
Specimen Identification	4	BZ	<del>0</del> 4	7.	9-19-17	2		Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa
Specimen Identification	Ų	BZ	all) Stores	8	10-10-17	3		7	4.03	59010	4610
Specimen Identification								7	4,03	60700	4740 4
Required strength (PSI/MPa)	1500 pgi 13	QA/QC specifica	ation (br	oke @ 2	8 days)	†⊡ yes D	QDE.	28	4.93	73 300	6500 5
Specimen type:  2 4 x 8 cyli	**************************************		plitting	Q Ci	ıbe			25	4.03	73690	6530 ⁴
□ 6 x 12 cy			ensile:					28	4.03	83100	64875
<u>-</u>	Previous	This pl	acement	•	To date	* **-					
Quantity represented cubic yards/meters	300		100		400	America.		5.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 10.5 Table 1	m - a consistent at the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consistence of the consiste		
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CUNCHETE SPECIIVIEN TO BE English D Metric	ivi <i>cvim</i> a			-14-17-	Region F	Resident RoB <i>E</i>	Engineer ET SHANKS	CDOT Mix #	017/731	O.C.
Ready Mix Supplier: FCM/PAGOSA		icable CDOT Form #281 Suppliers ticket #: 35			Otalian		.,11,8,7	Itama C December		:65
Slump ir	iches (mm	<u> </u>			%	weight			os/ft³ (kg/m³)	
Cylinders for design adequacy		molded 9-14-17	Time	30	Cured hrs.	Days mole	is 1 27	∠ZÍ Water		Temp. 74 °F (°C)
Cylinders for structural strength informat		molded	Time		Cured hrs.	Days mole		structure Ship to	oped 🔲 Cer 🗓 Reg	ntrai lab gion lab
Mark Cylinders as indicated	et no.	Conc. class   Days	s cured	Break date	No. of cy	linders		Laboratory t	est results	
Specimen Identification	5	BE :	7	9-21	2		Specimen age	Diameter (beam - H x W)	Total load	PSI/MPa type
Specimen Identification	5		12	10-12	24		7	4.03	66240	5170
Specimen Identification						,	7	4,03	54270	3020 G
Required strength (PSI/MPa) 4500 FSI	Q.A.	QC specification (b	roke @ 2	28 days)	☐ yes t	≧⊃no	27	4,03	28480	6910 3
Specimen type:   4 x 8 cylinder	🗅 Bean	n 🗅 Splitting	□ C	ube			28	4,03	<i>9578</i> 9	6700 4
☐ 6 x 12 cylinder	<u> </u>	Tensile:					2-2	4.05	85110	6640 4
Quantity represented cubic yards/meters	0	This placement		To date	0					A Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Comp
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COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE SPECIMEN TRANSMITTAL				Contract ID	19219		Region	5	× 30110,	Field Sh	eet# -	100958	
CONCRETE SPECIES  DEnglish D Me	-			Project No.	STE 4	 iyo - 1	DOX			Date Su	bmitted		,
Ready Mix Supplier:		Suppliers ti 355201	cket,#:	Project Locat	ion					Item & D	9-22-/ Description		
+CM/P	AGO SA	355201	24	P.C.	to AV	t 5(		-			Description	0.5e.5	70007
				Station 上3 4,5,	Resident	Engineer BERT	SHA	'WKZ	CDOTI	11x# 2013	7173		
Slump 2.2 inches (mm	Entrained air		1,9 % Uni	tweight 겓	₹-0 lbs/ft³ (ŀ	(g/m³)	eld	1.00	opening to game legal and accounting a second account a copy and		Concrete ter	nperature 2/	°F (°C)
Cylinders for design adequacy		Date molded	9-22-17	Time 10:50		Cured hrs.		in .	Days in 27	☐ Dar ☐ Wa	np sand	at Temp.	°F (°C)
Cylinders for structural strengt	h information	Date molded		Time		Cured hrs.	Days molds		Days at st site		Shipped	☐ Central la ☐ Region la	b
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Sample ID		6	BZ	7	9-29	2		Age	Diame (beam - H		Totalload	PSI/MPa	Break Type
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Specified strength (PSI/MPa)	VI QA/QC	Specification specification	ition (broke @	) 28 days)		☐ yes ^γ	<b>≘</b> rno	28	4,	03	96210	7510	5
Specimen type:	inder 🗆 B	eam	Splitting	☐ Cube		en en euromonypyer en gewene en en e		25	4,		94760	7400	4
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cubic yards/meters	500		100	•	600	)							
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Previous editions are obsolete and may not be used. CDOT Form #82 1/17

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### **COLORADO DEPARTMENT OF TRANSPORTATION**

## **Concrete Mix Design Report**

This report was issued by and approved for use on SA 19219 by CDOT CPP Unit on 08/11/17. R. Ebel

CDOT Mix Number: Concrete Supplier: 2017173 Four Corners Supplier Mix ID: 36923344 Item 601 Class BZ Concrete Field Compressive Strength: 4000 psi Class 2 Sulfate Resistance and lower* *Class 3 Sulfate resistance requires a w/cm ratio ≤0.40 Concrete Mix Proportions (SSD Batch Weights for 1 Cubic Yard) GCC (Pueblo) 490 Pounds Cement: Type I/II Cement SRMG (Four Corners) 125 Fly Ash: Pounds Class F Fly Ash Silica Fume Pounds Coarse 4Corners - Animas Glaicier Pit; #67 1798 Pounds Aggregate 1 Coarse Pounds Aggregate 2 Coarse Pounds Aggregate 3 Fine Aggregate 1302 Pounds 4Corners - Animas Glaicier Pit Admixture 66.0 BASF - MasterGlenium 7500 Ounces Admixture Ounces Admixture Ounces Admixture Ounces Water 275 Pounds **Trial Batch Properties** 7-Day Compressive Strength: 6470 psi Unit Weight: 146.9 PCF 14-Day Compressive Strength: 7145 psi W / Cm Ratio: 0.45 28-Day Compressive Strength: psl Slump: 8.00 Inches 56-Day Compressive Strength: psi Air Content: % 2.40 7-Day Flexural Strength: psi Relative Yield: 28-Day Flexural Strength: psi Aggregate Test Results Specific Gravity (SSD) Absorption Coarse Aggregate 1: 2.66 1.2 % Coarse Aggregate 2 : Coarse Aggregate 3 : Fine Aggregate : 2.66 1.3 % Comments:

Reviewed by: Val Niculae

Review date: 7/31/2017

Please contact CDOT Concrete and Physical Properties Lab at 303-398-6549 with any questions.

Pinon Causeway to Aspen Village Shared Use Path Crossfire LLC Project No: STE C480-008 Project Code: 19219 Trautner Proj No: 54748 MT Supplier: FCM CDOT Mix ID: 2017173 CDOT Class BZ

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placement date	Item No.	placement location	QA No.	CDOT Form 82	Lab no. / truck #	concrete temp. (°F)	slump (in.)	air content (%)	unit weight (pcf)	Cal'd W/C ratio	cal'd yield	field cures (psi)	avg. 7 day break (psi)	avg. 28 day breaks (psi)	Ticket No.
8/31/2017	613	light standard foundations: No. 29, 30, 31, 32, 33	1BZ	120596	4887/truck #1	89	*5.5	1.9	147.6	0.46	1.00		5440	7110	35520053
9/6/2017	613	light standard foundations: No. 27, 26, 25, 24, 23	2BZ	120597	4907/truck #1	88	*8.25	1.7	146.6	0.45	1.01		4670	6170	35520064
9/11/2017	613	light standard foundations: No. 20, 21, 22, 28, 34	3BZ	120598	4923/truck #1	81	*7.0	2.1	147.2	0.46	1.02		5310	6870	35520083
9/12/2017	613	light standard foundations: No. 19, 18, 17, 16, 15	4BZ	120599	4928/truck #1	84	*9.0	2.0	146.4	0.46	1.02		4680	6510	35520091
9/14/2017	613	light standard foundations: No. 14, 12, 11, 8, 7	5BZ	120600	4952/truck #1	79	*10.0	1.0	152.0	0.45	0.97		5100	6750	35520099
9/22/2017	613	light standard foundations: No. 4, 5, 6, 9, 10, 13	6BZ	165958	4980/truck #1	78	*2.75	1.9	148.0	0.45	1.00		6050	7440	35520124
9/25/2017	613	light standard foundations: No. 1, 2, 3	7BZ	165959	4992/truck #1	74	*7.75	2.1	146.4	0.45	1.01		4840	6440	35520130
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		*SEE Folum 4-13 *high range water reducer added to the bat	ch											TRAUTN	

note: this spreadsheet displays the pertinent data from the concrete tested in general accordance with ASTM procedures. Additional information is available upon request for compressive strength results per ASTM C 39.

STE 480-008

PECIAL INSTRUCTIONS



## FOUR CORNERS

DELIVERY INVOICE

### PAGOSA

613-412

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TEAR HERE

No.4 10855

456 W/GA = 6.467 Ry = 1.00

2 gal super

STE 480-208



Truck 10f | 5ta. 21=29+51 24=26+41 25:27+39 23:25+415

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R CORNERS

## **DELIVERY INVOICE**

PAGOSA

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ELIVERY INST	HUGHONS							TOTAL	

TEAR HERE

No.053388

W/cm = 0.452.

21/2 yallows Super

PECIAL INSTRUCTIONS

STE 480-008 19219
TRUCK 10F1 STA 20-21164/21-22-161/22-25-153

## FOUR CORNERS

## **DELIVERY INVOICE**

## PAGOSA

613 LIGHT BASE'S

-	ANT: 970-731 FAX: 970-731	15407		DAVELLI	3OX 1969 D. CO 81	100			No. $05$	3386	
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			%		4				CITY TAX		
ELIVERY INSTRU	JCTIONS							1	TOTAL		

SPECIAL INSTRUCTIONS

TEAR HERE

No.050086

W/wn= 0.46 Ry=1.02

21/2 gallons of Super added

## FOUR CORNERS

## **DELIVERY INVOICE**

PAGOSA

613 LIGHT BASES

BATCH P	LANT: 970-731	-5194	* •	P.O. E	3OX 1969			Na 🗄	1 有精频 /
	FAX: 970-731	-5197	1 11-05	BAYFIEL	D, CO 81 [.]	122 - J		No. 🖖	S + 2 ( ) 4 x 2
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CCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER	***			
					.	-		COUNTY TAX	
ELIVERY INS	FRICTIONS		%	9	6	<u> </u>		CITY TAX	
ELIVERY INS	INUCTIONS							TOTAL	
PECIAL INSTR	RUCTIONS						L		<u> </u>

TEAR HERE

No.003392

W/cm: 0.46 Ry= 1.02

2 gal. super edded

## FOUR CORNERS

## **DELIVERY INVOICE**

## PAGOSA

613 LIGHTBASES

	NT: 970-731	-5194			OX 1969			No. 05	2999
	FAX: 970-731-	-5197	A Way Way Har	BAYFIELD	D, CO 811	22		140. a	the time that has
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ELIVERY INSTRU	DOTTONS.						l	ΤΟΤΔΙ	

PECIAL INSTRUCTIONS

TEAR HERE

No. 153339

W/cm: 0.45 Ply= 0.97

2.75 gal. 54po

## FOUR CORNERS

## **DELIVERY INVOICE**

## PAGOSA

613 light Bases

F	NT: 970-73 AX: 970-73 [: 7,50 \	4 - 40-	W= 44,35	DANCELEL	3OX 1969 D, CO 811 = 140 ,C	22 1 p.f	ty for authorizing the	No.	3425
COT DEGLILTS	23/4	CODMEDS MATERI	ALS to travel on the and hold harmless F	) job site premises OUR CORNERS N	of property as	lacent thereto as a n	neans of access to the any loss, cost, dama	e discharde area :	LEAVE PLANT
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VATER ADDED A	т		GALLONS BY:	CUSTOME	R SIGNAT	URE		BLE UNLOADING MINUTES PER ARD.	
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() () ()									
RUCK	PLANT	SLUMP	DUE AT JOB	USE OF CONC				SUB TOTAL STATE TAX	
CCEL	AIR ENTRAIN	SUPER PLAS.	CAL, CHLORIDE	HOT WATER	RETARDER			COUNTY TAX	

DELIVERY INSTRUCTIONS
SPECIAL INSTRUCTIONS

TEAR HERE

No.059425

0.45 = 0.45 Port = 1.00

TOTAL

STE 480-008



truck lof 1

63 121

## FOUR CORNERS

**DELIVERY INVOICE** 

## PAGOSA

6/3 Light Dose

F	ANT: 970-731 AX: 970-731	-5194 -5197	Uz 43,95 (		OX 1969 D. CO 81			No. 05	3431
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CCEL	AIR ENTRAIN	SUPER PLAS.	CAL. CHLORIDE	HOT WATER	RETARDER		-	COUNTY TAX	
			%	%	,			CITY TAX	
ELIVERY INSTRI	UCTIONS							TOTAL	

TEAR HERE

No.353431

w/cm = 0.45

PECIAL INSTRUCTIONS

19219-601-30

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION					
OR MATERIALS DOCUMENTATION	19219 3-10-18 Project No. STE C480-008				
Metric units yesX_ no	Project Location PINON CAUSENAY TO ASPEN VILLAGE DR. SUP				
Material Type CURING COMPOUND	Field Lab phone Cell Phone				
Material Code (LIMS)    Item (a)   Class   604, 608, 609	Grading Special Provisions yes .				
Previously used on Project No.: Previous CDOT	Form #157 F/S No.(s): CDOT Form #633 (sack)  CDOT Form #634 (can)				
<ul> <li>Sample Identification: Quantity &amp; Unit of material submitted, describe tests re</li> <li>Materials Documentation: Field inspected (describe appearance, weight/dimension)</li> </ul>	equired, precise location sample removed from ( stationing), etc. ensions, model/serial number), COC &/or CTR provided , etc.				
THE CONCRETE CURING COMPOUND,					
BY DAYTON SUPERIOR CORP, WAS APPR					
BY THE PROJECT ENSINEER. THE MI	ATERUAL IS ON TITE APL.				
DO CUMENTATION IS ATTACHED.					
Jser ID					
Sample ID (#1) Sample iD (#2)	Sample ID (#3)				
Sample ID (#4) Sample ID (#5)	Sample ID (#6)				
APL/QML Acceptance: APL Ref. No. Product name:	0.6 J9A Date checked: 7-26-17				
APL/QML Acceptance: APL Ref. No.  APL/QML Acceptance: APL Ref. No.  Product name:	Date checked:				
Preliminary Construction Maintenance Emerg					
	Plier DAYTON SUPERIOR CORP.				
	name or owner				
Quantity represented Previous quantity  A 0.5 Guides 60 175 ms 1 1576	Total quantity to date  [NS REQUILED FOR ITEM LISTE				
Sample submitted: Shipped specified quantity to:    Yes   No   Central lab   Region	Via Date				
Sampled or inspected by (print name)  CLI FTON LEF, PE  Title  PROJECT E	E-mail				
Dervisor (Pro./Res./Matis. Engr./Maint. Supt.) (print name) Title	Residency  NAVIS ENC SVC				



## CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

07/26/2017

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

601-01000

APL Category:

Concrete

APL Sub-Category:

Curing

APL Base Category:

Type 2 (White, Wax Based)

APL Reference No.:

2271-16

Product Name:

White Wax Cure J9A

Manufacturer:

Dayton Superior Corporation

Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC

Paul Martin,

Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Needed (quantity and units) of pay item:

601-01000 White Wax Cure J9A , 601 , 608, 609

(Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219

Contractor

820 Airport Rd, Durango, CO 81137

p(970) 884-4869 f(970) 403-1129

## COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 2271-16

Product Evaluation Coordinator	Material code:
Product Evaluation Coordinator  Solorado Department of Transportation	711.01.01.00
) North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	Concrete, Curing
	(MAX 13 13 14 14 14 14 14 14 14 14 14 14 14 14 14
PART 1	Product category:
Product name: White Wax Cure J9A	Concrete\Curing Compound\Type 2, Class A
Product Representative (name & address):	Manufacturer (name & address):
Attn: Todd Fraker, Senior Chemical Sales Manager	Attn: Matt Carter
Dayton Superior Corporation	Dayton Superior Corporation
23655 E. 19th Ave., Bldg 2, Suite 100	4226 Kansas Ave Kansas City, KS 66106
Aurora, CO 80019	Phone: (877) 266-7732
Phone: (303) 289-4808 E-mail: toddfraker@daylonsuperior.com	Web-site address: www.daytonsuperior.com
Web-site address: www.daytonsuperior.com  Description of the product: (Include specific quantifiable details from tech data she	
	te pigments and other solids in suspension. White Year care water loss allowed afe and is VOC compliant. It meets or exceeds the maximum water loss allowed
Restrictions, (installation and/or use):  Do not apply at temperatures below 40°F.  In the product, (be specific to CDOT highway activities only):  Indicement concrete curing of new bridge/highway construction or ceme  Benefits to CDOT, (how will your product enhance quality, improve safety,  Ready to use in pails, drums, and reusable totes. Locally available. Product exhibits ex  towering/eliminating the defects in concrete that result from inadequate curing. It is whith hydration is taking place. It is safe to work with and is not combustible.	save money, be a better value then other manufacturer's products).
Specifications: (listing those applicable is required)  CDOT: Standard Specification 711.01; 601.16; 601.13(b)  ASTM: C-309, Type 2, Class A  AASHTO: FHWA: other:	
Cortificate of Compliance (COC) provided Certificat	te of Verification (COV) provided for select categories ONLY
Product Testing: (National/independent laboratories or universities with Report NTPEP-AASHTO:  FHWA:  Other: Nelson Testing Laboratories (February 2)  other:	port Date.) <b>Certified Test Repo</b> rt (CTR) provided to validate all claims.
other :	Re-submittal Cycle: 3 years
State DOT Approvals, (current documentation required):	Sheets (SDS): 7 yes no n/a
Sample submitted:  yes  no  n/a Safety Data  **Tate Product Category:	SHEETS (SDO). Y YOU ELITE THE THE



### TECHNICAL DATA SHEET

**DESCRIPTION** 

A water-based, liquid membrane forming, wax curing compound for freshly finished concrete. The White Wax Cure J9A is white pigmented to reflect the heat of the sun.

USE

White Wax Cure J9A is a curing compound formulated to retain moisture in freshly finished concrete to ensure full hydration of the cement. Specifically designed for use on exterior projects such as highway pavements, residential paving, airport runways, parking lots and other pavement projects.

#### **FEATURES**

- Water-based
- Meets ASTM and AASHTO Standards
- Approved by numerous state highway departments
- Clean-up with water
- White pigments to reflect the heat of the sun

#### PROPERTIES

ASTM C-309 Type 2, Class A AASHTO M-148 Type 2, Class A

Drying time:

Approximately 2 hrs. at 70° F (21°C)

Less than 100 g/L. Compliant with all Canadian and U.S VOC regulations for Concrete Curing Compounds including Federal EPA, OTC, LADCO, SCAQMD & CARB.

**Estimating Guide** 

Coverage: 200 sq. ft./gal. (4.9 sq. M/L)

Packaging

er-ov-more		SI	ZE.
PRODUCIT CODE	PACKAGE	Galions	Liters
69165	Pail	5	18,93
69164	Drum	55	208,20
69144	Tote	275	1040.99

### STORAGE

The White Wax Cure J9A should be stored in tightly sealed original factory containers. Store in a horizontal position to prevent moisture accumulation on the drum head. Avoid prolonged exposure to sunlight and/or constant heat in excess of 100°F (37.8°C). Do not allow to freeze. Shelf life of properly stored, unopened containers is 12 months.

Mixing:

White Wax Cure J9A should be thoroughly stirred prior to each days use. Do not over-agitate or use high speed mixing equipment.

Placement:

Apply immediately after all surface water has disappeared and the surface cannot be marred. DO NOT delay in applying the curing compound. Use low pressure sprayer. All application equipment and tools should be thoroughly cleaned prior to use to avoid contamination. Do not thin. Apply uniformly without puddling.

#### **CLEAN UP**

Clean tools and equipment with water while wet. After the product dries, Dayton Superior Citrus Cleaner J48 or organic solvents such as xylene may be necessary to remove the product.

#### LIMITATIONS

FOR PROFESSIONAL USE ONLY

The White Wax Cure J9A should be thoroughly stirred prior to each use.

White Wax Cure J9A should not be used on surfaces that will subsequently receive paint, tile, grout, sealers, or other coatings unless it is completely removed.

Not recommended for interior use.

Do not apply at temperature below 40°F (4°C). Cool, damp conditions and/or over-application may extend drying and dissipation time.

### **PRECAUTIONS**

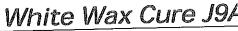
### READ SDS PRIOR TO USING PRODUCT

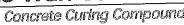
- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- 🛮 If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

### MANUFACTURER

Dayton Superior Corporation 1125 Byers Road Miamisburg, OH 45342

Customer Service: 888-977-9600 Technical Services: 877-266-7732 Website: www.daytonsuperior.com CROSSTARES COS ____ AN BACK





File Date: 1/26/2015



## TECHNICAL DATA SHEET

WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any nonconformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.

19219-601-51

COLORADO DEPARTMENT OF THE FIELD REPORT FOR SAIOR MATERIALS DOCU	MPLE IDEN	Region 5 Contract ID 19219 Project No.	Field sheet  Date Subr	# <del>266289</del> nitted 3-10-18	
Metric units	yes 🔀	no	STE C4BO	EWAY TO A	SPEN VILLAGE DR-SUIT
Material Type CONCLETE R	ATCH IN	V7E12-	Field Lab phone	Ce	Il Phone
Material Code (LIMS)	m 601,604 19,609,613	Class	Grading	Special P	rovisionsyes .
Previously used on Project No.:	·	Previous CDOT Form			OOT Form #633 (sack) OOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Unit of</li> <li>Materials Documentation: Field inspecte</li> </ul>	material submitted d (describe appear	describe tests required ance, weight/dimension	, precise location s s, model/serial num	ample removed from ber), COC &/or CT	m ( stationing), etc. R provided , etc.
THE WATER USED	TO BAT	CH CONCRE	TE AT I	-cra Pag	10sa BATCH
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PLANT IS SUPPLIED USTED IN THE A	TIACHEO	CETTER P	ROVIDED	BY THE	SUPPLIER.
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Iser ID		<u> </u>			
Sample ID (#1)	Sample	ID (#2)		Sample ID (#3)	
Sample ID (#4)	Sample	ID (#5)		Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:		and their stops of management of the stops of the Hills clause and shape of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stops of the stop of the stops of the stops of the stops of the stops of the stop of the stops of the stops of the stop of the stops of the stops		Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:				Date checked:
Preliminary Construct  ☐ 万	ion Maintena	ince Emergency			Date needed
Contractor ·CASSFIRE, LEC	\ <u></u>	Supplier	PAWSD		
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name	or owner		
Quantity represented	Previ	ous quantity		Total quantity  13 LEQU	
AS CEQUIDED  Sample submitted: Shipped  Yes  No	specified quantity to  Central lab		Via		Date
Sampled or inspected by (print name) CUFTON LEC PE	Ti	the Maject ENG	Ę-	mail	
pervisor (Pro./Res./Metts, Engr./Meint. Supt.) (p	rint name) Ti	NESIDENT- 1	Re	esidency SVC :	

Jim Smith, President/Chairman Blake Brueckner, Vice President Gordon McIver, Secretary



Paul Hansen, Treasurer Michael Church, Director

January 5, 2018

Re: CDOT Project No.: STE C480-008

CDOT Project Code: 19219

Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC.

Supplier: Four Corners Material - Pagosa Springs Batch Facility

Product: Four Corners Materials Class BZ & Class P Concrete

ted in this Certificate of annity and units) of pay and description) that will ons on Project Number 480-008.	01 724 18 Date
I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents RS Needed item [quantity and units) of pay item b01, 606, 609, 612, 604, (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.	Contractor Rep. Signature

Dear Mr. Lee,

Four Corners Material is provided water by Pagosa Area Water and Sanitation District's Micro Filtration Plant off Hatcher Lake. The Lake water runs through Micro Fiber filters and is tested daily for PH, Turbidity, Chlorine, Temp, Alkalinity, and Chlorite. Every month the water is tested for E.coli and sent to a state certified lab in Durango CO. Quarterly the water is tested for disinfection byproducts and Cryptosporidium. Annually the water is sent off to a state certified lab in Indiana to be tested for multiple heavy metals and contaminants.

If you have any questions or comments please do not hesitate to call or write.

Sincerely,

UNCE

Andrew Conner

Pagosa Area Water and Sanidation District Water

Operator in Responsible Charge

100 Lyn Avenue P.O. Box 4610 www.pawsd.org Pagosa springs, Colorado 81157 (970) 731-2691 FAX (970) 731-2693

			19219-601-6
COLORADO DEPARTMENT OF TRANSPO	RTATION	Region 5	Field sheet # 266294
FIELD REPORT FOR SAMPLE		Contract ID	Date Submitted
		19219	3-2-18
OR MATERIALS DOCUMENT	ATION	Project No.	
	<del>     </del>	STE C480-1	008
Metric units yes	no	Project Location	- Assilling Do Cill D
		PINON CAUSEMAN	TO ASPEN VILLAGE DR S.U.P.
Material Type SLAB BOLSTERS		Field Lab phone	Cell Phone
Material Code (LIMS) Item	Class	Grading	Special Provisions yes
Waterial Code (LIMS)			
Previously used on Project No.:	Previous CDOT Form	#157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Unit of material st</li> </ul>	ubmitted, describe tests required	, precise location sample	e removed from ( stationing), etc.
A Motoriale Documentation: Field inspected (describe	appearance, weighturinension	s, modernoona manner,	
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Sample ID (#1)	Sample ID (#2)		
	- 1	San	nple ID (#6)
Sample ID (#4)	Sample ID (#5)	Can	
			Date checked:
APL/QML Acceptance: APL Ref. No. Product	name:		Bate direction
APL/QML Acceptance: APL Ref. No. Product	name:	,	Date checked:
APL/QIVIL Acceptance, APL Net. No.			
Preliminary Construction M	aintenance Emergency	/	Date needed
Contractor	Supplier	NAIC MAIGE C	n 1010
CROSSFIRE, LLC		WE MYER CO	), 1100.
Sampled from (Pil, roadway, windrow,	Pit name	Of Owner	
stock, etc.)	D. Janananikt		Total quantity to date
Quantity represented	Previous quantity		AS NEEDED
AS NEFOSO Sample submitted: Shipped specified of	uantity to:	Via	Date
Yes No Centra		b	
Sampled or inspected by (print name)			
CUPTON LEE, PE	THE PROJECT EN	C7NEER Reside	nov.
(pervisor (Pro./Res./Matls, Engr./Maint, Supt.) (print name)	Title	\c C   Reside	ису
SIMIKE DAVIS. PE	THESIDENI - 1	16.3	ODOT Form #457 214



### **Certificate of Compliance Letter**

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date:	
Date.	

2/20/2018

**Project Number:** 

STE C480-008

Project Code & Name:

19219 Pinon Causeway to Aspen Village

Manufacturer's Name:

Lane Myers Co., Inc.

Manufacturing facility Address:

415 North Broadway Street Protection, KS 67127

Laboratory Name and Address:

415 North Broadway Street Protection, KS 67127

**Product Name or Assembly:** 

4" Upper Continuous High Chair

**Description of Material:** 

4" Slab Bolster

Model, Catalog, Stock Number:

Invoice # 15832

Lot / batch number:

PO # 3593

Date or Frequency of Lab Testing:

Testing done based on ACI SP-66

**Applicable Specifications:** 

The material above has been reviewed according to subsection

601 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents (S) Necure (quantity and units) of pay item 601-01000 controls (DIASS (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

3 16 18 Date

## LANE MYERS CO., INC PO BOX 538 PROTECTION, KS 67127

### To Whom It May Concern:

Our reinforcing bar supports are made from the best grade of steel. Wire sizes used will not be less than those jointly recommended by the Concrete Reinforcing Steel Institute (C.R.S.I.) and the American Concrete Institute (A.C.I.). All products are manufactured according to the specifications published by the C.R.S.I. and will pass the ACI SP-66 publications code. All legs are turned up a minimum of 1/8" unless otherwise specified. Our wire is purchased from King Steel in Norfolk, NE.

Plastisol baked on to the product helps prevent rust spots. Plastisol will not chip, crack, or deform under normal job conditions. We coat our wire in no less than 5 mil., as referenced by CRSI 3-1-V, class one maximum protection. Our plastisol is purchased from PolyOne Corp, Sullivan, Missouri.

Our Slab Bolster is made from #4 wire with legs spaced on 5" centers. Corrugations in top wire are vertically spaced on 1" centers, with a maximum height of 3". On 3/23/2017, Invoice #15832, PO #3593, H & H Bolt and Supply purchased 2,700 If of our 4" Upper Continuous High Chair.

All of our products are manufactured in Protection, KS, USA.

Sincerely,

Tom Murphy, Pres. Lane Myers Co., Inc.

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Unil number	56950	56981	56957	56956	56955	56954	56952
Rated mixing capacity (1)	11	10.5	11	11	11 ·	11	11
Blade wear (2)	ok	ok	ok	ok	ok	ok	ok
Free of Hardened concrete (3)	ok	ok	ok	ok	ok	ok	ok
Revolution counter	ok	ok	ok	ok	ok	ok	ok
Water gauges	ok	ok	ok	ok	ok	ok	ok
Meets operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017
NSPECTED BY company employee)	Thompson	Thompson	Thompson	Thompson	Thompson	Thempson	Thompson
(1) Rated mixi	ng capacity c	annot exceed	63% of gross v	olume of drun		en en en en en en en en en en en en en e	alle de ser en en en en en en en en en en en en en
(2) Blade wear configuration	r cannot exce ons see "x" dir	ed more than 2 mensions belo	25 mm (one ind w	ch) of the origi	nal height. For	typical blade	
Mixer blade types:	T X I		X S	Straight"	X X X		

(3) The drum cannot have an appreciable accumulation of hardened concrete inside.

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title

Richard Morris Concrete QC Manager

Batch plant water meter certification date	Batch plant scale certification (Certifiers name and date)	
 Tille	Signed	Print name
 		Remarks:
		Remarks:

# COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE TRUCK MIXER INSPECTION CERTIFICATION

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Unit number	56941	56964	56958	560017	560012	560010	560019
Rated mixing capacity (1)	11	11	11	10.5	11	11	11
Blade wear (2)	ok						
Free of Hardened concrete (3)	ok						
Revolution counter	ok						
Water gauges	ok						
Meets operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017
NSPECTED BY company employee)	Thompson	Thompson	Thompson	Thompson	Thompson	Thompson	Thompson

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(1)	Rated mixing capacity cannot o	exceed 63% of gros	s volume of drum	operations with the specific of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of	allicke fillered kommen un were er zur er er er die bezonte deutsprachtige get
(2)	Blade wear cannot exceed mor configurations see "x" dimension	,	inch) of the origin	al height. For typical blade	
Mixer b	olade types:		"Straight"	X "T"	
(3)	The drum cannot have an appre	eciable accumulation	n of hardened cor	ncrete inside.	
	y the truck mixers listed above SHTO M157 specifications.	e were inspected a	nd met the requi	irements for conformance	e with
CABLE AND C	ARE UNDER PENALTY OF PE STATE OR FEDERAL LAWS, OMPLETE TO THE BEST OF M	THAT THE STATE! IY KNOWLEDGE.	COND DEGREE, MENTS MADE OF	AND ANY OTHER APPLI- N THIS DOCUMENT ARE	TRUE
	ompany's principal executive, signature ar	· ///	1		
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## COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE TRUCK MIXER INSPECTION CERTIFICATION

Contract ID	Date S	) Submi	lled	
19219	7	31	led 2017	
Project No.	<del> </del>	<u> </u>		
STE CABO-	000			
Project location				
Archuleta C	ountr	JU,	)	
Concrete company				
- Fow Corners	Ma	win	15	

Unit number	560015	560011	560020	560016	560018	56926	56924
Rated mixing capacity (1)	11	11	11	11	11	11	11
Blade wear (2)	ok						
Free of Hardened concrete (3)	ok						
Revolution counter	ok						
Water gauges	ok						
Meets operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/13/2017	3/1/2017
NSPECTED BY company employee)	Thompson	Thompson	Thompson	Thompson	Thompson	Ayers	Ayers

Date inspected INSPECTED BY	3/1//2017	3/17/2017	3/17/2017	3/17/2017	3/17/2017	3/13/2017	3/1/2017	
(company employee)	Thompson	Thompson	Thompson	Thompson	Thompson	Ayers	Ayers	
(1) Rated mixi	(1) Rated mixing capacity cannot exceed 63% of gross volume of drum							
(2) Blade wear configuration	cannot excee ons see "x" dim	d more than 2 nensions belov	25 mm (one i v.	nch) of the origin	nal height. For	typical blade		
Mixer blade types:								
(3) The drum c	annot have an	appreciable a	occumulation	of hardened co	ncrete inside.			
I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.  I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.								
Concrele company's princip			M	1	***************************************			
Richard Morris C	oncrete QC N	lanager	TOP	Janus				
Completed and chec	ked by CDOT	personnel		and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s				
atch plant scale certification	(Certifiers name	and date)		Batch plant water me	eter certification da	le	-·	
Print name	<del></del>	Signed			Title			
emarks:	· · · · · · · · ·	/l	<del>.</del>		J		· · · · · · · · · · · · · · · · ·	

#### **COLORADO DEPARTMENT OF TRANSPORTATION CONCRETE TRUCK MIXER** INSPECTION CERTIFICATION

	Contract ID 9219	Date Sybmitted 7/3//2017
	Project No. STE C4BD-008	
i	Project location Avolukta Cou	
	Concrete company	Materials

Unit number	56943	56953	56949	56980	56965	56921	56948
Rated mixing capacity (1)	11	11	11	10.5	11	10.5	11
Blade wear (2)	ok						
Free of Hardened concrete (3)	ok						
Revolution counter	ok						
Water gauges	ok						
Meels operating speed requirements	ok	ok	ok	ok	ok	ok	ok
Date inspected	3/13/2017	3/13/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017	3/10/2017
NSPECTED BY company employee)	Ayers	Ayers	Katzer	Katzer	Katzer	Katzer	Katzer

(1)	Rated mixing	capacity cannot	exceed 63%	of gross	volume (	of drum
-----	--------------	-----------------	------------	----------	----------	---------

(2)	Blade wear cannot exceed more than 25 mm (one inch)	of the original height. For typical blade
	configurations see "x" dimensions below.	3

Mixer blade types:







The drum cannot have an appreciable accumulation of hardened concrete inside. (3)

I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLI-CABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Concrete company's principal executive, signature and title

Richard Morris Concrete QC Manager

Batch plant scale certification (Certifiers name and date)		Batch plant water meter certification date	
rint name	Signed	Title	
emarks:			
	nion Materials Engineer Pre	winds editions are obsolete and may not be used.	

1st copy - Resident/Project Engineer

2nd copy - Concrete company

#### Date Submitted 7/31/2017 COLORADO DEPARTMENT OF TRANSPORTATION Contract ID 19219 **CONCRETE TRUCK MIXER** Project No. 57E C480-008 INSPECTION CERTIFICATION Project location Archaleta County, CD Concrete company Fow Corners Materials 56928 56961 G-89 Unitnumber 56931 999216 DM-057 999033 Rated mixing 11 capacity (1) 11 11 11 11 ok ok Blade wear (2) ok 06 OK Olc Olc Free of ok ok Hardened concrete (3) ok 010 ok ok Revolution counter ok OK ÓK ok ok ok. ok Water gauges 01 010 Meets operating ok ok ok speed requirements 3/13/2017 3/22/2017 Date inspected 3/22/2017 **INSPECTED BY** Katzer Katzer Katzer (company employee) (1)Rated mixing capacity cannot exceed 63% of gross volume of drum Blade wear cannot exceed more than 25 mm (one inch) of the original height. For typical blade (2)configurations see "x" dimensions below. Mixer blade types: 'Straight" The drum cannot have an appreciable accumulation of hardened concrete inside. (3)I certify the truck mixers listed above were inspected and met the requirements for conformance with the AASHTO M157 specifications. I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLI-CABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. Concrete company's principal executive, signature and title Richard Morris Concrete QC Manager Completed and checked by CDOT personnel Batch plant scale certification (Certifiers name and date) Batch plant water meter certification date Print name Signed Title Remarks:

2nd copy - Concrete company

CONCRETE TRUCK MIXER	19219	Date 7/31/21
INSPECTION CERTIFICATION	Project No. STE CABD-003	
	Proj. location Arabuleta Coun	ity .CO
	Concrete company Faur Coviners III	ativinia
Unit number 56 984		
Rated mixing Capacity (1)		
Blade wear (2)		
Hardened concrete (3)		
Revolution counter O/C		
Water gauges O/C		
Meets operating speed requirements		
Date inspected 7/28//7 INSPECTED BY		
(company employee)		
	traight"	T"
(3) The drum cannot have an appreciable accumulation of	المعنى hardened concrete inside.	T"  formance with
(3) The drum cannot have an appreciable accumulation of I certify the truck mixers listed above were inspected and the AASHTO M157 specifications.  DECLARE UNDER PENALTY OF PERJURY IN THE SECONCABLE STATE OR FEDERAL LAWS, THAT THE STATEMEN AND COMPLETE TO THE BEST OF MY KNOWLEDGE.  Increte company's principal executive, signature and title	hardened concrete inside.  met the requirements for con  ID DEGREE, AND ANY OTHE  ITS MADE ON THIS DOCUME	
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Included to show Mick # 56-951
Previously inspected in 2015

CONCRETE	Project code (SA#)  18884  Date 04/30/2015							
CONCRETE INSPECTIO	: IRUUK N CERTIE	MIXEK ICATION	ı	Project No.	RO C480-007	·		
	i oli(iii	IOATION		Proj. location CR 337A Rio Blanco Bridge Replacement				
	·			Concrete comp	anv	ers Materials, P		
Unit number	56-921	56-922	56-941	56-942				
Rated mixing capacity (1)	//	11			56-948	56-763	56-951	
Blade wear (2)	ok	,	10.5	10.5	10.5	10.5	10.5	
Free of Hardened concrete (3)		<u> </u>	ok_	-ok	OK_	OK	ok	
	OK	OK.	OK_	-ok_	ok	Ok_	ok	
Revolution counter	OK	OK	ok_	ok	ok_	01	ok	
Water gauges Meets operating	ok	OK	ok	ok	ok	ok	ok	
speed requirements	yes	yes	yes	405	yes	405	yes	
Date inspected INSPECTED BY	1-26-15	1-26-15	1-26-15	1.26.15	1-26-15	1-26-15	1-26-15	
(company employee)	RON/	Roy	Key	Voul	Koy	Her!	2021	
(1) Rated mixir	g capacity can	not exceed 63	% of gross vo	lume of drum		The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s		
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☐ 1st copy	- Resident/Project - Concrete compa	Engineer ny		•		CDOT	Form #46 3/04	

Distribution:

#### HOPPER OR FLOOR SCALE INSPECTION REPORT

HOPPER OR FLOOR SCALE INSPEC	TION REPORT
Date 4 - 6 20/	
This is to certify, that in accordance with the law, I have tested the scale he	rein reported, said to be the property of, or operated
leused by For Court Court	CONTRACTION OF THE PROPERTY AND ADMINISTRATION OF T
COUNTY State Judice Make Co	MARGARIA! Allenan
TYPE BOTH MOST CONTROL CAPACITY 1000 / 1300	O MIN. GRADS 5/10 (
INDICATION: F.C. BEAM DIGITAL DIAL	FLECTRONIC DIAL:
SER. NO. <u>CC 123779</u> SR EMPTY <u>191</u>	LBS. SR LOADED
NEW INSTALLATION REPAIRED DEVICEANNUAL TESTK	
Remarks	TEST WEIGHT APPLIED TO SCALE
	Lbs. Strain Amount Weighed Erro
	Teme it 3000 2000 0
	Aug 2000 mo 0
	97 M. Green 50
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WESTERN SLOPE SCALE SERVICE	
965 27 1/2 Rond Grand Junction, CO 81591	

Rev. 5/08

#### Colorado Department of Agriculture Measurement Standards Section 3125 Wyandot Street, Denver, CO 80211 303-477-4220

	Date: 4-20-17
Owner or User: Jour Cov	users Malerials
Address: <u>P.O. Box</u>	
City: Bay Gold	Zip Code: 32/122
Contact Name: May	Phone: <u>2972-2172</u>
Physical Location of Device:	15)C1/2 RU 600
	1 - 2 - Carrier State Conference
Check all methods of Placing-In-Service	e that apply: ver Install Service
Device meets NIST Install and/or Service meets NIST	HB 44 Requirements: <u>\scripts</u> HB 44 Requirements: <del>\scripts</del>
(11.11.01.10.01.01.01.01.01.01.01.01.01.0	AL NUMBER CAPACITY
Note: If scales are oll the same type at the same location	C/3 (23 779 / 2000 / 100, s/N's may be listed on a separate attacked sheet.
Digital: Mechanical:	
NTEP CC Number: 97-124-1	41
New Device:	Used Device:
Bench/Counter	Platform Livestock
Vehicle .	
	Other Device (specify type)
Malandone W	/estern Slope Scale Svc. 79
Service person Signature	Company Name Colorado License #
NOTICE TO SERVICE COMPANY: Encl with this report if the device was rejected f to the Measurement Standards Office wi	or repair. This notice must be submitted
NOTICE TO OWNER/USER: This form we the device pending its official state inspection user of the device.	rill allow the temporary commercial use of on, when countersigned below by the owner
Stones Road	
Owner or User Print	Signature

MS-14 (03)



#### Certified Weigher Certificate

THIS Certificate IS NOT TRANSFERABLE

#### BOYD, STEVEN W

Doing Business As Name(s) (DBA)

BOYD, STEVEN W

PO BOX 195

PAGOSA SPRINGS CO 81157

**Effective Date** 

Expires Date

Certified Weigher Certificate AgLicense ID # ØØ1C8Q

Jan 01, 2017

Dec 31, 2017

coping the \$15.34.461 His set 3 of 6.50 the Procession Court of the above according to 15.00 cm and the court of the above according to 15.00 cm.

Don Brown

February 23, 2017

Commissioner of Agriculture

Print Date



### National Ready Mixed Concrete Association



## Certificate of Conformance Concrete Production Facilities

THIS IS TO CERTIFY THAT

Pagosa Springs Plant No. 355, Pagosa Springs, CO Four Corners Materials

has been inspected by the undersigned licensed professional engineer for conformance with the requirements of the Check List for Ready Mixed Concrete Production Facilities. As of the inspection date, the facilities met the requirements for production by

Truck Mixing with Automatic Batching and Recordings of Cementitious Materials, Aggregate, Water, and Chemical Admixtures



Signature of Licensed Professional Engineer

March 16, 2017

March 16, 2019

Inspection Date

Certification Expiration Date

This company will maintain these facilities in compliance with the Check List requirements and will correct promptly any deficiencies which develop.

Production Manager

NOTICE: The Check List indicates only that plant facilities are satisfactory for the production of concrete when properly operated. Conformance of the concrete itself with specification requirements must be verified by usual inspection methods in accordance with sales agreements.

This certificate is issued by the National Ready Mixed Concrete Association on verification that the production facility conforms to the requirements of the NRMCA Certification of Ready Mixed Concrete Production Facilities, QC3. Unauthorized reproduction or misuse of this certificate may result in legal action.

Plant ID #: 839790

Certification ID #: 21111

© 1965, 1992, 2001, 2002, 2006, 2007, 2012

National Ready Mixed Concrete Association 900 Spring Street & Silver Spring & Maryland 20910

Report No.	Serial No	. 1550	Hours: 435
Company: Aung S	hot	Address: DUCC	mad CO
Type of Boom: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	27-411	Customer Unit No.: 3 7	Mfg.
Verification - Result of the In	Spection	ome wo.:	Year.:2015
. /	efects _	Re-inspection Required	STOP Operation
Code of Faults:			ý.
00 No Objections	08 Deformed	16 Lubrication	24 Scored
01 Adjusted (	9 Dirty	17 Missing Parts	25 Shavings
<b>02</b> Bearings	0 Electric	18 Modified	26 Stuck
03 Bent 1	1 Fasteners	. 19 No Function	27 Temperature
04 Broken 1	12 Hydraulic	20 Noise	28 Vibration
05 Burned 1	13 Leaking	21 Out of Adjustment	29 Welds
06 Corrosion 1	4 Legibility	22 Paint Damage	30 Worn
07 Cracks 1	5 Loose	23 Other	31 Re-inspection Require
400 M. I.		٤.	9
100 Machine Documents			
101 Operating Instructions	00	- <del>- 31</del>	
102 Spare Parts List			
'00 Chassis Frame		/	
∠01 Frame Attachment	00	3/1	
300 Right Front Outrigger		(	The second section is a second second second second section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section se
301 Transport Safety Device	00	31/	
302 Support Arms	00		
303 Extension Box	00	37	- 00
304 Extension Safeguard	00	37	
305 Slewing Bearing	00	3/	
306 Slewing Safeguard	00	- <del>-</del> <del>3/</del>	
307 Support Safeguard	00	(3)	
308 Support Blocks	00	57	الاسميلة
309 Support Cylinder Attach.	00	61	
310 Support Cylinder	00	31	
311 Swivel Cylinder	00	31 6 des	6
B12 Extension Hydraulics	00	37	
313 Pressure Settings	00	<u></u>	7



#### INSPECTION REPORT – CONCRETE PLACING BOOM

Page 2 of 8

Report No.	Serial No. 1550	Date: 3-20-17
350 Left Front Outrigger	1	
351 Transport Safety Device0	0	
352 Support Arms 0	0	
353 Extension Box	0	E
354 Extension Safeguard 0	0	
355 Slewing Bearing 0	0	. 4
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Report No.	Serial No.	1550	Date: 3-20-/7
<ul> <li>500 Boom Pedestal</li> <li>501 Boom Pedestal Attach.</li> <li>502 Mounting Frame</li> <li>503 Vehicle Frame</li> <li>504 Boom Pedestal (steel constr.</li> <li>505 Leaks</li> <li>506 Transport Safety Device</li> <li>507 Hydraulic Lines</li> </ul>	00 00 00 00 00 00 00	3/ 3/ 3/ 2/ 2/ 3/ 3/ 3/ 3/ 3/ 3/ 3/ 3/ 3/ 3/ 3/ 3/ 3/	
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<ul> <li>700 Slewing Head w/ Slewing</li> <li>701 Slewing Head</li> <li>702 Slewing Column Bearing</li> <li>703 Slewing Drive (gear lash)</li> <li>704 Slewing Speed</li> <li>705 Pressure Setting</li> <li>706 Hydraulic Lines</li> <li>707 Slewing Cylinder</li> <li>01 Fill in Corresponding Fault (</li> </ul>	00 00 00 00 00 00 00	3/ 31 31 31 31 31 31 31 31 Cross Out Fault Coo	de That Does Not Apply (00, 31)

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INSPECTION REPORT - CONCRETE PLACING BOOM Page 4 of 8 Report No. Serial No. Date: 2 -Joint "B" Joint "D" Arm "E" Arm "A" Arm "B" Arm "C" Joint "E" Joint "C" Joint "A" 900 Joint "A" (Arm "A") 901 Joint Bolt 00 902 Hyd. Cyl. "A" 00 903 Speed 00 905 Hydraulic Lines 00 906 Monoblock (head) 00 907 Monoblock (rod) 00 908 Synchronous Cyls. 00 950 Concrete Placing Boom 951 Arm "A" 00 0 952 Guide/Catch 00 953 Delivery Line Support 00 954 Hook Catch 00 1000 Joint "B" (Arm "A" + Arm "B") 1001 Reversing Lever 00 1002 Pressure Rod 00 1003 Joint Bolt 00 1004 Hyd. Cyl. "B" 00 1005 Speed 00 1007 Hydraulic Lines 00 1008 Monoblock (head) 00 1009 Monoblock (rod) 00 1010 Synchronous Cyl. 00

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#### INSPECTION REPORT - CONCRETE PLACING BOOM

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Report No.	Serial No. 1550	Date: 3-20-17
1050 Concrete Placing Boom		
1055 Arm "B" / <u>00</u>	\ <u>31</u>	
1056 Guide/Oatch 00	1 91	• • • •
1057 <b>Ø</b> elivery Line \$upport / <u>00</u>	_\	
105% Hook Catch 00	_\	
1100 Joint "C" (Arm "B": + Arm "C		
1101 Reversing Lever <u>00</u>	<del></del>	
1102 Pressure Rod 00		
1103 Joint Bolt00		19
1104 Hyd. Cyl. "C" 00	- <del> </del>	000
1105 Speed	<del></del>	0
1107 Hydraulic Lines <u>00</u>	<del></del>	
1108 Monoblock (head) 00		
1109 Monoblock (rod) 00	37	
1150 Concrete Placing Boom		
1159 Arm "C" 00	- — — <del>—                               </del>	
1160 Guide/Catch 00		64 6.0
1161 Delivery Line Support 00	<del></del>	
1200 Joint "D" (Arm "C": + Arm "D	<u>")</u>	
1201 Reversing Lever 00	31/	
1202 Pressure Rod 00	<u> </u>	
1203 Joint Bolt 00	<u></u>	
1204 Hyd. Cyl. "D" 00		633
1205 Speed		0.000
1207 Hydraulic Lines 00	<u> </u>	
1208 Monoblock (head) 00	_ <u> </u>	
1209 Monoblock (rod) 00	<del></del> <del></del> <del></del>	
1250 Concrete Placing Boom	, sta	
1252 Arm "D" <u>00</u>		R:
1253 Guide/Catch 00	<del></del>	NA TOTAL
1254 Delivery Line Support 00		<u> </u>
1300 Joint "E" (Arm "D": + Arm "E	<u>")</u>	
1301 Reversing Lever 00	31_	
1302 Pressure Rod 00	31	1
1303 Joint Bolt		
1304 Hyd. Cyl. "E"	31	000
1305 Speed / 00		
1307 Hydraulic Lines \ <u>/00</u>		
1308 Monoblock (head) 00		
1309 Monoblock (rod) 00	31	
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Report No.	Serial No.	1550	Date: 3-20./7
1350 Concrete Placing Boom			
1355 Arm "E"	06\ /7 \	31	
1356 Guide/Catch	00	31	
1357 Delivery Line Support	00/ //	31	
1500 Hydraulics, Control, & Hyd	<u>traulic Valves</u>	, Remarks:	
1501 Pressure Limiting Valve	00	31	
1502 Pressure Setting	00		
1503 Hydraulic Lines	00	3/1	
1504 Manual Operation	00	31/	
1505 Boom Control Block	00	37	
1506 Hydraulic Pumps	00	37	
1600 Hydraulics, Control, & Hyd	draulic Valves		
1601 Remote Controls	00	31	
1602 Emergency Stop	00	371	
1603 Elec. Selector Sw. (outrggrs)	00	21	
1604 Elec. Selector Sw. (bm func)	00	3/1	
1605 Electric Cables Harness	00	3/1	
1606 Central Lubrication	00	<del>3</del> 7	
1700 Signs and Placards			
1701 Danger Signs	00	31	
1702 Information Signs	00	- C3/1	
1703 Operation Signs	00	37	
1704 Signs – Abbreviated	00	37	
1705 Information Sign	00	37	
1706 Information Sign	00	3/	
1707 Model Data Plate	00	31	
1708 Danger Sign	00	<u> </u>	
4000 Vacuum Pump Unit	00	<u> 4</u> ·	· · ·
4100 Hyd. Pump Frame	00	<b>2</b> 1	

01 Fill in Corresponding Fault Code (Crack)

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4200 Water Tank

4300 Truck Chassis 4301 Axle Stops

4400 Flushing Water Pump

31 Cross Out Fault Code That Does Not Apply (00, 31)

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Report No.		Serial No.	15	50	Date:	3-20-/7
4500 Vibrator	00		<u> 31</u>	Remarks:		
4600 Protection Equipment						
4601 Ladder Assembly	00	·	3/			· · · · · · · · · · · · · · · · · · ·
4602 Ladder Steps	00		31			
4603 Handrails	00		3/1		<del></del>	
4604 Hopper Grate	00		3,7			
4605 Hopper Grate Bolts	00		3#		<u> </u>	
4606 Hopper Grate Spacing	00		31			• • •
4607 Hopper Grt. Grille (crush pt.)	00		3/1		<del>-</del>	
4608 Hopper Grate Hinges	00		21			
4609 Hop. Saf. Sw. (agitator stops)	00		<del></del>			
4610 Hop. Saf. Sw. (accum dischrg)	00		3/7			
4611 Hop. Grt. Saf. (hold open dev)	00		3/1			
4612 Hopper Cleanout	00		3/			
4613 Rotor Housing Cover	00		31			
4614 Shaft Cover(s)	00		3/			nenn er i den er
4616 Chain Cover(s)	00		21			
4617 Shift Cylinder Cover	00		3/1			
4618 Misc. Covers	00					
4619 Heat Shields	00	·	31			
4700 Electrical Equipment						
4701 Proper Operation (oper. ctrls)	_00		31′			
4702 Proper Operation (emer stps)	00		<u>3/1</u>			15.5
4703 Ground Connections	00					1
4704 Cables, Cable Harness	00	<del></del>		<u> </u>		
4705 Temperature Indicator	00					
4800 Pump Supports				*		· · · · · · · · · · · · · · · · · · ·
4801 Transport Safeguards	00		3/			
4802 Extension Safeguards	00	<del></del>	3/1			
4803 Support Blocks	00		3/1			
4804 Support Cylinder Attach.	00		3/			
4805 Support Cylinder Pressure	00		$-\frac{31}{2}$		·	
4900 Modifications Made By Ow	ner		,			

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4901 Extensions/Repairs

4902 Alterations

31 Cross Out Fault Code That Does Not Apply (00, 31)

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Report No.	Serial No.	CONCRETE PLACING E		
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		CERTIFIED INSPECT SIGNATURE:		
		CUSTOMER'S SIGNATURE: RE-INSPECTION DAT	E:	

(BIR)

Boom Inspection & Repair, Inc.

2530 Highland Road Greeley, CO 80634 ph. 303-885-6845 / fax 970-330-5373

01 Fill in Corresponding Fault Code (Crack)

Cross Out Fault Code That Does Not Apply (00, 31)

**CERTIFIED INSPECTOR'S** 

SIGNATURE:

CUSTOMERS SIGNATURE:

S	Crossfire LLC 820 Airport Road, Durango CO 81303			Document Source:  CROSSFIRE CONSTRUCTION QUALITY PLAN			
Document Title  Crossfire Quality Control Plan			Job Number: 501-170093  Document No.		Document - Pinon Causeway Trail QCP  Document Revision Date: 7/14/17		
Project No.:	CDOT Project No: STE C480-008 Project Code: 19219	Other:	CF-C	Approved By:  (CF QA/QC	Manager)		

## **Crossfire Quality Control Plan**

# Archuleta County, Town of Pagosa Springs, CDOT Road & Bridge Department PE. Clifton Lee, Davis Eng. Service Inc.

Pinion Causeway Multi-use Trail
CDOT Project No: STE C480-008 Project Code: 19219

Personnel: QC Officer: (Jason Vavrina), CROSSFIRE LLC

Clifton Lee



Davis Engineering Service, Inc. 188 S. 8th Street - P.O. Box 1208 Pagosa Springs, Colorado 81147

Phone: (970) 264-5055x105 Fax: (970) 264-9210 E-mail: clifton@doveng.com

#### 1. SCOPE

This Construction Quality Control Plan is to ensure compliance to project specifications, code requirements, engineered drawings, scope of work, and fit for purpose construction.

#### 2. PURPOSE

The purpose of the Quality Control Plan (QCP) is to outline procedures to be utilized in establishing reasonable assurances that equipment, materials and workmanship meet the level of quality in accordance with the project design requirements, and to ensure safety and reliability of operation. This plan illustrates the tools, procedures, inspection reports and checklist that will be used during the Placing, Consolidating and Finishing phases of the project (CDOT Spec 601). Included in the QCP will be the following items:

- 1. Concrete Mix Ingredients and Proportions (Appendix A)
- 2. Work Schedule (Appendix B)
- 3. Applicable Specifications and Special Notes (Appendix C)
- 4. Delivery Details (Appendix D)
- 5. Planned Construction Joint Locations (Appendix E)
- 6. Role of All Personnel (Section 5)
- 7. Construction Details surface preparation, finish, joint locations, etc. (Appendix F)
- 8. Testing Requirements (Section 6)
- 9. Acceptance Criteria (Section 9)
- 10. Contingency Plans for Wind, Rain, Breakdown, etc. (Section 10)
- 11. Curing Details (Section 11)

#### 3. METHODOLOGY

This QCP has been designed with a proactive approach to quality. The Methodology of this approach emphasizes training/qualification along with a team approach towards quality during the project production.

#### 4. REFERENCES

- Contract Documents and Special Provisions
- ASTM American Society for Testing and Materials
- AASHTO American Association of State Highway Transportation Officials
- Colorado Department of Transportation Standard Specifications for Road and Bridge Construction (2011), PSP,PSR
- Crossfire LLC Policies and Procedures as applicable

#### 5. ROLES AND RESPONSIBILITIES

CROSSFIRE personnel are responsible for the implementation and management of the CROSSFIRE Quality Control Plan.

CROSSFIRE is to determine and define the roles and responsibilities for production personnel as they pertain to Quality Control and to the placement of the work.

Quality work is the responsibility of "ALL" CROSSFIRE personnel. All those involved with execution should bear in mind that <u>poor quality work is a potential safety incident waiting to happen.</u>

- 5.1. The CROSSFIRE QC designee shall be in direct contact with a Customer Quality Assurance (QA) representative to assure that the proper program, governing codes, and specific project designs and specifications are complied with for every aspect of the work.
- 5.2. Whenever a conflict exists between the Quality Control Plan and contract documents, the conflict shall be raised to the attention of the QA Manager and Project Engineering for determination of whether a specific project addendum is required or not.
- 5.3. It is the responsibility of CROSSFIRE's group or discipline referenced in this plan to ensure that their personnel are familiar with this program and other referencing documents, and that all requirements are properly executed.
- 5.4. CROSSFIRE Onsite QC Manager Core Responsibilities:
  - Manage all CROSSFIRE onsite quality control including:
    - Assuring adequate staffing for the work.
    - o Ensuring personnel are trained and have the skills necessary to perform the task efficiently.
    - o Providing the necessary forms, procedures, and tools to monitor quality effectively.
  - Collecting all QC documentation from the project.
  - Review and address any Non-Conformance as they arise.
  - Consider and address any Continual Improvement observations made by onsite Customer or CROSSFIRE personnel.
  - Fully understands the Quality requirements and their responsibilities within the Quality Control Plan.
  - Verify inspection of material at intervals outlined for acceptance or rejection based upon the requirements of the project specifications, engineering drawings, and/or code requirements.
  - Witnesses the inspection of hold points as established.
  - Ensures that CROSSFIRE supervision is aware of all inspection points.
  - Monitors work activities and quality performance to ensure the requirements of the Quality Control Plan, project specifications, and procedures are met.
  - Produces and circulates all test and inspection reports pertinent to the Quality Plan.
  - Documents, reports, and initiates any Quality, Observation or Non-Conformance reports required due to non-conforming items.
  - During inspection, shall utilize checklists, included in the contract documents, and/or checklists created by CROSSFIRE, if approved, to meet Customer Quality compliance.
  - Items to be verified include but are not limited to the following:
    - Verify pre placement/pour release has been completed and approved.
    - Verify intended mix design has been approved
    - Verify testing is scheduled appropriately
    - o Proper sampling and testing is performed and tracked

#### 5.5. CROSSFIRE Craft Personnel Responsibilities:

• Informs the CROSSFIRE Supervisor when a "Hold Point" or a specific inspection point or test is required in the inspection plan.

- Informs the CROSSFIRE Supervisor of any circumstance existing or anticipated that could result in a non-conformance.
- Consults with the CROSSFIRE Supervisor if there is any part of the Field Installation Work Package and/or the Quality Control requirements that they do not fully understand.

#### 6. TESTING FIRM AND LABORATORIES

A third party materials testing firm will be retained to provide Quality Assurance periodically during concrete placements of construction.

#### 6.1. Production Sampling and Testing

The material testing reports generated from 3rd party sampling will be documented on forms in compliance with industry standards. Quality Control TBD will consist of sampling and testing the first three truckloads of a day's production for air content, slump, and temperature. Molding of 6 - 4"X8" compressive strength cylinders for each day of testing will be performed. A sample test slab is not scheduled for this job.

Additional cylinders will be taken for determination of removing falsework if needed and loading the Concrete with future pours.

#### 7. DESIGN CHANGE CONTROL

All communication between CROSSFIRE and Customer that alter the Project Scope of Work, engineered drawings, code and/or specifications, shall be documented and approved via Customer's Request for Information (RFI) and Change Order procedure prior to commencement of such work.

CROSSFIRE procedure to document any changed conditions to the Scope of Work shall include the following requirements:

- Identify the change in Scope of Work and relay that information back to CROSSFIRE Project Management, including the rational for the change in scope
- Allow Project Management sufficient time to create and submit RFI to Customer.
- Written approval from Customer shall be provided back to CROSSFIRE Project Management and relayed back to CROSSFIRE personnel in the field.

#### 8. QUALITY DOCUMENTATION

#### 8.1. Inspection and Test Plans

Inspection and Test Plan shall be developed by CROSSFIRE for placement. The Inspection and Test Plan will be a reference document used to establish the Quality Control Requirements for the work.

CROSSFIRE's inspections and test plans will include the following:

- A description of inspections and tests to be performed as required by code, standard or specification, and when they occur during production.
- Level of inspection required
- Hold, witness and review columns for CROSSFIRE QC representatives with a place to initial.
- Material Control measures

- Installation, Inspection and Test procedures with acceptance criteria
- Safety related documents

#### 8.2. Concrete Pre-Placement / Pour Release

The pre-placement / pour release document completed prior to pour and will provide signoff for all components of the concrete forming and rebar placement. Additional information will be logged in association to the concrete site conditions upon placing.

#### 9. ACCEPTANCE CRITERIA

CROSSFIRE shall have a system for managing all material within their control. Materials shall be strictly controlled to ensure physical traceability (Batch tickets, Bill of Lading, MTR's, etc.)

#### 10. CONTINGENCY PLAN

The weather will be monitored the day before to confirm that a storm is not in line with our pour schedule. If it is determined that a weather event will align with the pour schedule, the pour date will be shifted by one day.

Plastic will be purchased in the case of a wind storm. A plastic cover / blanket or tent will be constructed to protect wet concrete from blowing debris and unexpected rain. This will be removed at the appropriate finishing time and then put back in place after the finishes have been applied if needed.

#### 11. CURING DETAILS

Before placing plastic cover sheeting, surface shall receive the necessary curing compound

As a contingency the water truck has fire hose sprayer that could be used to spray water on the concrete as needed for this curing task.

After managing for needed days the cover system will be removed.

#### Applicable Specifications and Special Notes

202-00204 REMOVAL OF CURB, GUTTER & SIDEWALK 66 L.F.
208-00045 CONCRETE WASHOUT STRUCTURE
608-00012 CONCRETE CURB RAMP (SPECIAL) 128 S.Y.
609-21900 CURB AND GUTTER TYPE 2 (12 INCH PAN) (SPECIAL) 44 L.F.
609-21900 CURB AND GUTTER TYPE 2 (18 INCH PAN) (SPECIAL) 22 L.F.
602-00000 REINFORCING STEEL 3,530 LBS.(Alt 1)
601-01000 CONCRETE CLASS B 36 C.Y. footings and walls sub Class D or P

October 29, 2015 Project Number STE C480-008 January 25, 2016 Project Code 19219

REVISION OF SECTION 106 CONTROL OF MATERIAL (SAMPLING)

Section 106 of the Standard Specifications is hereby revised for this project as follows:

In subsection 106.03 delete the fifth paragraph and replace with the following:

Samples will be taken by the Department except that the Contractor shall sample the following:

- 1. Asphalt cement, asphalt rejuvenating agent and emulsified asphalt in accordance with AASHTO T 40.
- 2. Hot mix asphalt items 403 in accordance with Colorado Procedure 41, Method B
- 3. A composite of aggregates for hot mix asphalt in accordance with Colorado Procedure 30.
- 4. Plastic Portland cement concrete in accordance with AASHTO T 141 and Colorado Procedure 61.

The Contractor shall transport the concrete sample to the place of testing.

The Engineer will designate the sampling time, location, and sample size. The sampling will be conducted in the presence of the Engineer.

1
REVISION OF SECTION 601
CONCRETE SLUMP ACCEPTANCE

Section 601 of the Standard Specifications is hereby revised for this project as follows:

Delete the fifth paragraph of Subsection 601.05 and replace with the following:

Except for Class BZ concrete, the slump of the delivered concrete shall be the slump of the approved concrete mix design plus or minus 2.0 inch. The laboratory trial mix must produce an average compressive strength at least 115 percent of the required field compressive strength specified in Table 601-1. When entrained air is specified in the Contract for Class BZ concrete, the trial mix shall be run with the required air content.

Delete Subsection 601.17 (b), 601.17 (d) and Table 601-3 and replace with the following:

(b) Slump. Slump acceptance, but not rejection, may be visually determined by the Engineer. Any batch that exceeds the slump of the approved concrete mix design by 2.0 inches will be retested. If the slump is

exceeded a second time, that load is rejected. If the slump is greater than 2 inches lower than the approved concrete mix design, the load can be adjusted with a water reducer, or by adding water (if the w/cm allows) and retested.

Portions of loads incorporated into structures prior to determining test results which indicate rejection as the correct course of action shall be subject to reduced payment or removal as determined by the Engineer.

(d) Pay Factors. The pay factor for concrete which is allowed to remain in place at a reduced price shall be according to Table 601-3 and shall be applied to the unit price bid for Item 601, Structural Concrete. If deviations occur in air content and strength within the same batch, the pay factor for the batch shall be the product of the individual pay factors.

**Table 601-3 PAY FACTORS** Percent Total Air Strength **Deviations** From Specified Air (Percent) Pay Factor (Percent) **Below** Specified Strength (psi) [ < 4500 psi Concrete] Pay Factor (Percent) Below Specified Strength (psi)  $\leq 4500 \text{ psi}$ Concrete] 0.0-0.2 98 1-100 98 1-100 0.3-0.4 96 101-200 96 101-200 0.5-0.6 92 201-300 92 201-300 0.7-0.8 84 301-400 84 301-400 0.9-1.0 75 401-500 75 401-500 Over 1.0 Reject Over 500 Reject 65 501-600

54 601-700 42 701-800 29 801-900 15 901-1000 Reject Over 1000 February 3, 2011

REVISION OF SECTION 712 WATER FOR MIXING OR CURING CONCRETE

Section 712 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 712.01 and replace it with the following:

712.01 Water. Water used in mixing or curing concrete shall be reasonably clean and free of oil, salt, acid, alkali,

sugar, vegetation, or other substance injurious to the finished product. Concrete mixing water shall meet the requirements of ASTM C1602. The Contractor shall perform and submit tests to the Engineer at the frequencies

listed in ASTM C1602. Potable water may be used without testing. Where the source of water is relatively shallow, the intake shall be so enclosed as to exclude silt, mud, grass, and other foreign materials.

#### **Delivery Details**

#### Concrete Delivery

Concrete will be provided by Four Corners Materials. Approximately 34 yards will be delivered to the site with an average of 10 yards per truck. Concrete will be batched at the Four Corners Materials concrete batch plant located at 3157 Co Rd 600, Pagosa Springs, CO 81147.

Concrete Trucks will be highway 160. Trucks will access the site through the main Arterty roads. Trucks will be staged at the Site until they are flagged to back up to the concrete pump truck.

The first 2 concrete trucks will be loaded and dispatched to the site per the work schedule. Each additional truck will be released on 20 minute intervals. If adjustment to the delivery time needs to be adjusted (i.e. slowed down or sped up).

#### Contingency

In the event that the Four Corners Materials Batch Plant in Pagosa Springs is unable to produce the necessary concrete, concrete will be batched from Four Corners Materials Batch Plant in Bayfield 6699 Co Rd 521, Bayfield, CO 81122.

## Plan Detail Narrative Appendix F Pinion Causeway Multi-use Trail CDOT Project No: STE C480-008 Project Code: 19219 Placing, Consolidating and Finishing Concrete pay items

Detailing procedures for concrete placing, consolidating and finishing and associated tooling -- vibrators, screed information, and Boom pump.

Starting at scheduled time we will be setting up the pour, getting tools out and calling batch plant for confirmation, delivery of cement will start from the FCM batch plant. The batches will be made to arrive starting on site at TBD time on pour day. The ¼ yard pump test will occur and the QA will be done as scheduled though out the pours.

Pumping and vibrating while the concrete is being placed with the boom pump the stinger vibrators will be used per 601.15 (d) on the lower layer of placed concrete as needed. As the pour proceeds finishing crew will start floating the previously struck areas following

Finishing: Following consolidation, the concrete shall be struck off and finished by mechanical longitudinal floating, mechanical rolling, surface vibration, or a combination of any of these methods. Surface vibrators will be used.

Only minimum hand finishing will be done, planned at the edges and screed lines. If the surface of the deck slab appears to become dry immediately following finishing operations, due to an excessive evaporation rate, it shall be covered with wet burlap or fogged with water covering the dry areas surface using pneumatic atomizing nozzles on the hand held Hudson type sprayers.

Sprayed curing compound J10W will be applied after the finishing surface is complete by sprayer method.

During periods of excessive drying, a cover of wet burlap or plastic sheeting shall be maintained on the slab at appropriate times until final cure is placed.

Pump contingency Longshot has several other pumps that can be used. The 80 / 10 temp anemometer monitoring will be on site if needed.

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S	Crossfire LLC 820 Airport Road, Durango CO 81303
Document Title	

Document Source:

CROSSFIRE CONSTRUCTION QUALITY MANUAL

CONCRETE PRE-PLACEMENT / POUR RELEASE Document Revision Date:
5 - August - 15
Document No.
CF-QC-CPP/PR

Document - Page 1 of 1
Approved By:
Quality Control Team

Project Name:					Project #:	
LOCATION / UNIT:		ITEM:			DRAWING NO	D.:
I.D. OF BENCH MARK USED:	;	ELEV. OF BM:	.:		BM REF. DRWG	3 No.
PRE-PLACEMENT ACTIVITIES	RESPONSIBLE SIGN/DA		QC INSPECTOR SIGN/DATE			Client QA * INSPECTOR SIGN/DATE
EXCAVATION:						
BACKFILL - COMPLETE AND SIGNED OFF:						
FORMWORK;						
REINFORCEMENT:						
ANCHOR BOLTS LOCATION / PROJECTION VERIFIED						
KEYWAYS:						
MISC. IRON:						
EXPANSION JOINTS:						
WATER STOPS:						
EMBEDMENTS: CIVIL / STRUCTURAL					-	
ANCHOR BOLTS						
UP-LIFT CONNECTORS						
ELECT. / INSTRUMENTATION:						
PIPING:						
RELEASED FOR CONC	CRETE:   YES	□ №	DATE	.,		
Supervisor:			DATE			
SURVEY:			DATE:	:		
QC Inspector:			DATE:			
Client QA Inspector: *			DATE:			
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SPECIFICATION REQUIRE	EMENTS: CC	ONCRETE SLUM	MP: MAX TEMPERATURE:			AIR:
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FINISH SURFACE REQUIRED:	:					,
CURING REQUIREMENTS:						

S	Crossfire LLC 820 Airport Road, Durango CO 81303	Document Source:  CROSSFIRE CONSTRUCTION QUALITY  MANUAL						
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	QUALITY	5 August 2015	Document - Page 1 of 1					
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- 1		CFOC-ONCR	QUALITY CONTROL					

To be completed by Originator – Submit Report t	o Corporate Quality Control Manager
Job Number:	Client/ Job
Originator:	Title:
Date of Non- Conformance:	Date Submitted:
Non-Conforming	Submitted.
Item	
Describe Root Cause(s) of Non-Conformance(s) or Potentia	l Quality Problem(s):
Immediate Actions taken:	
1	
Safety Concerns (if any) Associated with Quality Problem(s)	;
Suggested Action(s) to be taken:	
To be completed by Corporate Quality Control	Manager
Non-Conformance Quality Report #:	Date Opened:
Action Form #:	Assigned To:
y total i dill m.	Date Actions Form Submitted:
Action Type Assigned: Corrective  Prevent	
Corrective is when a problem has occurred. Preventive is before a problem happens. Improvement makes a p	ocess more enterent of improves product of service.

To be completed by Corporate Management Representative

C	Corpo	orate	e Quali	tv Cc	ntrol	Man	ader:					Date	e Clo	osed				

Region 5 Field sheet # COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 19219 OR MATERIALS DOCUMENTATION Project No. STE C480-008 Metric units Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-S.U.P. Field Lab phone REINFORCING STEEL Grading Special Provisions Material Code (LIMS) yes 607 Previous CDOT Form #157 F/S No.(s): Previously used on Project No.: CDOT Form #633 (sack) CDOT Form #634 (can) stationing), etc. Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided REINFORCING STEEL INSTALLED ON THE PROJECT WAS FIELD MSPECTED AND APPROVED BY THE PROJECT ENSINEER. THE STEEL MILLS ARE ON THE GMC. ALL MILL TEST REPORTS ARE ATTACHED, REINFORCING STEEL WAS INSTALLED AND PAID AS FOLLOWS: 1666 1700 165 AMOUNT OF ITOOLBS SEEFORM 470 400 lbs 105 165 PAID AS ORIGINAL 700 1 hs AMOUNT OF 3,530 LBS 492 4043 165 600 Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: APL/QML Acceptance: APL Ref. No. Product name: REINFORCING STEEL (CIMC Steel GLOUP MEGA) 7/26/2017 QML Report Dated 7/23/2017 Date checked: APL/QML Acceptance: APL Ref. No. Product name: REINFORCING STEEL (NUCOR STEEL PLYMONTH) 7 26 2017 OML Report Duted 7/23/2017 Date needed Maintenance Emergency Preliminary Construction Contractor & CMC Chossfile Sampled from Pit name or owner (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity Quantity represented SEE ABOVE ABNE SEE Shipped specified quantity to: Sample submitted: []_No . 🔲 Central lab ____ 🔲 Region lab Yes Sampled or inspected by (print name) E-mail CUPTON LEE PE Residency pervisor (Pro./Res./Matls. Engr./Maint. Supt.) (print name) MRESIDENT-DAVIS EN MIKE DAVIS

Pink copy - Resident Engineer



#### CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

07/26/2017

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Qualified Manufacturers List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

602-00000

QML Fabricated Structural Materials:

Steel Reinforcing Bars & Steel Dowel Bars

Qualified Manufacturer:

- CMC Steel Group Mesa 11444 E. German Road Mesa, AZ 85212
- Nucor Steel Plymouth
   P.O. Box 100
   Plymouth, UT 84330

Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC

Paul Martin, Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 3.530 LBS (quantity and units) of pay item:

602-00000 Reinforcing Steel ALTERNATE 1 AMOUNT

(Pay item # and description) that will be installed in Conformance with the plans and specifications ρn Project No. STE C480-008, 19219

Contractor

01/26/18

820 Airport Rd, Durango, CO 81137 p(970) 884-4869 f(970) 403-1129

## CERTIFICATE OF COMPLIANCE BUY AMERICA ACT & AMERICAN IRON & STEEL

NIMTHOR, INC.
dba H&H BOLT / ROCKY MOUNTAIN REBAR
686 INDUSTRIAL BLVD., DELTA, CO 81416
PHONE # (970) 874-8001 or (970) 874-8443 / FAX # (970) 874-8002

RMR JOB #: 5648

CONTROL CODE(S): 41X, 434

JOB NAME: PINON CAUSEWAY RET WALLS, PAGOSA SPRINGS, CO

CONTRACTOR: CROSSFIRE LLC

REBAR PRODUCER: BLACK REBAR - NUCOR STEEL OR CMC STEEL

Size:

Heat Numbers:

NUCOR:

CMC:

#3/10 Bar

16207389, 17202996,

#4/13 Bar

17104183, 17101255, 17200506, 17104192

#5/16 Bar

171200716

4067162

#6/19 Bar

#7/22 Bar

#8/25 Bar

#9/29 Bar

#10/32 Bar

#11/36 Bar

Rocky Mountain Rebar certifies that this material has been produced and fabricated in accordance with applicable specifications unless otherwise noted below. All manufacturing & fabrication processes occured in the USA and in accordance with the Buy America Act. The above products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

**AUTHORIZED SIGNATURE:** 

DATE: 07/17/17

Detrie A Young /

## CERTIFICATE OF COMPLIANCE BUY AMERICA ACT & AMERICAN IRON & STEEL

## NIMTHOR, INC. dba H&H BOLT / ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD., DELTA, CO 81416 PHONE # (970) 874-8001 or (970) 874-8443 / FAX # (970) 874-8002

RMR JOB #: 5648

CONTROL CODE(S): 44L

JOB NAME: PINON CAUSEWAY RET WALLS, PAGOSA SPRINGS, CO

CONTRACTOR: CROSSFIRE LLC

REBAR PRODUCER: BLACK REBAR - NUCOR STEEL OR CMC STEEL

Size: Heat Numbers: NUCOR:

#3/10 Bar

#4/13 Bar

#5/16 Bar

#6/19 Bar

#7/22 Bar

#8/25 Bar

#9/29 Bar

#10/32 Bar

#11/36 Bar

Rocky Mountain Rebar certifies that this material has been produced and fabricated in accordance with applicable specifications unless otherwise noted below. All manufacturing & fabrication processes occured in the USA and in accordance with the Buy America Act. The above products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

AUTHORIZED SIGNATURE:

DATE: 07/21/17

Detrie A. Young / Office Manager

I hereby certify under penalty of perjury that the material listed in this Certified Test
Report represents 3,530 lbs (quantity and units) of pay item
(02-0000 leinfecture steel (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

Batel

## CERTIFICATE OF COMPLIANCE BUY AMERICA ACT & AMERICAN IRON & STEEL

NIMTHOR, INC.
dba H&H BOLT / ROCKY MOUNTAIN REBAR
686 INDUSTRIAL BLVD., DELTA, CO 81416
PHONE # (970) 874-8001 or (970) 874-8443 / FAX # (970) 874-8002

RMR JOB #: 5600

CONTROL CODE(S): 3YF

JOB NAME: PAGOSA CAGES, CDOT STE C480-008

CONTRACTOR: ONE TOUCH ELECTRIC

REBAR PRODUCER: BLACK REBAR - NUCOR STEEL OR CMC STEEL

Heat Numbers: Size: CMC: NUCOR: #3/10 Bar 4065117 / 17101255 🗸 #4/13 Bar #5/16 Bar #6/19 Bar #7/22 Bar 16028763 🗸 #8/25 Bar #9/29 Bar #10/32 Bar #11/36 Bar

Rocky Mountain Rebar certifies that this material has been produced and fabricated in accordance with applicable specifications unless otherwise noted below. All manufacturing & fabrication processes occured in the USA and in accordance with the Buy America Act. The above products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

**AUTHORIZED SIGNATURE:** 

DATE: 08/04/17

Detrie A. Young / Office Manager

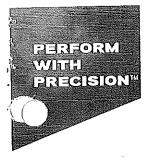
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PATADOLINA	I y C/ F	LARK WAR AND CARK	22.70

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents [.700 | 165 (quantity and units) of pay item 602-00000 Keinforging Steel (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

For 613-4-0012 Light Standard Foundation (Special)

Contractor Rep. Signature

Date Date





August 31, 2017

RE:

Item #13208 - A21-X Flat Tie 8" Wall (Standard)

Item #13212 - A21-X Flat Tie 12" Wall (Standard)

Dear Sir/Madam,

This is to certify that the above referenced product(s) are Melted and Manufactured in the U.S.A. out of domestic material, and produced by Dayton Superior Corporation, in accordance with Dayton Superior's standard specifications.

These products meet the Buy American criterion.

All materials will conform to the load values and physical dimensions as published in the appropriate Dayton Superior Handbook.

The product(s) were produced in Elk Grove Village, Illinois, a Dayton Superior manufacturing facility.

Please let us know if we can be of further service.

Sincerely,

Jonathan D Southgate-Sands

Director of Quality & Operational Excellence

**Dayton Superior Corporation** 

TL

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents (quantity and units) of pay item (402-0600) Reinfurcing Steel (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/26/18



#### Dear Sir or madam:

 $\mathcal{S}_{k-1}^{(i)}$ 

Please accept this letter as certification that all of the coil wire produced at Mar-Mac Wire out of black annealed wire is drawn, annealed and produced in the USA, and also meets ASTM 510 and ASTM 853.

14 Gauge	.079" to .081" in Diameter	C1006
15 Gauge	.071" to .073" in Diameter	C1006
16 Gauge	.062" to .064" in Diameter	C1006
16.5 Gauge	.057" to .059" in Diameter	C1006
18 Gauge	.046" to .049" in Diameter	C1006

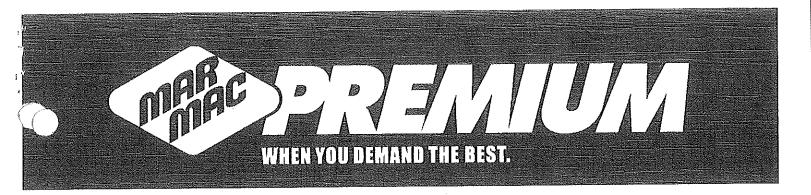
Dead Soft Annealed

Tensile Range 43,000 psi. to 53,000 psi.

Note: C1006 is a technical reference to the chemical make up of the basic steel and specifically refers to the carbon content.

Sincerely,

Gene Player Quality Manager



# Premium Annealed Bar Tie Data Sheet

# **Standard Requirements:**

Mar-Mac Wire Premium Annealed Bar Ties are produced from wire that is drawn, annealed, formed, and packaged in the USA. Premium Bar Ties meet "Buy American" standards. The wire used to produce Mar-Mac Wire Premium Annealed Bar Ties conforms to the ASTM A853 specification. Premium Bar Ties are produced in 14, 15, 16, 16.5, and 17 gauge wire sizes.

## **Chemical Requirements:**

The wire used to produce Mar-Mac Premium Annealed Bar Ties is produced using a C1006 or C1008 grade of steel as specified in ASTM A510 and ASTM A1040.

## 'hysical Requirements:

The wire used to produce the Premium Annealed Bar Ties is annealed in a "dead soft" annealing cycle. The wire used will be annealed to a tensile range of 40,000psi to 54,000psi.

#### Wire Diameter:

14 G	auge	15 G	auge	16 Gauge		16.5 Gauge		17 Gauge	
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
.079"	.081"	.071"	.073"	.060"	.064"	.057"	.059"	.053"	.055"

#### Packaging Requirements:

Mar-Mac Wire Premium Annealed Bar Ties are supplied in poly fiber bags and in some cases can be supplied in boxes for 1,000 count products. Premium Annealed Bar Tie products are supplied in 5,000 count bundles, 2,500 count bundles, 4 X 1,000 count bundles, and 5 X 1,000 count bundles.

# **Colorado Department of Transportation**

# Qualified Manufacturers List

# Steel Mills Producing Uncoated Reinforcing Steel and Dowel Bars

NY Charles	#5 Cut Street	Alton	IL.	62002
Alton Steel Inc.	I-10 & Vinton Rd.	Vinton	TX	79835
Bayou Steel Group Vinton	310 New State Road	Cayce	SC	29033
CMC Steel Group Cayce	100 Columbia 7-B	Magnolia	AR	71753
CMC Steel Group Magnolia	11444 E. Germann Rd	Mesa	AZ	85212
CMC Steel Group Mesa	1 Steel Mill Drive	Seguin	TX	78155
CMC Steel Group Seguin	3200 NE Highway 99W	McMinniville	OR	97128
Cascade Rolling Mills, Inc.	1612 East Abriendo Avenue	Pueblo	co	81004
Evraz Rocky Mountain Steel	Old Hwy 90	Beaumont	TX	77704
Gerdau Ameristeel Beaumont	6601 Lakeview Road	Charlotte	NC	28269
Gerdau Ameristeel Charlotte	801 Gerdau Ameristeel Road	Jackson	TN	38305
Gerdau Ameristeel Jackson	Hwy. 217 Yellow Water Road	Baldwin	FL.	32234
Gerdau Ameristeel Jacksonville	1919 Tennessee Avenue N. W.	Knoxville	TN	37921-2696
Gerdau Ameristeel Knoxville	300 Ward Road	Midlothian	TX	76065
Gerdau Ameristeel Midlothian	North Crossman Road	Sayreville	NJ	08872
Gerdau Ameristeel Sayreville	1678 Red Rock Road	St. Paul	MN	55119
Gerdau Ameristeel St. Paul	7000 S W Adams St.	Peoria	IL.	61641
Keystone Steel & Wire Co.		Madill	OK	73446
Mid American Steel and Wire	1327 Smiley Road	Norfolk	NE.	68701
Nucor Steel - Norfolk, Nebraska	2911 E Nucor Rd	Auburn	NY	13021
Nucor Steel Auburn	25 Quarry Road	Birmingham	AL	35234
Nucor Steel Birmingham	2301 F. L. Shuttlesworth Drive	Wallingford	СТ	06492
Nucor Steel Connecticut	35 Toelles Road	Jackson	MS	39232
Nucor Steel Jackson	3630 Fourth Street	Jewett	TX	75846
Nucor Steel Jewett	P.O. Box 126	Bourbonnais	IL.	60914
Nucor Steel Kankakee	One Nucor Way		AZ.	86413
Nucor Steel Kingman	3000 West Old Highway 66	Kingman Marion	OH	43302
Nucor Steel Marion	912 Cheney Avenue		UT	84330
── Nucor Steel Plymouth-Utah	PO Box 100	Plymouth	WA	98106
Nucor Steel Seattle	2424 SW Andover	Seattle	SC	29540
Nucor Steel South Carolina	300 Steel Mill Road	Darlington	50	200.0

Note 1: The listed steel mills are the only qualified manufacturers that are approved to supply non-coated deformed and plain bar stock to the field, epoxy coaters, galvanizers, or fabricators.

Note 2: In accordance with the Special Notice to Contractors, a Certified Test Report (CTR) will be required for all reinforcing steel and dowel bars, coated or not, delivered to a CDOT project.

Note 3: Specific information on the current qualification process, guidance in the certification, and annual re-certification is located in CP 11, Part II, Sub-Part 1 of the CDOT Field Materials Manual.

Report Version: 20150129 Page 1 of 1 Report Date: 7/23/2017

# PICK TICKET



107 Parker Ave. Durango, CO 81303-7919 Phone: (970)375-0900

Phone: Fax: (970)375-7762

Customer Copy

158764 Number Date 07/17/2017 Page

1150.2

Ship To: TEMP

CROSSFIRE, LLC

1800 HUGHES LANDING BLVD.

SUITE 500

'XTENSION TOT:

******NO RETURNS ON SPECIAL ORDER ITEMS******

CROSSFIRE, LLC Bill To: 31800

1800 HUGHES LANDING BLVD.

SUITE 500

THE WOODLANDS TX 77380

TOTAL WEIGHT:

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# Rocky Mountain Rebar 686 Industrial Blvd.

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PINON CAUSEWAY RET WALLS

CUSTOMER
CROSSFIRE LLC

RELEASE NUMBER

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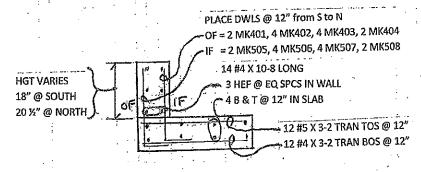
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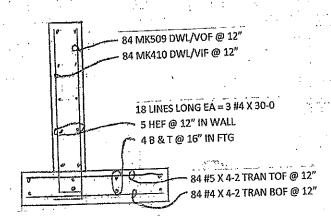
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JOB NUMBER



# WALL W/ MOMENT SLAB

11 LF REQD



# WALL W/ SPREAD FOOTING

83 LF REQD

FIELD TRIM WALL REINF AS NEEDED IF WALL HGT < 4-6

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Rocky Mountain Rebar 686 Industrial Blvd, Delta, CO 81416 (970) 874 - 8443

Job: PINON CAUSEWAY		eyyard gad mad dal Potto estato	
Contractor: CROSSFIRE LL	C		
Location: PAGOSA SPRIN	GS,CO		
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By: Date: Dwg #: 1

# MUCOR NUCOR CORPORATION NUCOR STEEL UTAH

## **Mill Certification** 12/15/2016

MTR #: U1-3629 PO Box 1 7285 West 21200 Noi PLYMOUTH, UT 843 (435) 458-23 Fax: (435) 458-23

Sold To:

H&H BOLT & SUPPLY DBA ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY 686 INDUSTRIAL BLVD 686 INDUSTRIAL BLVD DELTA, CO 81416 (970) 874-8001 Fax: (970) 874-8002

Customer P.O.	25969	Sales Order	270251.1
Product Group	Rebar	Part Number	900000107204200
Grade	ASTM A615/A615M-14 GR 60[420] AASHTO M31-07	Lot#	PL1620738951
	10/#3 Rebar	Heat#	PL16207389
Size Product	10/#3 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-555555
Description	A615M GR 420 (Gr60)	Load Number	U1-362963
Customer Spec		Customer Part #	MULTJOB

Qty Shipped Pcs: 700 Melt Date: 10/20/2016 Qty Shipped LBS: 15,792 Roll Date: 10/30/2016

Cb Mo Cr Ni P S Si Cu С Mn 0.001% 0.12% 0.024% 0.0022% 0.26% 0.08% 0.048% 0.20% 0.010% 0.90% 0.39%

Yield 1: 64,798psi

Tensile 1: 99,648psi

Elongation: 15% in 8"(% in 203.3mm)

Bend OK

Weight Variation -003.5%

**Specification Comments:** 

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL TR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL.
2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

# RUCCA NUCOR CORPORATION NUCOR STEEL UTAH

# **Mill Certification** 5/9/2017

MTR #: U1-37616 PO Box 10 7285 West 21200 Nor PLYMOUTH, UT 8430 (435) 458-230 Fax: (435) 458-230

Sold To:

H&H BOLT & SUPPLY INC DBA ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD DELTA, CO 81416

Ship To: H&H BOLT & SUPPLY INC 686 INDUSTRIAL BLVD DELTA, CO 81416 (970) 874-8001 Fax: (970) 874-8002

		Sales Order	280423.1
Customer P.O.	26107	Part Number	900000102404202
Product Group	Rebar	Lot#	PL1720299651
Grade	ASTM A615/A615M-16 GR 60 AASHTO M31-15	Heat#	PL17202996 🗸
Size	10/#3 Rebar	B.L. Number	U1-568540
Product	10/#3 Rebar 2K 20' A615M GR420 (Gr60)	Load Number	U1-376191
Description	A615M GR 420 (Gr60)	Customer Part #	RB3 20 4202
Customer Spec	material described herein has been manufactured in accordance with the specifications ar	of standards listed above and that it satisfies	those requirements.

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Qty Shipped Pcs: 6,210 Qty Shipped LBS: 46,690 Melt Date: 4/21/2017 Roll Date: 4/30/2017

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
0.40%	0.94%	0.011%	0.047%	0.22%	0.30%	0.09%	0.20%	0.032%	0.0022%	0.001%

Yield 1: 69,637psi

Tensile 1: 107,819psi

Elongation: 16% in 8"(% in 203.3mm)

Bend OK

Weight Variation -002.7%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL OMTR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL. HAS NOT BEEN USED IN THE PRODUCTION OF TESTING OF THIS MATERIAL. 2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER 2. PROPOSITION 65 WARNING: THIS PRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300. AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL

# NUCCE NUCOR CORPORATION NUCOR STEEL UTAH

# **Mill Certification** 6/15/2017

MTR #: U1-379 PO Box 7285 West 21200 No PLYMOUTH, UT 84 (435) 458-2: Fax: (435) 458-2:

Sold To:

H&H BOLT & SUPPLY INC DBA ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD DELTA, CO 81416

Ship To: H&H BOLT & SUPPLY INC 686 INDUSTRIAL BLVD DELTA, CO 81416 (970) 874-8001 Fax: (970) 874-8002

		Sales Order	282684.1
ustomer P.O.	26092	Part Number	900000137204200
roduct Group	Rebar	Lot#	PL1710418351
Grade	ASTM A615/A615M-16 GR 60 AASHTO M31-15	Heat #	PL17104183/
Size	13/#4 Rebar	B.L. Number	U1-572407
Product	13/#4 Rebar 60' A615M GR420 (Gr60)	Load Number	U1-379728
Description	A615M GR 420 (Gr60)		R84 60 4200
	malerial described herein has been manufactured in accordance with the specifications ar	Customer Part #	<u></u>

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

**Qty Shipped Pcs: 198** Qty Shipped LBS: 7,936 Melt Date: 5/29/2017 Roll Date: 6/3/2017

C 0.39%	Mn 1.14%	۶ 0.019%	S 0.032%	SI 0.22%	Cu 0.29%	Ni 0.08%	Cr 0.21%	Mo 0.020%	V 0.0024%	Cb 0.001%	
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Yield 1: 66,896psi

Tensile 1: 103,259psi

Elongation: 12% in 8"(% in 203.3mm)

Bend OK

Weight Variation 000.0%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL MTR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE, MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL.
2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

# MUCDR NUCOR CORPORATION NUCOR STEEL UTAH

# **Will Certification** 2/27/2017

MTR #: _U1-369 7285 West 21200 N PLYMOUTH, UT 84 (435) 458-2 Fax: (435) 458-2

Sold To:

H&H BOLT & SUPPLY DBA ROCKY MOUNTAIN REBAR DELTA, CO 81416

"Ship To: H & H BOLT & SUPPLY 686 INDUSTRIAL BLVD 686 INDUSTRIAL BLVD DELTA, CO 81416 (970) 874-8001 Fax: (970) 874-8002

/ield 1: 78,02	0psi			Tensile	1։ 113,742թ	si		Eld	ngation: 13%	in 8"(% in 203	.3mm
C 0.39%	Mn 1.20%	P 6 0.012%	S 0.044%	Si 0.17%	Cu 0.25%	Ni 0.11%	Cr 0.16%	Mo 0.029%	V 0.0022%	Cb 0.000%	
oll Date: 2/1	9/2017	Melt Date: 2/17	7/2017 Qty	Shipped LE	S: 31,744	Qty Shipped	l Pcs: 792				<del></del>
nereby certify tha	t the male	rial described herein ha	s been manufacti	ired in accordanc	e with the speci			and that it satisfie	s those requireme	nts.	
Customer Sp	рес							istomer Part #			
Descripti		A615M GR 420 (Gr60) Load Number					U1-36903	7	· · ·		
Produ		3/#4 Rebar 60' A6	15M GR420	(Gr60)				B.L. Number			
		13/#4 Rebar						Heat #	PL171012	255 /	
Grad		ASTM A615/A615M-14 GR 60[420] AASHTO M31-07						Lot#	PL171012		
Product Gro	up R	ebar						Part Number 900000137204200		7204200	
Customer P.	.0. 25	5969						Sales Order	273919.2		

Bend OK

Weight Variation -005.2%

Specification Comments:

{

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL MTR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL. 2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

# RUCOR NUCOR CORPORATION NUCOR STEEL UTAH

# **Mill Certification** 2/2/2017

MTR #: U1-3639 PO Box 1 7285 West 21200 No PLYMOUTH, UT 843 (435) 458-23 Fax: (435) 458-23

Sold To:

H&H BOLT & SUPPLY DBA ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD DELTA, CO 81416

Ship To: H&HBOLT & SUPPLY

686 INDUS	STRIAL BLVD
DELTA, C	O 81416
(970) 874- Fax: (970)	874-8002
1 2711 (01 -7	•

Customer P.O.	25969	Sales Order	272285.3
		Part Number	900000133604200
Product Group	Rebar	Lot#	PL1720050651
Grade	ASTM A615/A615M-14 GR 60[420] AASHTO M31-07	Heat#	PL17200506 🗸
Size	13/#4 Rebar 13/#4 Rebar 30' A615M GR420 (Gr60)	B,L, Number	U1-559627
Product	13/#4 Repai 30 Ao Isini GR420 (Gloo) A615M GR 420 (Gr60)	Load Number	U1-363928
Description Customer Spec		Customer Part #	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements

Melt Date: 1/20/2017 Qty Shipped LBS: 35,712 Qty Shipped Pcs: 1,782 Roll Date: 1/23/2017

0.00% 0.00% 0.11% 0.018% 0.0028% 0.000%	_	N. 6	n	c	<b>S</b> i	Cu	Ni	Сг	Мо	V	Cb	
	C	Mn	٢	3	JI		•	0.4401	0.04007	ለ ለሰኃያዩፌ	n naa%	
	0.41%	1.13%	0.011%	0.046%	0.22%	0.26%	0.08%	0.11%	0.010%	0.002070	0.000.0	

Yield 1: 68,139psi

Tensile 1: 105,538psi

Elongation: 15% in 8"(% in 203.3mm)

Bend OK

Weight Variation 000.0%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL. NTR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE, MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL. 2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM, FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

Ryan Reg (

## YUCCR NUCOR CORPORATION NUCOR STEEL UTAH

## Mill Certification 6/21/2017

MTR #: U1-3797 PO Box : 7285 West 21200 No PLYMOUTH, UT 845 (435) 458-23 Fax: (435) 458-23

Sold To:

H&H BOLT & SUPPLY INC DBA ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD DELTA, CO 81416

H&H BOLT & SUPPLY INC 686 INDUSTRIAL BLVD DELTA, CO 81416 (970) 874-8001 Fax: (970) 874-8002

Customer P.O.	26092	Sales Order	282684.1
Product Group	Rebar	Part Number	900000137204200
Grade	ASTM A615/A615M-16 GR 60 AASHTO M31-15	Lot#	PL1710419251
Size	13/#4 Rebar	Heat#	PL17104192 V
Product	13/#4 Rebar 60' A615M GR420 (Gr60)	B.L. Number	U1-573121
Description	A615M GR 420 (Gr60)	Load Number	U1-379729
Customer Spec		Customer Part #	RB4 60 4200

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requi

Melt Date: 5/29/2017 Roll Date: 6/3/2017 Qty Shipped LBS: 15,872 Qty Shipped Pcs: 396

Cb Cu Μo ٧ С Ρ S SI Ni Сг Μn 0.0021% 0.001% 0.19% 0.034% 0.012% 0.034% 0.22% 0.33% 0.11% 0.40% 1.13%

Yield 1: 72,998psi

Tensile 1: 110,348psi

Elongation: 12% in 8"(% in 203.3mm)

Bend OK

Weight Variation -004.5%

Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL ^MTR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL.
2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.



# NUCDA NUCOR CORPORATION

NUCOR STEEL UTAH

# Mill Certification 2/27/2017

MTR #: U1-369037 PO Box 100 7285 West 21200 North PLYMOUTH, UT 84330 (435) 458-2300 Fax: (435) 458-2309

H&H BOLT & SUPPLY DBA ROCKY MOUNTAIN REBAR DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY 686 INDUSTRIAL BLVD 686 INDUSTRIAL BLVD DELTA, CO 81416 (970) 874-8001 Fax: (970) 874-8002

		Sales Order	273919.2
ustomer P.O.	25969	Part Number	900000137204200
roduct Group	Rebar	Lot#	PL1710125551
Grade	ASTM A615/A615M-14 GR 60[420] AASHTO M31-07	Heat#	PL17101255./
Size	13/#4 Rebar	B.L. Number	U1-561636
Product	13/#4 Rebar 60' A615M GR420 (Gr60)		U1-369037
Description	A615M GR 420 (Gr60)	Load Number	
ustomer Spec	the last base manufactured in accordance with the specifications and s	Customer Part #	· · · · · · · · · · · · · · · · · · ·

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards lis

Qty Shipped Pcs: 792 Qty Shipped LBS: 31,744 Melt Date: 2/17/2017 Roll Date: 2/19/2017

Cb ٧ Cr Мо Ni Sì Cu S Р 0.000% C Mn 0.0022% 0.029% 0.16% 0.11% 0.25% 0.044% 0.17% 1,20% 0.012% 0.39%

Yield 1: 78,020psi

Tensile 1: 113,742psi

Elongation: 13% in 8"(% in 203.3mm)

Bend OK

Weight Variation -005.2%

Specification Comments:

ſ

>ments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL RECOMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL. 2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

Ryan langt

# MUEDR NUCOR CORPORATION

NUCOR STEEL UTAH

# Will Certification 1/30/2017

MTR #: U1-364 PO Box 7285 West 21200 N PLYMOUTH, UT 86 (435) 458-2 Fax: (435) 458-2

Sold To:

H&H BOLT & SUPPLY DBA ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD DELTA, GO 81416

Ship To: H & H BOLT & SUPPLY 686 INDUSTRIAL BLVD 686 INDUSTRIAL BLVD DELTA, CO 81416 (970) 874-8001 Fax: (970) 874-8002

DELIA	0001410	-ax: (970) 674-6002	
		Sales Order	272285.6
2 -tumor P.O.	25969	Part Number	900000167204200
Customer P.O.	Debar	Lot#	PL1720071651
roduct Group	ASTM A615/A615M-15 GR 60[420] AASHTO M31-07	Heat#	PL17200716 /
Grade	16/#5 Rebar	B.L. Number	U1-559149
Size Product	16/#5 Rebar 60' A615M GR420 (Gr60)	Load Number	111 004004
- Intion	A615M GR 420 (Gr60)	Customer Part #	
Customer Spec	material described herein has been manufactured in accordance with the specifications an	d standards listed above and that it satisfies	those requirements.
	Ohi Shinned LDO: 0,0 10 Com	pped Pcs: 128	
toll Date: 1/30/2	JII more and a second		v Cb

Cb Мо Cr Ni 0.001% Cu 0.0033% Si 0.021% S 0.15% P 0.09% Mn С 0.30% 0.18% 0.043% 0.014% 1.12% 0.41%

Yield 1: 63,234psi

Tensile 1: 100,922psi

Weight Variation 000.0%

Elongation: 16% in 8"(% in 203.3mm)

Bend OK Specification Comments:

Comments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL MTR COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE. MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL. HAS NOT BEEN USED IN THE PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER 2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALL 1-435-458-2300. AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

Ryan Rangel

# NUCCE NUCOR CORPORATION NUCOR STEEL UTAH

# Mill Certification 12/14/2016

MTR #: U1-361728 PO Box 100 7285 West 21200 North PLYMOUTH, UT 84330 (435) 458-2300 Fax: (435) 458-2309

Sold To:

H&H BOLT & SUPPLY DBA ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD DELTA, CO 81416

Ship To: H & H BOLT & SUPPLY 686 INDUSTRIAL BLVD 686 INDUSTRIAL BLVD DELTA, CO 81416 (970) 874-8001 Fax: (970) 874-8002

		Weight Variation -004.9%									
Yield 1: 63,948psi Tensile 1: 102,239psi						Eld	ngation: 16%	in 8"(% in 203.3mm)			
C 0.41%	Mi 1.16		P 0.011%	\$ 0.037%	Si 0.21%	Cu 0.21%	Ni 0.09%	Cr 0.10%	Mo 0.023%	V 0.0027%	Cb 0.000%
nereby certify th			elt Date: 12			LBS: 16,020		ped Pcs: 100			
Customer Spec Customer Spec Customer Spec Customer Spec Customer Spec Specifications and standards listed above the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of the specification of th						stomer Part #		nts.			
Descript	ion	A615M GR 420 (Gr60)						oad Number		<u> </u>	
Prod	luct	25/#8 Rebar 60' A615M GR420 (Gr60)							B.L. Number		
5	Size	25/#8 F	5/#8 Rebar							Heat # PL16208763 \( \square \) Number   U1-555419	
Gra	ade	ASTM A	A615/A615N	и-14 GR 60[4	20] AASHT	O M31-07			Lot#	PL162087	<u> </u>
Product Gr	oup	Rebar							Part Number		
Customer F	'.O.	25969						Sales Order 270888.4  Part Number 900000257204200			

Specification Comments:

mments: NUCOR - PLYMOUTH IS AN I.S.O. 9001 AND AN A.B.S. CERTIFIED MILL R COMPLIES WITH DIN EN 10204 - 3.1

1. ALL MANUFACTURING PROCESSES OF THE STEEL MATERIALS IN THIS PRODUCT, INCLUDING MELTING, CASTING, AND HOT ROLLING HAVE OCCURRED WITHIN THE UNITED STATES. ALL PRODUCTS PRODUCED ARE WELD FREE, MERCURY, IN ANY FORM, HAS NOT BEEN USED IN THE PRODUCTION OR TESTING OF THIS MATERIAL.
2. PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. FOR MORE INFORMATION, PLEASE CALL 1-435-458-2300.

Ryan Roy (1)



CMC STEEL ARIZONA 11444 E. GERMANN RD. MESA AZ 85212-9700

## CERTIFIED MILL TEST REPORT For additional copies call 830-372-8771

We hereby certify that the test results presented here are accurate and conform to the reported grade specification

Jacob Selzer – CMC Steel AZ

Quality Assurance Manager

HEAT NO.:4067162 ✓

SECTION: REBAR 16MM (#5) 60'0" 420/60

GRADE: ASTM A615-16 Gr 420/60

ROLL DATE: 06/14/2017 MELT DATE: 06/14/2017

Cert. No.: 82108605 / 067162F002

s	Rocky Mountain Rebar
0	
L	686 Industrial Blvd
D	Delta CO
	US 81416-2812
T	Delta CO US 81416-2812 9708748001
T	9708748001

0 9708748002

S CPU Mesa Non Taxable
H
I 11444 E Germann Rd
P Mesa AZ
US 85212-9700
T 999 999 9999

Delivery#: 82108605 BOL#: 1522552 CUST PO#: 26091 CUST P/N:

DLVRY LBS / HEAT: 24532.000 LB DLVRY PCS / HEAT: 392 EA

Characteristic	Value	Characteristic Value		Characteristic Value
C	0.32%	Elongation test 1	14%	
Mn	0.92%	Elongation Gage Lgth test 1	8IN	
P	0.013%	Bend Test Diameter	2.188IN	
S	0.029%	Bend Test 1	Passed	
Si	0.20%	Rebar Deformation Avg. Spaci	0.398IN	
Cu	0.31%	Rebar Deformation Avg. Heigh	0.038IN	
Cr	0.18%	Rebar Deformation Max. Gap	0.129IN	
Ni	0.20%	Uniform Elongation	9.2%	
Mo	0.040%			
V	0.001%			
Сь	0.000%			
Sn	0.012%			The Following is true of the material represented by this MTR:
Al	0.000%			*Material is fully killed
N	0.0000%			*100% melted and rolled in the USA
Carbon Eq A6	0.55%			*EN10204:2004 3.1 complaint
				*Contains no weld repair
Yield Strength test 1	87.8ksi			*Contains no Mercury contamination
Yield Strength test 1 (metri	606MPa			*Manufactured in accordance with the latest version
Tensile Strength test 1	109.0ksi			of the plant quality manual
Tensile Strength 1 (metric)	752MPa			*Meets the "Buy America" requirements of 23 CFR635.410

:MARKS:

IIS MATERIAL WAS TESTED ACCORDING TO ASTM A370 METHOD A9

06/27/2017 14:01:10

Page 1 OF 1



CMC STEEL ARIZONA 11444 E. GERMANN RD. MESA AZ 85212-9700

# CERTIFIED MILL REPO

For additional copies call 830-372-8771

We hereby certify that the test results prace accurate and conform to the reported grac

ited here secification

Jacob Selzer - CMC Steel AZ

#### Quality Assurance Manager

HEAT NO.:4066591  SECTION: REBAR 16MM (#5) 60'0" 420/60  GRADE: ASTM A615-16 Gr 420/60  ROLL DATE: 05/25/2017  MELT DATE: 05/25/2017  Cert. No.: 82108604 / 066591F002	S Rocky Mountain Rebar O L 686 Industrial Blvd D Delta CO US 81416-2812 T 9708748001	H ! 11444 E Germann Rd. P Mesa AZ US 85212-9700	Delivery#: 82108604 BOL#: 1522551 CUST PO#: 26091 CUST P/N: DLVRY LBS / HEAT: 12266.000 LB DLVRY PCS / HEAT: 196 EA
Cert. No.: 82108604 / 06659 1F002	0 9708748002	0	

Characteristic	Value	Characteristic Value		Characteristic Value
C	0.32%	Elongation test 1	11%	·
Mn	0.91%	Elongation Gage Lgth test 1	8IN	
Р	0.011%	Bend Test Diameter	2.188IN	
s	0.030%	Bend Test 1	Passed	·
Si	0.20%	Rebar Deformation Avg. Spaci	0.401IN	
Cu	0.31%	Rebar Deformation Avg. Heigh	0.037IN	•
, Cr	0.11%	Rebar Deformation Max. Gap	0.131IN	-
Ni	0.10%	Uniform Elongation	7.9%	
Mo	0.028%			
V	0.001%			
Сь	0.000%			
Sn	0.011%			The Following is true of the material represented by this MTR:
AI	0.001%			*Material is fully killed
N	0.0128%			*100% melted and rolled in the USA
Carbon Eq A6	0.52%			*EN10204:2004 3.1 complaint
				*Contains no weld repair
Yield Strength test 1	94.0ksi			*Contains no Mercury contamination
Yield Strength test 1 (metri	649MPa	·		*Manufactured in accordance with the latest version
Tensile Strength test 1	112.0ksi			of the plant quality manual
Tensile Strength 1 (metric)	773MPa			*Meets the "Buy America" requirements of 23 CFR635.410

REMARKS:

THIS MATERIAL WAS TESTED ACCORDING TO ASTM A370 METHOD A9



CMC STEEL ARIZONA 11444 E. GERMANN RD. MESA AZ 85212-9700

# CERTIFIED MILL TI REPORT For additional copies call 830-372-8771

Jacob Selzer – CMC Steel AZ

#### Quality Assurance Manager

HEAT NO.:4065117	S	Rocky Mountain Rebar	S	CPU Mesa Non Taxable	Delîvery#: 82107564
SECTION: REBAR 13MM (#4) 60'0" 420/60	0		H		BOL#: 1522102
GRADE: ASTM A615-16 Gr 420/60	L	686 Industrial Blvd	1	11444 E Germann Rd	CUST PO#: 26091
ROLL DATE: 03/31/2017	D	Delta CO	P	Mesa AZ	CUST P/N:
MELT DATE: 03/31/2017	]	US 81416-2812		US 85212-9700	DLVRY LBS / HEAT: 37032.000 LB
Cert. No.: 82107564 / 065117F265	T	9708748001	T	999 999 9999	DLVRY PCS / HEAT: 924 EA
	O	9708748002	0		

Characteristic	Value	Characteristic Value		Characteristic Value
C	0.25%	Elongation test 1	15%	
Mn	0.84%	Elongation Gage Lgth test 1	8IN	
P	0.011%	Bend Test Diameter	1.750IN	
s	0.025%	Bend Test 1	Passed	
Si	0.19%	Rebar Deformation Avg. Spaci	0.334IN	
Cu	0.28%	Rebar Deformation Avg. Heigh	0.025IN	
Cr	0.11%	Rebar Deformation Max. Gap	0.144IN	
Ni	0.12%	Uniform Elongation	8.3%	
Мо	0.037%			
V	0.000%			
Сь	0.000%			
Sn	0.013%			The Following is true of the material represented by this MTR:
Al	0.000%	·		*Material is fully killed
N	0.0172%			*100% melted and rolled in the USA
Carbon Eq A6	0.44%			*EN10204:2004 3.1 complaint
** *** *** *** *** *** *** *** *** ***				*Contains no weld repair
Yield Strength test 1	92.1ksi			*Contains no Mercury contamination
Yield Strength test 1 (metri	635MPa			*Manufactured in accordance with the latest version
Tensile Strength test 1	106.0ksi			of the plant quality manual
Tensile Strength 1 (metric)	731MPa			*Meets the "Buy America" requirements of 23 CFR635.410

**EMARKS:** 

HIS MATERIAL WAS TESTED ACCORDING TO ASTM A370 METHOD A9

Field sheet # Region 5 COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted OR MATERIALS DOCUMENTATION Project No. STE C480-008 Metric units yes |X no Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P. Cell Phone Field Lab phone REINFORCING STREL-SMOOTH DOWELS Grading Special Provisions yes Class Material Code (LIMS) 602 Previous CDOT Form #157 F/S No.(s): CDOT Form #633 (sack) Previously used on Project No.: CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided SMOOTH DOWEL BARS WERE INSTALLED AND FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE STEEL IS FROM AN MANUFACTURER LISTED ON THE QML, THE MILL IS ATTACKSO. THE MATERIAL WAS PAID INCIDENTAL 17EMS 608 8609. Jser ID Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date needed Emergency Maintenance Preliminary Construction Supplier Contractor Nucor CROSSFIRE, LLC Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity Quantity represented RS NEEDED NS NEEDED Date Sample submitted: Shipped specified quantity to:

Distribution: White copy - CDOT Central Laboratory

Sampled or inspected by (print name)

No K

Supervisor (Pro./Res./Mails. Engr./Maint. Supt.) (print name)

Yes

CLIFTON LEE

MIKE DAVIS

(submit white copy only if sample or information is directed to Staff Materials)

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PRESIDENT-DES



## **Certificate of Compliance Letter**

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

-	
1101	Δ.
val	<b>C</b> :

2/20/2018

**Project Number:** 

STE C480-008

Project Code & Name:

19219 Pinon Causeway to Aspen Village

Manufacturer's Name:

**R&S Steel** 

Manufacturing facility Address:

2189 River Rd, Grand Junction, CO 81505

Laboratory Name and Address:

2189 River Rd, Grand Junction, CO 81505

**Product Name or Assembly:** 

Hot Rolled Round Smooth Bar

**Description of Material:** 

1/2" Smooth Bar

Model, Catalog, Stock Number:

Heat # 16200987

Lot / batch number:

Lot # 1620098751

Date or Frequency of Lab Testing:

Testing done based on ASTM A36

**Applicable Specifications:** 

The material above has been reviewed according to subsection

608 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

Hem 6003-60012 Concrete Curb Ramp (Special), 133.25 S.F. Hem 6001-219100 Curb & Guller Type 2(1210)(Special), 25.5 L.F. : Hem 6009-219100 Curb & Guller Type 2(1810)(Special), 50.5 L.F.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents NS Neerled (quantity and units) of pay item See to the viable (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

3/6/18

# <u>CERTIFICATE OF COMPLIANCE</u> BUY AMERICAN ACT & AMERICAN IRON & STEEL

# NIMTHOR, INC. dba H&H BOLT / ROCKY MOUNTAIN REBAR 686 INDUSTRIAL BLVD., DELTA, CO 81416 PHONE # (970) 874-8001 or (970) 874-8443 / FAX # (970) 874-8002

RMR JOB #: 4861

CONTROL CODE(S): 2V6

JOB NAME: STOCK

CONTRACTOR: CONCRETE EQUIPMENT & SUPPLY, DURANGO, CO

HOT ROLLED ROUND SMOOTH BAR SUPPLIER: R&S STEEL, GJ, CO

				,., <u>.,.,.</u> ,,.,.,.,.,.,.,.,.,
SIZE	PRODUCER:	HEAT#:	PRODUCER:	HEAT#:
1/4				·/
3/8				
1/2	NUCOR	16200987		
5/8				
3/4				
7/8				
1				

Rocky Mountain Rebar certifies that this material has been produced and fabricated in accordance with applicable specifications unless otherwise noted below. All manufacturing & fabrication processes occured in the USA and in accordance with the Buy American Act. The above products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

AUTHORIZED SIGNATURE:

DATE: 10/12/16

Detric A. Young / Office Manager

Item 608-00012 Concrete Curb Ramp (Special), 133.25 S.F. Hem 609-21980 Curbi Gulter Type 2 (121N)(Special), 25.5 L.F. Hem 609-21980 Curbi Gulter Type 2 (181N)(Special), 50.5 L.F.

ı	I hereby certify under penalty of perjury the	at the material listed in this Certified Test
	Report represents AS Needed	(quantity and units) of pay item
		(pay item # and description) that will be
	installed in conformance with the plans	and specifications on Project Number
	19219 Pinon Causeway to Aspen Village D	rive SUP, STE C480-008.
1		

Contractor Rep. Signature

3 14 18 Date

# MUCOR.

HUCOH CONTONATION HUCOR STEEL UTAH

Sold To:

R&S STEEL INC FO BOX 21119 HOUSTON, TX 77228-1119

**Will Certification** 5/18/2016

. Will

Ship To:

8811 JOUET 303) 227-3347

Customer P.O.	DEN-11295	·					
	Efrechant Dan Daniel	Sales Order	258906.12				
	A36/Af29GR60/GSA44W/50W	Red Number	3000050024004W0				
2455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A 6455 A	A4P/4929GHg0/GSA44W/50W	Lot#	PL1620098761				
		Hoat#	PL16200987				
Description	1/2" (.5000) Round 20' A36/A529-50/44W/50W A36/A529-50/44W/50W	B.L. Number	U1-535268				
Customer Spen	W30W354-301444M9(IM	Load Number	U1-344817				
		Customer Part #					
Increby certify that the material described herein has been monufactured in eccerdance with the specifications and standards fisled above and that it satisfies those requirements.							

Roll Date: 3/10/2016 Molt Date: 2/18/2016 City Shipped LGS: 8,230 Qty Shipped Pos: 616

or and

ASTM A36/A36M-12, A709/709M-13 GR36, ASME SA36-10 Ed '11 Ad, ASME SA36-2010 EDITION-2011 ADDENDA ASTM A709/A709M-13 GR 36 [250]

C

Mn S Si NI Cr Cb 0.18% 0.74% 0.013% 0.030% 0.23% 0.08% 0.11% 0.025% 0.0018% 0.000%

Yield 1: 53,333psi

Yield 2: 52,816psl

Weight Variation 000.0%

Tensile 1: 73,642psi

Tensile 2: 73,234psi

Elongation: 24% in 8*(% in 203.3mm)

Elongetion 25% in 8"(% in 203.3mm)

Specification Comments: MEETS THE REQUIREMENTS OF: ASTM A36/A36M-12, A529/A529-05 GR50, CSA G40,21-04 GR44W(300W)&GR50W(350W) AASHTO M270/M270M-12 GR36(270), ASME SA36/SA36M-07

Comments: NUCOR - PLYMOUTH IS AN L.S.O. 9901 AND AN A.B.S., GERTIFIED MILL CMTR COMPLIES WITH DIN EN 10204 - 3.1

Ryan Pennington Division Metallurgist

--- (IBMG-10 Jenuary 1, 2012

# TRAUTNER DE SOLE GLOBE

GEOTECHNICAL ENGINEERING, MATERIAL TESTING AND ENGINEERING GEOLOGY

August 23, 2017

Ms. Liz Collins AMEC Foster Wheeler 9177 Sky Park Court San Diego, CA 92123-4341

Phone: 858-514-6427

Ms. Collins,

Please find enclosed the following samples:

- 3 pieces of reinforcing steel - #5 bar from CMC Steel Arizona

3 pieces of reinforcing steel - #4 bar from Nucor Steel Utah

Please test at least 2 bars from each set in accordance with ASTM A 370. Please include the following information on your report.

Project Name: PCW to AV - SUP

Project No: CDOT Project No: STE C480-008 / 19219

The invoice and test results shall be sent to the following address attention Gina Denten.

Trautner Geotech
95 Henry Street
Cortez, CO 81321
gdenten@trautnergeotech.com

If you have any questions or concerns, please do not hesitate to call me at 970-259-5095.

Thank you,

Gina Denten

Materials Testing Manager



9177 Sky Park Court, San Diego, CA 92123 Phone: 858-278-3600 Fax: 858-278-5300

# PHYSICAL PROPERTIES OF REINFORCING STEEL ASTM A615/A615M A706/A706M

PROJECT:	PCW to AV-SUP	LAB NO.:	31001 & 31002	JOB NO.:	5015-15-0037.01
Z 10 7 m 0 - 1	E C480-008 / 19219	SAMPLED BY:		DATE:	
		SUBMITTED BY:		DATE:	
		AUTHORIZED BY:	G. Denten	DATE:	08/23/17
		TESTED BY:	J. Tacovera	DATE;	08/29/17
SOURCE:	Nucor & CMC	REVIEWED BY:	L. Collins	REPORT DATE	E: 08/29/17
FABRICATOR:	_ ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				

## **SPECIFICATIONS**

Specifications	ASTM A615/A615M Grade 60	ASTM A706/A706M	
Tensile Strength, min. psi	90,000	80,000	
Yield Strength, min. psi.	60,000	000,00	
Yield Strength, max. psi		78,000	
Elongation in 8 in., min %			
Bar No. 3	9	14	
4, 5, 6	9	14	
7, 8	8	12	
9, 10	7	12	
11	7	12	
14, 18	7	10	

Bar designation No.	Nominal Cross-Sectional Area Per ASTM A615/A615M and A706/A706M (in.2)		
3	0.11		
4	0.20		
5	0.31		
6	0.44		
7	0.60		
8	0.79		
9	1,00		
10	1.27		
11	1,56		
14	2.25		
18	4.00		

## TEST RESULTS

				<del></del>	 1	1	T	1
Lab No.	31001	31002						
Heat No.	*	*						
Type	A615	A615						
Size of bar	5	4						
Grade .	60	60						
Wt. lbs.	*	1/1						
Mill	CMC	Nucor						
Elongation	13	14						
Yield, lbs.	21,670	13,610	<del></del>					
Yield, PSI	69,900	68,100						
Tensile, lbs.	34,375	21,425		_ <del></del>				
Tensile, PSi	110,900	107,100						
Bend T285	OK	OK						
Pass / Fail	Pass	Pass						
Unit Wt. (lb/ft)	0.99	0.63						

REN	MARK	S: *Indicates	information	was not submitted	with	test samples

Distribution:

David C. Wilson, Senior Professional

Distribution: White copy'- CDOT Central Laboratory

(submit white copy only if sample or information is directed to Staff Materials)

Canary copy - Region Materials Engineer

Pink copy - Resident Engineer

Previous editions are obsolete and may not be used.



#### BOL# 12274804

# SUPPLIERS CERTIFICATE OF COMPLIANCE

#### FOR

# MATERIALS FURNISHED FOR STATE AND FEDERAL AID HIGHWAY PROJECTS

PROJECT NO: STE C480-008

PROJECT LOCATION: Pagosa Springs Colorado

CONTRACTOR: Grand Junction Winwater Works Co.

MANUFACTURER: CONTECH ENGINEERED SOLUTIONS

Item	Туре	Coating	Gage	Diameter	Length	QTY	Total	Unit	Manufacturer	Heat#	Notes
Pipe	1 1/4"x1/2"	Galvanized 16 8" 20 4 80		ĒΑ	AK Steet	565536					
End Sections	2 2/3"x1/2"	Galvanized	16	12"		4	4	EA	Steel Dynamics	B603543	
Pipe	2 2-3"x1/2"	Galvanized	16	12"	20	2	40	EA	USS/Pasco	087764	
Pipe	2 2-3"x1/2"	Galyanized	16	12"	20	1	20	EA	USS/Posco	087719	
Pipe	2 2-3"x1/2"	Galvanized	16	18"	20	2	40	EA	USS/Posco	087719	
Pípe	2 2-3"x1/2"	Galvanized	16	18"	10	i	10	EA	USS/Posco	087737	
End Section	2 2-3"x1/2"	Galvanized	16	15"	·	1		EΑ	Steel Dynamics	B515727	_
End Section	2 2-3"x1/2"	Galvanized	16	18"	·.··	4	4	EΑ	Steel Dynamics	41619540	
Dimple Band	2 2·3"x1/2"	Galvanized	16	12"		1	1	EΑ	AK Steel		
Dimple Band	2 2·3"×1/2"	Galvanized	16	16"		1	1	ΕA	AK Steel	7532110	
End Section	2 2-3"x1/2"	Galvanized	16	12"		2	2	EA	Worthington Steel	11430367	
DW											

WE HEREBY CERTIFY THAT THE ABOVE MATERIAL('S) FURNISHED TO: Grand Junction Winwater Works Co.

MEET THE REQUIREMENTS OF AASHTO M218 M36 AND NMDOT 570 AS INDICATED
BY THE ATTACHED TEST DATA. BY SIGNING THIS CERTIFICATE OF COMPLIANCE, IT CERTIFIES THAT
THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I AM IN A POSITION TO
LEGALLY BIND THE MANUFACTURER OR SUPPLIER OF THE MATERIAL.

MADE IN THE U.S.A. WITH AMERICAN MADE STEEL. (23 CFR 635.410) "BUY AMERICA"

POSITION:

Plant Manager

Date:

7/17/2017

GRAND JUNCTION

A SECTION

COMPANY

7/19/2017

Contractor: Crossfire LLC

Project: Pinon Causeway to Aspen Village Shared Use Path Project

Project #: STE C480-008 Reference Order #: 044606-00

This letter is to certify that we supplied Crossfire LLC 8" through 18" CMP Pipe, End Sections and Bands on the above referenced project. The 8" through 18" CMP Pipe, End Sections and Bands was manufactured in accordance to the attached certification of compliance.

8" 16 Gage Galvanized Coated Corrugated Metal Pipe Quantity - 80' 12" 16 Gage Galvanized Coated Corrugated Metal Pipe Quantity - 60' 18" 16 Gage Galvanized Coated Corrugated Metal Pipe Quantity - 50' 12" 16 Gage Galvanized Coated Corrugated Metal Pipe End Section Quantity - 6ea 15" 16 Gage Galvanized Coated Corrugated Metal Pipe End Section Quantity - 1ea 18" 16 Gage Galvanized Coated Corrugated Metal Pipe End Section Quantity - 4ea 12" 16 Gage Galvanized Coated Corrugated Metal Pipe Band Quantity - 1ea 18" 16 Gage Galvanized Coated Corrugated Metal Pipe End Sections Quantity - 1ea

Please contact me with any questions.

Casey Kenney

Sales Manager Grand Junction Winwater 819 21 1/2 Road Grand Junction CO, 81505

Ph: 970-255-9015 Fax: 970-255-9018

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents Sector Herial (quantity and units) of pay item see to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

603-10080, Binch, CSP, 58.5 L.F.
603-10120, 12 inch. CSP, 57.0 L.F.
603-10180, 18 inch, CSP, 43.0 L.F.
603-XXXXX, Binch, E.S., 5 each
603-30012, 12 inch, E.S., 6 each
603-30015, 15 inch, E.S., 1 each
603-3001B, 18 inch, E.S., 4 each

Fax: 970-255-9018

7/18/17 * * * * * * * Date To - CROSSFIRE LLC Ship To - CROSSFIRE LLC PACKING LIST HIGHWAY 160 AND ALPHA DRIVE Page 820 AIRPORT RD JD 970-442-1318 * * * * * * * Time 15,03.39 PAGOSA SPRINGS, CO 81147 Customer No.-1749 CKENNE DURANGO, CO 81303-8854 970-884-4869 Order No. - 044606-00 THANKS FOR YOUR BUSINESS! * NON-STOCK ITEMS ARE NON RETURNABLE Date Requested - 7/13/17 Date Printed - 7/18/17 Cust. Order # - 501401447 Job Name - PINON CAUSEWAY SHARED USE PATH Shipped - 7/18/17 Date Ordered - 7/13/17 Ordered By - GABE ed By Salesman ∯ - 050 - GJWW Via Taken By - CASEY aht .00 Extended Freight No. of Line Bin In rder Shipped On B/O Hold UM Description/Stock Number No. Location Weight Class Packages FT 8X20 CMP 16GA 80 466800820 FT 12X20 CMP 16GA 2.0 A10-A04 60 60 466801220 FT 18X20 CMP 16GA 3.0 A10-A03 40 40 466801820 4.0 A10-A01 FT 18X10 CMP 16GA 10 10 0651181016 FT 15X20' SOLID N-12 WT/IB PIPE 5.0 A08-A06 20 20 0674N1S650020IB FT 18X20' SOLID N-12 WT/IB PIPE 6.0 A08-A07 20 20 0674N18650020IB 7.0 EA 8 CMP FLARED END SECTION *00305016577 EA 12 CMP FLARED END SECTION 6 8.0 A10-A06 6 466800012 EA 15 CMP FLARED END SECTION 9.0 A10-A06 1 1 466800015 EA 18 CMP FLARED END SECTION 10.0 A10-A06 466800018 EA 12 CMP DIMPLE BAND 11.0 A10-A05 1 1 466801012 12.0 A10-A05 1 EA 18 CMP DIMPLE BAND 1 466801018 1 EA 1515AA 15 N-12 WT BELL CPLG 13.0 1 0674AA1515 14.0 A07-A04 1 EA 1815AA 18 ADS WT CPLG 1 0674AA1815 3 BA NEENAH R-4216-B BEEHIVE GRATE 15.0 3 *00305016578 1 EA RX1200 13.1'X164' GEOGRID 16.0 1 RX1200 236.16 SY PER ROLL 458738377

END OF PACKING LIST

and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s						
Customer Signature:	**	MATERIAL	RECEIVED	IN GOOD	CONDITION	X

[:] You agree that the sale of these products/services is subject to all of our standard terms and conditions of sale located at www.winsupplyinc.com/tcsale

ORDERED

WIDTH

GAUGE



PRODUCT TYPE

Pcs

Columbus División

400 N STEEL RD COLUMBUS, MS 39701

SHIP TO: CONTECH C/O OLYMPIC STEEL 625 XENIUM LANE NORTH PLYMOUTH, MN 55441

LOAD #: S588526

DATE: 04/18/16

WEIGHT

CARRIER (SCAC): CPUT

(NAME): CUSTOMER PICK UP

VEHICLE I.D...:

P.O. No.

SOLD TO: CONTECH ENGINEERED SOLUTIONS LL 9025 CENTRE POINTE DRIVE WEST CHESTER, OH 45069

TAG ID.

1 HOT	DIPPED GALVANIZED	.0570 38.	0000 0003	44274-1		381-A01 1989002	30,2	60
Mate Part Alt Cust	t: B515727	TM 929-07 PKCD: C130 Type: P	C: .03 Cu: .07 Al: .028 B:<.0001 Y: 47.		P: .010	8:.001 Cr: .04 Nb:<.001	Si: .02 Mo: .010 Ti: .001	
· · · · · · · · · · · · · · · · · · ·			anne galant mand van geboort Millelle (1888)					
						and the second second second second		
1		TOTALS	Page	1 of 1	eranning plant are me spiriter militare	ang mang manggan kanan menggan kanan menggan kanan menggan kanan menggan kanan menggan kanan menggan kanan men	30,2	50
DELIVER	Y INSTRUCTIONS:			: PREPAID E	KCEPT WHEN	INDICATED HE	RE COLLEC	T
			per:	· ·				
LOADING	: INSTRUCTIONS:		l .v. Received :	No. 15	this bade and	PICK UP	or damayed mat he nuscomer and	erial Che
			Consign	nee Signatu	ıre:			
LOADED	Section ) of the Conditions of Applicable	mhoud resourse on	EXCEP		l Name:			
the consid	mor, he shall sign the following statement delivery of this shipment without payment of ful charges	. The carrier sha	11					

MELTED AND MANUFACTURED IN THE USA

400 H STEEL RD COLUMBUS, MS 39761

White - Original-Not Negotiable

Yellow - Consignee Copy

Pink - Carrier Copy



# **AK Steel Corporation** Metallurgical Test Report Middletown Works 1801 Crawford St. Middletown, OH 45043 U.S.A.

Page	1
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Load No.

9813260

Srn No.

9813260

PROCESSOR ORDER NO. MILL ORDER NO. BUYERS ORDER NO. 241331-4809 PO000366097-1 PO000366097-1

CONTECH ENGINEERED SOLUTIONS 9025 CENTRE POINTE DR STE 400 WEST CHESTER, OH 45069

CONTECH ENGINEERED SOLUTIONS C/O PRECISION STRIP

PART NO. CO2GVL16M

4400 OXFORD STATE ROAD MIDDLETOWN, OH 45044

ENGLISH UNITS -: PRODUCT:- METRIC UNITS .0570 MIN 54.9060 X COIL

M E R OUTSIDE PROCESSOR ID HEAT PARENT LIFT ID NET WEIGHT LIFTID PIECE 565536 56,530 LBS. 25,642 KG. 423129300 435511-04 435511-04 TOTAL PLECES TOTAL NET WEIGHT TOTAL LIFTS 56,530 LBS. 25,642 KG.

CHEMICAL ANALYSIS P-Product Analysis of Parent Coil L=Ladle Analysis of Heat

0

i	ID	С	MN	P	s	Sì	CīJ	Al.	СВ	Υ	NI	CR	TI	N	MIO	SN	В
L	565536	.039	.18	.011	.010	.004	.026	.042	.001	.001	.010	.025	.000	.0015	.003	.006	.0001
	ID	CA															
L	565536	.0002		-													

SHIPPING DATE: 02/08/2017

REMARKS

MELTED AND MANUFACTURED IN THE USA

ALL MANUFACTURING PROCESSES FOR THIS STEEL HAVE OCCURED IN THE UNITED STATES THIS STEEL WAS MELTED AT MIDDLETOWN.OH

#### PRODUCT DESCRIPTION

ZINCGRIP(R) GALV SHT FLAT CULV MIN SPANGLE CHEM TREATED DRY TEST REPORTS AASHTO M218-03 ASTM A929/929M-01 (AKS CODE V93)

PARENT LIFT ID	POS	DIR (L, T, D)	COND	YIELD STRENGTII (KSI)	TENSILE STRENGTH (KSI)	% ELONG	ELONG METHOD	ELONG GAUGE LENGTH		
435511-04	T	L	A.S.T.M	40.2	52.4	38	CALC	2 Inch		



# AK Steel Corporation Metallurgical Test Report Middletown Works 1801 Crawford St. Middletown, OH 45043 U.S.A.

Page 2

Load No

9813260

Srn No.

9813260

BUYERS ORDER NO.

PO000366097-1

PROCESSOR ORDER NO.

PO000366097-1

CONTECTI ENGINEERED SOLUTIONS
9025 CENTRE POINT E DR
STE 400
WEST CHESTER OH 45009

CONTECH ENGINEERED SOLUTIONS
C/O PRECISION STRIP
4400 ONFORD STATE ROAD
T MEDDLETOWN DIT 45044

241331-4809 PART NO. CO2GVI.16M

MILL ORDER NO.

ENGLISH UNITS -: PRODUCT: - METRIC UNITS

R				U			1 307 0 (60.	14 243V00 V	COII.		
PARENT LIFT	Pos	DIR	COND		CTG WGT	CIG WGT	CTG WGT	CTG WGT	CTG WGT	CTG WGT	CTG WGT
1D		(I., T, D)		TOP E1 (OZ/SQ FT)	TOP E1 (GM/SQ M)	TOP CT (OZ/SQ FT)	TOP CT (GM/SQ M)	TOP F.2   (OZ/SQ FT)	(GM/SQ M)	BOT E1 (OZ/SQ FT)	BOT EI (GM/SO M)
435511-04	-A-		A.S T.M	1.08	331.00	. 1.05	319.00	1.04	316.00	1.08	331.00
PARENT LIFT	POS	DIR	COND	CTG WGT	CTG WG1	CTG WGT	CTG WGT	CTG WGT	CTG WGT		
ID		(L, T, D)		BOT CT (OZ/SQ FT)	BOT CT (GM/SQ M)	BOT E2 (OZ/SQ FT)	BOT E2 (GM/SQ M)	AVG (OZ/SQ FT)	AVG (GM/SQ M)	:	
435511-04	1		A.S.T.M	1.05	319.00	1.04	316.00	2.11	544.00	<u> </u>	

STANSO Trustopher Courses The 182 The



1945 Airport Road Columbus, MS 39701 Phone: 662-245-4200 Fax: 662-245-4297

# Metallurgical Certification

Order Number:

312390

Sold To: CONTECH ENGINEERED SOLUTIONS L Ship To: OLYMPIC STEEL

WEST CHESTER, OH 45069

Order Dimensions: 0.0570X38.0000 (in) (MIN)

PLYMOUTH, MN 55441

Ordered Product: AASHTO M218-3 ASTM 929-07

PRIME GALV COLD ROLLED SHEET - PRIME

Part Number:

COESGV1638/32

Alt Part#:

Customer PO #: 000345598-1

Load #: S617402

Ship Date: 06/24/2016

Chemical Analysis:

Coil Number:	Heat:	С	Mn	Р	S	Sì	Cu	Sn	Ni	Сг	Mo	Al	N	٧	Nb	Τi	В	Ca	C(eq)
214575-A01	B603543	.03	.17	.015	-052	. 04	. 09	.0050	, 04	-07	.010	.044	.0064	.003	.001	.001	<,0001		
16S602513AA	Weight: 9,640	lb.		-				2", . t						Wasin Inda				177-7	
Mechanical Propert			f	Metric															
Yield Strength	44.0 k	si	3	04 MP	a														
Tensile Strength	54.9 k	si	3	78 MP	a														
Elongation	39 %			39 ፄ															
N-Value	Not Report	eđ																	
Hardness - HRBW	Not Report																		
Direction	Longitudin	al																	•
Linear Footage	ī,553 f		4	73 m															
Actual Gauge	.0570 i	n	1.	45 mm					-										
Coating Weight	G200														· ·		•		

We hereby certify the above is correct as contained in the records of the company. All tests performed according to ASTM standard E8, A370, E18, E415, E1019, E646, E517 and E23 (yield strength determined using 0.2% offset method) or JIS Z2241 or DIN EN10325. All heats are Al-killed and Ca treated.

THIS PRODUCT WAS MELTED AND MANUFACTURED IN THE USA

Certified by:

Shobhit

Shobifit Bhartiya

Certificate Date: 06/24/2016 Galvanize Line Metallurgical Engineer

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER POOO0355618 VEHICLE ID CDS TRANSPORT MILL ORDER NUMBER NS1153501 TALLY TF038624 SHIP DATE 07-25-2016

SOLD TO: 0036415 022
CONTECH ENGINEERED SOLUTIONS LLC
ATTN ACCOUNTS PAYABLE
9025 CENTRE POINTE DRIVE
SUITE 400

WEST CHESTER, OH 45069-9700

SHIP TO: CONTECH ENGINEERED SOLUTIONS LLCC 6290 CLERMONT ST COMMERCE CITY, CO 80022-0000

PREPARED BY MANAGER OF QA

PREPARED BY THE OFFICE OF: ERIC BONAVENTURE MANAGER QA ON: DATE 07-22-2016 TIME 10:27:30

USS-POSCO INDUSTRIES

SPEC: GALVANIZED SHEETS, ASTM A929-01 ZN/AASHTO M218-03, REGULAR SPANGLE, CULVERT 2.00 OZ COATING, CHEM TREAT, NO OIL, THICKNESS TOLERANCE IS BASED ON ASTM SUPPLEMENTARY REQUIREMENTS, .0610 NOM BASE METAL THICKNESS DOMESTIC STEEL ONLY

CERT: THIS IS TO CERTIFY AND GUARANTEE THAT THE MATERIAL DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED, AND/OR INSPECTED BY UPI AND MEETS THE REQUIREMENTS OF THE STATED SPECIFICATION.

NOTE: THE MATERIAL DESCRIBED HEREIN IS BRANDED ACCORDING TO STATED SPECIFICATIONS INCLUDING: NAME OF MANUFACTURER, BRAND NAME, SPECIFIED THICKNESS, COATING TYPE, SPECIFIED COATING WEIGHT, HEAT NUMBER AND COATING LOT NUMBER.

MATERIAL DESCRIPTION: .0640 NOM X 27.2500 1.63MM NOM X 692MM

HEAT NUMBER	TEST PTECE	YIELD TENSILE ELONG.% 33KSI 45KSI IN 2 IN	AVG. COAT'G HRB
ROUBLIC	IDENT	MIN. MIN. 20%MIN	WEIGHT
087763	LCDC79	40 51 40	2.176 [.] 55
JOI! 102		276MPA 352MPA	664G/M
087764	074GEH	34 49 39	1.603 56
		234MPA 338MPA	489G/M
087768	090GEH	42 52 38	2.041 55
		290MPA 359MPA	622G/M
087771	044GFE	47 56 30	2.000 64
		324MPA 386MPA	610G/M

HEAT# 087764 SOURCE HEAT# F04962-2015 C=.038, MN=.20, P=.010, S=.008, SI=.008, CU=.05, NI=.02, CR=.04, MO=.006, AL=.034, N=.004, V=.001, TI=.001, B=.0040

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER P0000355618 MILL ORDER NUMBER NS1153501 TALLY TF038624

USB POSCO

HEAT# 087768 SOURCE HEAT# F05043-2015 C=.038, MN=.20, P=.008, S=.007, SI=.008, CU=.02, NI=.01, CR=.03, MO=.003, AL=.035, N=.004, V=.001, TI=.001, B=.0040

HEAT# 087771 SOURCE HEAT# R06409-2015 C=.035, MN=.20, P=.008, S=.007, SI=.009, CU=.04, NI=.01, CR=.03, MO=.003, AL=.033, N=.003, V=.001, TI=.001, B=.0040

PREPARED BY MANAGER OF QA

MELTED, POURED AND MANUFACTURED IN THE UNITED STATES.

HEAT SOURCE HEAT 087763 F04956-2015 087764 F04962-2015 087768 F05043-2015 087771 R06409-2015

USS-POSCO INDUSTRIES

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER PO000352214 MILL ORDER NUMBER NS1071801 TALLY TF027748 VEHICLE ID HUDDY TRANSPORTATION LLC SHIP DATE 05-31-2016

SOLD TO: 0036415 035
CONTECH ENGINEERED SOLUTIONS LLC
ATTN ACCOUNTS PAYABLE
9025 CENTRE POINTE DRIVE
SUITE 400
WEST CHESTER, OH 45069-9700

SHIP TO:
CONTECH ENGINEERED SOLUTIONS LLCC
1224 W.STOCK RD.
OGDEN, UT 84401-0000

PREPARED BY MANAGER OF QA

PREPARED BY THE OFFICE OF: ERIC BONAVENTURE MANAGER QA

ON: DATE 05-27-2016 TIME 14:02:53 USS-POSCO INDUSTRIES

SPEC: GALVANIZED SHEETS ASTM A929-01 ZN/AASHTO M218-03, REGULAR SPANGLE CULVERT 2.00 OZ COATING, CHEM TREAT, NO OIL .0760 NOM BASE METAL THICKNESS DOMESTIC STEEL ONLY

CERT: THIS IS TO CERTIFY AND GUARANTEE THAT THE MATERIAL DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED, AND/OR INSPECTED BY UPI AND MEETS THE REQUIREMENTS OF THE STATED SPECIFICATION.

NOTE: THE MATERIAL DESCRIBED HEREIN IS BRANDED ACCORDING TO STATED SPECIFICATIONS INCLUDING: NAME OF MANUFACTURER, BRAND NAME, SPECIFIED THICKNESS, COATING TYPE, SPECIFIED COATING WEIGHT, HEAT NUMBER AND COATING LOT NUMBER.

MATERIAL DESCRIPTION: .0790 NOM X 27.1250 2.01mm NOM X 689mm

HEAT NUMBER	TEST PIECE IDENT	YIELD TENSILE ELONG.% 33KSI 45KSI IN 2 IN MIN. MIN. 20%MIN	AVG. COAT'G HRB WEIGHT
087719	105GDE	47 53 36 324MPA 365MPA	2.438 56 744G/M
	106GDE	47 52 35 324MPA 359MPA	2.598 56 792G/M
087727	061GB8	46 52 33 317MPA 359MPA	2.247 59 685G/M

HEAT# 087719 C=.036, MN=.21, P=.008, S=.007, SI=.010, CU=.03, NI=.01, CR=.04, MO=.004, AL=.034, N=.004, V=.001, TI=.001, B=.0050

HEAT# 087727 C=.039, MN=.20, P=.009, S=.008, SI=.008, CU=.04, NI=.02, CR=.03, MO=.005, AL=.040, N=.003, V=.001, TI=.001, B=.0040

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER PO000352214 MILL ORDER NUMBER NS1071801 TALLY TF027748



POURED AND MANUFACTURED IN THE UNITED STATES.

HEAT SOURCE HEAT 6087719 F04950-2015

087727 F04960-2015

PREPARED BY MANAGER OF QA

USS-POSCO INDUSTRIES

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION

P.O. NUMBER P0000356568 VEHICLE ID A & M TRANSPORT MILL ORDER NUMBER NS1171601 TALLY TF042499 SHIP DATE 08-10-2016

SOLD TO: 0036415 003 CONTECH ENGINEERED SOLUTIONS LLC ATTN ACCOUNTS PAYABLE 9025 CENTRE POINTE DRIVE SUITE 400 WEST CHESTER, OH 45069-9700

SHIP TO: CONTECH ENGINEERED SOLUTIONS LLCC C/O SPAN-ALASKA TRANSPORTATION, INC 3815 W. VALLEY HWY N. AUBURN, WA 98001-0000

PREPARED BY THE OFFICE OF: REBECCA ZIMBRA MANAGER QA

ON: DATE 08-09-2016 TIME 13:24:50

MEMPEO SY THRACE OF IN USS ADSLU INDUSTRIES

SPEC: GALVANIZED SHEETS, ASTM A929-01 ZN/AASHTO M218-03, REGULAR SPANGLE, CULVERT 2.00 OZ COATING, CHEM TREAT, NO OIL, THICKNESS TOLERANCE IS BASED ON ASTM SUPPLEMENTARY REQUIREMENTS, .1060 NOM BASE METAL THICKNESS DOMESTIC STEEL ONLY

CERT: THIS IS TO CERTIFY AND GUARANTEE THAT THE MATERIAL DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED, AND/OR INSPECTED BY UPI AND MEETS THE REQUIREMENTS OF THE STATED SPECIFICATION.

NOTE: THE MATERIAL DESCRIBED HEREIN IS BRANDED ACCORDING TO STATED SPECIFICATIONS INCLUDING: NAME OF MANUFACTURER, BRAND NAME, SPECIFIED THICKNESS, COATING TYPE, SPECIFIED COATING WEIGHT, HEAT NUMBER AND COATING LOT NUMBER.

MATERIAL DESCRIPTION: .1090 NOM X 26.7500 2.77MM NOM X 679MM

HEAT	TEST	YIELD TENSILE ELONG.%	AVĢ٠
NUMBER	PIECE	33KSI 45KSI IN 2 IN	COAT'G HRB
	IDENT	MIN. MIN. 20%MIN	WEIGHT
087737	052GEH	39 49 37	2.608 55
001721		269MPA 338MPA	795G/M
087743	GMHL48	45 56 26	2.720 68
<b>V U U U U U U U U U U</b>		310MPA 386MPA	830G/M
087777	103GGC	44 54 31	3.321 67
		303MPA 372MPA	1013G/M

HEAT# 087737 SOURCE HEAT# F05041-2015 C=.040, MN=.20, P=.007, S=.006, SI=.009, CU=.02, NI=.01, CR=.03, MO=.003, AL=.036, N=.005, V=.001, TI=.001, B=.0050

SOURCE HEAT# R06412-2015 HEAT# 087743 C=.038, MN=.20, P=.006, S=.007, SI=.012, CU=.04, NI=.01, CR=.02, MO=.003, AL=.037, N=.004, V=.001, TI=.001, B=.0040

USS-POSCO INDUSTRIES METALLURGICAL TEST REPORT AND CERTIFICATION MILL ORDER NUMBER NS1171601 TALLY TF042499

P.O. NUMBER P0000356568

USB POSCO

HEAT# 087777 SOURCE HEAT# R06466-2015 C=.046, MN=.21, P=.008, S=.008, SI=.007, CU=.03, NI=.01, CR=.03, MO=.003, AL=.036, N=.004, V=.001, TI=.001, B=.0050

MELTED, POURED AND MANUFACTURED IN THE UNITED STATES.

HEAT SOURCE HEAT 087737 F05041-2015 087743 R06412-2015 R06466-2015

PREPARED BY MARAGER OF QA

USS-ADUCO ENDUSTRIES



1945 Airport Road Columbus, MS 39701 Phone: 662-245-4200 Fax: 662-245-4297

## Metallurgical Certification

Order Number:

301037

Sold To: CONTECH ENGINEERED SOLUTIONS L Ship To: CONTECH C/O OLYMPIC STEEL

Order Dimensions: 0.0570X38.0000 (in)

WEST CHESTER, OH 45069

PLYMOUTH, MN 55441

Ordered Product: AASHTO M218-3 ASTM 929-07

HOT DIPPED GALVANIZED - PRIME

Part Number:

COESGV1638

Alt Part#:

Customer PO #: 000344274-1

Load #: S588526

Ship Date: 04/18/2016

Chemical Analysis:																	
Coil Number:	Heat: C	Mn	P S	Si	Cu	Sn	Ni	Сг	Мо	ΑI	N	٧	Nb	Tí	В	Ca	C(eq)
187381-A01	B515727 .03	-22	010 .0	01 ,02	, 97	.0030	.04	. 04	. 010	.028	.0073	.001	< .001	,001	<.0001	.0020	090
6S01989002	Weight: 30,260 lb.	•												······························	·············	**********	green and account of the
Mechanical Properti	ies: English	Me	ric						-								
Yield Strength	47.2 ksi	325	MPa	-													
Tensile Strength	58.1 ksi	400	MPa														
Elongation	34 %	34	용		•												
N-Value	Not Reported																
Hardness - HRBW	Not Reported																
Direction	Longitudinal																
Linear Footage	4,354 ft	1,327	m														
Actual Gauge	.0538 in	1	mm														
Coating Weight	G200																
Coating W. Triple S.	2.04 OZ/SqFt	623	g/m2														

We hereby certify the above is correct as contained in the records of the company. All tests performed according to ASTM standard E8, A370, E18, E415, E1019, E646, E517 and E23 (yield strength determined using 0.2% offset method) or JIS Z2241 or DIN EN10325. All heats are Al-killed and Ca treated.

THIS PRODUCT WAS MELTED AND MANUFACTURED IN THE USA

Certified by:

Shoblit

Shobilit Bhartiya

Certificate Date: 04/18/2016 Galvanize Line Metallurgical Engineer



### CHEMICAL/PHYSICAL CERTIFICATION

4500 County Road 59
Butier, IN 46721 USA
Telephone (260) 868-8000
Fax (260) 868-8955

SHP	Olympic Steel Inc T - MN 625 Xenium Lane North Minneapolis, MN 55441 United States	0000	Contech Engineered Solutions LLC 9025 Centre Pointe Drive Suite 400 West Chester, OH 45069 United States
T		T	EDI Contact
0		0	

<u>Order ⊭</u> 573899	<u>Line Item #</u>	<u>Coil #</u> 16G389947	Heat #	<u>PO#</u> 0000351542 -	<u>Part #</u> COESGV1646
91 3033	~	1000000047	#1019540 °C	\nnn\20124\~~	COE3GA 1040
<u>Width</u>	9	<u>Gauge</u>	<u>Length</u>	Coil Weight	
46.000 in	0.057	0 in -Min	4,682 ft	44,380 lbs	

1,428 m

ASTM A 929 - 01(1

Product Description

Prime Galv Hot Rolled Sheet

G210/G210

Material Specification

20,149 kg

Ladle Chemical Analysis %

			· <del></del>		· —										_			
C	Mn	P	S	Si	Al	Cu	Ni	Сг	Mo	Sn	N	٧	Nb	Ti	B	Ca	Pb	Zr
0.03	0.22	0.010	0.002	0.03	0.029	0.11	0.04	0.05	0.01	0.006	0.008	0.000	0.000	0.000	0.0047	0.002	0.00	0.0004

#### Mechanical Properties

Testing Direction	Yield S	trenath	Tensile	Strength	Elongation	Rockweil
Longitudinal	(KSI)	(MPa)	(KSI)	(MPa)	(percent)	(Rb)
	41.3	285	54.3	374	33.00	55

Made in the USA

Quality Assurance_

1,168.4 mm

Chem Treat:

Melted, thin stab cast and roked by proud Americans in Butler, IN.

1.448 mm - Min

Oiled: No

All tests were performed according to applicable standards and are correct as contained in the records of the company.

Metallurgist

Stonly V. Seff

Metandi

Retrieved on: 7/24/2016 21:23:15

el Dynamics, Inc. Rev. Level 8.8[1007] - Web-Butler Produci

Page 1 of 1



The Worthington Steel Company Delta 6303 County Road 10 Delta, OH 43515

Contech Construction Products Inc Olympic Steel 625 Xenium Lane North Plymouth, MN 55441 US

CERTIFICATE ANALYSES	OF CHEMICAL AND TESTS
Certificate Number 5188726	0
Customer Order No. P0000335477	Date 2015-09-23
Sales Order No. 1698213 1.1	Mill Order No.
B/L No. WSC1627066	Weight 44741 lbs
OSP/Warehouse BoL	Customer Reference
Alloy / Grade 1006	Part No. COESGV1632
Specification No. ASTM A929 & AASHTO	M218 Curr Rev
Description	
Hot Dipped Galvan Dry 1006 G200 0.0640 in X 32.000	

Melted, Cast, Hot Eplled and Galvanized in the USA

Heat Number

11430367

Supplier Name Steel Dynamics Inc - Steel Dynamics

Supplier Heat 21526010

#### Chemical Analysis

C	.030
MN	.160
p	.011
S	. 002

Heat Number

Coil No.

11430367

3585784

#### Mechanical Analysis

RBW Hardness	65.0
Tensile (KSI)	60.3
Yield (KSI)	45.6
Percent Elongation 2 in	25.0
Customer Test	1

#### Coating Analysis

Triple Spot Total (oz/ft2)

Heat Number

Coil No.

11430367

3586441

echanical Analysis	
RBW Hardness	63.0
Tensile (KSI)	59.6
Yield (KSI)	45.5
Percent Elongation 2 in	·29.0
Customer Test	

I never certify the chemical analyses and mechanical properties are correct as contained in the records of the Corporation. All mechanical tests were performed to the current ASTM Standards unless otherwise noted.

AF ONLY



The Worthington Steel Company Delta 6303 County Road 10 Delta, OH 43515

Contech Construction Products Inc Olympic Steel 625 Xenium Lane North Plymouth, MN 55441 US

CERTIFICATE ANALYSES	OF CHEMICAL AND TESTS
Certificate Number 5188726	0
Customer Order No. PO000335477	2015-09-23
Sales Order No. 1698213 1.1	Mill Order No.
B/L No. WSC1627066	Weight 44741 lbs
OSP/Warehouse BoL	Customer Reference
Alloy / Grade 1006	Part No. COESGV1632
Specification No. ASTM A929 & AASHTO	M218 Curr Rev
Description	
Hot Dipped Galvan Dry 1006 G200 0.0640 in X 32.000	

Coating Analysis
Triple Spot Total (oz/ft2)

2.056

I nereoy certify the chemical analyses and mechanical properties are correct as contained in the records of the Corporation. All mechanical tests were performed to the current ASTM Standards unless otherwise noted

AFF-ARA

White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)

Canary copy - Region Materials Engineer Pink copy - Resident Engineer



## CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Ŧ	`	^	+	4	

07/26/2017

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

603-50018

APL Category:

Drainage

APL Sub-Category:

Culvert Pipe

APL Base Category:

Open Cut / Direct Bury

APL Reference No.:

3434-12

Product Name:

18" Plastic Pipe

Manufacturer:

**ADS N-12** 

Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC

Paul Martin,

Project Manager

l hereby certify under penalty of perjury that the material listed Compliance represents ちした。 (quantity and units)	d in this Certificate of of pay item:
603-50018 18" Plastic Pipe (Pay item # and description) that will be installed in Conforma and specifications on Project No. STE C480-008, 19219	nce with the plans
Contractor	61 74 18 Date



## CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

07/26/2017

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

603-50015

APL Category:

Drainage

APL Sub-Category:

Culvert Pipe

APL Base Category:

Open Cut / Direct Bury

APL Reference No.:

3434-12

Product Name:

15" Plastic Pipe

Manufacturer:

**ADS N-12** 

Date of Web Site Review & Selection: 7/26/17

Crossfire, LLC

Paul Martin,

Project Manager

I hereby certify under penalty of perjury that the material liste	d in this Certificate of
Compliance represents 4 1.5 (quantity and units	) of pay item:
Compliance represents	, ( )
603-50015 15" Plastic Pipe (Pay item # and description) that will be installed in Conformation and specifications on Project No. STE C480-008, 19219	ance with the plans
I a he he he	01 24 18 Date
Contractor	



7/19/2017

Contractor: Crossfire LLC

Project: Pinon Causeway to Aspen Village Shared Use Path Project

Project #: STE C480-008 Reference Order #: 044606-00

This letter is to certify that we supplied Crossfire LLC 15" and 18" ADS N-12 WTIB Solid Pipe on the above referenced project. The 15" and 18" ADS N-12 WTIB Solid Pipe was manufactured in accordance to the attached materials data sheet.

15" ADS N-12 WTIB Solid Pipe Quantity - 20' Item Number - 15650020IB 🗸

18" ADS N-12 STIB Solid Pipe Quantity - 20' Item Number - 18650020IB 🗸

Please contact me with any questions.

Casey Kenney

Sales Manager Grand Junction Winwater 819 21 1/2 Road Grand Junction CO, 81505 Ph: 970-255-9015 Fax: 970-255-9018

> I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents See to the right (quantity and units) of pay item See to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

603-50015 15 inch plas. Pipe, 4 L.F. 603-50018 18 inch plas. pipe, SLF

#### APL Reference No. COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY 3434-12 Material code: Product Evaluation Coordinator 712.13.02.00 Colorado Department of Transportation Material code description full name: 4670 North Holly Street, Unit A Pipe, Plastic, Corrugated Denver, Colorado 80216 PART 1 Product category: Drainage\Culvert Pipe\Open-Cut/Direct-Bury Product name: N-12 HP [12 - 60 Inch Pipe] Manufacturer (name & address): Product representative (name & address): Attn: Peggy B. Graham, P.E., CFM Advanced Drainage Systems, Inc. Advanced Drainage Systems, Inc. 4640 Trueman Blvd. 9830 Niwot Road Hilliard, Ohio 43026 Longmont, CO 80504 Phone: (614) 658-0050 FAX: Phone: (720) 982-6303 FAX: Web-site address: Web-site address: www.ads-pipe.com Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.) N-12 HP is a high performance polypropylene pipe for gravity flow storm drain applications. N-12 HP uses advanced polypropylene resin technology with a dual wall profile design (smooth interior and annular corrugated exterior). Pipe diameters: 12'' - 60''. Manning's n = 0.012Pipe stiffness: Is variable with greater stiffness than other thermoplastic pipes ranging from 40 to 115% including PVC. Brittleness: A impact co-polymer is added to the resin making it less brittle than PVC. Joints: Pipe is joined with a gasketed integral bell and spigot meeting the requirements of ASTM D 3212 or ASTM F 2881. 3rd party testing has been completed demonstrating that the pipe joints will hold a 15 psi pressure. Corrosion and abrasion: Polypropylene has a pH range of 1.5 - 14 and same abrasion resistance as High Density Polyethylene Pipe. Ultra violet protection: Titanium dioxide, a UV retardant is added to the resin. Restrictions, (installation and/or use): Use of the product, (be specific to CDOT highway activities only): Culvert and storm drainage applications. Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products): Polypropylene pipe enhances quality by providing greater pipe stiffness using a polypropylene resin making the stiffness values equal or greater than polyvinyl chloride; less brittle than polyvinyl chloride due to the impact co-polymer added to the resin; superior joint performance as compared to single gasketed plastic pipe and reinforced concrete pipe by providing a joint that tests to 15psi by 3rd party testing; superior Manning's coefficient of 0.012 as compared to reinforced concrete and corrugated metal pipe. Polypropylene pipe provides cost savings compared to reinforced concrete pipe due to ease of installation and polyvinyl chloride due to material pricing. Specifications, (listing those applicable is required) & Certificate of Compliance (required to certify compliance with listed specifications): : F 2736, F 2881, D 3212, F 477, F 2487, F 2321 AASHTO: MP 21-11 Product testing, (from national/independent laboratories or universities) & Certified Test Report (CTR required to validate all claims): INTPEP-AASHTO: [Currently NTPEP only audits manufacturing facilities producing polyethylenc pipe] : Infrastructure & Development Engineering, Inc. (November 29, 2011) State DOT Approvals, (current documentation required): Oregon, Virginia, Washington ⊡n/a Materials Safety Data Sheets (MSDS): ∐n/a ∐no Sample submitted: yes Notes/Additional Comments

PRE-APPROVED PRODUCT EVALUA	
the Constitutor	Material code:
roduct Evaluation Coordinator olorado Department of Transportation	712.13.02.00
670 North Holly Street, Unit A	Material code description full name:
Penver, Colorado 80216	Pipe, Plastic, Corrugated
and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second o	
ART 1	Product category:
oduct name: I-12 HP [12 - 60 Inch Pipe]	Drainage\Culvert Pipe\Open-Cut/Direct-Bury
reduct representative (name & address):	Manufacturer (name & address): Attn:
Attn: Peggy B. Graham, P.E., CFM	Advanced Drainage Systems, Inc.
Advanced Drainage Systems, Inc.	4640 Trueman Blvd.
9830 Niwot Road	Hilliard, Ohio 43026
Longmont, CO 80504	Phone: (614) 658-0050 FAX:
hone: (720) 982-6303 FAX:	Web-site address:
Veb-site address: www.ads-pipe.com	www.ads-pipe.com
Description of the product: (Include specific quantifiable details from N-12 HP is a high performance polypropylene pipe for gravity flow storn design (smooth interior and annular corrugated exterior). Pipe diameters pipe stiffness: Is variable with greater stiffness than other thermoplastic	:: 12" - 60". Manning's n = 0.012 pipes ranging from 40 to 115% including PVC. tle than PVC. requirements of ASTM D 3212 or ASTM F 2881. 3rd party testing has been completed une abrasion resistance as High Density Polyethylene Pipe.
	(v):
Polypropylene pipe chiances quarty by providing a composition of the providing a joint that tests to 15psi by 3rd party testing; superior polypropylene pipe provides cost savings compared to reinforced concr	rove safety, save money, be a better value then other manufacturer's products): using a polypropylene resin making the stiffness values equal or greater than polyvinyl chloride; less resin; superior joint performance as compared to single gasketed plastic pipe and reinforced concre or Manning's coefficient of 0.012 as compared to reinforced concrete and corrugated metal pipe. rete pipe due to ease of installation and polyvinyl chloride due to material pricing.
Use of the product, (be specific to CDOT highway activities onle Culvert and storm drainage applications.  Benefits to CDOT, (how will your product enhance quality, improduct enhance pipe enhances quality by providing greater pipe stiffness brittle than polyvinyl chloride due to the impact co-polymer added to the pipe by providing a joint that tests to 15psi by 3rd party testing; superior polymer provides cost savings compared to reinforced concrete.	rove safety, save money, be a better value then other manufacturer's products); using a polypropylene resin making the stiffness values equal or greater than polyvinyl chloride; less the resin; superior joint performance as compared to single gasketed plastic pipe and reinforced concreter Manning's coefficient of 0.012 as compared to reinforced concrete and corrugated metal pipe, are the pipe due to ease of installation and polyvinyl chloride due to material pricing.  In the of Compliance (required to certify compliance with listed specifications):
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T&C: You agree that the sale of these products/services is subject to all of our standard terms and conditions of sale located at www.winsupplyinc.com/tcsale

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Region S Field sheet COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 19219 OR MATERIALS DOCUMENTATION Project No. STE C480-009 Metric units ves Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. S.U.P Field Lab phone Cell Phone Material Type (SPECIAL NIET Special Provisions Grading Item Class Material Code (LIMS) lves 604 Previous CDOT Form #157 F/S No.(s): Previously used on Project No.: CDOT Form #633 (sack) CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided THE INVET (SPECIAL) WAS FIELD INSPECTED AND APPROVED BY THE PROJECT ENGINEER. THE COC FOR THE CAST IRON EARTH DITCH PRATING IS ATTACHED. CLASS P CONCRETE WAS APPROVED FOR USE. ALL INFORMATION NEGARDING CONCRETE IS FILED WHOER ITEM GOT CLOSS P. THE REINFURCING STEEL INFORMATION IS FILED UNDER ITEM 602. er ID Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date needed Preliminary Construction Maintenance Emergency Supplier CASTIRON - NEENAH FOUNDRY Contractor REINFORCING STEEL NUCORS CMC CONCRETE- FCM. CROSSFIRE Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity Quantity represented 3 EA EA Date Shipped specified quantity to: Via Sample submitted: □ No Central lab . ___ 🔲 Region lab Yes E-mail Title Sampled or inspected by (print name) CUPTON LEE PE Residency ervisor (Pro./Res./Matls. Engr./Maint. Supt.) (print name) MUCE DAVIS

Pink copy - Resident Engineer

White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)

CDOT Form #157

3/15

Municipal Products Group · PO Box 729, Neenah, WI 54597 · P: (920) 725-7000 · F: (920) 729-3661 · www.nfco.com

### CASTING CERTIFICATION

Project:

Colorado Department of Transportation (CDOT)

Project No. STE C480-008

Manufacturer: Neenah Foundry Company

2121 Brooks Avenue Neenah, WI 54901

Laboratory:

Neenah Foundry Company utilizes its on-site laboratory for material testing.

Laboratory Test Date - Typically within 24 hours of casting.

Product Info: R-4216-B, Cast Iron Earth Ditch Drain

Part No. 4916-8000

Material:

Cast Gray Iron Complying with ASTM A48 Class 35B

Batch No.:

219K7, Cast Date: August 7, 2017

CDOT Spec:

Complies with CDOT Standard Specification 712.06 with the exception of the load

capacity requirements of AASHTO M306. This casting is not a load rated casting and is

not intended to be driven over.

Neenah Foundry Company hereby certifies that the castings supplied for the project listed below comply with the specifications identified herein and were manufactured entirely in the United States of America.

Sincerely,

Neenah Foundry Company

Joseph J. Falle IV, P.E. (Licensed in IA and WI)

**Product Support Engineer** 

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents house (quantity and units) of pay item 604-1900 [wet (Special) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

19219-607-1

COLORADO DEPARTMENT OF TRANSFIELD REPORT FOR SAMPLOR MATERIALS DOCUMEN	E IDENTIFICATION	Region 5 Contract ID 19219	Field sheet # 266289 Date Submitted 3-11-18
Metric units yes	🔀 no	Project No. STE C480 Project Location PINON CAUSEU	000 NAY TO ASPEN VILLAGE DR. S. IL
Material Type FEGGG DI AST		Field Lab phone	Cell Phone
Material Type FENCE (PLAST)  Material Code (LIMS) Item	Class	Grading	Special Provisions yes .
Previously used on Project No.:	Previous CDOT Form	#157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Unit of materia</li> <li>Materials Documentation: Field inspected (desc</li> </ul>	al submitted, describe tests required ribe appearance, weight/dimension	d, precise location samp is, model/serial number)	ile removed from ( stationing), etc. ), COC &/or CTR provided , etc.
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Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name	or owner	Total quantily to date
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(submit white copy only if sample or information is directed to Staff Materials)
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Pink copy - Resident Engineer
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CDOT Form #157 3/15



5433 Newport Street • Commerce City, CO 80022 • (303) 945-7588 Office • (303) 945-7579 FAX

MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR MATERIALS FURNISHED FOR PROJECT: STE C480-008 – PINON CAUSEWAY TO ASPEN VILLAGE DRIVE SHARED USE PATH AS OUTLINED IN SECTION 106.011 OF THE CDOT SPECIFICATION BOOK

PROJECT: CDOT STE C480-008

LOCATION: ARCHULETA COUNTY, CO

CONTRACTOR: CROSSFIRE, LLC

MANUFACTURER: CDOW ENTERPRISES, INC; 4005 CHIMNEY ROCK FLOWER MOUN, TX

TYPE OF MATERIAL: ORANGE DIAMOND SAFETY FENCE- 4' X 100'

TEST PERFORMED: NA

DATE OF TEST: NA

LOTS REPRESENTED: NA

WE HEREBY CERTIFY THAT ALL OF THE ABOVE MENTIONED MATERIALS FURNISHED TO CROSSFIRE, LLC CONFORMS WITH ALL THE SPECIFIED REQUIREMENTS OF CDOT SPEC SECTION 607 FENCES. BY SIGNING THIS CERTIFICATE OF COMPLIANCE CERTIFIES THE ABOVE INFORMATION IS A TRUE AND CORRECT STATEMENT AND I REPRESENT A DISTRIBUTOR OF THE PRODUCT FOR THE MANUFACTURER.

LAURA CAMPBELL

Nama Dent Campbell

Triton Environmental, LLC

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 3,399.5 L.F. (quantity and units) of pay item (a07-11525 Fence (Plastic) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

Ot 76

١	I hereby certify under penalty of perjury that the material listed in this
	Certificate of Compliance represents(quantity and units) of
	pay item(pay item number and Description) that will be
	installed on project number STE C480-008 - PINON CAUSEWAY TO ASPEN VILLAGE DRIVE



### NATIONWIDE CONSTRUCTION + EROSION SUPPLY

WWW.CDOWWHOLESALE.COM

January 15, 2018

To whom it may concern,

I certify that the orange safety fence that we have sold to Triton Environmental that they sold to their customer is indeed orange and 4 feet tall and 100 feet long. I have also attached the specification sheet for the product.

Thank you,

Eric Peacock

CDOW Wholesale

MODEL:

**DIAMOND FENCE 20** 

COLOR:

ORANGE, GREEN

MATERIAL:

HIGH DENSITY POLYETHYLENE

PROPERTY	UNIT	VAL	.UE	RANGE	METHOD
STANDARD HEIGHT	cm (ft)	122	122 (4.0)		ICE - 05
STANDARD LENGTHS	m (ft)	30.5 (100)	15.2 (50)	Standard	ICE - 05
	m (ft)	32 (105)	16 (52.5)	Max.	ICE - 05
WEIGHT PER ROLL	kg (lb)	9.09 (20.0)	4.54 (10)	Standard	ICE - 05
	kg (lb)	8.78 (19.3)	4.38 (9.64)	Min	ICE - 05
WEIGHT PER LINEAL METER	g (lb)	298 (0.656)		Standard	ICE - 05
	g (lb)	288 (0	634)	Min	ICE - 05
TENSILE STRENGTH	kgf (lbf)	7.1 (15.62)		Mínimo	MPE - 04

(*) Units in English System NA – Not Apply

20 Rolls Per Pallet 48 Pallets Per Truck 960 Rolls Per Truck

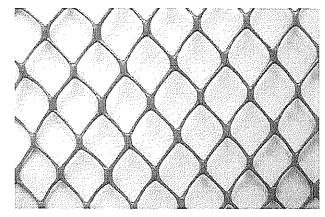
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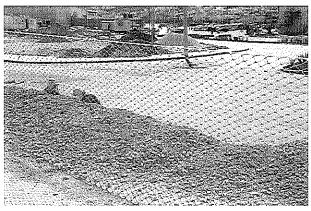
1 YEAR

**NOTE:** Information here is proposed as a result of our experience based on real information obtained in a labratory and does not provide warranty, implicit or explicit, of the results obtained by the user who in all cases needs to prove use of the product in their own plant to determine the application parameters according to his particular requirements of experiece and process conditions.



5433 Newport St. • Commerce City, CO 80022 303-945-7588 • www.TritonEnviro.com





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	tem Class		Grading	Special Provisions yes .
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## CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:	07/26/2017
CDOT Project No:	19219
CDOT Project Location	on: Archuleta, County
CDOT Project Code	STE C480-008
The following material project plans, the 2011	was selected from the CDOT Approved Products List in accordance with the Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.
QML Part/Sub-Part:	608-00012
APL Category:	Pedestrian Safety_
APL Sub-Category:	ADA Truncated Dome
APL Base Category:	Embedded
APL Reference No.:	2673-13
Product Name:	Duralast DWS 24 x 24
Manufacturer:	EJ USA, INC
Date of Web Site Rev	iew & Selection: 7/26/2017 and 7/26/2017
	Crossfire, BLC Paul Martin, Project Manager
Compliance represents	penalty of perjury that the material listed in this Certificate of Incidental (quantity and units) of pay item 608-00012 Pay item # and description) that will be installed in plans and specifications on Project No. STC C480-008, 19219  Block T



EJ 301 Spring Street PO Box 439 East Jordan, MI 49727-0439 +1 231 536 2261 800 874 4100 ejco.com

### **Material Certification**

October 14, 2017

Davis Engineering Service, Inc. 188 S 8th St Pagosa Springs, CO 81147 Attn: Clifton Lee

Fax #:

RE: Job Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Project #: STE C480-008
Job Number: 19219
Order Type.: Distributor

QUANTITY

DESCRIPTION

45

00700571 DURALAST DWP 24X24 UND

Cast Dates: 6/28/2017

2

00700721 DURALAST DWP 30X24 UND Cast Dates: 6/28/2017

#### Dear Valued Partner:

We hereby certify that the iron used to make the construction castings manufactured by EJ for the above referenced project is in full compliance with ASTM A48, Class 35B and AASHTO M105 for gray iron castings and ASTM A536, Grade 70-50-05 for ductile iron castings. Thank you for specifying and using products manufactured by EJ.

The above listed castings are melted and manufactured 100% in the United States of America at our foundries in Ardmore, OK and East Jordan, Ml. These castings comply with the applicable provisions of the Code of Federal Regulations 23 CFR 635.410 BUY AMERICA Requirements.

We also certify that the above listed products supplied to the subject project are in full compliance with the American Iron and Steel (AIS) requirement as mandated in EPA's State Revolving Fund Programs.

Cast Dates:

Tensile (PSI):

6/28/2017

41,470

lik B. Bel

EJ USA, Inc.

Scott B. Beal

Product Testing & Compliance Manager



EJ 301 Spring Street PO Box 439 East Jordan, MI 49727-0439 +1 231 536 2261 800 874 4100 ejco.com

### **Material Certification**

October 14, 2017

Davis Engineering Service, Inc. 188 S 8th St Pagosa Springs, GO 81147 Attn: Clifton Lee Fax #:

RE: Pinon Causeway to Aspen Village Drive Shared Use Path

Job Number: 19219 Project #: STE C480-008 Order Type.: Distributor

Dear Valued Partner:

EJ USA has contracted ABIC Laboratories to perform testing on the EJ truncated dome product line. Please see the attached test report from ABIC. Thank you for specifying and using products manufactured by EJ.

QUANTITY

45

DESCRIPTION

00700571 DURALAST DWP 24X24 UND

2

00700721 DURALAST DWP 30X24 UND

EJ USA, Inc.

Scott B. Beal

Product Testing & Compliance Manager

lot B. Bel

## ABIC TESTING LABORATORIES, INC.

24 Spielman Road Fairfield, NJ 07004 973-227-7060 Fax: 973-227-0172

To:

East Jordan Iron works

October 31, 2006

Mr. John Synder

From:

Leonard Mackowiak

Subject:

Static Coefficient Of Friction Testing

Project No 5260-02

#### Introduction

ABIC Testing Laboratories, Inc. was authorized to test samples of cast iron skid plate for the following tests

- ASTM D-482 (Bond Strength)
- · ASTM C-1028 (Static Coefficient of Friction)
- ASTM C-501 (Abrasion Resistance)

#### Results

Our results are shown in Exhibit I attached.

#### Discussion

The American with Disabilities Act requires that a walking surface must produce a Static Coefficient of Friction (SCOF) of 0.6 or greater. In our study the cast iron skid plates meet this standard dry and wet when tested according to ASTM C-1028.

The Wear Index values of the cast iron plates are approximately 8800. As point of reference, typical ceramic paver tiles have wear index values in the 300-500 range.

Respectfully-subpritted

Leonard Mackowiak

Vice President

# COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 2673-13 /

Product Evaluation Coordinator	Material code:
orado Department of Transportation	608.02.03.00
3 North Holly Street, Unit A	Material code description full name:
Denver, Colorado 80216	ADA Truncated Dome
PART 1	
Product name:	Product category:
DURALAST	Pedestrian Safety\ADA Truncated Dome\Embedded
Product representative (name & address): Attn: Kirk Stoltzner / Brian Thomas	Manufacturer (name & address): Attn: Kirk Stoltzner
EJ USA, Inc.	EJ USA, Inc.
2577 East 79th Street	301 Spring Street
Denver, CO 80229	East Jordan, MI 49727
Phone: (303) 286-8014 FAX: (303) 286-0051	Phone: (800) 626-4653 FAX: (231) 536-4593 Web-site address:
Web-site address: www.ejco.com	www.ejco.com
to Concrete (Bond Strength) is >5,000 lbs. Tensile Strength is 35,000 PSI. It is available USA, Inc. was previously East Jordan Iron Works, Inc. (EJIW). DURALAST was previously East Jordan Iron Works, Inc. (EJIW).	
Restrictions, (installation and/or use):  f the product, (be specific to CDOT highway activities only):  Sidewalk Ramps.	
Benefits to CDOT, (how will your product enhance quality, improve safety, sa Long lasting, impervious to vehicular and snow plow traffic, corrosion resistant, perma meet most required installations. Meets current and past ADA requirements.	nently embedded product. Available in multiple colors and sizing including radius to
Specifications, (listing those applicable is required) & Certificate of Complia  CDOT: M-608-1  ASTM: C 501  AASHTO:  FHWA:  other:	
Product testing, (from national/independent laboratories or universities) & Ce  NTPEP-AASHTO:  FHWA:  other: ABIC Testing Laboratory (October 31, 2)  other:	
State DOT Approvals, (current documentation required): Idaho, Montana	
Sample submitted: yes I no I n/a Materials Safety	Data Sheets (MSDS):  yes no n/a
'Additional Comments Sumple product available upon request. Samples previously submitted as part of the ori	
,	

Exhibit I
East Jordon Iron Works
Product: Cast Iron Skid Plates

Force Values (Pounds)

7					
	20	57	c	٠	

L ASTM D-482 (Bond Strength to Concrete)	Sample No.	Force	Comments
	I	>5,000 lbs	Concrete did not shear off of metal plate
	2	>5,000 lbs	Concrete did not shear off of metal plate
	3	>5,000 lbs	Concrete did not shear off of metal plate

IL ASTM C-1028 (Static Coefficien	it of Friction):	(SCOF	)	F	orce V	alues (	Pound	s)					Calibration Factor	SCOF Value *	
Material: Dry Neolite	52.1	54.3	53.2						53.4	55.2	54.2	52.1		1.1	
													Calibration	SCOF	

			······································	<u>F</u>	orce V	alues ()	Pouod	<u>s)</u>				<del></del>	Factor	Value **
Material: Wet Neolite	51.2	51.8	52.3	49.2	49.7	51.2	52.1	52.1	52.2	49.2	48.2	49.8	0.08	1.1

^{*} Dry SCOF Calculation: SCOF = (Sum of 12 force values / number of pulls (12) x assembly weight (52 lbs)) + dry calibration factor (.07)

** Wet SCOF Calculation: SCOF = (Sum of 12 force values / number of pulls (12) x assembly weight (52 lbs)) + dry calibration factor (.08)

III. ASTM C-501 (Abrasion Resistance)	Sample No. 1 2 3	<u>Test Cycles</u> 1000 1000 1000	Wt Loss (.gr) 0.01 0.01	<u>Wear Index</u> 8800 8800
	<i>3</i>	1000	0.01	8800

TOTAL P.002

19219-608-2

COLORADO DEPARTMENT OF	SAMPLE IDEN	Region 5 Contract ID 19219	Field sheet # 26  Date Submitted	6289 -12-18		
OR MATERIALS DOC	JUNIEN I A I II	ON () no	Project No. STE (480		10 10	
			Project Location PINUN CAUSE	UAG TO ASPEN VILLAG	je DaS.U.P,	
Material Type GROWT			Field Lab phone	Cell Phone		
Material Code (LIMS)	ltem GOS	Class	Grading	Special Provisions	yes	
Previously used on Project No.:	, 0 - 0	Previous CDOT Form #	#157 F/S No.(s):		n #633 (sack) n #634 (can)	
<ul> <li>Sample Identification: Quantity &amp; Un</li> <li>Materials Documentation: Field inspendent</li> </ul>	it of material submitted ected (describe appear	describe tests required, ance, weight/dimensions	precise location sa , model/serial numi	mple removed from ( sta	ationing), etc.	
NOW-SHRINK GROU	T WAS US	SED TO FIL	UTHE V	JEEP HOLES IN	I THE	
WARNING PLATES ENGINEER. THE	. THE MA	ATEMAL W	AS APPR	OVED BY THE	e Prodect	
ENGINEER. THE	MATERIA	L IS ON TI	te APL	Document	ATION	
IS ATTACHED. TH	HS MATERUO	IL WAS PAID				
CONCRETE CURB RI	AMP SPECIA	L.				
User ID						
Sample ID (#1)	Sample	ID (#2)		Sample ID (#3)		
Sample ID (#4)	Sample	ID (#5)	Sample ID (#6)			
APL/QML Acceptance: APL Ref. No. 32 72 - 11	Product name:	VANTAGE GA	20W7	Date c	hecked: 26//3	
APL/QML Acceptance: APL Ref. No.	Product name:	V		Date c	hecked:	
Preliminary Constru	iction Maintena	nce Emergency □		Date n	eeded	
Contractor COOSSFIRE LLC	No.	Supplier ()	AYTON SU	PERIOR		
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name or	owner			
Quantity represented AS NEGOGO	Previo	us quantity ()		Total quantity to date		
	ed specified quantity to:	🔲 Region lab	Via	Date		
Sampled or inspected by (print name) CUPTON LEE, PE	Titl		JEEC E-m	ail		
Supervisor (Pro./Res./Matts. Engr./Maint. Supt.)	(print name) Title		Res	dency		

Distribution:

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.

CDOT Form #157 3/15



#### CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

11/03/2017

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to Aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

(601.02.14.00)

APL Category:

Concrete

APL Sub-Category:

Grout

APL Base Category:

General Purpose non shrink

APL Reference No.:

3272-11

Product Name:

1107 Advantage Grout

Manufacturer:

**Dayton Superior** 

Date of Web Site Review & Selection: 11/03/17

Crossfire, LLC

Paul Martin,

Project Manager

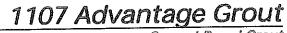
> 820 Airport Rd, Durango, CO 81137 p(970) 884-4869 f(970) 403-1129

### COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

Material code:

APL Reference No.  $3272-11_{V}$ 

Product Evaluation Goodinator	Material code: 601.02,14.00					
Colorado Department of Transportation	Material code description full name:					
4670 North Holly Street, Unit A Denver, Colorado 80216	Concrete, Grout					
PART 1	Product category:					
Product name: 1107 Advantage Grout	Concrete\Grout\General Purpose [Non-Shrink]					
Product representative (name & address):	Manufacturer (name & address):					
Attn: Todd Fraker, Senior Regional Manager	Attn: John Hukey					
Dayton Superior	Dayton Superior 4226 Kansas Avenue					
4950 Olive Street Commerce City, CO 80022	Kansas City, KS 66106					
•	Phone: (913) 279-0264 FAX: (913) 371-3330					
Phone: (303) 289-4808 FAX: (303) 289-3451 Web-site address:	Web-site address:					
www.DaytonSuperior.com  Description of the product: (Include specific quantifiable details from tech data shee	www.DaytonSuperior.com					
1107 Advantage Grout is a ready to use, high strength, non-shrink grout according to A strength of 2500 psi in flowable condition. Its key advantage is that is can be used in fl 10,000 psi at 28 days when dry packed and tested according to ASTM C-1107.	liuid, Howable, and dry pack condition just by varying the water added. It achieves					
Restrictions, (installation and/or use):  Maintain the temperature of the grout and the contain area at 45°F to 90°F for   *Ise of the product, (be specific to GDOT highway activities only):  Structural load transfer for girders, bearing seats, cable anchorages, etc.  Benefits to CDOT, (how will your product enhance quality, improve safety, sa						
This is a very cost competitive general purpose grout. It is stocked at multiple dealer le	ocations throughout the state.					
Specifications, (listing those applicable is required) & Certificate of Complia  CDOT:  ASTM: C-1107  AASHTO:  FHWA:  Corps of Engineers CRD C-621	arice (required to certify compliance with listed specifications).					
other : Corps of Engineers CRD C-621						
Product testing, (from national/independent laboratories or universities) & Ce  \( \text{NTPEP-AASHTO}: \\ \( \text{FHWA} : \\ \( \text{Other} : \) \( \text{Other} : \) \( \text{Nelson Testing Laboratories (Flowable & Company)} \( \text{Nelson Testing Laboratories} : \)						
State DOT Approvals, (current documentation required): AZ, OR, ME, MD,MI, MA, OH, AR, LA, NC, TN, IL, KS, MO, NE, WI						
	Data Sheets (MSDS): yes no n/a					
	Date Office (mode): End you had no had not					
Notes/Additional Comments Sample available upon request.						





Cement Based Grout

#### TECHNICAL DATA SHEET

DESCRIPTION

The 1107 Advantage Grout is a non-shrink, non-metallic, non-corrosive, cementitious grout that is designed to provide a controlled, positive expansion to ensure an excellent bearing area. The 1107 Advantage Grout can be mixed from a fluid to a dry pack consistency.

#### USE

Exterior grouting of structural column base plates, pump and machinery bases, anchoring bolts, dowels, bearing pads and keyway joints. It finds applications in paper mills, oil refineries, food plants, chemical plants, sewage and water treatment plants etc.

#### **FEATURES**

- Controlled, net positive expansion
- Non shrink
- Non metallic/non corrosive
- Pourable, pumpable or dry pack consistency
- Interior/exterior applications

#### **PROPERTIES**

Corps of Engineers Specification for non-shrink grout: CRD-C 621 Grades A, B, C

ASTM C-1107 Grades A, B, C

ASTM C-827 - 1107 Advantage Grout yielded a controlled positive expansion

Expansion - ASTM C-1090:

1 day: 0.10% 3 days: 0.11% 14 days: 0.11% 28 days: 0.11%

#### **Test Results**

							10000000	
	@1	Day	@4	Dietyjs:	@7	Days -	@ 28	Days
Fluidity	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa
Dry-Pack	5000	34.5	7000	48.2	9000	62.0	10000	68.9
Flowable	2500	17.2	5000	34.5	6000	41,4	8000	55.1
Fluid	2000	13.8	4000	27.6	5000	34.5	7500	51.7

#### Note:

The data shown is typical for controlled laboratory conditions. Reasonable variation from these results can be expected due to interlaboratory precision and bias. When testing the field mixed material, other factors such as variations in mixing, water content, temperature and curing conditions should be considered.

**Estimating Guide** 

Yield (Flowable Consistency): 0.43 cu. ft./50 lbs. (0.0122 cu. m/22.7 kg) bag 0.59 cu. ft./50 lbs. (0.017 cu. m/22.7 kg) bag extended with 25 lbs. (11.34 kg) of washed 3/8 in. (1cm) pea gravel

Packaging

PRODUCT		SI	ZE.
CODE	PACKAGE	lbs	kg
67435	Bag	50	22.67
67437	Supersack	3,000	1,360.78

#### **STORAGE**

Store in a cool, dry area free from direct sunlight. Shelf life of unopened bags, when stored in a dry facility, is 12 months. Excessive temperature differential and /or high humidity can shorten the shelf life expectancy.

#### **APPLICATION**

Surface Preparation:

Thoroughly clean all contact surfaces. Existing concrete should be strong and sound. Surface should be roughened to insure bond. Metal base plates should be clean and free of oil and other contaminants. Maintain contact areas between 45°F (7°C) and 90°F (32°C) before grouting and during curing period.

Thoroughly wet concrete contact area 24 hours prior to grouting, keep wet and remove all surface water just prior to placement. If 24 hours is not possible, then saturate with water for at least 4 hours. Seal forms to prevent water or grout loss. On the placement side, provide an angle in the form high enough to assist in grouting and to maintain head pressure on the grout during the entire grouting process. Forms should be at least 1 in. (2.5 cm) higher than the bottom of the base plate.

Water Requirements:

Desired Mix Water / 50 lbs. (22.67 kg) Bag

Dry Pack: 5 pints (2.4 L) Flowable: 8 pints (3.8 L) Fluid: 9 pints (4.2 L)

Mixing:

A mechanical mixer with rotating blades like a mortar mixer is best. Small quantities can be mixed with a drill and paddle. When mixing less than a full bag, always first agitate the bag thoroughly so that a representative sample is obtained.



## 1107 Advantage Grout

Cement Based Grout

#### TECHNICAL DATA SHEET

Place approximately 3/4 of the anticipated mix water into the mixer and add the grout mix, adding the minimum additional water necessary to achieve desired consistency.

Mix for a total of five minutes ensuring uniform consistency. For placements greater in depth than 3 in. (7.6 cm), up to 25 lbs. (11.34 kg) of washed 3/8 in. (1 cm) pea gravel must be added to each 50 lbs. (22.7 kg) bag of grout. The approximate working time (pot life) is 30 minutes but will vary somewhat with ambient conditions.

For hot weather conditions, greater than 85°F (29°C), mix with cold water approximately 40°F (4°C). For cold weather conditions, less than 50°F (10°C), mix with warm water, approximately 90°F (29°C). For additional hot and cold weather applications, contact Dayton Superior.

#### Placement:

Grout should be placed preferably from one side using a grout box to avoid entrapping air. Grout should not be over-worked or over-watered causing segregation or bleeding. Vent holes should be provided where necessary.

When possible, grout bolt holes first. Placement and consolidation should be continuous for any one section of the grout. When nearby equipment causes vibration of the grout, such equipment should be shut down for a period of 24 hours. Forms may be removed when grout is completely self-supporting. For best results, grout should extend downward at a 45 degree angle from the lower edge of the steel base plates or similar structures.

#### **CLEAN UP**

Use clean water. Hardened material will require mechanical removal methods.

#### **CURING**

Exposed grout surfaces must be cured. Dayton Superior recommends using a Dayton Superior curing compound, cure & seal or a wet cure for 3 days. Maintain the temperature of the grout and contact area at 45°F (7°C) to 90°F (32°C) for a minimum of 24 hours.

#### **LIMITATIONS**

## FOR PROFESSIONAL USE ONLY Do not re-temper after initial mixing

Do not add other cements or additives
Setting time for the 1107 Advantage Grout will slow during cooler weather, less than 50°F (10°C) and speed up during hot weather, greater than 80°F (27°C)
Prepackaged material segregates while in the bag, thus when mixing less than a full bag it is recommended to first agitate the bag to assure it is blended prior to sampling.

#### **PRECAUTIONS**

#### READ SDS PRIOR TO USING PRODUCT

- Product contains Crystalline Silica and Portland Cement Avoid breathing dust Silica may cause serious lung problems
- Use with adequate ventilation in Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shleld)
- Make Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

#### MANUFACTURER

Dayton Superior Corporation 1125 Byers Road Mlamisburg, OH 45342

Customer Service: 888-977-9600 Technical Services: 877-266-7732 Website: www.daytonsuperior.com

#### WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in Its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.



## 1107 Advantage Grout

Cement Based Grout

### TECHNICAL DATA SHEET

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodlly injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.

19219-608-3

COLORADO DEPARTMENT OF			Region 5	Fleld sheet # 266269
FIELD REPORT FOR S	SAMPLE IDEN	NTIFICATION	Contract ID	Date Submitted
OR MATERIALS DOC	CUMENTATI	ON	19219	3-11-10
2	,		Project No.	
Motrio resito	г Тига г	√ no	STE C480-00	୦ଟ
Metric units	yes	N uo	Project Location	A - 111 A 201.
			PINON CAUSEU	iay to Aspen Village DrS.U.
Material Type 2			Field Lab phone	Cell Phone
<u> </u>	ous BIKEWA			
Material Code (LIMS)	Item `	Class	Grading	Special Provisions yes .
	608			
Previously used on Project No.:		Previous CDOT Form	#157 F/S No.(s):	CDOT Form #633 (sack)
				CDOT Form #634 (can)
<ul><li>Sample Identification: Quantity &amp; Uni</li><li>Materials Documentation: Field inspendent</li></ul>	ected (describe appear	rance, weight/dimension	s, model/serial number),	COC &/or CTR provided , etc.
THE BITUMINOUS F	BIKEWAY (	SPECIAL) WAS	: FIELD INSPE	LCTED & APPROVED BY
The Pomier Gala	I FED AL	5 0-0-1 A . I A .	ne oc Til	LIMA ADELICIEN
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ser ID				
Sample ID (#1)	Sample	ID (#2)	Sam	ple ID (#3)
•		•		
	Sample	ID /#E\	Sam	ple ID (#6)
Sample ID (#4)	Compre	ID (#3)	ļ ,	pie io (#G)
APL/QML Acceptance: APL Ref. No.	Product name:			Date checked:
ADI Dot blo	D - that named			D-t- sheeked
APL/QML Acceptance: APL Ref. No.	Product name:			Date checked:
O an adm	· MA-i-hopo			Date needed
Preliminary Constru		•	•	Date Heeded
	<u> </u>	Cumplion		
Contractor  CAOSS BAE 110		Supplier	STROHECKER P	DALLIALC
CAOSSFIRE LLC Sampled from		Pit name o		AVIIVG
(Pit, roadway, windrow,		FILHAIDO O	i owner	
stock, etc.)	Drovie	141 -		otal quantity to date
Quantity represented		ous quantity	***************************************	(LSO) TONS
650 TUNS		<u> </u>	Via	Date
	ed specified quantity to:			Date
Yes 🖾 No	☐ Central lab		<del>'</del>	
Sampled or inspected by (print name)	Titl		E-mail	
TRANTNER GEOTE CH		DA TESTERS	Distant	
pervisor (Pro./Res./Matls, Engr./Maint, Supt.)	_		Residence	»y
ICHETON CEE DE	141	ROVECT ENCIN	JEER-	

3/15

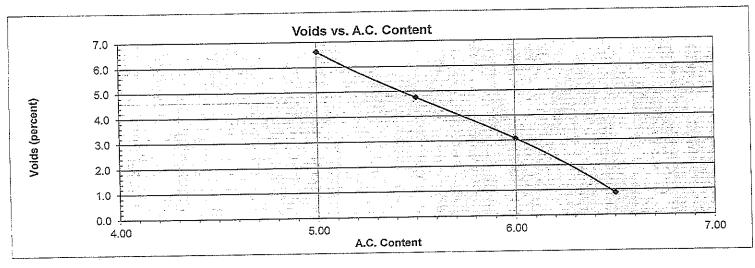
19608-01500

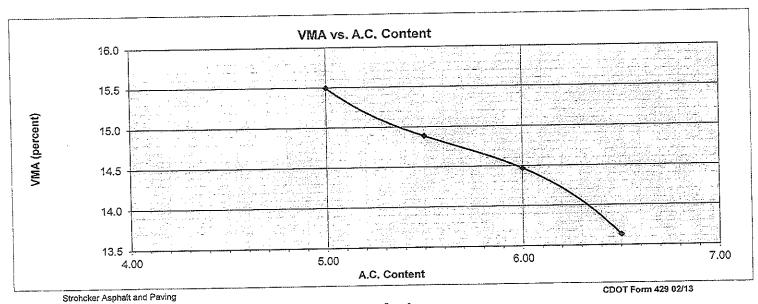
PROJECT: PINON CAUSEWAY TO ASPEN VILLAGE	SUBMITTAL NO: 403-00720.1 REV1
CLIENT'S PROJECT NO. STE C480-008	DATE: 6/21/2017
Project Code (SA) 19219	DATES OF PREVIOUS SUBMISSIONS:
CONTRACTOR: Crossfire, LLC	6/15/2017
CONTRACTOR COSCUL,	
SUPPLIER: Strohecker Asphalt and Paving	MANUFACTURER: Strohecker Asphalt and Paving
SPECIFICATION NO.: 403-00720	DRAWING NO.:
IS THIS A LONG LEAD TIME ITEM? YES NO X	
IS THIS ITEM ON THE APPROVED PRODUCTS LIST? YES.)	K NO 🗆
ARE THERE ANY DEVIATIONS FROM THE CONTRACT DO	CUMENTS? YES I NO X
Explain:	
- CAPITITI	
PRODUCT DESCRIPTION:	
Material Testing for asphalt mix	
Waterial resums for aspirate this	
Resubmittal	
Resubilitati	
OCT IND A	CTOR'S COMMENTS
CONTRAC	JOR'S COMMENTS
LRII.	DATE: 6/21/2017
SIGNATURE:	Engineer's Stamp and Review Comments
SUBMITTAL REVIEW	Euglueer 2 Stamp and Kealer Commence
FURNISH AS SUBMITTED REJECTED/RESUBMIT	* Please review the signed CDOT Firm#43 with
Canadians a comments made to the submitted documents during	Strohecker Asphalt & Paring. The CDOT Form \$4-3
this review do not relieve the Contractor from compliance with requirements of the drawings and specifications. This check is only for	requires an AC of 6%. t.o.3.
review of general conformance with the information given in the	
Contract Documents. The Contractor is responsible for confirming	Also, a 5016 sample shall be submitted to me two
processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and	weeks print to paving, 2 "asphalt" cans/samples
satisfactory monner.	shall be submitted as well.
By: MF Davis Engineering Service, inc. Date: 7   3   2017	Spin (to Vo To To
By: VVI V - V	
I hereby certify under perjury that the materi	al listed in this Certificate of Compliance
represents (quantity and units) of	pay item (pay in conformance with the plans and specifications
item # and description) that will be installed i	in comormance with the plans and specimens.
on Project Number STE C480-008	•
Contractor	Date

	Project: STE C480-008
DLORADO DEPARTMENT OF TRANSPORTATION	Location: ARCHULETA CNTY PINON TO ASPEN
ROJECT PRODUCED JOB MIX FORMULA	Region: 05 Project Code (SA#): 19219
	From Project No:
Mix Design: 52017A19219BP	From Project SA#:
Date: 6/26/2017	
nis Job Mix Formula defines the specified gradation, asphalt cement	content, and admixture dosage for the grading and project shown.  Components:
	1. 25 Coarse Aggregate
Contractor: Crossfire Construction	2. 25 Intermediate Aggregate
Supplier: Strohecker Asphalt	3. 50 Crusher Fines
Plant: Pagosa Springs	4,
Pit: C&J Gravel	5.
	6.
Grading & Compaction: SX (75)	7.
% RAP: 0.00 % Lime: 0.00	8.
Gradation (% Passing)  X Specification Voids Acceptance	
X  Specification	
Seive mm (in) % Pass Min % Pass Max	% AC: 6.00 +/3
37.5 (1 1/2):	Grade of AC: PG 58-28
25.0 (1):	Source of AC: SUNCOR
19.0 (3/4): 100	Max. Sp. Gr. at % AC: 2.444 +/01
12.5 (1/2): 90 100	Bulk Sp. Gr. of Combined Agg: 2.604
9.5 (3/8): 82 94	
4,75 - #4: 46 56	Bulk Sp. Gr. of Fine Agg: 2.596
2.36 - #6:	Angularity (T 304): 48.5
1.18 - #16:	% Agg Absorp (SSD): 1.2
600 mic - #30.	
300 mic - #50:	
150 mic - #100: 5.10	New Mix Design With Changes
75 mic - #200. [ 1170 ]	Mix Design Modified
	New Mix design with no change
Voids Data at Property Nds Target Value  Tolerance	
Stability 28 Minimum	
% Voids 3.00 +/- 1.2	Date 7/3/2017
· % VMA min" 13.3 max 15.7	Signed Project Engineer: Lee, Clifton
% VFA min 65 max 80	Date 6-26
Distribution: Staff Materials Region Materials Engineer Resident Engineer (2)	Signed Project Engineer: Lee, Clifton  Signed Regional Materials Engineer: Webb, Tim  Signed Contractors Representative:
Contractor	CDOT Form #43 (

troheker A	sohaita	nd Paving							Lab Mix No.:	,	3155JH052	
		for Asphalt							<u> </u>	Region	5	
ample Ide					Date Received	8/21/2015				Region	•	
ield Sheet					Project	STE C480-008 Pinon Causway to Aspe	n Village					
ubaccount		,	SA 19219		Location	Archuleta County				WMA	Yes	√ No
em 403:		Contractor/Supplier		/ Strol	hecker A&P Grading	SX Nominal Max Agg. Size	3/4	Gyr. (N _{design} )	75	WMA Additive	(G)	<u></u>
CIII 400.		Pit Name		C&J Gravel	AC sour	ce Suncor Ener Grade 58-28		(SMA, if used)		WINA Additive		
		Antistrip Additive (of	ther than lime i	if used), %	.3	Antistrip Additive Material Evotherr	າ					
naroasta.	Data (C)	>-31 A & B):				Aggregate Sampled by (CP-30)						
(ûdtedate	Data (O	-01A C 2/			Natural Products			Recycled Prod	ucts	_	Contro	ol Points
ype of Agg	regate	•	CF	ΙA	CA				100		Minimum	
\ggregate {			C&J Garvel	C&J Gravel	C&J Gravel		AC Conf	ent AC Content	AC Content		IAIM III II COL	1210041114111
(99109500)	004.00								Gradation	Combined		
						Virgin	Grada	ion Gradation	Gradation	Gradation		
						Gradation				100		
ercent in 1	Mix		50	25	25		00			100		
assing	1 1/2	(37.5)	100	100	100		00			100		
Passing	1	(25.0)	100	100	100		00			100		100
Passing	3/4	(19.0)	100	100	100		00		_	99	90	100
Passing	1/2	(12.5)	100	100	96		99			88		
Passing	3/8	(9.5)	100	100	52		88			51		
Passing	#4	(4.75)	96	9	2		51			32	28	58
Passing	#8	(2.36)	63	2	1		32 22			22		
Passing	#16	(1.18)	42	2	1		15			15		
Passing	#30	(0.60)	29	2	1		10			10		
Passing	#50	(0.30)	19	1	1		6			6		
Passing	#100	(0.15)	11	1	1		3.1			3.1	2,0	10.0
Passing	#200	(0.075)	5.2	1,1	8,0		0.1					Specs
Plastic or	Non-Plas	stic (T-90)	NP	NP	NP					2.604		
Aggregate	Bulk Sp	G(T-84 & T-85)	2,586	2.614	2.629					2,688		
Aggregate	App. Sp	G(T-84 & T85))	2.678	2.645	2.655					1.190		
		) (T-84 & T85)	1.3%	1.2%	1.0%					2,678		
Aggregate	e Eff. Sp(	G(T-84 & T-85)								2,586		
Fine Agg.										2,600		
Coarse A	gg. Bulk	SpG. (T-85)								1.031		
Binder Sp	oG.									95%		60 mi
Fractured										55	For Int	io 45 m
Sand Equ	uivalent (	T-176) WMA/HMA O										45 m
LA Abras	ion (T-96	3)		28								45.0 r
Fine Agg	regate A	ngularity (T-304) WM	A/HMA Only									12 ma
Sodium S	Sulfate Se	oundness (T 104) SN	IA Only			12						18 ma
Micro De	val (CP-I	<u>.</u> 4211)				12			CDOT For	m 429 02/13		

			<u> </u>					Lab No.	3155JH052
ohcker Aspha			,				ļ		
poratory Desig	gn for Asphalt								
	Court Date aringtion Possition					***************************************			Daint Cate
x Design A.C.	Content Determination Results:  Rice = 2.453 @ 5.	75 %AC							Optimum Point Data
	Rice = 2,453 @ 5.  A.C. Content (percent)	5.00	5.50	6.00	6.50	%			5.75 A.C.
		2.480	2.462	2.444	2.426				2,453 Rice
	Rice Data (CP-51)							•	A AFE DUIL C.C.
pecimen SpG.	Data (CP-L 5115 & CP-L 5106):	2,316	2,345	2.369	2.405				2.355 Bulk S.G.
	Bulks at Ndes	64.9	63.5	64.1	63.1				•
	Height at Ndes						Voids Specs:		4 37-24-
oids Data:	Mariata wa Malana	6.6	4.8	3.1	0.9	%	3% to 4%		4 Voîds
	Voids at Ndes						Specs:		44.0 3/850
Other Data:	VAAA of Nidon (CD-69)	15.5	14.9	14.5	13.6	%	>14.5		14.8 VMA
	VMA at Ndes (CP-48)	57	68	79	94	%	65-80%		73 VFA
	VFA at Ndes (percent) Aggregate Eff. SpG(T-84 & T-85)	2.678	2.678	2.678	2,678				474
	Effective Asphalt Content	3,95	4,46	4,96	5.47				4.71 Effective A
	Dust to A.C. Ratio (CP-50)	0,53	0.47	0.42	0.38		0.7		0.44 D/A Ratio
	Stability (CP-L 5106) (Grade S and SX Only)		40	39	39		28		40 Stability
	Stability (CP-L 5100)(Grade 5 and 5X 511)								
							≤30% RAS ≤23% RAP		0.0 ≤23% RA
	Total Binder Replaced	0.0	0.0	0.0	0.0				
l ettman Moisti	ure Sensitivity Results (CP-L 5109, Method B)					Lottma	n Specs:		
LORGINAL MOISE	Asphalt Content (percent)	5,75							
	Tensile Strength Retained	82 %				>80%			
	Avg. Dry Tensile Strength (psi)	73.9	(3	372KPa)		> 30			
	Avg. Cond. Tensile Strength (psi)	60.4	()	291KPpa)					
	Avg. Specimen Voids (percent)	6.5				6,0% -	8.0%		
	Avg. Saturation (percent)	87.2							
SMA Specific I	nput and Calculations						B	eak Point Sieve	
Silla opecino.	Bulk Specific Gravity at Optimum AC (Gmb)	2,355							#N/A
	Bulk Specific Gravity of Coarse Agg (Gca)	2,600				Percent Aggrega	ate retained on the b	reakpoint Sieve	HIVE
1	Percent of Coarse Agg (Pca)	#N/A							
ļ	Voids Coarse Agg (VCAmix)	#N/A							
Ì	Unit Weight of Stone (γ _s )					dro to ensure stone	on stone contact	#N/A	Yes passes, No fails
1	Voids Coarse Agg DRC (VCAdro)	100.0			VCA Ratio Che	eck		#18/74	1 es passes, No laito
ļ									
	Plasticity of Mineral Filler (T-90)		4% max.						
	Calcium Oxide Content (ASTM C25)		22% max.						
1	Modified Rigden Voids (NAPS IS-101)		≲50					Report Date	8/21/2015
<del></del>		istribution: R	ME					CDOT Form 4	
	ment Engineer	Н	Q		Page 2			CDO I FORM	

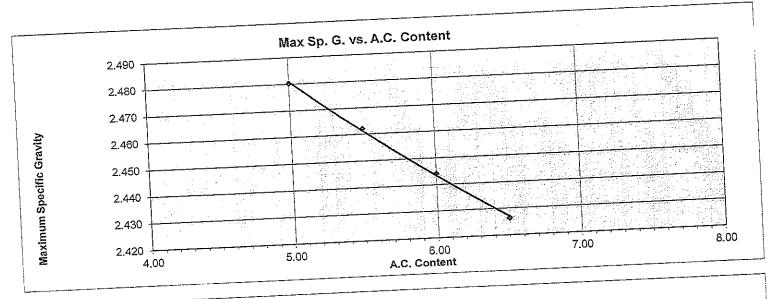


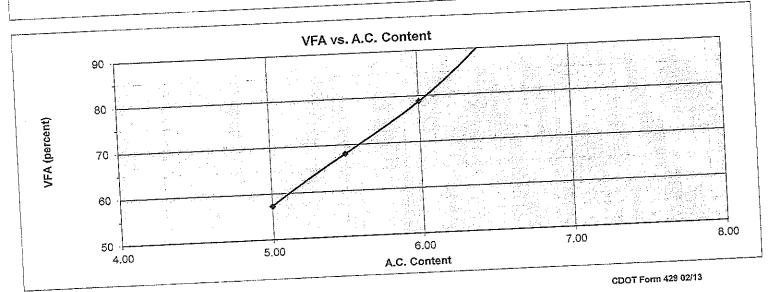


Lab Mix No.:

3155JH052

Page 3



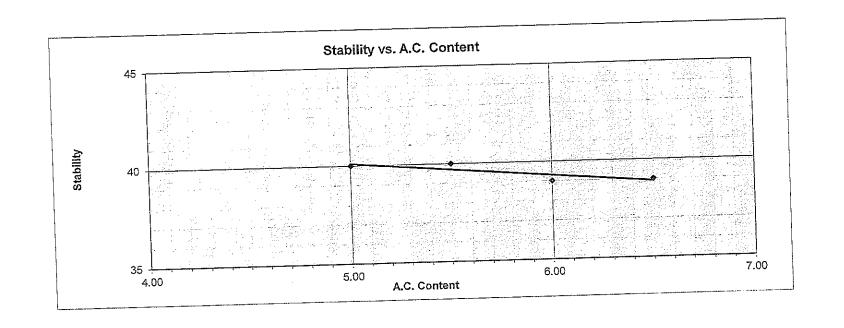


Strohcker Asphalt and Paving

Lab Mix No.:

3155JH052

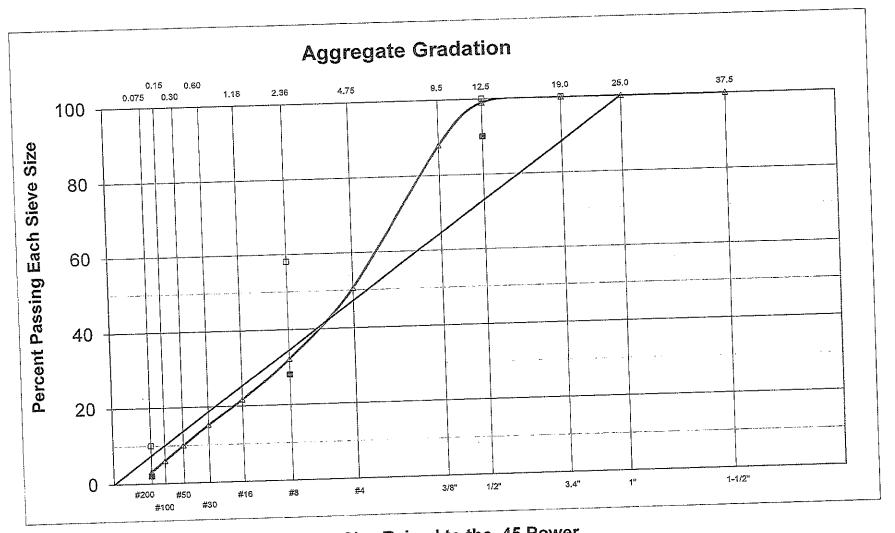
Page 4



Strohcker Asphalt and Paving
Lab Mix No.: 3155JH052

Page 5

CDOT Form 429 02/13



Strohcker Asphalt and Paving
Lab Mix No.: 3155JH052

Sieve Size Raised to the .45 Power

Page 6

CDOT Form 429 02/13



278 Sawyer Drive, No. 2 Durango, Colorado 81303-7904 (970) 375-9033 • fax 375-9034

August 31, 2015

Strohecker Asphalt and Paving. 37801 Highway 160 Durango, Colorado 81122

Attn: Mr. Kip Strohecker

Re:

CDOT SX 75 Asphalt Concrete Mix Design

Various Locations SW Colorado Reference No. 3155JH052

Pursuant to your request and authorization, Western Technologies, Inc. (WT) has completed a series of tests on aggregates and asphalt cement. The purpose of our testing was to provide an asphalt concrete mixture design for the above-referenced application.

Aggregate stockpile samples were obtained by WT on July 23, 2015 from C&J Gravel. Suncor Energy submitted the performance graded asphalt cement and liquid anti-stripping agent to WT's Farmington laboratory. The material sources are listed in the table below:

MATERIAL	SOURCE/SUPPLIER	SOURCE LOCATION
Mineral Aggregate	C&J Gravel	Durango, Colorado
PG 58 - 28 Asphalt Cement	Suncor Energy	Denver, Colorado
Liquid Antistrip	Evotherm	Richmond, Virginia

#### SAMPLE PREPARATION/TESTING

A sieve analysis was performed on each of the as-received aggregate stockpile samples. The individual aggregates were then proportioned and based upon the client's quality control data, combined to fall within the CDOT SX 75 gradation limits.

As indicated by CP-L 5115 Table 1 for PG 58-28, the combined aggregates and asphalt cement were heated to 310°F prior to mixing. The specimens were mixed at 5.0, 5.5, 6.0, and 6.5 percent asphalt cement (by weight of total mixture). Specimens were compacted at a temperature of 280°F using the SHRP Gyratory Compactor per CP-L 5115, utilizing gyrations consisting of 7 for Nini and 75 for Ndes.

Strohecker Asphalt & Paving Reference No. 3155JH052 Page 2 of 2

Testing was performed in accordance with test procedures contained in the *Colorado Procedure – Laboratory Manual, Flexible Pavement Unit*. Unit weight, percent air voids, percent voids in the mineral aggregate (VMA), and percent voids filled with asphalt were determined for the trial specimens. Moisture sensitivity testing was performed on the mixture utilizing the Tensile Strength Ratio Method. The results are attached.

Tests for aggregate specific gravities, Los Angeles abrasion, plasticity index, fractured faces, fine aggregate angularity, and sand equivalent value were performed in accordance with applicable test methods.

#### **RESULTS**

Results of the above testing are presented in the attached mix design summary and supporting laboratory documents.

#### RECOMMENDATIONS/COMMENTS

Based on the data provided herein, an asphalt cement content of 5.75 percent (by total weight of mixture) for the CDOT SX 75 Grading with the PG 58-28 asphalt mix is appropriate for general project application.

The asphalt concrete mix design presented herein is based upon aggregate samples provided by C&J Gravel. The mix design results are representative of overall material only to the extent that the samples are representative of the aggregate quality and uniformity obtained during production and handling operations, which are the client's responsibilities. Normal variations from the mixture design results due to normal plant crushing and handling operations are to be expected. However, should the source or physical characteristics of the aggregates substantially change, the development of a new or revised mix design is recommended. The mix design set forth in this report may be relied upon only for the referenced project or application, and is subject to timely verification.

If you have any questions regarding this information, or if we may be of additional assistance, please do not hesitate to contact us.

Respectfully Submitted,

WESTERN TECHNOLOGIES INC.

Fred Hampton
Project Manager

Attachments

Roger K. Southworth, P.E. Managing Director

WT Job No.: 3155J11052

CDOT Project No.: General Submittal

Project Name: 2015 Various Quality Control Client: STROHECKER PAVING

Source of Aggregate: C&J Gravel Home Pit

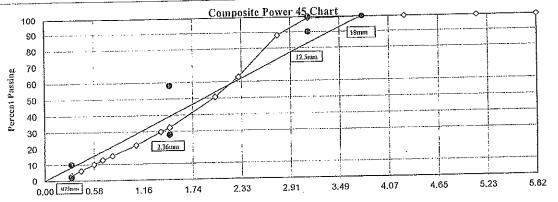
Date: 08-21-15
Type of Mix: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28

Lab No.		Aggregate Name		Percentage	Location
CF	Aggregate #1:	Crusher Fines		50.0	C&J Gravel Home Pit
IA CA	Aggregate #2: Aggregate #3:	Intermediate Aggregate 3/8" Coarse Aggregate 5/8"		25.0 25.0	C&J Gravel Home Pit
	Aggregate #5: Aggregate #6: Admixture:		,		
			Total;	100.0	
Test N	Method; CP 31		Difference:	0.0	

		<del></del>	0.	———Т			Lab No.	<u> </u>			
CF		IA	CA	<i>-</i>	• • • • •				Specs	1	
50,0		25.0	25.0		}-		Percent		Control	Production	i
Agg. #1	Agg. #2	Agg. #3	Agg. #4	Agg. #5			Sieve				
		Pe	rcent Passin	] 2			(US/mm)	Composite	Points	Specs	
100		100	100		1		2º / 50	100			
100		100	100				1.5" / 37.5	100			
100		100	100				I" / 25	100			
100		100	100				3/4" / 19	100	100	100	
100		100	96				1/2" / 12.5	99	90-100		
100		100	52			. ]	3/8" / 9.5	88		82-94	·
-	-	47	4				1/4* / 6.3	63			
100		9	3				#4 / 4.75	51		46-56	
96		, , , , , ,					#8/2,36	32	28-58	27-37	
63		1	· · -			- 1	#10/2.00	30		T	
58		2	, ,				#16/1.18	22			1
-12	1	2	1				#30 / .600	15	1	11-19	
29		2	11.				#40 / 425	13	· · · · · ·		
2-1	i	. 2	1		. –			10	-		
;9		1	] 1				#50 / ,300				
11		1	1				#1007.150	6		1	
5.2	1	1.1	0.8	<u> </u>		L	#200 / ,075	3.1	2-10	1.1-5.1	<u> </u>



Sieve Size Raised to 0.45 Power



WT Job No.: 3155JH052

WT Lab No.: TRIAL #2

Project Name: 2015 Various Quality Control Client: STROHECKER PAVING

Project No.: C&J Gravel Home Pit

Source of Aggregate:

Date: 08-21-15

Mix Type: CDOT SX (75)

Contractor: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28

		Weigh-up w	eight (g):	2000	2200	3300		1000	1100	1100	600
ggregate	Sieve	Indiv	Accum.			TSR	Flat & Elongated	Fractured Faces	SE	FAA	Make up
Lab #	Size	% Ret	% Rei	Rice	Gyratory	18K	CipilRated	1 4003			
	1.5" / 37.5	0.0	0.0		-					ļ	
0,000	1" : 25	0.0	0.0	1	Ì				1		
ussia	3/4" / 19	0.0	0.0		1						
-	1/2" / 12.5	0.0	0.0	1					1	1	
Percentage	3/8" 95	0.0	0.0	ļ					-		
ÜÜ	1/4" 6.3	0.0	0.0	1					. 1		
	#4 "4 75	0.0	0.0		- 1			]			
1	#8 / 2.36	0.0	0.0	1	-					1	
	Mm #8 - 2.36	0,0	0,0								
	1.5" / 37.5	0.0	0.0		1						
0.000	I* 25	0,0	0.0		}						
მექმ	3/4" / 19	0.0	0.0							i	
	1.2* 12.5	0.0	0.0		-						
Percentage	3/8" 9 5	0,0	0.0				ļ	1	ļ		
0.0	1.4" 6.3	0.0	0,0						]		
	#4 14.75	0.0	0.0		ļ		1				ĺ
	#8 236	0.0	0.0				ļ		ļ !		
	Min 48 2 36	0,0	0,0						o annual photos and the same		
TAX TIL TIME	1.5"/37.5	0,0	0.0								
CA	1" / 25	0.0	0.0				1		1		1
Соцье Аругераю 5.	3/4" / 19	0.0	0,0		22	33	0	20	1	1	
	1/2" 112.5	1.0	1.0	20	22 264	396	0	244			1
Percentage	3/8" / 9 5	11.0	12.0	240	528	792	1	487	1		ł
25.0	174" 16.3	12.0	24.0	480	539	809	•	497			ļ
	#4 - 4.75	0.5	24.5	490	545	817			5		1
	₽8.236	0.3	24.8	495 500	550	825		ļ	11	9	5
	Mm #8 12 36	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	25.0	200	330	***************************************					
	15° / 37.5	0.0	25.0		ļ	1					
JA	§" . 25	0.0	25.0				1	1	1		1
Intermediate Aggre	3:4" 19	0.0	25,0			1					Ì
	1/2" 12.5	0,0	25.0								
Percentage_	3/8" '95	0,0	25,0	2005	842	1262		766	1	1	
25.0	14" 63	13.3	38.3	765	1051	1576	-	959	ļ		1
1	±4 4.75	9.5	47.8	955	1089	1634	į		49		
	#8 2.36	1.8	49.5	990	1100	1650		•	60	26	14
<u> </u>	Min #8 12.3	6 0.5	50.0	3000	1100	-					
	15"/37.5	0.0	50.0			1			1		1
0,000	1", 25	0.0	50.0	1							
0.00	3/4" 19	0.0	50.0								
	L2" / 12.5		50.0	1		1					1
Percentage	3/8" 9.5	0,0	50,0		İ	}					
0.0	1/4"/6.3	0.0	50,0			1					
	#4 4 75	0.0	50.0		1	1					
	#8 - 2 30	0.0	50,0								
L	Mm #8 / 2.3		50.0			+					1
.,,	1,5" 37.5		50.0		ļ	1		1	1	1	1
CF.	] 1" - 25	0.0	50.0		1					1	
Consuct Pages		0.0	50.0	]		1					
1	1/2* / 12.5	1 .	50.0			Ì		1			1
Percentage	378" 95	1	50.0					1			Į.
56.0	1:4" / 6.3		50.0	10.10	1144	1716		1000	1		1
	#4·475		52.0	1040	1144	2261	ı		417		
	1	16.5	68,5	1370	1507			1	1100	1100	600
	#8 236 Mm#8/2.		100.0	2000	2200	3300	i		1 1100		THE R. P. LEWIS CO., LANSING, MICH.

## Superpave Design Summary

WT Job No.: 3155JH052 CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING

Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15

Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28

Comp	seita Aggre	gate Grad	ation
Comb	Isite Aggre	gate orde	
Aggre	gate	Lab No.	Percentage
Crusher Fine	s	CF	50.0
Intermediate	Aggregate 3/	IA	25.0
Coarse Aggre		CA	25.0
Sieve	Composite	Control	Production
(US/mm)		Points	Spees
2", 50	100		
(5" 37.5	160		
l" 125	100		,,
3:4" [9	100	100	100
1 2" 12.5	99	90-100	
3.8" 9.5	88		82-94
1.4" - 6,3	63		
#4 4.75	- 51		46-56
#8 2.36	32	28-58	27-37
=10 2.00	30		
#16 1.18	2.2		
#30 .600	15		11-19
#40 .425	13		
#50 .300	10		
#100150	6		
#200075	ì	2-10	1.1-5.1

Tensile	Strength Ra	tio (AASHT	O T283)
Dry (psi)	Wet (psi)	Ratio	% Asphait
73.9	60.4	0.82	5.8
		0.80 Min	
		· · · · · · · · · · · · · · · · · · ·	

Desi	gn Data a	t Selected ?	∕₀ Aspnan	
Property		Value	- Spec.	
Percent o	f Asphalt:	5,75		<u> </u>
Bulk Specific Gravity @		2.356		
Hycem Stability @		35	28 Min	
Theor. Max. Sp. G		2.453		
Bulk Density @ 1	\d (kg/m²):	2356		
Percent Gmm (	ndesign:	96.0	96.0 - 98.0	
Dry Split Tensile St		73.9	30 Min	
Percent Air Voids (		4.0	3.0 - 5.0	
Percent VMA (		14.7	14.5 Min	
Percent Voids Filled		73.2	65-80	
Percent Effect		4.713		
Dust to Eff. As		0.7	0.6 - 1.2	
	pecific Gr.:	1.031		
	Sp. Gravity:	2,678		
Film Thicknes	s (microns):	12.0		
	Aggregate	e / Admix P	roperties	
Property	Coarse	Fine		Combined
Bulk (Dry) Sp. Gravity:	2.621	2.586		2.604
"SSD" Sp. Gravity:	2.650	2.621		2.635
Apparent Sp. Gravity:	2.698	2.678		2.688
Water Absorption(%):	1.09	1.32		1.19
	Admixture Sp	ecific Gravity:	1.000	
AASHTO T	176 Sand Eq	juivalent value	55	
		o (CP 45) (%)		60 Min
		(ASHTO T89)		
		AASHTO T90)		NP
L.A. Abr. (AAS	HTO T 96)	@500 Rev.(%)	28	45 Max
Uncompacted \				45 Min
Micro Deval (C				lnfo

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control Client: STROHECKER PAVING

Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15

Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28 Type of Admix: EVOTHERM 3%

TABE OF VICTOR			
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	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	AVION TO	(2)
Coarse Aggreg	10 - Cra	,,,,,,,(AASH1U 10	, 3)
a Agrees	ate Specific Gray	ity (2 H 2-5	
Coarse Aggive			١
	5/8"	Intermediate Aggregate 3/8"	L

		·			T
Maximum Theoretical Gravity	(Rice	) Test			-
10 as Method: CP 51					$\vdash$
Percent of binder in Se	mple	<u> </u>	6.0		Ì
Weight of Container:	}		0.0		1
-	2		0.0		
20 to and Container	١		1119.		1
Weight of Sample and Container:	- 2	2 }	991.		
0.144	├	1	4056	9	
Wt. of Sample, Container , Water, & Lid:		2	3963		
				0.0	1
Weight of Sample in Air	::   :-	.1	111		1
		2	99		_
	_			0.5.0	-{
Wt. Of Container, Water and Li	d:	1		95.9 	-
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	_		40	)56.9	٦
Wt. of Container. Sample ,& Water,(	C): }	. 1	3	963.3	1
	1				- ]
7.00			-		
	u\.	1	-	458.9	
Volume of Voidless Mix ("Vy	111 J.	2		404.8	
and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t					
		1		2.440	
Maximum Sp. Gravity ("Gr	μu J	2		2.448	
Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capital and Capita		1 -	}		
	. /!! (	Zmm¹	n:	2.444	
Average Maximum Sp. Gravity	neits	(PCI	7):	152.5	
Average Maximum De	Gmi	n" Ran	ge:	0.008	
All Weights in Gruns. 0.0 = i	iem "	as tared			

All Weights in Grams.	0.0 = 4600 Maz razen
Maximum Theoretical	Gravity (Rice) Test Design Calcula

Toot Design	Calculations
Maximum Theoretical Gravity (Rice) Test Design	1,031
Asphalt Specific Gravity @ 77°F:	
Effective Specific Gravity:	4.10
Asphalt Absorbed (%):	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon

NAME AND POST OF THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER,	Chapitic Litay	ILY (TATIONAL T	
Coarse Aggrega	te Specific Grav	Intermediate Aggregate 3/8"	
	Coarse Aggregate 5/8"		
Oven-Dry Weight(g):	3034.5	2485.1	
	3063.9	2515.2	
"SSD" Weight(g):		1564.4	
Weight in Water(g):		2,614	1
Bulk (Dry) Sp. Gravity.	2.629		† <b> </b>
"SSD" Sp. Gravity:	2.655	2,645	1
		2.699	
Apparent Sp. Gravity	0.97	1.21	
Water Absorption(%)			
		и илешто Т	84)
Fine Aggreg	ate Specific Gra	vity (AASHTO T	<u> </u>
1	Crusher Fines		

A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PAR		THE RESERVE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE
	Specific Gravi	ty (AASHTO T84)
Fine Aggregate	Specific or	<u> </u>
	Crusher Fines	
Oven-Dry Weight(g):	493.5	
"SSD" Weight(g):	500.0	
Weight of Flask & Water(g):	663.6	
Wt. of Flask, Water & Sample(g)	972.8	<del></del>
Bulk (Dry) Sp. Gravity:	2.586	
"SSD" Sp. Gravity:	2.621	
Apparent Sp. Gravity:	2.678	
Water Absorption(%):	1.32	

Combined Specific Gra	vity T	
O.,.hi	ned Bulk (Dry):	2.604
Como	mbined "SSD"	2.635
	oined Apparent:	2.688
	r Absorption (%)	1.19
Combined water		
		L
		THE RESERVE AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO
Composite Mineral Aggregate	Properties	
Composite Mineral Agg. Cg	Value	Spec
Property	<u> </u>	
AASHTO T176 Sand Equivalent value:	95.0	60 Min
Fractured Face Two (CP 45) (%):	NV	
Liquid Limit (AASHTO T89):	NP	
(AASHIO 170). 1	28	45 Max
Plastic Limit (AASHTO T90):		45 Min
Plastic Limit (ARCTT  L.A. Abr. (AASHTO T 96) @500 Rev.(%):  Uncompacted Voids (AASHTO TP 33) (%):	48.5	45 14111

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING

Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15

Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to  $\leq 3.0$  Million

Asphalt Source: SUNCOR

Asphalt Grade: PG 58-28

Specimen No. 1 Comp/Mixing Temps: 380 F/325 F		Asphalt %	Gmb (measured)=	2.314	
Total Air Dry Mass, g		1151.4	% Water Absorp. (by Vol.)=	1.2	
al Mass "SSD", g =		Immersed Wt., g =	Gmb	% Gmm	% Air
No. of	<del></del>	Gmb	(corrected)	(corrected)	Voids
Gyrations	Height, mm	(estimated)	2,051	82.7	17.3
	73,1	2.005	2.085	84.1	15.9
7	71.9	2.039	2.157	87.0	13.0
15	69.5	2.109	2,185	88.1	11.9
20	68.6	2.137	2.208	89.0	11,0
25	67.9	2.159	2.228	89.8	10.2
30	67,3	2,178	2,241	90.4	9,6
35	66.9	2.191	2,254	90.9	9.1
40	66.5	2.204	2,265	91.3	8.7
45	66.2	2,214	2,275	91.7	8.3
50	65.9	2,224	2,285	92.1	7.9
55	65.6	2,234	2,299	92.7	7.3
65	65,2	2.248	2,314	93.3	6.7

			1 ambout 1/a	= 100	
	Compa trame	300 F / 325 F Total Mass =	Asphalt %	Gmb (measured)= 2 % Water Absorp. (by Vol.)= 1	.318 .0
Gmm = 2 Total Mass "SSD", g = 1 No. of Gyrations  5 7 15 20 25 30 35 40 45 50		Immersed Wt., g =  Gmb (estimated)  1,997 2,030  2,103 2,130 2,152 2,171 2,188 2,201 2,211 2,221 2,231	G58.5  Gmb (corrected)  2.050  2.084  2.158  2.187  2.209  2.229  2.245  2.259  2.269  2.279  2.290	% Water Absorp. (by Vol.)= 1 % Gnun (corrected) 82.6 84.0 87.0 85.2 89.1 89.9 90.5 91.1 91.5 91.9 92.3	% Air Voids 17.4 16.0 13.0 11.8 10.9 10.1 9.5 8.9 8.5 8.1 7.7
55 65	65.7 65.3 64.9	2.245 2.258	2,304 2,318	92.9 93.5	6.5

		Asphalt %=	5.00	
Average Values for Specimen No. 1 & 2			% Gmin	% Air
	Gmb	Gmb	(corrected)	Voids
No. of	(estimated)	(corrected)		16,0
Gyrations Height, mm  7 72.1	\	7.084	84,0	10.0
72.1	2,034	***************************************	93.4	6.6
64,9	2,260	2,316		1
75 64.9				

Western Technologies Inc.

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control Client: STROHECKER PAVING

Project No: C&J Gravel Home Pit

Date: 08-21-15 Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28

	Comp / Mixing Temps:	300 F / 325 F	Asphalt %	5.50 = 5.50	3/10
		Total Mass =	1166.5	Gmb (measured)= 2	2
Gmm = 2.462		Immersed Wt., g=	670.7	% Water Absorp. (by Vol.)= 0	% Air
otal Mass "SSD", g =	1107.5	Gmb	Gmb	% Gmm	Voids
No. of	Height, mm	(estimated)	(corrected)	(corrected)	15,6
Gyrations	72.5	2,049	2.077	84.4	14.1
5	71.2	2,086	2.115	85.9	11.0
	68.7	2.162	2,192	89.0	9.8
15	67.8	2.191	2.221	90.2	8.9
20	67,1	2.213	2,244	91.1	8,2
25	66.6	2,230	2.261	91.8	7.5
30	66.1	2,247	2.278	92.5	7.1
35	65.8	2,257	2.288	92.9	6.5
*1(1	65.4	2.271	2.302	93,5	6,1
45	1	2,281	2,313	93.9	5.8
50	65.1	2.288	2.320	94.2	5.2
55	64,9	2,303	2,334	94.8	4.6
65	64,5 64,1	2.317	2.349	95.4	4,0

	<u></u>	200 P / 225 F	Asphalt %	= 5.50		
Specimen No. 2 Comp / Mixing Temps: 300 F / 325 F  Total Mass = 1				Gmb (measured)=	(d)= 2.342	
Gmm = 2.462 10tal Mass		669.6	% (Vater Absorp. (by Vol.)=	).3		
Total Mass "SSD", g =	1167.7		Gmb	% Ginin	% Air	
No, of		Gmb	(corrected)	(corrected)	Voids	
Gyrations	Height, mm	(estimated)	2,074	84,2	15.8	
5	70.9	2.095	2,107	85.6	14.4	
7	69.8	2.128	.,,,,,,,	83.8	11.2	
15	67.3	2.207	2.185	90.0	10.0	
20	66.4	2.237	2,215	90.9	9.1	
-	65,7	2.261	2,238	91.6	8.4	
25	65.2	2.278	2,256	92.2	7.8	
30	64.8	2,292	2.269	1	7.2	
35	64.4	2,306	2.284	92,8	6.8	
-\$()	1	2,317	2,294	93.2	6.4	
45	64.1	2,328	2.305	93.6		
50	63,8	2,335	2.312	- 93.9	6.1	
55	63.6		2.327	94.5	5.5	
65	63.2	2,350	2,342	95.1	4.9	
75	62.8	2,365				

			Asphalt %=	5.50	
Average Values for S	Specimen No. 1 & 2		Gmb	% Gmm	% Air
No. of		Gmb		(corrected)	Voids
ļ i	Height, nun	(estimated)	(corrected)	(concered)	142
Gyrations	Ficigia, tan	4.07	2.111	85.7	14.3
Gyrations 7	70.5	2,107	0.245	95,3	4.7
**************************************	63,5	2.341	2,345		<del></del>
15					

WT Job No.: 3155JH052

CDOT Project No TRIAL #2

Project Name: 2015 Various Quality Control Client: STROHECKER PAVING

Project No. C&J Gravel Home Pit

Date: 08-21-15

Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR

Asphalt Grade: PG 58-28

Specimen No. 1	Comp / Mixing Temps:	300 F / 325 F	Asphalt %	Gmb (measured)= 2	.366
Gmm =		Total Mass -	1150.5	% Water Absorp. (by Vol.)= 0	.3
otal Mass "SSD", g =	1158.0	Immersed Wt., g =	669.1 Gmb	% Gmm	% Air Voids
No. of	488.9	(estimated)	(corrected)	(corrected)	14.8
Gyrations	Height, mm	2,031	2.082	85.2 86.7	13.3
5	71.2	2,068	2.120	90.0	10,0
15	68.6	2,146	2,200	91.3	8.7
20	67.6	2.178 2.201	2,256	92.3	7.7
25	66.9	2,221	2,276	93.1	6,9 6,3
30	66,3 65,9	2,234	2.290	93.7 94.3	5.7
35	65.5	2,248	2,304	94.9	5.1
45 45	65.1	2,262	2,318 2,329	95,3	4.7
50	64.8	2.272	2,329	95.6	4.4
35	64,6	2.279	2,354	96.3	3.7
65	64.1 63.8	2.297 2.308	2,366	96.8	3.2

	a : Mulius Tampe:		Asphalt %=	= 6.00 Gmb (measured)= 2	372
Specimen No. 2 Gmm =	Comp / Mixing Temps:	Total Mass =	1158.1	% Water Absorp. (by Vol.)= 0	.1
otal Mass "SSD", g =	1158.5 488.2	Immersed Wt., g =	Gmb (corrected)	% Gmm (corrected)	% Air Voids
Gyrations	73.6	(estimated)	2,076	84,9 86,5	15.1 13.5
5 7	72.3	2,037	2,113	89.9	10.1 8.7
15	69,5 68,5	2.150	2,230	91,3 92,3	7.7
20 25	67.7	2.175 2.194	2.257	93,2	6.8 6.1
30 35	67.1	2.211	2,294	93.9 94.4	5.6
-40	66.2	2.224 2.238	2.308 2.322	95.0	5,0 4,6
45 50	65.8 65.5	2,248	2.332 2.343	95.4 · 95.9	4.1
55	65.2	2,258 2,276	2,343	96.6	3.4 2.9
65 75	64.4	2,286	2,372	97.1	1

Average Values for	Specimen No. 1 & 2		Asphalt %=	6.00 % Gam	% Air
No. of	Specime-	Onio	Gmb (corrected)	(corrected)	Voids
Gyrations	Height, mm	(estimated)	\	86.6	13,4
7	71.8	2.297	2,369	96,9	3.1
75	04.1				

WT Job No.: 3155Jf1052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control Client: STROHECKER PAVING

Project No: C&J Gravel Home Pit

Source of Aggregate:

Date: 08-21-15

Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR
Asphalt Grade: PG 58-28

Specimen No. 1	Comp / Mixing Temps:	300 F / 325 F	Asphalt %	o= 0.50	2 404		
Gmm = 3		Total Mass =		Gmb (measured) [™]	Gmb (measured)= 2.404		
Total Mass "SSD", g =		Immersed Wt., g =	681.1		% Water Absorp. (by Vol.)= 0.0		
No. of	484.9	Gmb	Gmb	% Gmm	% Air Voids		
Gyrations	Height, mm	(estimated)	(corrected)	(corrected)			
	71.4	2.079	2,121	87.4	12.6		
''	70.1	3.117	2,161	89.1	10.9		
15	67,6	2.196	2.241	92.3	7.7		
20	66.6	2.229	2,274	93.7	6.3		
	65.9	2,252	2.298	94.7	5.3		
25	65.4	2,270	2,316	95,5	4.5		
5U	64.9	2.287	2,334	96.2	3.8		
35		2,298	2,345	96.6	3,4		
-14)	64.6	2,312	2,359	97.2	2.8		
45	64,2	2,319	2,367	97.5	2.5		
50	64.0	2,330	2.378	98.0	2,0		
55	63,7	2,345	2,393	98.6	1,4		
65	63.3	1	2,404	99,1	0.9		
75	63.0	2.356	2,404				

Specimen No. 2	Comp / Mixing Temps:	300 F / 325 F	Asphalt %	= 6.50			
Gmm =		Total Mass =	= 1168.8	Gmb (measured)= 2	Ginb (measured)= 2.405		
		Immersed Wt., g		% Water Absorp. (by Vol.)= 0.1			
Total Mass "SSD", g =		Gmb		% Gmm	% Air		
No. of	486.0 Height, mm	(estimated)	(corrected)	(corrected)	Voids		
Gyrations		2.064	2,111	87.0	13.0		
5	71.9	2,102	2.149	88.6	11.4		
7	70.6	2,186	2,235	92.1	7.9		
15	67.9	1	2,268	93.5	6.5		
30	66,9	2.219	2,296	94.6	5.4		
25	66.1	2.246	2,317	95.5	4,5		
3U	65.5	2,266	2,331	96.1	3,9		
35	65.1	2.280	1	96.7	3,3		
-40	64.7	2.294	2,345	97.1	2,9		
45	64.4	2.305	2.356	97.6	2.4		
50	64.1	2.316	2,367	97.9	2.1		
55	63.9	2,323	2,375	98.7	1.3		
άō	63.4	2,341	2,394		0,9		
75	63.1	2,352	2,405	99.1			

Average Values for 5	Specimen No. 1 & 2		Asphalt %= 6.50				
	specimen (10. x & z	Gmb	Gmb	% Gmm	% Air		
No. of Gyrations	Height, mm	(estimated)	(corrected)	(corrected)	Voids		
7		2.110	2.155	88.8	11.2		
	63,1	2,354	2,405	99,1	0.9		
73			<del></del>				

Volumetric Calculations

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING

Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15

Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Western Technologies Inc.

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28

alumetr	ie Calcula	tions for	N ini						VMA	liation Method: Voids Filled	Eff. Voids	% Gmm	
Gyration				Agg. & Admix	Admix Vol.			Dust to Eff.	(%)	(%)	(%)	Corrected	Gmm
Level	Number	(Tot Wt.)	(Gmb)	Vol. (%)	(%)	Vol. (%)		Asph Ratio	24.0	33.4	16.0	84.0	2.480
Nini	7	5.00	2.084	76.042	.0.000	7.998	3.955	0.7	23,4	39.0	14.3	85.7	2.46
Nini	7	5.50	2.111	76.601	0.000	9.135	4.461	0.6	23.6	43.2	13.4	86.6	2.44
Nini	7	6.00	2,116	76.396	0.000	10.197	4.966	0.6	22.6	50.6	11.2	88.8	2,42
Nini	7	6.50	2,155	77.381	0.000	11.441	5.472		23.5	41.2	13.8	86.2	2,45
Nint	7	5,75	2,114	76.515	0.000	9.667	4.713	0.7	23.3	71.2			

									Calcul	lation Method:	A.l. SP-2		
Volumetr	ie Calcula	tions for	N design	1			Eff'94 Acab	Dust to Eff.	VMA	Voids Filled	Eff. Voids	% Gmm	
Gyration	Gyration	% Asph.	Sp. Gr.	Agg. & Admix				Asph Ratio	(%)	(%)	(%)	Corrected	Gmm
i_evel	Number	(Tot Wt.)	(Gmb)	Yol. (%)	(%)	-	The residence of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of t	0.8	15.5	57.3	6.6	93,4	2.480
Nd	75	5.00	2.316	84,484	0.000	8.886	3.955	0.7	14.9	68.2	4.7	95.3	2,462
Nd	75	5.50	2.345	85.113	0.000	10.150	4,461	0.6	14.5	78.8	3.1	96.9	2.444
Nd	75	6.00	2.369	85,511	0.000	11,414	4.966	0.6	13.7	93.4	0.9	99.1	2.426
Nd	75	6.50	2.405	86.339	0.000	12.765	5.472		14.7	73.2	4.0	96.0	2.453
Nd	75	5,75	2.356	85,274	0.000	10.774	4.713	0.7			3,0 - 5.0	96.0 - 98.0	
1/(1	Spees:						<u>L</u>	0.6 - 1.2	14.5 Min	65-80	1 3,0 - 3.0	70,0 75.0	<u> </u>

ability De	terminatio	ns - CPL	5106	<u></u>
Gyration	% Asph.	Stab	Average Stability	
		40	40	40
		41	40	40
		39	39	39
	6.50	39	40	39
		Gyration         % Asph.           Number         (To We)           75         5.00           75         5.50           75         6.00	Gyration         % Asph.         State           Number         (Tot W.)         Measu           75         5.00         40           75         5.50         41           75         6.00         39	Number         (Tot W.)         Measurements           75         5.00         40         40           75         5.50         41         40           75         6.00         39         39

VMA & % Gmm Graphs

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING

Source of Aggregate: C&J Gravel Home Pit

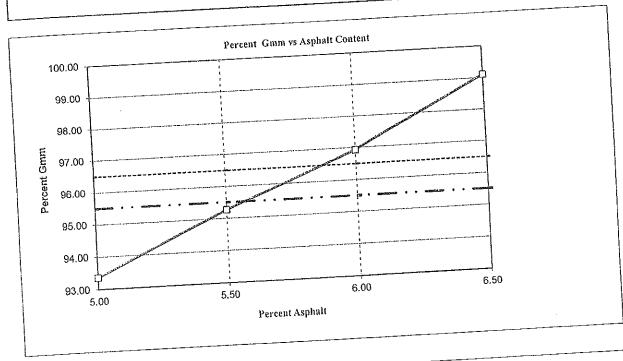
Western Technologies Inc.

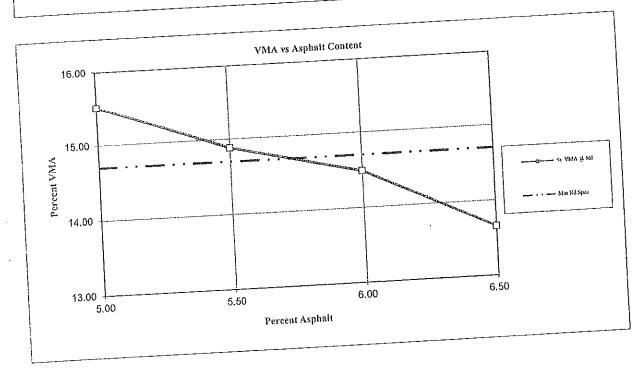
Date: 08-21-15

Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28





VFA & Air Voids Graphs

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING

Source of Aggregate: C&J Gravel Home Pit

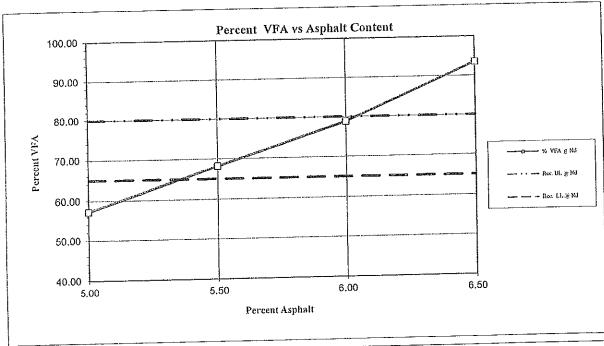
Western Technologies Inc.

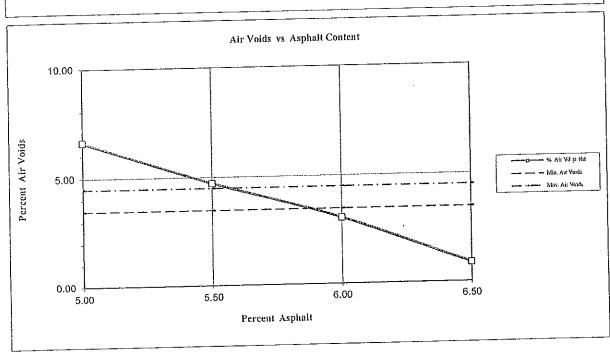
Date: 08-21-15

Mix Type: CDOT SX (75)

Traffic Type:  $ESAL^{\dagger}s = 0.3 \text{ to} < 3.0 \text{ Million}$ 

Asphalt Source: SUNCOR
Asphalt Grade: PG 58-28





ability Graph

Western Technologies Inc.

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

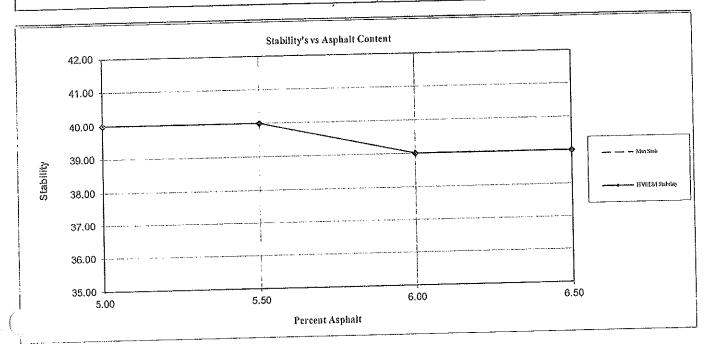
Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15 Mix Type: CDOT SX (75)

Traffic Type: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28



#### Tensile Strength Ratio

WESTERN TECHNOLOGIES INC.

970

414.0

985

60.9

420.4

60.4

975

60.3

416.1

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Percent Swell (%)(After Condition)

WET TENSILE STRENGTH (psi)

WET TENSILE STRENGTH (kPa)

Average Wet Tensile Strength (psi) Average Wet Tensile Strength (kPa) TENSILE STRENGTH RATIO

LOAD (lb.) (After Conditioning)

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING

Source of Aggregate: C&J Gravel Home Pit

Date: 08-21-15

Mix Type: CDOT SX (75)

Client: ESAL's = 0.3 to < 3.0 Million

Asphalt Source: SUNCOR Asphalt Grade: PG 58-28

			770			
Resistance of C	Compacted B	ituminous M	lixture to M	oisture Dam	age	
	Test	Method: CPL		2	4	6
Specimen Identification	1 .1 -	3	5	100000	Gyratory	
Compaction Effort	Gyratory	Gyratory	Gyratory	Gyratory	Wet	Wet
Specimen Use	Dry	Дгу	Dry	Wet	3,937	3,937
Diameter (in.)	3.937	3.937	3.937	3.937	2.614	2.614
Height (in.)	2.614	2.614	2.614	2.614	L	100.0
Diameter (mm)	100.0	100.0	100.0	100.0	100.0	66.4
Height (mm)	66.4	66.4	66.4	66.4	66.4	1158.5
Dry Weight in Air (g)	1158.8	1157.3	1155.5	1162.3	1156.0	1161.9
S.S.D. Weight (g)	1160.5	1161.0	1159.2	1166.9	1159.8	658.8
Weight in Water (g)	654.9	656.7	653.0	660.1	656.4	503.1
Volume (cm³)	505.6	504.3	506.2	506.8	503.4	2.303
Bulk Specific Gravity	2.292	2.295	2.283	2.293	2.296	143.7
Bulk Density (pcf)	143.0	143.2	142.4	143.1	143.3	F
Maximum Density (Rice Value)	2,453	2.453	2.453	2.453	2.453	2.453
Percent Air Voids (%)	6.6	6.4	6.9	6.5	6.4	$ \frac{6.1}{20.01}$
Air Void Volume (cm³)	33.19	32.50	35.13	32.96	32.13	30.81
LOAD (lb)	1225	1090	1270			
Load (N)	5449	4849	5649			
DRY TENSILE STRENGTH (psi)	75.8	67.4	78.6			
DRY TENSILE STRENGTH (kPa)	522.8	465.2	542.0			
Average Dry Tensile Strength (psi)	1	73.9				
Average Dry Tensile Strength (kPa)		510.0				<del></del>
Amount of Vacuum (mm of Mercury)	<u> </u>			28	28	28
S.S.D. Weight (g) (After Saturation)	1			1187.7	1180.8	1182.0
Weight in Water (g) (After Saturation)				682.2	680.5	681.9
Volume (cm ³ )	Vacuu	m Saturated for	5 Minutes	505.5	500.3	500.1
Volume of Absorbed Water (cm ³ )	-			25.4	24.8	23.5
l e contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra de la contra del la contra del la contra del la contra de la contra del la contra de la contra de la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra del la contra d	1			77.1	77.2	76.3
Percent Saturation (%)	ļ			-0.3	-0.6	-0.6
Percent Swell (%)				2.649	2,368	2,638
Thickness, (in) [After 24h Condition]				1190.5	1184.3	1185.6
S.S.D. Weight (g) (After Condition)				686.0	680.0	682.3
Weight in Water (g) (After Condition)				504.5	504.3	503.3
Volume (cm³)(After Condition)	Conditio	ned Specimens	included the	28.2	28.3	27.L
Volume of Absorbed Water (cm³)(Af C)	minimu	n 16 hours free:	ze thaw cycle	85.6	88.1	88.0
Percent Saturation (%)(After Condition)				-0.5	0.2	0.0
Percent Swell (%)(After Condition)	L					AMA

Western Technologies Inc.

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING Source of Aggregate: C&J Gravel Home Pit

Traffic Type: ESAL's = 0.3 to < 3.0 Million

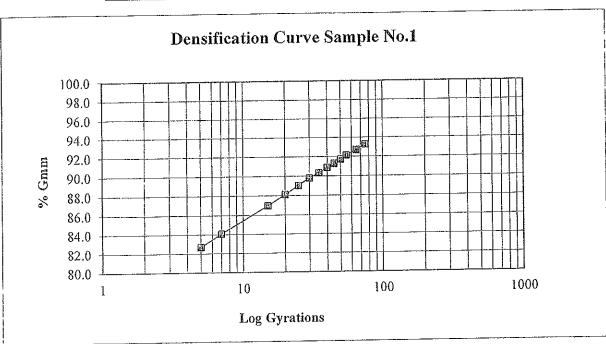
Asphalt Source: SUNCOR Asphalt Grade: PG 58-28

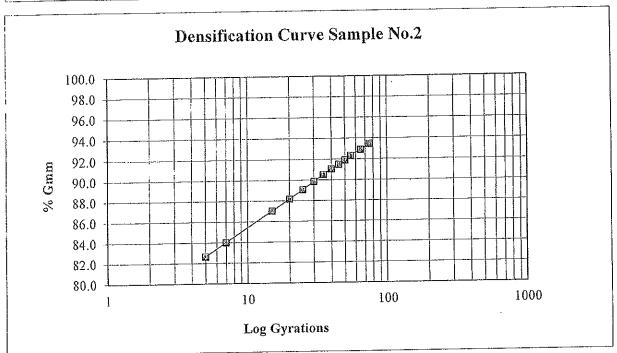
Type of Admix.: EVOTHERM 3%

Date: 08-21-15

Mix Type: CDOT SX (75)

5.00 Asphalt Content (%) =





Date: 08-21-15

Western Technologies Inc.

WT Job No.: 3155JH052

Mix Type: CDOT SX (75)

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control Client: STROHECKER PAVING

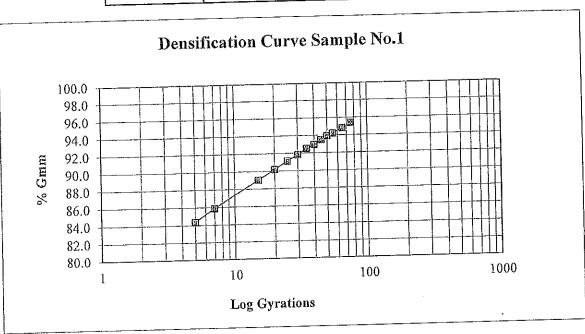
Traffic Type: ESAL's = 0.3 to < 3.0 Million Asphalt Source: SUNCOR

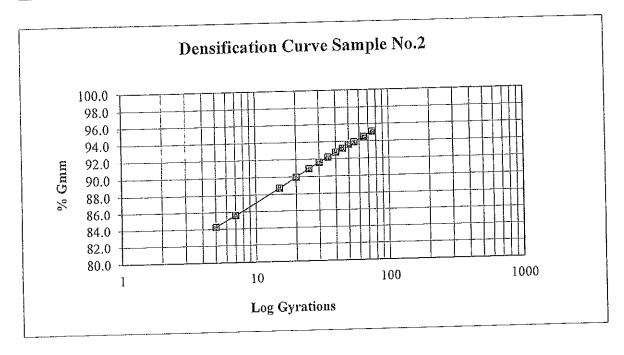
Source of Aggregate: C&J Gravel Home Pit

Asphalt Grade: PG 58-28

Type of Admix.: EVOTHERM 3%

Asphalt Content (%) = 5.50





Western Technologies Inc.

WT Job No.: 3155JH052

CDOT Project No.: TRIAL #2

Project Name: 2015 Various Quality Control

Client: STROHECKER PAVING

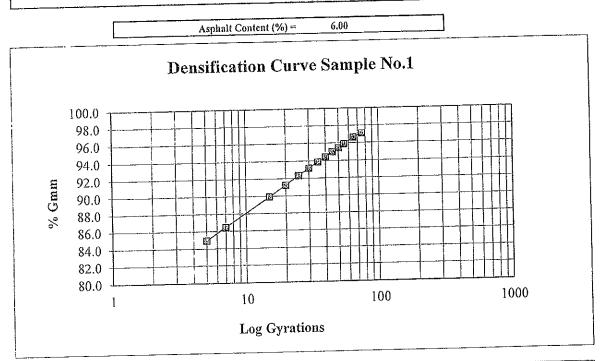
Source of Aggregate: C&J Gravel Home Pit

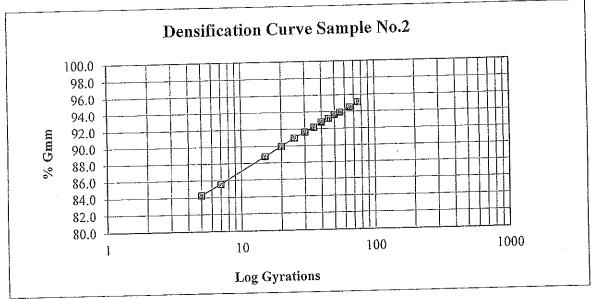
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Mix Type: CDOT SX (75)

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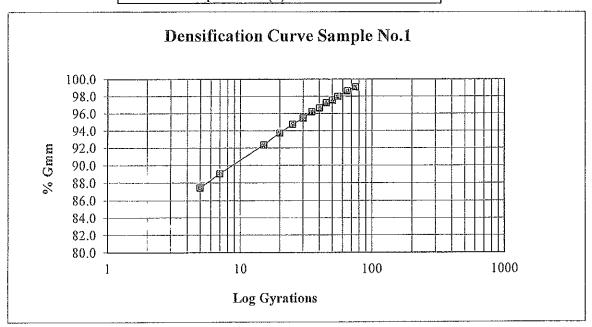
Traffic Type: ESAL's = 0.3 to < 3.0 Million

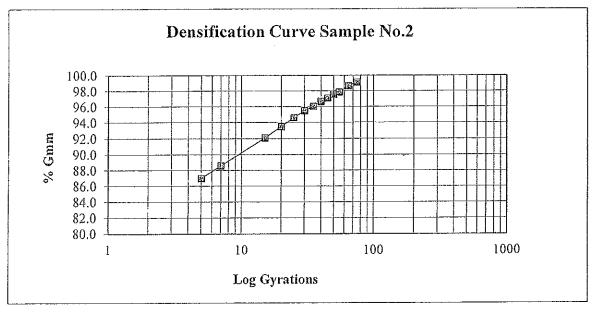
Asphalt Source: SUNCOR Asphalt Grade: PG 58-28

Type of Admix.: EVOTHERM 3%

Asphalt Content (%) =

6.50





		-	SIE	VE ANALY	SIS, AC CC	NALYSIS, AC CONTENT, MAX SPG WORKSHEET						
*					, , , , , , ,	and of a state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of						
1000		STE CHBO	THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.		SA No: 19	219 Location: PAGOSA-PC TO AVD SUP						
, *	Sample Da	ate: 8-9	-17	Station:	IMPLED AT	Offset: PLANT Torinage: N/A						
	Samp By:	KIP STROK	<i>LECKER</i>	Date: 8	9-17	Sample No: FICATION #   Item No: 608 HM A						
	Grading:	SA	Form 43#	A19219BP	Supplier:	STROHECICER PAVING						
	Test Date:	0-9-17		GREG JA								
	IA #:	10K:	Treated by.	Rep/Verif:	mare of state	Checked By: GINA OENTEN						
	Borner to the same of the	IALT GRADA		repreent	Ad to Sand							
	ASPH	desirement of the second		NO: VUCIT	TON HUNG	ASPHALT CEMENT CONTENT AND MOISTURE						
	Sinua Oina	WEIGHT RETAINED	PERCENT	PERCENT	]	Test No: NECLETION #1						
	3"	INCIAINED	KETAINED	PASSING	RANGÈ	Test Temperature:						
	2 1/2"			· · · · · · · · · · · · · · · · · · ·		Basket Weight: 2845,2 Basket and Sample Wt: 4428,5						
	2"				fermétinnen empfehensigtépesketejásásásásásag	Basket and Sample Wt: 4426.5 Sample Weight: 1503.31/						
	1 1/2"					After Ignition						
	1"			-		Basket and Sample Wt: 4322.2						
	3/4" 1/2"	0	0	100%	100	A/C Loss (Weight): 106, 3						
	3/8"	59.0 235.5	4.0 /	96.0'	90-100	% A/C External: 6.7/						
	No. 4	784.7	15.9. 53.1	94,17	92-94	Calibration Factor: -0,33						
	No. 8	1008,0	68.2		46.56 27-37	Corrected Percent A/C: 6.38						
	No. 16	1134.3	76.8	23.2/	2/13/	MOISTURE IN MIX: - 0.00 = 16.36 %						
	No. 30	1213.2	BZ.1	The state of the state of	11-19	AC MOISTURE SAMPLE:						
,	No. 50	1275.4	86.4	13.6/		Pan Tare:						
	No. 100	1346,8	91,21	9.0		Wet Weight of Sample:						
	No. 200	13 74.1	93,03 1	6.97	1.10-5.10	Dry Weight of Sample:						
E	PAN	37,0			Weight Loss: Percent Moisture:							
13-	WASH TOTAL T	(65.)										
P	101AL	476.11										
Aug.	GRA	DATION W	ASH TEST			MAXIMUM SPECIFIC GRAVITY						
	Original Wei	History and the second second second second second	NIA									
	Corrected Dry		1477.0			Flask 1 Flask 2 Flask weight (empty):						
	Dry Wt. Afte	er Wash:	1411.9		Fla	sk and Sample Weight:						
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" HING SANKE PLANT WIK" 40K-13 54748 m7 SIEVE ANALYSIS, AG CONTENT, MAX SPG WORKSHEET Location: PAGOSA SPUNAS CO SA No: 19219 Project: PC-AVD 54.4P Torinage: N/A Station: N/A Offset: Sample Date: 9 /00 /07 Sample No. VERIACATION# Item No: 403 1608 Date: 9-11-17 QC. Samp By: 👄 52017/5192198/ Form 43#: STROHECKER Supplier: Grading: SA Tested By: D. MANGESTER G. JASSYCH Checked By: G. DENTEN Test Date: 9/12/11 Replyent: VERIFICAT 10N#3 10K: IA#: ASPHALT CEMENT CONTENT AND MOISTURE ASPHALT GRADATION TEST NO: VECLACATION # 3 Test No: \ELIFICATION#3 PERCENT T.V./ PERCENT WEIGHT Test Temperature: Carrie Comment Sieve Size RETAINED RETAINED RANGE PASSING Basket Weight: ₹856.3 4513.3 Basket and Sample Wt: 2 1/2" 1657.01 Sample Weight: After Ignition 1 1/2" 4401.8 Basket and Sample Wt: 101.64 1 A/C Loss (Weight): 100 100 0 3/4" % A/C External: ?¥. ⊗1 90-100 3.0 45.7 1/2" 0.44 Calibration Factor: 81.5/ 02-94 205,4 3/8" 6.28 Corrected Percent A/C: 45.8146-56 54.0 837.4 No. 4 27-37 3/0 620 069,6 No. 8 AC MOISTURE SAMPLE: 02 St. 6 No. 16 82.6 No. 30 Pan Tare: 7338.8 86.6 No. 50 2023. P Wet Weight of Sample: No. 100 Dry Weight of Sample: Q083.0 1.10-5.10 No. 200 Weight Loss: O,O COLLEGION FACTUR 0.01 PAN O 34 Percent Moisture: 6.86 WASH 545,3 TOTAL MAXIMUM SPECIFIC GRAVITY GRADATION WASH TEST Flask 2 Flask 1 Original Wet Weight: Flask weight (empty): 1545.6 Corrected Dry Weight: Flask and Sample Weight: 1476,6 Dry Wt. After Wash: (A) Weight of Sample: 69.0 Weight Loss: (B) Weight of Flask, H20 and Lid: 4.46 Percent Loss: (C)Weight of Flask, Sample, H20 and Lid: Temperature of Water: GRADATION MOISTURE TEST Uncorr. Maximum Specific Gravity: 1545.6 Original Wet Weight: Avg. Maximum Specific Gravity: Final Dry Weight: 1545,6 Corrected Maximum Specific Gravity: Weight Loss: Max. SPG = A/(A+B-C)Percent Moisture: Weight Check Before and After Sieving Dry Wt. After Wash: 1476.6 1476.3 Dry Wt. After Sieving: 0 . 3 Difference (grams): 0.027/ Percent Difference: Fractured Faces Dry Weight of Sample: Weight of FF: Percent FF:

### Random Sampling Schedule

Project:

STE C480-008

Location:

PC to AVD SUP

Project Code:

Item:

403 - Hot Bituminous Pavement

Plan Quantity: 700 Frequency, 1: 190

Grading: SX

Start Value: 0

Element: AC

Start Test Number: 1

#### AC

Test No.	ton	Rand No.	Taken At		
1	85	0.491	93.62	9-19-17	
2	240	0.516	266	10-23-17	
3	420	0.787	440	10-24-17	PAVING
4	676	0.802			
5	907	0.319			

f--- F---

___

#### **Random Sampling Schedule**

Project:

STE C480-008

Location:

PC to AVD SUP

**Project Code:** 

19219

Item:

403 - Hot Bituminous Pavement

Grading: SX

Element: density

Plan Quantity: 700

Frequency, 1: 190

Start Value: 0

Start Test Number: 1

#### density

35

ordinolog							
Test No.	ton	Offset Rand No.	Taken At	_	0.	,	(0 - )
1	114	0.391	114	9-19-1-	7 PAVING	(57A.	29+85)
2	199	0.121	199	9-19-17	PAVING		
3	440	0.314	440	10-24-17	yming		
4	711	0.914					
5	839	0.014					
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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20 21							
21							
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25							
26				•			
27							
28							
29							
30							
31							
32							
33							
34							

State of Colorado

Report Date: 03/20/18

Special: Standard Specifications 2005

Program: Asphalt03, v4.0.1.501(915054865)

Mix Design: 52017A19219B

403SX Item: \$177.85 Cost/ton:

Project No: STE C480-008

Project Code: 19219

Region No: Location:

PC to AVD - SUP

Supplier:

Strohecker Paving

HBP Cost/ton: \$177.85 AC Cost/ton: \$ 0.00

*** FINAL REPORT *** 

Asphalt Content

V Factor: 0.20 W Factor: 0.25 Upper Test Limit: 6.30 Lower Test Limit: 5.70 MaxSpG @ Optimum %AC: 2.444

Test Test Total Test MQL%AC MaxSpG 6.36 2.433 Date Quant Quant No. 6.36 1 09/19/17 237 237 5.53 2.466 371 134 2 10/23/17 34 *Red 6.52 2.420 630 259 3 10/24/17 259 4 10/30/17 20 6.00 2.444 650 4 10/30/17

Asphalt Content Process Summary

QL=45.530 PF=0.81607 I/DP=\$-5,315.58 Process 1, Test 1-4, 650 tons

Mean: 6.103 Std Dev: 0.439

11-10-17 Date Data Entered By

3 2018 Date

State of Colorado

Report Date: 03/20/18

Special: Standard Specifications 2005 Program: Asphalt03, v4.0.1.501(915054865)

Mix Design: 52017A19219B

403SX Item: \$177.85

STE C480-008 Project No:

Project Code: 19219

5 Region No:

PC to AVD - SUP Location: Strohecker Paving Supplier:

Cost/ton:

HBP Cost/ton: \$177.85 AC Cost/ton: \$ 0.00

*** FINAL REPORT ***

Upper Test Limit: 96.00 V Factor: 1.10
Lower Test Limit: 92.00 W Factor: 0.45

Test Test Test Total
No. Date Quant Quant Density
1 09/19/17 119 119 95.00
2 09/19/17 118 237 96.20
3 10/23/17 134 371 94.90
4 10/24/17 259 630 97.00
*P 5 10/30/17 20 650 ---MQL77 57 *Red

Mat Density Process Summary

QL=57.441 PF=0.90628 I/DP=\$-4,725.36 Process 1, Test 1-4, 630 tons

Mean: 95.775 Std Dev: 1.008

QL=--- PF=1.00000 I/DP=\$0.00 Process 1PF, Test 5, 20 tons

Mean: ---

Std Dev:

*P 1.0 Pay Factor: Item 403-09500 Furnish HBP

11-10-17 60 Date Data Entered By

Data Checked By

3 -20-18

State of Colorado

Report Date: 03/20/18

Special: Standard Specifications 2005 Program: Asphalt03, v4.0.1.501(915054865) Region No: Location:

Project No:

Project Code: 19219 5 PC to AVD - SUP

STE C480-008

Supplier:

Strohecker Paving

52017A19219B Mix Design:

403SX Item: \$177.85 Cost/ton:

\$177.85 HBP Cost/ton: \$ 0.00 AC Cost/ton:

## *** FINAL REPORT ***

*** FINAL REPORT ***								=========			
Gradation											
Test			otal uant	3/4"	1/2"	3/8"	#4	#8	#30 	#200 	MQL 
No.	Upper Tes Lower Tes	t Limit t Limit Factors	: ::	100 *100 2.8 0.15 r 100	100 90 2.8 % pas	94 82 2.8 sing s	56 46 2.8 sieves	37 27 2.8	19 11 1.8	5.1 1.1 0.8	
*V 1 *V 2 *V 3	09/19/17 10/23/17 10/24/17 10/30/17	237 134 259 20	237 371 630 650	100 100 100 100	96 95 98	84 79 89	48 37 53 51	32 26 35 32	18 16 19 15	7.8	0 *Red

## Gradation Process Summary

PF=1.00000 I/DP=\$0.00 QL=0.000 Process 1, Test 4-4, 20 tons --- 95.0 88.0 51.0 32.0 15.0 3.1 --- 0.0 0.0 0.0 0.0 0.0 0.00 Mean: Std Dev: 0.0 0.0 0.0 --- 0.0 0.0 0.0 QL:

# Separate Gradation Processes per 105.03

PF=0.40625 I/DP=\$-3,754.02 Process 1D, Test 1, 237 tons --- 96.0 84.0 48.0 32.0 18.0 7.0 --- 0.0 0.0 0.0 0.0 0.0 0.00 --- 0.0 0.0 0.0 0.0 0.0 0.0 Mean: Std Dev: PF=0.19643 I/DP=\$-2,872.59 QL: --- 95.0 79.0 37.0 26.0 16.0 6.7 Process 1A, Test 2, 134 tons ___ 0.0 0.0 0.0 0.0 0.0 0.00 Mean: Std Dev: 0.0 0.0 0.0 --- 0.0 0.0 0.0 PF=0.15625 I/DP=\$-5,829.87 QL: Process 1C, Test 3, 259 tons --- 98.0 89.0 53.0 35.0 19.0 7.8 ___ 0.0 0.0 0.0 0.0 0.0 0.00 Mean: --- 0.0 0.0 0.0 0.0 0.0 0.0 Std Dev: QL:

 $\star V$  Sample outside 2V made into separate process.

11-10-17 Date Data Entered By

Data Checked By Date

-3-

State of Colorado

Report Date: 03/20/18

Special: Standard Specifications 2005

Program: Asphalt03, v4.0.1.501(915054865)

Project No: STE C480-008

Project Code: 19219

Region No: 5

PC to AVD - SUP Location: Strohecker Paving Supplier:

*** FINAL REPORT ***

Joint Density - Process 1 ______

Unit Price: \$ 177.85

Comment: no longitudinal joints constructed

Upper Test Limit: 96.00 V Factor: 1.60 Lower Test Limit: 88.00 W Factor: 0.15 

Test Test Total
No. Date Quant Quant Density
1 09/19/17 650 650 94.00

MQL

Joint Density - Process 1 Summary

Process 1, Test 1-1, 650 tons

QL=0.000 PF=1.00000 I/DP=\$0.00

Mean: 94.00 Std Dev: 0.000

Data Entered By

State of Colorado

Report Date: 03/20/18

Special: Standard Specifications 2005 Program: Asphalt03, v4.0.1.501(915054865)

STE C480-008 Project No:

Project Code: 19219 Region No:

PC to AVD - SUP Location: Strohecker Paving Supplier:

52017A19219B Mix Design:

403SX Item: \$177.85 Cost/ton:

HBP Cost/ton: \$177.85 AC Cost/ton:

*** FINAL REPORT ***

Final Tabulation for Mix Design 52017A19219B

Material under 105.03 (e)

Asphalt Content

Mat Density

Gradation

4 tests 650 tons QL=45.530PF=0.81607 I/DP=\$-5,315.58

4 tests 630 tons QL=57.441 PF=0.90628 I/DP=\$-4,725.36

1 tests 20 tons QL=0.000PF=1.00000 I/DP = \$0.00

1 tests 20 tons QL=0.000 PF=1.00000 I/DP = \$0.00

Separated material per 105.03

Asphalt Content

Mat Density

Gradation

Process 1D 237 tons PF=0.40625I/DP=\$-3,754.02

Process 1A 134 tons PF=0.19643 I/DP=\$-2,872.59

Process 1C 259 tons PF=0.15625 I/DP=\$-5,829.87

Data Entered By

3-20-18

Date

State of Colorado Report Date: 03/20/18

Special: Standard Specifications 2005 Program: Asphalt03, v4.0.1.501(915054865)

Location:

Supplier:

Project Code: 19219

Project No: STE C480-008

Region No:

PC to AVD - SUP Strohecker Paving

Mix Design: 52017A19219B

Item: Cost/ton:

403SX \$177.85 HBP Cost/ton: \$177.85 AC Cost/ton: \$ 0.00

*** FINAL REPORT *** 

Totals for Mix Design 52017A19219B

Asphalt Content Mat Density Gradation

4 tests

4 tests

650 tons

5 tests

650 tons

I/DP=\$-5,315.58 I/DP=\$-4,725.36 I/DP=\$-12,456.48

650 tons

I/DP for Mix Design 52017A19219B = \$-22,497.42

Data Entered By

11-10-17

Date

State of Colorado Report Date: 03/20/18

Special: Standard Specifications 2005 Program: Asphalt03, v4.0.1.501(915054865)

STE C480-008 Project No:

Project Code: 19219

Region No: 5

PC to AVD - SUP

Location: Supplier:

_________________________

Strohecker Paving

*** FINAL REPORT ***

Final Tabulation for Joint Density Material under 105.03 (e)

Process 1

= 0.000QL PF = 1.00000

1 test 650 tons

I/DP = \$0.00

Comment: no longitudinal joints constructed

Totals for Joint Density

1 process

Qty = 650 tons I/DP = \$0.00

1 test

Data Entered By

Data Checked By

State of Colorado

Report Date: 03/20/18 Special: Standard Specifications 2005 Program: Asphalt03, v4.0.1.501(915054865)

STE C480-008 Project No:

Project Code: 19219

Region No: 5

Location:

PC to AVD - SUP Strohecker Paving

Supplier:

*** FINAL REPORT ***

Project Totals

Mix Design 52017A19219B

I/DP

\$-22,497.42

Joint Density Process

I/DP

\$0.00

Project I/DP = \$-22,497.42

Data Entered By

3-2018 Date

COLORADO DEPARTMENT OF TRANSPORTATION Ignition Oven Gradation Correction/Degradation 09/11/17 Date: 19219 SA#: Project #: STE C480-008 Binder Ign Oven CF#2 Lab #: 43#: 52017A19219BP Pagosa - PC to AV - SUP Location: D. Manchester/G. Jadrych 6/26/2017 Tester: 43 Date: Strohecker Paving - C&J Gravel Supplier/Pit Name: Oven Dgo - BO#2 % RAP: 0 HMA SX (75) PG 58-28 Asphalt/Grading: BURNED SAMPLES # **UNBURNED SAMPLES #** 3 4 1 PAN ID: PAN ID: 0 PAN WT: 0 Α 0 PAN WT: 0 1733.2 GROSS WT BEFORE WASH: 1753 В 2066.6 2183.1 В GROSS WT BEFORE WASH: 1733.2 (B-A) 1753 C NET WT BW:  $\overline{\mathsf{c}}$ 2183.1 2066.6 (B-A) NET WT BW: GROSS WT AFTER WASH: 1649.2 1633 D 1949.8 D 2062.6 GROSS WT AFTER WASH: 1633 NET WT AW: (D-A)Ε 1649.2 Ε 2062.6 1949.8 (D-A) NET WT AW: (C-E) 100.2 WT -200: F 103.8 116.8 120.5 (C-E) WT -200: 2 SAMPLE# BURNED UNBURN -WEIGHT PERCENT UNBURNED WEIGHT PERCENT PERCENT WEIGHT PERCENT PERCENT WEIGHT BURN (G-H) AV (3&4) H RETAINED **PASSING** PASSING AVE (1&2) G RETAINED **PASSING** RETAINED RETAINED **PASSING** SIEVES PASSING 0 0 1-1/2" 0 0 0 0 1" 0 0 0 3/4" -0.3 97.1 57.6 96.7 42.8 97.6 47.5 97.7 96.9 96.0 86.9 1/2" 82.6 -1.6337.2 80.5 84.6 269.7 81.0 363.9 82.4 79.6 444.7 3/8" -2.5 49.4 48.0 50.8 900.5 862.4 47.0 49.0 45.0 1054.7 1201.3 #4 -2.3 33.3 34.1 1141.4 34.9 1156.5 31.8 32.9 1386.3 1514.6 30.6 #8 1.0 24.4 25.0 25.6 1309.9 26.1 1303.4 30.1 22.0 1444.4 1702.5 #16 -2.0 19.3 19.7 20.1 1398.9 1400 18.3 17.7 1688.6 17.1 1810.3 #30 -1.8 15.7 1466.1 15.4 16.0 1472.1 13.9 1770.8 14.3 13.5 1888.4 #50 -1.2 10.8 10.9 1549.6 10.6 1561.5 9.6 9.8 9.4 1864.2 1978.4 #100 -0.81 8.8 1581.6 8.75 1599.5 8.76 7.94 7.84 1904.5 2007.5 8.04 #200 5.8+6962 6 1632.5 1648.7 5.9498 5 5496739 1949.9 2062.6 PAN % DIFF % DIFF % DIFF % DIFF TOTAL OF 1632.5 0.03 0.03 1648.7 1949.9 -0.01 0.00 2062.6 ALL SIEVES <u> 151.1</u> 153 162.2 175.6 TOTAL -200 (F+PAN)

^{*} Gradation correction to be applied to ALL screens for difference between unburned and burned for any >.5% (#200), >3% (#100-#16), & >5% (#8 & above).

^{*} Gradation correction to be applied ONLY to #200 for difference between unburned and burned >.5% (#200) if only screen applicable.

SIEVE ANALYSIS, AG CONTENT, MAX SPG WORKSHEET 54748mt 4016-6 Location: STE C48D-008 SA No: 19219 PC-AVD SUP Torinage: Offset: Station: Sample No: (F#2 Sample Date: Item No: 603 Date: 9/12/17 Samp By: STROHECKER PAVING Szor A14219 6P Supplier: Grading: SX Checked By: G. DENTEN V Tested By: Case JADAY (1) Test Date: Rep/Verif: 10K: A #: ASPHALT CEMENT CONTENT AND MOISTURE ASPHALT GRADATION TEST NO: COLD FEEO* Test No: TVI PERCENT WEIGHT PERCENT Test Temperature: RANGE RETAINED RETAINED **PASSING** Sieve Size Basket Weight: Basket and Sample Wt: 2 1/2" Sample Weight: After Ignition Basket and Sample Wt: 1 1/2" A/C Loss (Weight): % A/C External: 40 96.0 Calibration Factor: 1/2" 30. Y 29.6 Corrected Percent A/C: 3/8¹³ No. 4 30.6 AC MOISTURE SAMPLE: No. 8 ٥ No. 16 No. 30 Pan Tare: 56.3 Wet Weight of Sample: No. 50 70.6 Dry Weight of Sample: No. 100 2.04 2007.5 Weight Loss: No. 200 Percent Moisture: PAN 120.5 WASH TOTAL MAXIMUM SPECIFIC GRAVITY GRADATION WASH TEST Flask 2 Flask 1 2500. Original Wet Weight: Flask weight (empty): R183.1. Corrected Dry Weight: Flask and Sample Weight: 2062.6 Dry Wt. After Wash: (A) Weight of Sample: 70.5 120.5 (B) Weight of Flask, H20 and Lid: Weight Loss: 9 552 Percent Loss: (C)Weight of Flask, Sample, H20 and Lid: Temperature of Water: GRADATION MOISTURE TEST Uncorr. Maximum Specific Gravity: 2397.5 Original Wet Weight: Avg. Maximum Specific Gravity: 0375.P Corrected Maximum Specific Gravity: Final Dry Weight: 34611 Weight Loss: Max. SPG = A / (A + B - C) Percent Moisture: Weight Check Before and After Sieving 2060.6 Dry Wt. After Wash: Dry Wt. After Sieving: 0.0 Difference (grams): Percent Difference: Fractured Faces Dry Weight of Sample: Weight of FF: Percent FF:

SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET 54740 mt 4016-C PROJECT NO: STE (480-008 SA No: 19219 PC-AVD SUP Tonnage: Project: Offset: Sample Date: 09/11 Station: Item No: 608 Sample No: CFHZ Date: 9/14/17 Samp By: CLIENT QC STROHECKER PAVING 52017A192198A Supplier: Checked By: G. DENTENV Grading: SX Test Date: 09/14/18 Tested By: GREG Jadouch Rep/Verif: ASPHALT CEMENT CONTENT AND MOISTURE 10K: A#: ASPHALT GRADATION TEST NO: Cold Food Food Test No: PERCENT PERCENT TVJ WEIGHT Test Temperature: RANGE PASSING RETAINED Basket Weight: RETAINED Sieve Size Basket and Sample Wi: Sample Weight: 2 1/2" After Ignition Basket and Sample Wt: 1 1/2" A/C Loss (Weight): % A/C External: 100 3.3 Y 977 Calibration Factor: 44.5 1/2" BB. EAV Corrected Percent A/C: 17.6 363.9 3/8" 1054.7 No. 4 32.9V AC MOISTURE SAMPLE: 65 F. C 1386.3 No. 8 69. 1444.4 18.5 No. 16 Pan Tare: 1688.6 No. 30 Wet Weight of Sample: 119 1770.8 No. 50 9.81 Dry Weight of Sample: 90, ex 1864.2 No. 100 7,84 Weight Loss: 7.3.76 1904.5 No. 200 Percent Moisture: 1949.9 PAN 116.8 WASH MAXIMUM SPECIFIC GRAVITY. 7066.7 TOTAL GRADATION WASH TEST Flask 2 Flask 1 2001.1 Original Wet Weight: Flask weight (empty): 2066.6.4 Flask and Sample Weight: Corrected Dry Weight: (A) Weight of Sample: 1949.8 Dry Wt. After Wash: 776.8 V (B) Weight of Flask, H20 and Lid: Weight Loss: 5-4 (C)Weight of Flask, Sample, H20 and Lid: Percent Loss: Temperature of Water: 5.450 GRADATION MOISTURE TEST Uncorr. Maximum Specific Gravity: Avg. Maximum Specific Gravity: 7621.3 Original Wet Weight: Corrected Maximum Specific Gravity: 1609.3 Final Dry Weight: 11.8 V Weight Loss: Maic SPG = A / (A + B - C) 00 71 Percent Moisture: Weight Check Before and After Sieving 1949,0 Dry Wt. After Wash: 1949.9 Dry Wt. After Sieving: Difference (grams): .005 Percent Difference: Fractured Faces Dry Weight of Sample: Weight of FF: Percent FF:

54740mt 4016-D BURN OFF TEST # ONE FUR COLLECTION FACTOR # Z PROJECT NO: STE C483-008 SA No: 19219 Project: PC-AVD SUP Torinage: Offset: Station: Sample Date: Sample No: CF#Z Item No: 608 Date: 9/13/17 Samp By: Chert QC Supplier STROHECKER PAVING 52017A 19219 BA Grading: SX Checked By: G. DENTEN V Tested By: GAEG JADRYCH Test Date: Rep/Verif: 10K: IA#: ASPHALT CEMENT CONTENT AND MOISTURE ASPHALT GRADATION TEST NO: Test No. T.V.J PERCENT | PERCENT WEIGHT <del>Jigh Sh</del> Test Temperature: RANGE **PASSING** RETAINED RETAINED Sievė Size 2856.0 Basket Weight: 4727.1 Basket and Sample Wt: 2 1/2" 1378.11 Sample Weight: After Ignition 4608.1 (1752.1) 1 1/2" Basket and Sample Wt: 119,000 A/C Loss (Weight): 1001 ()6.36 3/4" % A/C External: 95,4 V 4,6. 80.8 1/2" -0,36) Calibration Factor: 78.0 De, sass 多的中。严 3/8" Corrected Percent A/C: 6.00 Ki 613, C 56.4 987.5 No. 4 29.0 71,0 1244 AC MOISTURE SAMPLE: No. 8 21.3 78.7 1379,0 No. 16 16.9 1456.0 83.1 No. 30 Pan Tare: 13.50 26.5 1514.7 No. 50 Wet Weight of Sample: 90.6 9.41 1587.9 No. 100 Dry Weight of Sample: 7.93 92.07 1613.1 No. 200 Weight Loss: 1660.0 PAN Percent Moisture: 917 WASH TOTAL MAXIMUM SPECIFIC GRAVITY. **GRADATION WASH TEST** Flask 2 Flask 1 Original Wet Weight: Flask weight (empty): 752.1. Corrected Dry Weight: Flask and Sample Weight: 660.4 Dry Wt. After Wash: (A) Weight of Sample: 91.7 Weight Loss: (B) Weight of Flask, H20 and Lid: 5.23 Percent Loss: (C)Weight of Flask, Sample, H20 and Lid: Temperature of Water: GRADATION MOISTURE TEST Uncorr. Maximum Specific Gravity: Original Wet Weight: Avg. Maximum Specific Gravity: Final Dry Weight: Corrected Maximum Specific Gravity: Weight Loss: Max. SPG = A/(A+B-C)Percent Moisture: USED FOR AggREGATE CF, Weight Check Before and After Sieving 1660,4 Dry Wt. After Wash: BO#4 BU# 3 BO#1 BO#2 1660.0 Dry Wt. After Sieving: 0,52 -0,27 - 0, S9 0.36 4 6h Difference (grams): · Lowest Hichest 024 Percent Difference: · BUDWING CP-L STZO Fractured Faces → Average = -0.44

COLLECTION FICTOR

SEE FORM 473 FOR DISCUSSION

Dry Weight of Sample:

Weight of FF: Percent FF: 54749mt 4016-D

((

54748 mf 4016-D SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET												
			E ANALYS	600 (011								
Buan	OFF TE		/ \{/\\\'	SA No: 19	219 PROSECT	NO: STE C480-008						
	C-AVI	1 SUP			Offset:	Torinage:						
Sample Dat		2	Station:	es, laire	the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	Item No: 608						
Samp By: ≺	chent	QC	Date: 9/13	3111	11/ I Sample No. O Photo No.							
Grading: 5		52017 A Form 43#:	1214.64	Supplier:	Supplier: STROKECKER PAVING							
	9/13/17	Tested By:		ABRYCH_	Checked By: 🕒 , 🛭 🖯	NTEN V						
Test Date:			Rep/Verif:	_	3							
IA #:	10K:		Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Contro	) ·	ASPHALT CEM	ENT CONTENT AND MOISTURE						
ASPH	ALT GRADA											
	WEIGHT	PERCENT	PERCENT	LV.T	Test Temperature							
	RETAINED	RETAINED	PASSING	RANGE	Basket Weigh	1: 2856./						
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	ALT GRADA	TION TEST I	NO: #3	3	ASPHALT CEMENT CONTENT AND MOISTURE						
ASYT	ALI GIVIDA	FENCENT	DEDCENT	T.V.J	Test No:						
	WEIGHT RETAINED	PERCENT	PASSING	RANGE	Test Temperature:						
	KEININED	1/61/01/20			Backet Weight: <u>CO.55</u> . C						
3" 2 1/2"	/	. All			Basket and Sample Wt: 4705. Sample Weight: 1849.						
2"	, die	<u> </u>			After Ignition						
1 1/2					Basket and Sample Wt: 4589.0						
18			100 V		A/C Loss (Weight):						
3/4"	57,6	3.3	96.71		% A/C External:						
1/2"	9.37.8	19.5	00.5		Calibration Factor: 1-0127						
3/8" No. 4	900,5	50,0	48.0	/	Corrected Percent A/C:						
No. 8	1156.5	66,9	33, 3/		AC MOISTURE SAMPLE:						
No. 16	1309.9	75.6	24.41		And the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t						
Nö. 30	1398.9	80.7	19, 3.1 15,41		Pan Tare:						
No. 50	14-66.1	34.76	10.6		Wet Weight of Sample:						
No. 100	1549,6	9/23/4	8-745	1	Dry Weight of Sample:						
No. 200	1581.6 16325	\$			Weight Loss: Percent Moisture:						
PAN WASH	. 100,2			ne and the second second second second second second second second second second second second second second se	heliosili iamiama.						
TOTAL	1732.7				B AND AND AND AND AND AND AND AND AND AND						
					MAXIMUM SPECIFIC GRAVITY						
	GRADATION			and the second second	Flask 1 Flask 2						
Original	Wet Weight:	17	33.2		Flask weight (empty):						
Corrected	Dry Weight: After Wash:	Annual Contraction of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last	33,0		Flask and Sample Weight:						
DIAAR	Veight Loss:		00.2		(A) Weight of Sample:eight of Flask, H20 and Lid:						
	ercent Loss:		5.70	(C)Meight:	of Flask, Sample, H20 and Lid:						
		AICTIPE T	FET	Í	Temperature of Water:						
GF.	ADATION M	UIBTUNE II		Uncon.	Maximum Specific Gravity:						
Original	Wet Weight: Dry Weight:			Ave.	Maximum Specific Gravity.						
Ling.	Veight Loss:			Corrected	Maximum Specific Gravity:						
Date	ont Moisture:			Max. SPG =	A / (A + B - C)						
Weight	Check Befo	re and After	Sleving	usea for Aggregate C.F.							
Dry Wt.	After Wash:	163	3.9	BO# 1	BO = 2 BO = 3 BO = 4						
Dry Wt. /	After Sieving:	And the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t	05	- 0.36	-0.59/-0.27/-0.52						
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		ed Faces		NECASE = -044							
Dry Weigi	nt of Sample:			CORRECTION FACTOR							
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	Percent FF:	<u> </u>	<del></del>	SEE for	m 473 For DISCUSSION						
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4016-D 54740 mt SIEVE ANALYSIS, AC CONTENT, MAX SPG WORKSHEET FUR CORNECTION FACTOR #2 BURN OFF TEST # FOUR PROJECT NO: STE C460-008 SA No: 19219 Project: PC-AVD SUP Tonnage: Offset: 9/11/17 Station: Sample Date: Sample No: CF# 2 Item No: 608 Date: 9/13/17 Samp By: Chent OC 57017 A 147 19 BP STROHECILER PAVING Supplier: Grading: S Checked By: G. DENTEN Tested By: GREG JAORYCH Test Date: Rep/Verif: 10K: IA#: ASPHALT CEMENT CONTENT AND MOISTURE ASPHALT GRADATION TEST NO: Test No. T.VJ. PERCENT PERCENT WEIGHT ropo ... Test Temperature: RANGÈ **PASSING** RETAINED RETAINED Sievė Size 2855.0 Basket Weight: 4718,0 Basket and Sample Wt: 2 1/2" 1863.0 Sample Weight: After Ignition 1 1/2" 4596-1 Basket and Sample Wt: A/C Loss (Weight): 101.5 100 0 3/4" 6.50 % A/C External: 4,0. 96,00 70.3 0,52 1/2" Calibration Factor: 82.7 17.2 301.8 3/8" Corrected Percent A/C: 48.5 A 96. 7 No. 4 33. 3 Color ? AC MOISTURE SAMPLE: No. 8 24.10 1321,5 No. 16 18.9 No. 30 Pan Tare: 15.0 Y 480, No. 50 Wet Weight of Sample: 10.3 89.7 No. 100 Dry Weight of Sample: 8.62 91.38 No. 200 Weight Loss: 6413 PAN Percent Moisture: 99.8 WASH TOTAL. MAXIMUM SPECIFIC GRAVITY GRADATION WASH TEST Flask 1 Flask 2 Original Wet Weight: Flask weight (empty): Corrected Dry Weight: Flask and Sample Weight: Dry Wt. After Wash: 641.9 (A) Weight of Sample: 99 8 Weight Loss: (B) Weight of Flask, H20 and Lid: 5,73/ Percent Loss: (C)Weight of Flask, Sample, H20 and Lid: Temperature of Water: GRADATION MOISTURE TEST Uncorr. Maximum Specific Gravity: Original Wet Weight: Avg. Maximum Specific Gravity: Final Dry Weight: Corrected Maximum Specific Gravity: Weight Loss: Max. SPG = A / (A + B - C) Percent Moisture: WEO FOR AGGICGATE C.F. Weight Check Before and After Sleving 1641.9 Dry Wt. After Wash: RO# 3 BO#4 K()# 2 BO#1 Dry Wt. After Sieving: 1641.3 -0.27 -0.SZ -0.59 0.36 0 G3 Difference (grams): LOWEST Itighess ·036 Percent Difference: CP-L SIZU FOLLOWING CP-LS AVERACE = -0.44/ Fractured Faces

TOLLECTION FACTOR

SEE FORM 473 FOR DISCUSSION

Dry Weight of Sample:

Weight of FF: Percent FF:

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Chapt #	50	1	(	٠

						Field She	et# 561	62		
FIELD	REPORT	OF ASPI	NSPORTATION HALT CONT C GRAVITY	ENT	ENT Project No. STE C400 - 008 Project Location Project Location PAGOSA SPUNGS-TO ASPEN VILLAGE OR-  Contract ID Date Submitted 10-11-17 Project No. Project Location PINON CAUSEWAM PAGOSA SPUNGS-TO ASPEN VILLAGE OR- STENDED					
(RICE)	OF HOT	MIX ASP	HALT		PAGOSA	SPRINGS	- TO ASPEN I	VILLAGE DR-	S.u.P.	
CDOT Form	#43 number: 19 2198P	стите на предоструктичност станова во учесной ферографија изглади	CDOT Form #43 date:	Asphalt mix formula reference:  6/26/2017 STROHECKER						
Report #/ Pag	ge#	Region S	llem # 608	<u> </u>	Grading SX % recycled					
CP 85 (ni	uclear)		_ CP-L5120 (ignition	on)	(	Other				
Job mix form	ula percent AC	6.00			Range 5.70	ю 6.30	Final report	es 🗆 no	]	
User ID	r ID SMM/LIMS Sample ID Station (or Test # [Date])				n	Fractured faces	Max Specific Gravity (RICE - CP 51)	Percent asphalt		
NIA	QA#1	9/19/17	Sta, 28+3	5		NIA	2.433/	6.36		
NIA	ONAS	10/23/17	STA. 6+0	හි		NIA	2.466/	5.53	1	
NIA	UN#3	10/24/17	STA. 1519	50		NIA	2.420	6.52	-	
	OAF4 10/30/17 PE: 1:00 FOR COST IN OPM	6-57 April 20 Toks							Section of the second section of the second section of the second section of the second section of the second section of the second section of the second section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section section sect	
% Voids VMA VFA Stability Action taken	· SEE FORA	A Test	IA Test	 	ification dev	iation □ no		4#3		
QA Tester (pri	int name)			Title					]	
CRAIG ( IA Tester (prir	AMPBELL nt name)	1 RAUTNER	GEOTE CI-I	Tille QA TESTER						
Approved by (	sion name)			Title						

		^ -	EANALYS AVA SU	ITENT, WAX	SPG WORKSHEE	<b>.</b>						
- V	<u>050 Spréag</u>		(1V!) 74	SA No: /5	7019	Location: Pago sa	Springs, Colorado					
Project: 57	/ /	- 808	1	- Proposition of the second	Offset:		Torinage: 93.82					
Sample Dat		7	Station:	7	A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PAR	Od still them she						
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Grading: 5	X	Form 43#	17 A 19219 BP	Supplier:	Hosphecker Paving							
Test Date:	129/17:4	Tested By:	Pata Care Od	kal]	Checked By:	GINA DENTER	<u></u>					
IA#:	10K:		Rep/Verif:									
	ALT GRADA	TION TEST	no: <i>ФА#</i>	1.	TENT AND MOISTURE							
	WEIGHT	PERCENT		ognation or splings was probable		Test No: OAH						
Sieve Size	RETAINED	RETAINED	PASSING	RANGÈ	_19	emperature:	and any of the second					
3 ⁸		M			<b>H</b> , "	- Animalian	57.8 16.4					
2 1/2"	f.					Sample Wt: <u>#80</u> uple Weight: 195	8.6 V.					
2"	<i></i>				Sali		fter Ignition					
1 1/2"		<u> </u>		and the second second	Rocket and	Sample Wt: 468	21/10 T=18243					
10			1200	108 000		ss (Weight): /3	7.3					
3/4*	0.0	0.0 3.7		1019-100 9D-100			8611					
1/2"	67.2	77,5164	82.5836			tion Factor: -0	441					
3/8"	300.0	52.0	48,01		Corrected F	Percent A/C:	05-6-37(636)					
No. 4	948.6 1233.6	67,6		27-37	a .	re contact on	95 0:06					
No. 8	1396.1	76.5	23.5 V			AC MOISTURE	SAMPLE:					
No. 16 No. 30	1489.2	8/6	18,4 1	11-19		1-1-1						
No. 50	1559.7	85.5	14.5 1			Pan Tare: 1549	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s					
No. 100	1695.7	90-2	9.8		Wet Weight							
No. 200	1681.1	922	7.85	1.10-5.10		of Sample: 5//_						
PAN	1733.2		- 0.81 Co.0	ECTION PACTON		leight Loss:						
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					MAX	KIMUM SPECIFIC GF	RAVITY.					
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User ID: NA			Project foo PAG0 S0	ation: LSPRING	īs*	to A	spen)	Jiu ViU	SEWAY NGE DR-SU	Item#:	98		Grading:	SX		
SMM/LIMS Sampie ID (or Test # [Date])	Station or Location	ΙĄ	Distance from C or Control line	Mat (M) or Joint (J)	CP 81	CP 44 B	CP 44 C	CP 44 L	Field Wet Density % (Corrected)	Core Specific Gravity	Daily Rice	Max Wet Density (Daily Rice x 62.4)	% Rel. Comp.	Projec	t Spec	In Spac? (Y/N)
OA#1 9/19/17 OA#2 9/19/17	ST. 29+85		1,5 97, 84	M		X				2,311	2.433	151,8	95.0	92,01	96.0	Y
QA#Z 9/19/17	ST. 34+36		2.0 FT. LT.	M		Χ				2,341	2,433	151.0	96,2			N
QA#3 10/23/17	ST. 8+50		1,0 FT. LT.	M		人				2.341	2.460		94.9			4
QA#4 10/24/17	ST. 15+50		3.0 FT, UT	M		X				2,347	2,420	151.0	97.0	<u> </u>	4	N
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COLORADO DEPAR	TMEN	FOF TRANSPORTATION	Project no. STE (480-008	Region Contract ID
BULK SPECIF	ic e	RAVITY TEST OF		
User ID	HM	A / SMA (CP 44)	Project Location Pinon Causeway to Ag Form #43 No. 52017 A19219 BP	Grading (
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Test number		@A H1	QA# 2	OA#3
Station		29+85	34+36	8+50
Distance rt. or lt. CL		1.5 rt.	2'Lt,	1'2t.
Course	21M	ge only 3"	Single Oaly, 3"	STAGIE ONLY, 34
Date placed		4/20, 9/19/17	9/19/17	10/23/17
Date retrieved (sample	d)	9/20/17	10/25/17	10/24/17
Pan Number		Participant of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the		, ,
Pan Weight		381.7	266.5	182.7
Pan + Dry Core		508.9   SS7.6	1509.6	1605.4
Dry weight in air	(A)	1175,9 <	1243.1 1	1422.7
Sat. surf. dry wt.	(B)	//78,3	1245,6	1424.0
Weight in H ₂ O	(C)	6694	714.7	816.2 1422,7/607,8=2,341
Bulk Specific Gravity		71 2.433	1243.1/530.9= 2.341	1422,7/607,8=2,34/
Lab Specific Gravity*		2.311.12	2.433	2.966
% Relative Compaction	n	95.0 V	96.2 1	94.9 1
Sample ID (for IAT)		,		
'A Test#				
Sample ID		OAH43		
Test number		4		
Station		15+50		
Distance rt. or lt. CL		3'Lt.		
Course	51	NGLE ONLY, 3"		
Date placed		10/24/17		
Date retrieved (sample	ed)	10/25/17		
Pan Number		,,		
Pan Weight		249.1		
Pan + Dry Core		1310.8		
Dry weight in air	(A)	1061.7		
Sat. surf. dry wt.	(B)	1062.8		
Weight in H ₂ O	(C)	610.5		
Bulk Specific Gravity		1061.7/452,3=2,347	(	
Lab Specific Gravity*		2,420		
% Relative Compaction	n	97.0 V		
Sample ID (for IAT)			· ·	
IA Test#				
Bulk Specific Gravity	y = <u>A</u>	<u> </u>	ote: Report % Relative Compaction on	the CDOT Form #69.
Sampled by (print name)		Tested by (pri		Date / /
WII, QC TES	1612		absolute and may not be used	10/26/17

FIELD TEST	-IELD IESTS OF BASE AGGREGATES, FILLERS, Proje													.19 5					Date Submitted (0 - 11 - 2017			
User ID: NA	DWIS	SUELL/ 	ANEOU:	S AG(	aKEG/	AIES	)		P	roject Lo	cation Pangs	PINON - ASPEN	CAUSE VIII AC	way -	FO SULP	Item 60%		8	Į.			
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Spec. deviations: Syes on P= % for lot #  Items: 206 Structure Backfill Class 1 206 Filter Material Class 304 ABC Class 307 Treated Subgrade 403 HMA Grading 403 SMA 409 Cover Coat										Project 1	Fester (p.	rint name BELL, print name Paul's E Sarlice, I	TRAU GEOTI	TNER ECH	Title QA Title Project	TES	TER					
Other Material:																						

Region

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Project: >	V / (	)-008	110,32-2	SA No: /	7219	Location:	agosa Springs, Colorado						
	ate:9//9/		Station: 2		Offset:	,	Tonnage: 93,82						
	nkstoen Te		Date: 9//	19/17	Sample N	10: DA #1.	Item No:403						
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3/4* 1/2"	0.0 67.2	10.0 3.7		100-100 9D-100	1	A/C External:	6.86						
3/8"	300.0	175/64	182.5°%		1	oration Factor:	-0.441						
No. 4	948.6	52.0		46-56	-	Percent A/C:	(636)						
No. 8	1233.6	67,6	32,41	27-37	nois	ture content	0.05 0.06						
No. 16	1396.1	76.5	23.5 V			AC MO	ISTURE SAMPLE:						
No: 30	1489.2	81.6	18.41	11-19			Lesino						
No. 50	1559.7	85.5	1451		*** * * * * * * * * * * * * * * * * * *	Pan Tare:	15448						
No. 100	16957	90-2	9.8	1.0 5.0	-	ht of Sample:	541.8						
No. 200	1681.1	922	7.85	L10 - 5,10 ECTION FACTOR		ht of Sample: _ Weight Loss:	541,5						
PAN WASH	1733.2 . 90.7		(7.04)	ECTION VACION	,	ent Moisture:	0.855 = 0.06 V						
TOTAL	1823.9		1.07			pades							
		-	(	MAXIMUM SPECIFIC GRAVITY									
Ğ	RADATION V	NASH TEST			IVI/	AXIMUNI SPEC	IFIC GRAVIIT						
Original V	vet Weight:			*	- Contraction services described and a service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of t		Flask 1 Flask 2						
Corrected [	)ry Weight:	1824.3				ight (empty): _							
	After Wash:	1133,6		F		nple Weight: 💆							
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	Dry Wt. After Sieving: 1733.2 Difference (grams): 0.4				-		***************************************						
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Pro	ject: P	C to AVD	SUP STE	1480-N	% SA No: /	9219 Location: Pagosa Sagrage							
		ite: 10/23		Station:									
	np By:		<del></del>	Date: /0/		Offset: N/A Tonnage: 49,52 DA) Sample No: QA 2 Item No: 608							
	ding(		Form 43#	52017 19219 B	A Supplier:	Strokecker Asohalt							
Tes	t Date:	10/24/17	Tested By/	Gaic Can	1	Checked By: G. DENTEN V.							
IA#	,	10K:	1	Rep/Verif:	A. 19 61 4. 91								
			ATION TEST		# 2	LAG # 4071-A (re-do)							
-	ASPHALT GRADATION TEST NO:					ASPHALT CEMENT CONTENT AND MOISTURE							
Siev	∕e Size		PERCENT RETAINED	PERCENT PASSING		Test No: 01 # 2 Test Temperature: 538 C							
3"						Test Temperature: 538 C  Basket Weight: 268 3							
2 1/2	) <del>p</del>				<b>†</b>	Basket and Sample Wt: 4739, 0							
2"	No.					Sample Weight: 18707							
1 1/2	8					After Ignition							
1"		-				Basket and Sample Wt: 4627.3							
3/4"		00	.00	100	100	A/C Loss (Weight): /// 7							
1/2"		87.8	5.0	95,0 V	90-100	% A/C External: 5,97							
3/8"		364.1	20.7	<i>79.3</i> v	182.94	Calibration Factor: -0.44							
No. 4		1109.7	628	37,2 V	46-36	Corrected Percent A/C: 5,53							
No. 8		1299.9	73.9	26./	27.37	anoisture cont. coll. fact: 0.00							
No. 1		1903,2	718	<i>202</i> 7		AC MOISTURE SAMPLE:							
No. 3	41-14-14-1-1-1	1473./	A5.7	16.31	11-19	· ·							
No. 10		1685.8	87.1	12.9		Pan Tare: <u>\/ 544 \&amp;</u>							
No. 20	_	1626.8	91.3	#. F	2 20 8 20	Wet Weight of Sample:							
PAN		16731	92.48	7.52 √ =0.87	1410-5110	Dry Weight of Sample:							
WASH		849		6,71	CORRECTION	factor Weight Loss:							
TOTAL		1758.0		> · · · · ·	<u> </u>	Percent Moisture:							
		ا الله المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع	and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t										
- Ağırım bərəfində ilər	ĞF	RADATION I	VASH TEST			MAXIMUM SPECIFIC GRAVITY							
Ori		et Weight:	Al la			1002.3 Flask 1 Flask 2 - 7001.3							
Сопе	ected D	ry Weight:	1759.0			Flask weight (empty): 1001.5 Flask 2 1001.3							
Dr	y Wt. At	fter Wash:	16741	4	F	lask and Sample Weight: 2777 8 2441.6							
	We	ight Loss:		<b>V</b>		(A) Weight of Sample: <u>1277-8</u> 2441.6							
	Per	cent Loss:	4.8		(B) Weig	9ht of Flask, H20 and Lid: 3398 5 3398 5							
					(C)Weight of	Flask, Sample, H20 and Lid: 1052.4 4153.7							
	NAME OF TAXABLE PARTY.	NAME OF TAXABLE PARTY.	ISTURE TES	T		Temperature of Water: 771/2°F 77/2°F							
		et Weight:		Samuel State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State	Uncorr. M	aximum Specific Gravity: 2.469 V 2.462V							
<del></del>		y Weight:			Avg. M	aximum Specific Gravity: 2466 V							
		ight Loss:	and the second		Corrected M	aximum Specific Gravity:							
DOMESTIC STREET		Moisture:			lax. SPG = A /								
			and After Si		Flosk 1 = 376.6 V								
	Dry Wt. After Wash: 16 +91				705k 2=3	35, /							
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i. Ci C	OILL DIL	relatice:	0-06										
to opening ( 4 mm	erinand desirable to the second	Fractured I		-									
Drv W	eight of	Sample:	HVGJ										
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			520/7A 19219 BP		Stroker Ker				
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ASP	HALT GRADA	TION TEST	NO: UNA		ASPHALT CEMENT CONTENT AND MOISTURE				
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Sieve Size	RETAINED	RETAINED	PASSING	RANGE	Test Temperature: 538°C				
3"					Basket Weight: 28449				
2 1/2"					Basket and Sample Wt: 47/24				
2"		<u> </u>		<del></del>	Sample Weight: 1877 1867 5				
1 1/2"				<u> </u>	After Ignition  Basket and Sample Wt: 456/,5				
3/4"	00	O+O	100	100	A/C Loss (Weight): /30.5 V				
1/2"	37.7	2.2	97,81	90-100	% A/C External: 7,0/ V				
3/8"	193,3	11,1	88,9 1	82-94	Calibration Factor:0.44/				
No. 4	R18.6	471	52,9 V	46-56	Corrected Percent A/C: 6,52 V				
No. 8	1127.0	649	35.1	27-37	motiture content coco, -0.05				
No. 16	1304,6	75./	24.9		AC MOISTURE SAMPLE:				
No. 30	1404./	80,9		11-19	D Tens. 167/// A				
No. 50	1475.8	85,0 89,9	15.0		Pan Tare: 15449 Wet Weight of Sample: 578,370,93,2				
No. 100 No. 200	1561.5 1587.9	91,44	8.56	1.10 -5.10					
PAN	16363			COMECTION FOR					
WASH	984	· (	7.75		ποι Weight Loss: <u>A.3</u> Percent Moisture: 0,05				
TOTAL	1734.7								
			(		MAXIMUM SPECIFIC GRAVITY				
	RADATION V								
	Vet Weight:	NIA		• :	Flask 1 Flask 2				
	Dry Weight:	1336	64		Flask weight (empty): 100/8 10006				
Name and Advantage of the Owner, where the Party of the Owner, where the Party of the Owner, where the Owner,	After Wash:	1638		Г	lask and Sample Weight: 2584.0 2546.4 (A) Weight of Sample: 158.2.2 1576.0				
وستسترأ فيستعب والبراق ويبين بشروع والمراوع	rcent Loss:		4	/R) Weir	ght of Flask, H20 and Lid: 3293.5 3298.5				
1 · IÇ	CONCLUSO.	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			Flask, Sample, H20 and Lid: 4222.30 7223.0				
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ample ID (#4)	Sample ID (#5)		Sample ID (#6)
			<u> </u>
PL/QML Acceptance: APL Ref. No.	Product name:		Date checked:
PL/QML Acceptance: APL Ref. No.	Product name:		Date checked:
·			Date Checked.
Preliminary Construc	ction Maintenance En	nergency	Date needed
ontractor	Vanad	Supplier	
Chursona (CC		· (IKIA)	7-10-1
ampled from it, roadway, windrow, ock, etc.)		Pit name or owner	
uantity represented	Previous quantity		Talal quantity ( ) 1
M3 NF(0)F0	Previous quantity		Total quantity to date
	specified quantity to:	Via	Date
ri <u>/-</u>	<del>-</del>	egion lab	Date
ampled or inspected by (print name)	Title	, E	-mail
LIFTON (FE, PE	Plunci	1/1/1/1/1/2	
/ISOr (Pro./Res./Matls, Engr./Maint, Supt.) (p	onnt name) Title	I R	esidency
MIGE WALLS, P.C.	Yall'au	Contract of the second	

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### **Certificate of Compliance Letter**

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

D	at	e:
---	----	----

2/20/2018

**Project Number:** 

STE C480-008

Project Code & Name:

19219 Pinon Causeway to Aspen Village

Manufacturer's Name:

ChemStation

Manufacturing facility Address:

4800 Lima St, Denver CO 80239

Laboratory Name and Address:

5015 Paris St, Denver CO 80239

Product Name or Assembly:

2217-B

**Description of Material:** 

Asphalt Release Agent

Model, Catalog, Stock Number:

3501088-4

Lot / batch number:

8227-01

**Date or Frequency of Lab Testing:** 

NTPEP's ARA program. This work plan consists of three test

procedures: a stripping test, a mixture slide test and an asphalt

performance test.

**Applicable Specifications:** 

The material above has been reviewed according to subsection

608 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

Hem 408-00720 Hot Mix Asphalt (Patching) (Asph.), 4tons Item 608-01500 Bituminous Bikeway (Special), 650 tons

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Needect (quantity and units) of pay item see to the right (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

31618



ChemStation of the Rockies - 4800 Lima St - Denver CO 80239 Phone: (303)288-8500 - Fax: (303)288-5449 - E-mail: gbabb@chemstation.net

SOLD TO: St

8227

Strohecker Asphalt Paving

37801 HWY, 160 Bayfield, CO 81122 **Delivery Ticket** 

Number:

7872

Date Printed: Terms:

07/30/2008 Net 30

Route:

I-25 SOUTH

SHIP TO: Stro

Strohecker Asphalt Paving 300 County Road 302 Pagosa Springs, CO 81147

Purchase Order:

Customer Signature:

 Salesperson Tank No.
 Product Additives
 Gallons Unf Office Use

 8010
 8227-01
 2217-B
 FI Green
 2/3
 3501088-4

Delivered By:

Date:

<u>7/31/8</u>

YOUR SERVICE REPRESENTATIVE ALSO CHECKED OR SERVICED THE FOLLOWING

☐ Container

□Stand

□Label

☐ Cap or Bung

□ Ball Valve

☐Tank Cleaned

ال Drum Pump

□Foot Valve

□Hose(s)

☐ Proportioner

Thank you for your business



300 COUNTY RD 302

Fairbanks Scales, Inc., 4850 Broadway, Denver, CO. 80216 Phone:(800) 435-4660

**FINAL TEST In tolerance: Yes** 

Task #: 1330361

Date: 6/21/2017 10:49:21 AM

Scale location: LOADOUT SCALE

Truck No: 1107

Truck Class: 2

Sec. 5 Sec. 6 Sec. 7 Sec. 8 Sec. 9 Sec. 10

PAGOSA SPRINGS, CO 81147

Contact:

CARL STROHECKER

STROCHECKER ASPHALT - 163270003

LVIDAURRI@FAIRBANKS.COM

Test equipment used NIST Traceable Certified Test Weights

Procedure used NIST Handbook 44

Next Inspection Due

0518

Load Receiver / Platform

Manufacturer	Model No.	Туре		Serial No.	Capacity	Platform Size	Sections
CMI	3FT7010	Truck	· · ·	500	120000	10X70	4
CLC: 70000	Deck Composition:	Steel	. 17 - 16 - 17 - 17 - 17 - 17	and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and t	,	Stand#/LC Cap	o: 60000
	;	Indic	ator	/ Instrument	tation		

Manufacturer	Model No.	Style		Serial No.	اDi	vision Size	Units Type	# of div
FAIRBANKS	R2500F1	Elect		043240100081		20	Lb	6000
			Shift	t Test Results				
Tolerance Used:	Acceptance				7	Weight A	pplied: 17000	

AS	FOUND	Sec. 1	Sec. 2	Sec. 3	Sec. 4
	Indicated	17000	17000	17020	17180
	Error	0	0	20	180
	Tolerance	20	20	20	20
AS	S LEFT				
	Indicated	17000	17000	17000	17000
	Error	0	0	0	0

20 20 Tolerance 20 20

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		AS FO	UND				AS LEF	T	
	Applied	Indicated	Error	Tolerance		Applied	Indicated	Error	Tolerance
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1	3000	3000	0	0	1	3000	3000	0	0
2	8000	8000	0	0	2	8000	8000	0	0
3	13000	13000	0	20	3	13000	13000	0	20
4	15000	15000	0	20	4	15000	15000	0	20
5	17000	17000	0	20	5	17000	17000	0	20
0 rtn to zero	0	0	0	0	0 rtn to zero	0	0	0	0

Strain Test Test/Tare Load Test Weights Total Combined Instrument Reading Error 49680 49680 17000 32680

Actions taken and comments: CHECKED AND ADJUSTED.

Conditions of approaches, decks, pit, bearings, etc.:

ustomer Signature MARVIN ROMINO

Inspectors Signature Arnold Otterstetter

PlaceID#: 163270003 Access Test Reports Online

### Certified Weigher Certificate

THIS Certificate IS NOT TRANSFERABLE

#### ROMINE, MARVIN

Doing Business As Name(s) (DBA)

ROMINE, MARVIN

PO BOX 696

PAGOSA SPRINGS CO 81147

**Effective Date** 

**Expires Date** 

Certified Weigher Certificate Aglicense ID # ØØ17VX

Aug 15, 2017

Dec 31, 2017

Pursuant to § 35-14-101 through 134, C.R.S., the Commissioner authorizes the above-named person to act as a certified weigher.

Don Brown

August 15, 2017

Commissioner of Agriculture

Print Date



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19219-612-1

COLORADO DEPARTMENT OF TRANSPORTATION	Region 5	Field sheet # 266289				
FIELD REPORT FOR SAMPLE IDENTIFICATION	Contract ID 19219	Date Submitted 3-11-1の				
OR MATERIALS DOCUMENTATION	Project No.	Jano				
Metric units yes X no	STE C400-0	06				
inetric dintsyes	Project Location	AY TO PEPEN VILLAGE DE-SU				
	Field Lab phone	Cell Phone				
Material Type DELINEATOR (FLEXIBLE) (TYPE TII)						
Material Code (LIMS) Item Class  (OI Z	Grading	Special Provisionsyes .				
Previously used on Project No.: Previous CDOT Form	#157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)				
Sample Identification: Quantity & Unit of material submitted, describe tests required		removed from ( stationing), etc.				
Materials Documentation: Field inspected (describe appearance, weight/dimension	•	•				
THE FLEXIBLE POST DELINEATURS WERE	MELO MOPI	CITY INVO INTICOVED				
FOR USE BY THE PROJECT ENGINEER.						
THE MATIERIAL IS ON THE APL. THE	Suppurais (	COC IS ATTALHED,				
A CTR FOR THE DELINEATOR POSTS IS ATTACHED						
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
, ,r ID						
Sample ID (#1) Sample ID (#2)	Sample	e ID (#3)				
Sample ID (#4) Sample ID (#5)	Sample ID (#6)					
APL/QML Acceptance: APL Ref. No.   Product name:   SHUL- FLEX DAINEABLE	DELINEATOR #50	Date checked:				
APL/QML Acceptance: APL Ref. No. Product name:	1	Date checked:				
2648-11 3M High INTENSITY PLU	SM#11C ( " 3930	))   12-6-17   Date needed				
Preliminary Construction Maintenance Emergency		Date Needed				
	M & SHUR-	TITE PROPUCTS				
Sampled from Pit name or owner (Pit, roadway, windrow,						
Quantity represented Previous quantity	Tot	al quantity to date				
Culture Sample submitted: Shipped specified quantity to:	Via	O EACH Date				
☐ Yes ,区 No ☐ ☐ Central lab ☐ ☐ Region lab	1					
Sampled or inspected by (print name)  [11 F70N LEE, PE   PLOSECT FNSINE						
visor (Pro/Res./Malls, Engr./Maint, Supt.) (print name)  Title  PRESIDENT-DA	Residency Vis Eyy Syc					

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## ROADWAY SUPPLY

### CERTIFICATE OF COMPLIANCE

TO: ACM Construction, LLC

ORDER: Posts, Signs, and Delineators for Ste 480-008

DATE: 12/6/17

SIGNS

Manufacturer:

Lyle Signs Date ordered: 06/12/17

6294 Bury Drive

Eden Prairie, MN 55346

Aluminum:

.080 Thickness: Vulcan Aluminum mill See attached Mill

Certs

900 Vulcan St, Foley, AL 36535

PO# 2554-1

Sheeting:

High Intensity Prismatic 3M 3930

APL Reference # 2648-11

POSTS

Manufacturer:

RM Components : See attached Mill Certs

Post Type:

2" POZ LOC post with wedge

PO# 2012490

DELINEATORS

Manufacturer:

Shur-Flex:

Post Type:

Surface mount 36", 42" or 48" round post, flattened for the upper 3

1/2" or 13". APL Reference # 3125-10

Manufacturer:

3M: Maplewood MN

Reflectors:

3"X3" Yellow High Intensity Prismatic 3M 3930 Sheeting Tab

Date:

APL Rererence #2648-11

This letter is to certify that all the above material meets the specifications of the Colorado Department of Transportation. All steel incorporated into materials originated within the United States of America.

Signature:

President, Roadway

Crossfires Certified Test Riof Compliance on Back



## CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

3/16/2018

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

OML Part/Sub-Part:

APL Category:

Traffic Control

APL Sub-Category:

Delineator

APL Base Category:

Flexible, Multiple Hit

APL Reference No.:

2648-17 3125-10/

Product Name:

Shur-Flex Driveable Delineator (Item #SD0031)

Manufacturer:

SHUR-TITE Products

Date of Web Site Review & Selection: 3/16/18

Crossfire, LLC

Paul Martin,

Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 6 CACh (quantity and units) of pay item: 612-00043 Delineator (Flexible) (Type III)

(Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219

Contractor

Date



#### CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

3/16/2018

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

APL Category:

Traffic Control

APL Sub-Category:

Sign Sheeting

APL Base Category:

ASTM D 4956, Type IV

APL Reference No.:

2648-11

Product Name:

3M High Intensity Prismatic (#3930)

Manufacturer:

3M Company

Date of Web Site Review & Selection: 3/16/18

Crossfire, LLC

Paul Martin

Project Manager

60 U EAEH

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents (quantity and units) of pay item: Go (14-1000) Gign-Panel (1045) (12-00043 DECINERTOL (FLEX) (13) (Pay item # and description) that will be installed in Conformance with the plans

and specifications on Project No. STE C480-008, 19219

Contractor

Date

# Ultimate Highway Solutions, Inc. Ulti-Mate Division

# UH-More*

The Ultimate Sign Support System

### Physical, Chemical Test Report and Material Certification Ulti-Mate Perforated Square Steel Sign Posts

ROAD SIDE SUPPLIES LLC Order #1726; Invoice #48782; Shipped 7/27/2017

These posts have been accepted by the FHWA as meeting the breakaway requirement. This product meets the requirements for crashworthiness (NCHRP 350) as adopted by the FHWA.

The steel used in manufacturing was made and melted in the United States and fabrication was done at our plant in Florence, AL.

Materials provided comply with current "Buy America" requirements of 23 CFR 635.410.

All tube products are galvanized and conform to ASTM A653, Coating designation G90.

Chemical and physical properties were in accordance and listed below:

Heat Number NE5701 SE3154 SE5997 SF1476	C .200 .180 .200 .200	Mn .830 .820 .850 .860	P .009 .007 .006 .010	S .003 .003 .001 .002	SI .015 .027 .029 .020		
Heat Number	Yield psi		TSN psi		ELN%	Size /Gauge	
NE5701	72100		79000		19	1.75sq x 12ga x 240"	
SE3154	68600		74900		19	1.75sq x 12ga x 288"	
SE5997	66100		77500		16	2sq x 12ga x 240"	
SF1476	68400		76200		19	2.25sq x 12ga x 288"	

Kalie Davis

Test Certification Representative

Corporate Office 11095 W. Olive Rd. Grand Haven, MI 49417 Phone: 888-366-9220

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 6 each (quantity and units) of pay item 6/2-0004-3 Delineator (Flex) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Stenature

61 26 18

### COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY 3125-10/

APL Reference No.

	Material code:
Product Evaluation Coordinator	612.02.02.00
Colorado Department of Transportation	Material code description full name:
'0 North Holly Street, Unit A	Delineator, Flexible Post
Lenver, Colorado 80216	
PART 1	
Product name:	Product category: Traffic Control\Delineator\Flexible, Multiple Hit
Shur-Flex Driveable Delineator (Item #SD0031)	Manufacturer (name & address):
Product representative (name & address):	Attn: David Riker
Attn: David Riker SHUR-TITE Products	SHUR-TITE Products
PO Box 2283	PO Box 2283
Round Rock, TX 78680	Round Rock, TX 78680
Phone: (512) 218-9500 FAX: (512) 388-0417	Phone: (512) 218-9500 FAX: (512) 388-0417
Web-site address:	Web-site address:
www.shur-tite.com  Description of the product: (Include specific quantifiable details from tech dat	
that is flattened for the upper 12". The reflector is 3" x 9" of sign specing. And non-mechanical design. Made from 90% post consumer recycled materials. Ma	
Restrictions, (installation and/or use):  of the product, (be specific to CDOT highway activities only): neators, Object Markers, and Traffic Channelization	fety, save money, be a better value then other manufacturer's products):  Can be impacted in any direction. Made from 90% post consumer recycled materials.
Will take multiple hits, self-righting, post can be replaced in less than a minute.  Maintenance cost savings due to durability minimizing change-outs.	Can be haparove in any warm
Specifications, (listing those applicable is required) & Certificate of C	ompliance (required to certify compliance with listed specifications).
X CDOT : Section 612.02 & 713.10	
☐ ASTM :	
☐ AASHTO:	t.
FHWA : Certification of FHWA Compliance, Category	pry 1 Device
☐ other :	
Product testing, (from national/independent laboratories or universities	s) & Certified Test Report (CTR required to validate all claims):
FHWA : FHWA considers SHUR-TITE D	priveable Delineator (Item #SD0031) a Category 1, "self-certify" device
other :	
other :	
State DOT Approvals, (current documentation required):	
AL, AZ, CA, KS. MS. NE, NM, NV, OK, TX	Safety Data Sheets (MSDS): yes I no I n/a
Sample submitted. Ed. yee	Safety Data Sheets (MSDO).
as/Additional Comments	Vinter 2009 - Summer 2009 Cycle of Testing. The report has yet to be completed.
Shur-Mex Defineator has been submitted to 1971 Et 101 months and	
	•

# COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No.

2648-11 /

Product Evaluation Coordinator Colorado Department of Transportation 4670 North Holly Street, Unit A Denver, Colorado 80216	Material code: 713.04.01.00  Material code description full name: Traffic Control, Reflective Sheeting

PART 1	
Product name:	Product category:
3M High Intensity Prismatic (#3930)	Traffic Control\Sign Sheeting\ASTM D 4956, Type IV
Product representative (name & address): Attn: Ted Denisuk	Manufacturer (name & address); Attn: 3M Customer Service
3M Traffic Safety Systems Division	3M Company - Traffic Safety Systems Division
1370 Quentin Street	3M Center, Building 235-03-A-09
Aurora, CO 80011	St. Paul, MN 55144
	Phone: (800) 553-1380 FAX: (800) 592-9293
Phone: (303) 520-6754 FAX: (303) 344-2161 Web-site address:	Phone: (800) 553-1380 FAX: (800) 592-9293  Web-site address;
www.3M.com/tss email: tdenisuk@mmm.com	www.3M.com/tss
Description of the product: (Include specific quantifiable details from tech data shee	at. Advertising generalities are not appropriate.)
Series 3930 is a non-metallized micro-prismatic lens reflective sheeting designed for pro-	oduction of reflective durable traffic control signs that are exposed vertically in service.
Series 3930 meets and exceed ASTM D 4956-09e1, Type IV.	
Series 3930 is comprised of micro-prismatic lens in a transparent resin, sealed and back	ed by a pressure sensitive adhesive protected by a liner.
Restrictions, (installation and/or use):	
Application is recommended for room temperature 65°F or higher.	
Use of the product, (be specific to CDOT highway activities only): Series 3930 is designed for the production of durable traffic control signs expo	osed vertically in service.
Benefits to CDOT, (how will your product enhance quality, improve safety, sa	
* Series 3930 is a more efficient retro-reflective sheeting than encapsulated lens sheeting	io
* Unique prismatic construction provides a high level of retro-reflectivity and nighttime	e visibility
Ollique prismane construction pre	
Specifications, (listing those applicable is required) & Certificate of Complian	nnce frequired to certify compliance with listed specifications):
CDOT : Standard Specifications, Section 713(b), 2011. Cur	rrently on the CDOT Approved Products List (form #2648)
ASTM : D 4956-09 e1, Type IV	tions, the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
☐ AASHTO:	
☐ FHWA :	
Other :	
Lauras O(1)O)	
Product testing, (from national/independent laboratories or universities) & Cer	rtified Test Report (CTR required to validate all claims):
NTPEP-AASHTO: 2008 SSM-08-1306	
☐ FHWA :	·
ather :	
☐ other :	
State DOT Approvals, (current documentation required):	
Sample submitted: yes I no I n/a Materials Safety [	Data Sheets (MSDS): yes no n/a
Notes/Additional Comments	
State DOT approvals referenced but not documented; SC, TX, LA, IN, GA, FL, CT, AL,	, NC, WY
	· ·

19219-613-1

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION		Region S  Contract ID 19219  Project No.	Field sheet #	700703 -	
Metric units yes	∑ no	STE CHE Project Location	1	Muage DzS.U.P.	
Material Type / INCH & 1,5 INC	H ELECTRIC COND	YUT Field Lab phone	Cell F	Phone	
Material Code (LIMS) Item 613	Class	Grading	Special Prov	isions yes	
Previously used on Project No.:		T Form #157 F/S No.(s):	CD01	T Form #633 (sack) Г Form #634 (can)	
Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc.					
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AND APPROVED BY THE PROJECT ENCINEER. THE MANUFACTURER'S					
COC FOR THE CONDUIT, ELBUWS, E. COUPLINGS ARE ATTACHED.					
THE BUY AMERICA CERTIFICATION ALSO IS ATTACHED.					
1.5 INCH ELECTRIC CONDUTT WAS DELETED FROM THE PROJECT					
By COLH CO#1					
Jser ID					
Sample ID (#1)	Sample ID (#2)	Sample ID (#3)			
Sample ID (#4)	Sample ID (#5)		Sample ID (#6)		
APL/QML Acceptance: APL Ref. No. Product name:			D	ate checked;	
APL/QML Acceptance: APL Ref. No. Product name:			D	ate checked:	
Preliminary Construction M	∕laintenance Emerge	<u> </u>		ate needed	
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			te 16 CF (BASEBID)		
Sample submitted: Shipped specified of Central	al lab 🗌 Regior	n lab	Da	ate	
Sampled or inspected by (print name)  CLIPTON LEE, PE  Title  PROJECT ENGINEEL  E-mail					
apervisor (Pro/Res./Mails, Engr./Maint, Supt.) (print name)  Title  Residency  PLESIDENT - DAVIS ENG. SVC.					

Distribution:

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

# Republic Conduit

Customer: <u>Davis Engineering Services, INC</u>
Supplier: <u>Border States Electric Supply</u>

December 13, 2017 Manufactured By: Republic Conduit™

#### **Certificate of Compliance**

This Certificate of Compliance is produced by Republic Conduit for

Patl
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•

Lot/Heat/Batch No: Date of Laboratory Testing:

Monthly (last test date: 11/09/2017)

Applicable C-DOT specifications:

613.07

This letter certifies that electrical steel conduit labeled as Republic Conduit is manufactured in the United States. The conduit is formed from U.S. metted; high percentage recycled flat rolled steel and is either Hot-Dip Galvanized or Electro-galvanized. After Galvanizing, all material receives a passivation coating to prevent white rust. The material labeled as Republic Conduit complies with the <u>ARRA 2009 Buy America</u> clause, and conforms to the following specifications:

Galvite® Electrical Rigid Metal Conduit-Steel (Galvite® ERMC-S)

- UL Standard -- UL 6 Fourteenth Edition, the common ANCE, CSA and UL (tri-national) standard for Electrical Rigid Metal Conduit-Steel, covering requirements for Mexico, Canada, and the United States.
- cUL listing for CSA C22.2 No. 45.1-07
- ANSI Standard -- C80.1.
- All sizes are manufactured in the U.S. at our facility in Louisville, KY
- Trade sizes range from ½" to 6".
- National Electrical Code Article 344

All Republic Conduit products are made from steel which is melted and rolled in the United States.

(m) tobasis assistant branching	
Gustavo Fuentes Quality Manager Republic Conduit quentes@republicconfutil.dom	I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 16 L.F. & (quantity and units) of pay item 613-90100 INCh elect. Combait (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.  Confractor Rep. Signature
About Republic Conduit	
	And the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t

Republic Conduit of a U.S. manufacturer of quality electrical steel conduit of multiple sizes and types. As a result of our eighty-year history in the electrical conduit industry, Republic has achieved strong name recognition. Over the years, Republic Conduit, as a domestic brand, has undergone several name changes: from Republic Steel, to LTV Steel Tubular Products, to LTV Copperveld, to Maverick Tube Corporation, and, finally, to Republic Conduit. Throughout this time, the company remained solely focused on delivering solid, quality conduit, which customers ask for by name time and time again.

January 1, 2017 Manufactured By: Republic Conduit™

#### Certificate of Origin and Material Test Report

This letter certifies that electrical steel conduit labeled as Republic Conduit is manufactured in the United States. The conduit is formed from U.S. melted; high percentage recycled flat rolled steel and is either Hot-Dip Galvanized or Electro-galvanized. After Galvanizing, all material receives a passivation coating to prevent white rust. The material labeled as Republic Conduit complies with the <a href="https://example.com/ARRA 2009">ARRA 2009</a> Buy America clause and conforms to the following specifications:

#### Galvite® Electrical Rigid Metal Conduit-Steel (Galvite® ERMC-S)

- UL Standard -- UL 6 Fourteenth Edition, the common ANCE, CSA and UL (tri-national) standard for Electrical Rigid Metal Conduit-Steel, covering requirements for Mexico, Canada, and the United States.
- cUL listing for CSA C22.2 No. 45.1-07
- ANSI Standard -- C80.1.
- All sizes are manufactured in the U.S. at our facility in Louisville, KY.
- Trade sizes range from 1/2" to 6".
- National Electrical Code Article 344

#### **Electrunite® Electrical Metallic Tubing (EMT)**

- UL Standard -- UL 797 Ninth Edition, the common ANCE, CSA and UL (tri-national) standard for Electrical Metallic Tubing-Steel, covering requirements for Mexico, Canada, and the United States.
- cUL listing for CSA C22.2 No. 83.1-07
- ANSI Standard C80.3
- · All sizes are manufactured in the U.S. in either our Cedar Springs, GA or our Louisville, KY plant.
- Trade sizes range from ½" to 4".
- National Electrical Code Article 358

#### Intermediate Metal Conduit (IMC)

- UL Standard -- UL 1242 Fourth Edition, for Electrical Intermediate Metal Conduit-Steel.
- ANSI Standard C80.6
- All sizes are manufactured in the U.S. in either our Cedar Springs, GA or our Louisville, KY plant. Trade sizes range from ½" to 4".
- National Electrical Code Article 342

All of the above Republic Conduit products are made from steel which is melted and rolled in the United States.

Our manufacturing facilities are ISO 9001:2015 certified.

For more information, visit www.republicconduit.com.

Gustavo Fuentes Quality Manager Republic Conduit

About Republic Conduit

Republic Conduit is a U.S. manufacturer of quality electrical steel conduit of multiple sizes and types. As a result of our eighty-year history in the electrical conduit industry, Republic has achieved strong name recognition. Over the years, Republic Conduit, as a domestic brand, has undergone several name changes: from Republic Steel, to LTV Steel Tubular Products, to LTV Copperveid, to Maverick Tube Corporation, and, finally, to Republic Conduit. Throughout this time, the company remained sotely focused on delivering solid, quality conduit, which customers ask for by name time and time again. In October of 2006, Republic Conduit became part of the Tenaris Group.

pipe products, co.
A Member of THE PHOENIX FORGE GROUP

1501 W. Main Street West Jefferson, OH 43162 Telephone: 614.879.5185 614.879.7785 Web: www.condullabe.com

December 6, 2017

Clifton Lee Davis Engineering Ref: CDOT Project STE C480-008

Mr. Lee:

We certify that the following rigid conduit fittings purchased from Border States and manufactured by Conduit Pipe Products Company were manufactured, sampled, tested, and inspected in accordance with the latest applicable specifications of Underwriters Laboratories UL6. These inspections also include random quarterly in-plant inspections by UL field representatives.

Mfa Item No	Mfg Item Description
22021000	1" 90° Galv Elbows
22022000	2" 90° Galv Elbows
22023000	3" 90° Galv Elbows
25020501	1/2" x CL (1-1/8") Galv Nipples

The rigid conduit elbows were manufactured at our Ohio facility, 1501 West Main St, West Jefferson, OH. The rigid conduit nipples were manufactured at our Ontario facility, 25 Winnipeg St, Vanastra, ON, Canada. All rigid conduit elbows and nipples are manufactured from hot dip galvanized rigid conduit supplied by the Wheatland Tube steel mill in Wheatland, PA.

UL listing marks are supplied on all conduit elbows as specified by UL. Close nipples, with no unthreaded outside diameter, are marked on full quantity cartons as specified by UL. I have included with this letter a copy of the UL Certificate of Compliance, Cert No. 20150812. Further details can be found by searching the UL Online Certification Directory at UL.com, reference our UL file E14120 for the Conduit Pipe Products rigid conduit listing.

The quality system for the Conduit Pipe Products Company is certified to the ISO 9001:2008 standard.

hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AE WETO (quantity and units) of pay tem see to the Vidut (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 9219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.	Richard Blickley	613-01100 613-01200	1 inch Electrical Conduit 1 inch Electrical Conduit (Plas 2 Inch Electrical Conduit (Plas 3 inch Electrical Conduit (Plas
1 - 1/4 /w 61/10/19.			

CAPPRODUCTE LTO

Contractor Rep. Signature

CAPITOL

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# CERTIFICATE OF COMPLIANCE

**Certificate Number** 

20150812 - E14120

Report Reference

E14120 - 20010705

Issue Date

2015-AUGUST-12

lasued to:

CONDUIT PIPE PRODUCTS CO

1501 W MAIN ST

WEST JEFFERSON, OH 43162 USA

This is to certify that representative samples of Rigid Ferrous Metal Conduit

USL, CNL Rigid steel conduit, 1/2 to 6 in. Trade Size.

USL, CNL Rigid steel conduit couplings and elbows, 1/2 to

6 in. Trade Size.

USL, CNL Rigid steel conduit nipples and bends, 1/2 to 6 in.

Trade Size.

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety:

ANSI/UL 6, "Electrical Rigid Metal Conduit - Steel."

CSA-C22.2 No. 45.1, "Electrical Rigid Metal Conduit -

Steel."

Additional Information:

See the UL Online Certifications Directory at

www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

AS NEEDED OF:

Look for the UL Certification Mark on the product.

: 16 L.F., 613-00100 1 inchelectrical conduit / PASE 18 L.F., 613-011001 inch electrical corduit (plastic)

52 L.F., 613-01200 2 inch electrical carduit (plastic) 841. F. 613-01320 3 inch electrical conduit (plastic)

321.F. 613-00-100 1 inch electrical worked (plastic)

DHOO

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 30 k of pay item 613-00100,

1 Inch Electrical conduit, that was installed on project number

STE C480-008, 19219.

Any information and documentation involving Ut. Mark services are provided contact a local Ut. Customer Service Representative at service service representative at service service responses to the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact and the contact a

Page 1 of 1

PIPE PHOENIX FORGE GROUP

1501 W. Main Street West Jefferson, OH 43162 Telephone: 614.879.9114 Fax: 614.679.5185 614.878.7785 Web: www.capitotcamco.com

March 15, 2017

#### **BUY AMERICA CERTIFICATION of COMPLIANCE**

We certify that conduit elbows, couplings, and nipples sold by the Conduit Pipe Products Company were manufactured, sampled, tested, and inspected in accordance with the latest applicable specifications of Underwiters Laboratories and the Canadian Standards Association. UL listing marks are supplied on all of our conduit products.

Furthermore, for orders specifying Meets Buy America, we certify that conduit elbows, couplings, and nipples are manufactured in the United States from pipe and tube supplied by steel milis located in the United States. Orders with Buy America requirements must be stated at the time of purchase.

The quality system for the Conduit Pipe Products Company is certified to the latest ISO 9001 standard.

Approved by:

Tom Costello Plant Manager

\$ 612-00100 1 inch electrical Conduit, 16 L.F.

612-01100 1 inch Electrical Conduit (Plastic), 18 L.F.

613-01200 2 inch Electrical Conduit (Plastic), 52 L.F.

613-01300 3 inch Electrical Conduit (Plastic), 84 L.F.

613-01100 1 inch Electrical Conduit (Plastic), 32 L.F.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS NEEDED (quantity and units) of pay item Selfo the left (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

C# 1

CAPITOL

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COLORADO DEPARTMENT OF T			Region 5	Field sheet	# <del>266289</del>
FIELD REPORT FOR SA			Contract ID	Date Subm	nitted
OR MATERIALS DOCU	IMENTATIO	ON	19219		3-10-10
•			Project No. STE (480	-000	
Metric units	yes	no	Project Location	.008	
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Material Code (LIMS)	m o <i>LS</i>	Class	Grading	Special Pr	ovisions yes
Previously used on Project No.:		Previous CDOT Form	#157 F/S No.(s):	. \	OT Form #633 (sack) OT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Unit of</li> <li>Materials Documentation: Field inspects</li> </ul>	ed (describe appear	ance, weight/dimensions	s, model/serial numbe	er), COC &/or C11	R provided , etc.
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Contractor CLOSSFIRE LLC		Supplier	CANTEX INC	· 4 CONOU	TO PIPE PRODUCTS
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name o	r owner		
Quantity represented  SEE TABLE ABOVE	Previo	ous quantity		Total quantity to SEE	odate TABLE ABOVE
	specified quantity to:  Central lab		Via		Date
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Supervisor (Pro./Res./Malls. Engr./Maint. Supt.) (pr			Desi	dency	
IMIKE DAVIS, PE	Pa	16 LESIDENT-DAV	ILS ENG. SVC.		



CANTEX INC, INC. 301 Commerce Street, Ste. 2700 Fort Worth, TX 76102-4127 817-215-7000 Fax: 817-215-7001

December 5, 2017

#### Certificate of Compliance

Distributor:

Border States Electric Supply, Farmington NM

PO#:

Various - See Below

Project Name:

CDOT Project No. STE C480-008

Manufacturer Name:

Cantex, inc.

Manufacturer Address:

2407 Martin Luther King Blvd, Mineral Wells, TX;

4045 Bonanza Drive, Kingman, AZ

Drne	1	L

2 UL CPLG CC	10	5501540528
1 UL ADAPT F CT	16	5501540528
2 UL ADAPT F CT	194	5501540528
3 UL ADAPT F CT	12	5501540528
1/2 UL ADAPT M CT	3	
2 UL ADAPT M CT	6	
1/2 PVC TC-40 10'BE	130	4503419759
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#### To Whom It May Concern:

CANTEX rigid schedule 40 (TC-40) and schedule 80 (TC-80) Polyvinyl Chloride (PVC) electrical conduit, elbows, and fittings are produced, inspected, sampled, and tested in accordance with Underwriters Laboratories (UL) Standard UL 651 and American National Standards Institute (ANSI) Standard ANSI/UL 651-2011. We also comply with NEMA Standard TC-2. The conduit meets the requirements for the UL "Sunlight Resistant" rating and is listed by UL for use in direct sunlight. These items are approved for listing by Underwriters Laboratories and representative samples are routinely examined and tested by Underwriters Laboratories for continuing compliance with UL specifications.

CANTEX rigid schedule 40 and 80 conduit, fittings, Spacers and elbows are listed by Underwriters Laboratories for use with 90 degree centigrade rated conductors. CANTEX conduit may be used in any application where the ambient temperature allows the use of conductors which are rated for 90 degree C (194 degree F), subject only to the limitations listed in Article 347-3 of the National Electrical Code. The conduit is listed by UI. for burial with or without concrete encasement and is applicable for use as "Rigid Nonmetallic Conduit" as described in Article 347 of the National Electrical Code, including direct burial in underground installations as defined in Sections 300-5 (d) and 710 (b).

All items manufactured by CANTEX are made in the United States of America.

Sincerely,

3) L.F. of item 613- Olles I inch elect. conduit loks

Vice President - Sales & Marketing CANTEX INC

I have the legal authority to bind the manufacture or the supplier of the material.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents  $\frac{\partial G^{-1} \not{\boxtimes}}{\partial G^{-1}}$  (quantity and units) of pay item 613-00100 1 Inch Electrical Conduit that was installed on project STE C480-008, 19219.

34 L.F. of item 613-00150 1 binds elect. corduit

(not paid, under.)

18 L.F. of item 613-0 11001 inch elect. conduit (plasti BASE BID "

A-16-1. F. of item 613-00-100-1 inch electiconduit

521.18 of item 63-012000 Zinch elect. conduit (plastic 84LF of item 613-013000 3 inch elect conduit (plast

4,414 L.F of item 613-012000 2 inchelect conduit (plastic

4.022 L.F. fitem 613-012000 2 inch elect conduit(plastic)

was actually placed on the prijed

pipe products, co. A Member of THE PHOENIX FORGE GROUP

> 1501 W. Main Street West Jefferson, OH 43162 Telephone: 614.879.9114 Fax: 614,879.5185 814,879,7785 Web: www.condulipipe.com

December 6, 2017

Clifton Lee Davis Engineering Ref: CDOT Project STE C480-008

Mr. Lee:

We certify that the following rigid conduit fittings purchased from Border States and manufactured by Conduit Pipe Products Company were manufactured, sampled, tested, and inspected in accordance with the latest applicable specifications of Underwriters Laboratories UL6. These inspections also include random quarterly in-plant inspections by UL field representatives.

<u>Mfa Item No</u>	Mfg Item Description
22021000	1" 90° Galv Elbows
22022000	2* 90° Galv Elbows
22023000	3" 90" Galv Elbows
25020501	1/2" x CL (1-1/8") Galv Nipples

The rigid conduit elbows were manufactured at our Ohio facility, 1501 West Main St, West Jefferson, OH. The rigid conduit nipples were manufactured at our Ontario facility, 25 Winnipeq St, Vanastra, ON, Canada. All rigid conduit elbows and nipples are manufactured from hot dip galvanized rigid conduit supplied by the Wheatland Tube steel mill in Wheatland, PA.

UL listing marks are supplied on all conduit elbows as specified by UL. Close nipples, with no unthreaded outside diameter, are marked on full quantity cartons as specified by UL. I have included with this letter a copy of the UL Certificate of Compliance, Cert No. 20150812. Further details can be found by searching the UL Online Certification Directory at UL.com, reference our UL file E14120 for the Conduit Pipe Products rigid conduit listing.

The quality system for the Conduit Pipe Products Company is certified to the ISO 9001:2008 standard.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ACNEDED (quantity and units) of pay item See by the Vicht (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.	Approved by:    C           Richard Blickley     Quality Manager	& 613-00 100 1 inch Electrical Conduit 613-01100 1 inch Electrical Conduit (Plas 613-01200 2 inch Electrical Conduit (Plas 613-01300 3 inch Electrical Conduit (Plas
Contractor Rep. Signature  61 76 18  Date		

CAPPERDUMENTALITY

# CERTIFICATE OF COMPLIANCE

Certificate Number

20150812 - E14120

Report Reference

E14120 - 20010705

Issue Date

2015-AUGUST-12

issued to:

CONDUIT PIPE PRODUCTS CO

**1501 W MAIN ST** 

WEST JEFFERSON, OH 43162 USA

This is to certify that representative samples of Rigid Ferrous Metal Conduit

USL, CNL Rigid steel conduit, 1/2 to 6 in. Trade Size.

USL, CNL Rigid steel conduit couplings and elbows, 1/2 to

6 in. Trade Size.

USL, CNL Rigid steel conduit nipples and bends, 1/2 to 6 in.

Trade Size.

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety:

ANSI/UL 6, "Electrical Rigid Metal Conduit - Steel."

CSA-C22.2 No. 45.1, "Electrical Rigid Metal Conduit -

Steel."

Additional Information:

See the UL Online Certifications Directory at

www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

KS.	Nee	000

& 16 L.F., 613-001000 1 inch electrical conduit 1 PASE

18 L.F., 613-01100 1 inch electrical conduit (Plastic)

52 L.F., 613-01200 2 inch electrical conduit 1 plastic) 84 L.F. 613-01300 3 inch electrical wordenit (plastic)

32 L.F. . 613-01100 lines electrical conduit (plastic)

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents ______ of pay item 613-00100, 1 Inch Electrical conduit, that was installed on project number

STE C480-008, 19219.

oformation and documentation involving UL Mark matrices are provide at a local UL Cusamer Berrice Representative at provide and facility

Page 1 of 1

pipe products, co.

A Member of THE PHOENIX FORGE GROUP

1501 W. Main Street West Jefferson, OH 43162 Telephone: 614.679.9114 Fax: 614.679.5185 614.679.7785 Web: www.capitotcamco.com

March 15, 2017

## BUY AMERICA CERTIFICATION of COMPLIANCE

We certify that conduit elbows, couplings, and nipples sold by the Conduit Pipe Products Company were manufactured, sampled, tested, and inspected in accordance with the latest applicable specifications of Underwriters Laboratories and the Canadian Standards Association. UL listing marks are supplied on all of our conduit products.

Furthermore, for orders specifying Meets Buy America, we certify that conduit elbows, couplings, and nipples are manufactured in the United States from pipe and tube supplied by steel mills located in the United States. Orders with Buy America requirements must be stated at the time of purchase.

The quality system for the Conduit Pipe Products Company is certified to the latest ISO 9001 standard.

Approved by:

Tom Costello Plant Manager

A.	(14 - 45	, BASE BU	D
4	612-00100	1 inch electrical Conduit, 16 L.F.	
	6125-01100	1 inch Electrical Conclait (Plastie), 1815.	
	613-D1200	2 Inch Electrical Cooduit (Plastic), 521.5,	
	613-01300	Sinch Electrical condesit (Plastie), 84 L.F.	
	613-01100	1 inch Electrical Conduit (Plastic), 32L.F.	
		t 60#1	

	**************************************
	y and units) of pay escription) that will on Project Number
Contractor Rep. Signature	01/26/18 Date

CAPHOL

CAMCO

CAEPECOLUMN LTO

COLORADO DEPARTMENT OF THE FIELD REPORT FOR SAIOR MATERIALS DOCU	MPLE IDENTIFIC	Region Contract ID	Date Sul	et# 266289/- bmitted 3-18-18
Metric units	) <del></del> -	Project No. STE ( Project Loc	480-008 ation	in Village D2,-S.U.P,
Material Type 2 IN, ELECT	RIC CONDUIT B	OREO) Field Lab ph		ell Phone
Material Code (LIMS) Iter		Grading	Special I	Provisions yes
Previously used on Project No.:	Previous	CDOT Form #157 F/S No.		DOT Form #633 (sack) DOT Form #634 (can)
Sample Identification: Quantity & Unit of Materials Documentation: Field inspected 2 IN. ELECTRIC  BY THE PROJECT  COLLIB, *Id, *Ih.  TITE MANUFACTURE	COMDUIT W.	ht/dimensions, model/seria AS FIELD IN: TIHS ITEN	il number), COC &/or C SPECTEO AN I WAS AC	TR provided , etc.  D APPLOVED
Sample ID (#1)	Sample ID (#2)		Sample ID (#3)	
Sample ID (#4)	Sample ID (#5)		Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:			Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:			Date checked:
Preliminary Construction ☐	n Maintenance Er □	nergency		Date needed
Contractor COOSSFIRE LLC		Supplier SUUTHW	IME COMPAN	y,ue
Sampled from (Pit, roadway, windrow, stock, etc.)		Pit name or owner		
Quantity represented 259 UF	Previous quantity		Total quantity to	
Sample submitted: Shipped spe	cified quantity to:  Central lab R	egion lab	E-mail	Date
CUPTON LEE, PE  "Ipervisor (Pro./Res./Malls. Engr./Mallst. Supt.) (print n	PRWECT Title	ENGINEER	Residency	
MIKE DAVIS, PE  Vistribution: White copy - CDOT Central Labora		T-DAVIS ENG. S	VC .	CDOT Form #157 3/16

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer

Previous editions are ob



# Certificate of Compliance

Carrollton Utility Products Plant Phone: 770-832-4972 770-832-4937

Border States Electric Supply

One Touch Electric, Inc. 3228 CR 21 Cortez, CO 81321-8613

Project No:

**CDOT STE C480-008** 

Company and Manufacturer Name:

Southwire Carrollton Utility Products Plant

Company and Manufacturer Address: 1 Southwire Drive, Carrollton, GA 30119

Product Name:

SIMpull CABLE-IN-CONDUIT

Product Description:

2" GRAY HDPE DUCT SCHEDULE 80 UL CIC

Stock No:

63302699

Southwire Order No:

959939

Manufacture Date

6/03/17

Laboratory Testing Date:

6/03/17

Laboratory Testing Name:

Southwire Carrollton Utility Products Plant

Laboratory Testing Address: 1 Southwire Drive, Carrollton, GA 30119

We certify that the material described above has been manufactured and tested in accordance with CDOT 613.07 and 715.06

Inspection Manager

Danny Henry

&-Used in Change Order No.101. For conduit placed after boring under U.S. Highway 1610, Village Drive/Pinon Causeway, and Alpha Drive.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 259 L.F. (Boyed) (quantity and units) of pay item 613-00206 ZINCHERE! COMUNE (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

# SIM*pull®* Cable-in-Conduit

# Custom cut lengths of Aluminum 600v UD Secondary and Copper CIC for lighting, now available and in stock!

- SIMputi® Cable-in-Conduit is now offering aluminum 600v UD pre-installed in schedule 40 conduit.
- · All stocking product for residential is black conduit with three red stripes and is Ut. Listed.
- · Order as much or as little as you need for your job with little to no wait!
- · Stocking product for lighting is black conduit and is UL Listed.

A1110			tial Alom
Stack Number			(Vax Length
63216999	2-2-4	1.25" Schedule 40	8000'
63008699	1/0-1/0-2	1.5" Schodule 40	<b>6000</b> '
63012499	4/0 4/0-2/0	2" Schedule 40	3500'
63019699	350-350-4/0	2.5" Schedule 40	2500'
	63216999 63006699 63012499	Triplex   Stack   Discription	63216999 2-2-4 1.25" Schedule 40 63006699 1/0-1/0-2 1.5" Schedule 40 63012499 4/0 4/0-2/0 2" Schedule 40

Code Name	Stock Number	Description	Conduit	Max Langth
Tulsa	63216899	4-4-4-4	1.25" Schedule 40	6000'
Dyke	63216599	2-2-2-4	1.25" Schedule 40	6000'
Notro Damo	63217099	1/0-1/0-1/0-2	1.5" Schodule 40	5000′
Wake Forest	63021699	4/0-4/0-4/0-2/0	2" Sahodule 40	2500'
Slippery Rock	63217199	350-350-350-4/0	2.5" Schedule 40	2000'

	Street Lighting, Path Lighting, DOT, Parking Lots and i	Parking Decks	
Stock Number	Description	Color Combination	Max Put-ups
83115999	10-10-10 STR CU THHN installad in 0.75" Schedule 40 Black Duct	Black/Red/Groon	10,000′
63126399	10-10-10-10 STR CU THHN installed in 0.75" Schedule 40 Black Duct	Black/Red/White/Green	10,000*
63237499	10-10-10 STR CU THHN Installed in 0.75" Schedule 40 Black Duct	Black/White/Green	10,000′
63259499	8-8-10 CU THHN installed in 0.75" Schedule 40 Black Duct	Black/White/Green	10,000'
63192299	6-6-8-8 CU USE Installed in 1* Schedule 40 Black Duct	Black/Red/White/Green	10,0001
63263999	6-6-6 CU THHN installed in 1" Schedule 40 Black Duct	Black/White/Green	10,000'
63116599	6-6-6 CU USE installed in 1" Schedule 40 Black Duct	filack/White/Green	10,000
53233899	6-6-6 CU THHN installed in 1" Schedule 40 Black Duct	Black/Red/Green	10,000*
63126899	4-4-4-6 CU USE installed in 1,25" Schedule 40 Block Duct	Black/Rod/White/Green	6,900'
63125199	4-4-4 CU USE Installed in 1" Schedule 40 Black Duct	Black/Red/Green	10,000'

# UL Listed SIM*pull*[™] Couplers for HDPE and PVC Conduit



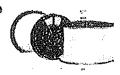
SIMpull** Couplers provide a quick and easy method to connect two lengths SIMpull* Cable-in-Conduit or connect to PVC conduit. Great for transitioning to PVC elbows to stub up in any application.

- · Couplers HDPE to PVC or HDPE to HDPE
- For use in underground applications



ULLIsted	SIM <i>pull^{ia}</i> Couplers for	HOPE and PVC	: Contluit
Partitytimber	Stack Number	Siza	OtyperBox
SW-DEL-105	59714001	.75"	60
SW-DEL-131	64970501	1"	50
SW-DEL-166	64970601	1.25"	50
SW-DEL-190	64970701	1.5"	25
SW-DEL-237	62052701	2.	25
SW-DEL-287	69714101	2.5*	10
SW-DEL-350	59714201	3"	10
SW-DEL-450	59714301	4"	5

#### **Pull Tape**



	Pull Tapo	100000000	
Stock Number	Description	Length	Pulling Strong
61683602	1/2" polyester pull tape	3000.	1,250 lbs
61683603	1/2" polyester pull tape	5000'	1,250 lbs
63064202	5/8" polyester pull tape	3000'	1,800 lbs
63064203	5/8" polyester pull tope	E000'	1,800 lbs
61829002	7/8" polyester pull tape	3000"	2,500 lbs
61829003	7/8" polyester pull tape	5000'	2,500 lbs

The Power of Connections™



Southwire

Visit cic southwire com for more information

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POWER DISTRIBUTION

BRANCH CIRCUIT

LOW VOLTAGE

1929-613-3

COLORADO DEPARTMENT O	Region 5		Field sheet	#2 <del>66289</del>				
FIELD REPORT FOR S OR MATERIALS DO			AHUN	Contract ID 1921 9		Date Subr	nitted	
OK MATERIALO DO	JUIVILIAIL	IIOIA		Project No.	10000		4/10	
Metric units	yes	🔀 no		STE () Project Loca	180-00	B		
				Α '		TO ASPEN	VILLAGE DR S.U.P.	
Material Type PULL 130X (24")	(26" X24")			Field Lab pho	_	Marian Angles and the San	ll Phone	
Material Code (LIMS)	Item 617	Class		Grading		Special Pr	rovisions yes	
Previously used on Project No.:		Previous 0	CDOT Form #	#157 F/S No.(	s):	<del></del> -	OT Form #633 (sack) OT Form #634 (can)	
<ul> <li>Sample Identification: Quantity &amp; Ur</li> <li>Materials Documentation: Field insp</li> </ul>			•	•	•			
PULL BOXES INSTALLE	D WERE FI	IELD INSP	ECTED A	HND APP	ROVED E	Y THE	PRO JECT	
ENGINEER. THE MANU	FACTURERS	s Cock 19	S ATTACH	NED.				
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ser ID								
Sample ID (#1)	Samp	ple ID (#2)			Sample	ID (#3)		
Sample ID (#4)	Sam	pple ID (#5)			Sample	ID (#6)	) (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:		ina kasahunnya muhampishining		ing manakyanishi uminahka minilahadish		Date checked:	
APL/QML Acceptance: APL Ref. No.	Product name:						Date checked:	
Preliminary Constru □ ⊠	ction Mainter	nance Em	nergency		A Paragraph of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Co	A CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR	Date needed	
Contractor  COSSFIRE LLC			Supplier BORDER	STATES E	LECTRIC	HUBBE		
Sampled from (Pit, roadway, windrow, stock, etc.)			Pit name or o					
Quantity represented 4. EACH	Pre	evious quantity		AND MARKET MARKET AND AND AND AND AND AND AND AND AND AND		quantity to ALH	date	
Sample submitted: Shippe	d specified quantity Central lab	to: 		Via			Date	
Sampled or inspected by (print name) CUPTON LEE, PE		Title PROJECT	ENGIN	EEC	E-mall			
pervisor (Pro./Res./Malls. Engr./Maint. Supt.)	(print name)	Title Parsinent	T- DAW		Residency			

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Previous editions are obsolete and may not be used.



Lenoir City, TN 37771
Tel: 865-635-2135
Fax: 865-635-2160
E-Mail:mfisher@hubbell.com

September 22, 2017

Mr. Clifton Lee Davis Engineering Service, Inc. 188 S. 8^{1h} Street Pagosa Springs, CO 81147

Subject: Enclosure Materials Data

Dear Mr. Lee,

I have been asked to provide you documentation on two of our enclosure sizes. The two sizes provided are: PG1324BA12 (J091716JH1) / PG1324HH00 PG2436BA24 (J072015OA2) / PG2436HH00

These products are going to be used for:

Project No.: STE C480-008

Project Code: 19219

Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC

Subcontractor: One Touch Electric, Inc.

Supplier: Border States Electric to One Touch Electric, Inc.

These product sizes are made in two of our manufacturing plants. The manufacturing plants are located in Hubbell Lenoir City
2911 Industrial Park Drive
Lenoir City, TN 37771

BEI. Manufacturera, S.A. de C.V. Boulevard Juan Pablo II #2554 Col. Fray Garcia de San Francisco Cd. Juarez Chih. 32575

These two products are tested at both facilities by Underwriters Laboratories (UL) and our Quality Control Technicians. UL comes to each of the plants quarterly, where they pull random parts from our inventory and test them to the loading we state in our literature. The materials used our products are also verified by UL to make sure we offer what we state in our literature. If you have any additional questions on our products, please call me to discuss.

We appreciate your business.

Sincerely,

Hubbell Lenoir City, Inc.

Michael Fisher

Senior Product Engineer

* Force Account - Walmart Utilities ? Irrigation
(1) 13"x24"x24" Pull Box

(3) each, item 613-07023 Pull Box (24"x36"x24")

(1) each, item 613-1071023 Pull Box (24" x36" x24") for Change Order No.1

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents Well to the virial Left Y(quantity and units) of pay item Sector the virial Left Y (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/26/18

Region COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Date Submitted Contract ID 3-16-16 19219 OR MATERIALS DOCUMENTATION Project No. STE (460-00A Metric units ves Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P. Field Lab phone Cell Phone SPECIAL-PED. X-WALK Special Provisions Grading ltem lves Material Code (LIMS) 613 Previous CDOT Form #157 F/S No.(s): CDOT Form #633 (sack) Previously used on Project No.: CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided WILLING INSTALLED AS"SPECIAL-PEDESTLIAN CROSSWALK" KEW INSPECTED AND APPROVED BY THE PROJECT ENGINEER. COC MUD TEST NEXULTS ARE ATTACHED MANUFACTURERS ALSO THE MANUFACTURER'S BUY AMERICA Jser ID Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date needed Emergency Preliminary Construction Maintenance Contractor FALCON FINE WINE & WIRE MODICIS! MOSSFIRE LLC Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity Quantity represented LUMI SUM Via Shipped specified quantity to: Sample submitted:

Distribution: White copy - CDOT Central Laboratory

-upervisor (Pro./Res./Matls. Engr./Maint, Supt.) (print name)

Yes

Sampled or inspected by (print name)

CLIPTON LEE, PE

MIKE DAVIS, PE

(submit white copy only if sample or information is directed to Staff Materials)

☐ Central lab

Canary copy - Region Materials Engineer Pink copy - Resident Engineer

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E-mail

Residency

____ Region lab

PROJECT ENGINEER

PRESIDENT - DAVIS ENG.

CDOT Form #157 3/15

FALCON FINE WIRE 2401 DISCOVERY BLVD ROCKWALL, TX 75087 214-771-3441 - OFFICE 972-722-9168 - FAX

## CERTIFIED TEST REPORT

CUSTOMER NAME: TW Cable, LLC

FALCON PART #: 980214X19-1-00

WO#:

278753

DESCRIPTION:

14/2 IMSA 19-1 STR BC

PO#:

095072

OTY:

5,200'

## **TEST CONDITIONS**

TEST CONDITIO	REQUIREMENT	ACTUAL
Conductor Type:	14 AWG 7/0242 BC	14 AWG 7/0242 BC
Primary Insulation:	POLYETHYLENE	POLYETHYLENE
Wall thickness	.025	.025
Overall O.D.:	.123	.123
Color	BLK-WHT	BLK-WHT
Filler:	YES	1 @ .125
Таре:	CLEAR MYLAR	CLEAR MYLAR
Diameter:	.270	.250
Drain:	N/A	N/A
Jacket Insulation:	PVC	PVC
Wall Thickness	.045	.045
Overall O.D.:	.360	.350
Color	BLK	BLK
Print:	INDENT	INDENT
Spark Test:	7500	7500
Continuity	YES	YES
Dielectric Strength	2500 AC	2500 AC

We hereby certify that the material covered by this report is in accordance with the following applicable specifications: IMSA Specification 19-1

FALCON FINE WIRE 2401 DISCOVERY BLVD ROCKWALL, TX 75087 214-771-3441 - OFFICE 972-722-9168 - FAX

## CERTIFIED TEST REPORT

CUSTOMER NAME: TW Cable, LLC

FALCON PART # 980514X19-1-00

WO#:

313870

DESCRIPTION: 14/5 IMSA 19-1 STR BC BLK

PO#:

099698

OTY:

10,460

#### TEST CONDITIONS

TEST CONDITIONS								
	REQUIREMENT	ACTUAL						
Conductor Type:	14 AWG 7/0242 BC	14 AWG 7/0242 BC						
Primary Insulation:	POLYETHYLENE	POLYETHYLENE						
Wall thickness	.025	.025						
Overall O.D.:	.123	.123						
Color	BLK-WHT-RED-ORG-GRN	BLK-WHT-RED-ORG-GRN						
Filler:	N/A	N/A						
Tape:	CLEAR MYLAR	CLEAR MYLAR						
Diameter:	.325	.325						
Drain:	N/A	N/A						
Jacket Insulation:	PVC	PVC						
Wall Thickness	.045	.045						
Overall O.D.:	.415	.425						
Color	BLK	BLK						
Print:	INDENT	INDENT						
Spark Test:	7500	7500						
Continuity	YES	YES						
Dielectric Strength	2500 AC	2500 AC						

We hereby certify that the material covered by this report is in accordance with the following applicable specifications: IMSA Specification 19-1



## Certificate of Compliance

Seller herby certifies that the material(s) manufactured and processes used in the fabrication of this material have been made in accordance with applicable specifications as referred in the below description

The following material is made in the USA at Falcon Fine Wire, 2401 Discovery Blvd., Rockwall, Texas 75032 and complies with Buy America Act, North America Free Trade Agreement and Conflict Minerals Requirement.

Date: 3/2/18

Customer: TW Cable LLC Purchase Order: 095072

Part Number 980214X19-1-00

Description 14/2 19-1 IMSA

Ship Date 11/30/15

Stranded Bare Copper

Supplied to: Gades Sales CDOT Project No. STE C480-008

350 feet

J McKinney Jennifer McKinney Sales Manager Falcon Fine Wire I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 350° of pay item 613-10010, Wiring (Special Pedestrian Cross-Walk), that was installed on project

Production Number

278753

number STE C480-008.

One Touch Electric, Inc.

Date

Contractor Rep. Signature

Date



23.901.323



## Certificate of Compliance

Seller herby certifies that the material(s) manufactured and processes used in the fabrication of this material have been made in accordance with applicable specifications as referred in the below description

The following material is made in the USA at Falcon Fine Wire, 2401 Discovery Blvd., Rockwall, Texas 75032 and complies with Buy America Act, North America Free Trade Agreement and Conflict Minerals Requirement.

Date: 3/2/18

Customer: TW Cable LLC Purchase Order: 099698

Part Number

980514X19-1-00

Description

14/5 19-1 IMSA

Stranded Bare Copper

Production Number

313870

Ship Date 1/24/17

Supplied to: Gades Sales

CDOT Project No. STE C480-008

350 feet

J McKinney
Jennifer McKinney
Sales Manager
Falcon Fine Wire

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 Lump SULV (quantity and units) of pay item 612-10010 Wiring (2011. Crass Walk) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon-Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

3/16/18





613-10010: Wiring (Special - Pedestrian Cross-Walk)



January 2017

Falcon Fine Wire and Wire Products, Inc. products are manufactured in the United States of America and are in compliance with guidelines established under the Buy America Act, North America Free Trade Agreement and Conflict Minerals Requirement.

Thank you,

Jennifer McKinney Sales Manager Falcon Fine Wire 214-771-3441

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 lump sum of pay item 613-10010, Wiring (Special - Pedestrian Cross-Walk), that will be installed on project number STE C480-008, 19219.

One Touch Electric, Inc.

1 0 - 0 Data

Contractor Ren. Signature

Date



2401 DISCOVERY BLVD • ROCKWALL, TEXAS 75032

214-771-3441 • 972-722-9168 • falconwire@aol.com



COLORADO DEPARTMENT OF	TRANSPORTA	TION	Region 5	Field	sheet # 266289
FIELD REPORT FOR S	<b>AMPLE IDE</b>	NTIFICATION	Contract ID		Submitted .
OR MATERIALS DOC	UMENTAT	ION	19219	Date	3-10-10
	······		Project No. STE (48	Danab	
Metric units	yes	∑ no	Project Location	0.008	
			^ ·	EWAY TO A	spen Vjuage D2 S.U.P.
Material Type 2 IN FIECH	IC CONTOURS	Trail Lighting	Field Lab phone	,	Cell Phone
Material Code (LIMS)	Item	Class	Grading	Spec	lal Provisions Types
	613		J		iai Provisionsyes
Previously used on Project No.:		Previous CDOT Form #	#157 F/S No.(s):		CDOT Form #633 (sack)
Sample Identification: Quantity & Unit	of material submitte	d, describe tests required,	precise location s	ample removed	GDOT Form #634 (can) I from ( stationing), etc.
Materials Documentation: Field inspe	cted (describe appea	rance, weight/dimensions	, model/serial nun	nber), COC &/oi	r CTR provided , etc.
2 IN. FLECTILL	CNDU17	NSTALLED AS	AN ADI	DITIVE	TEM - TRAIL
aghting was	RELD INS	PECTED IMO	APPROVE	o for l	BE BY THE
PROJECT ENTINEER.	THE MA	NUFACIUNER	's coc	FUR CO	NOUIT FLAUNS
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Jser ID					
Sample ID (#1)	G1-	ID (80)			***************************************
оапре в (#1)	Sample	ID (#2)		Sample ID (#3)	•
Sample ID (#4)	Sample	ID (#5)		Sample ID (#6)	
	Jampie	15 (110)		ogubie in (#d)	
APL/QML Acceptance: APL Ref. No.	Product name:			PART NEW YORK STREET, STREET STREET	Date checked:
APL/QML Acceptance: APL Ref. No.	m. J. J.				
TI LIGHT ACCEPTATION, AFL RES. 140.	Product name:				Date checked:
Preliminary Construc	tion Maintena	nce Emergency	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	en franças en agrando de acomo la Colombia de Araba (Colombia) de Araba (Colombia) de Araba (Colombia) de Arab	Date needed
Contractor  COSSFINE LLC		Supplier C	WITEX		
Sampled from		Pit name or o	wner		
(Pit, roadway, windrow, stock, etc.)					·
Quantity represented F	Previo	us quantity ⇔		Total quantit	
	specified quantity to:	\	/la	1	Date
☐ Yes ☐ No ☐ ☐	Central lab				
CUPTON CEE, PE	Titl   ρ _/	e Wect Engin	E-ma	ail	
"Ipervisor" (Pro./Res./Matis, Engr./Maint, Supt.) (pr				dency	
MIKE DAVIS, PE		ESIDENT - DAVIS			
stribution: White copy - CDOT Central Lab	orojona		. To to the real real real real real real real rea	Tripo harage Landing State of the Same	CDOT Form #457 21

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.



CANTEX INC, INC. 301 Commerce Street, Ste. 2700 Fort Worth, TX 76102-4127 817-215-7000 Fax: 817-215-7001

December 5, 2017

#### Certificate of Compliance

Distributor:

Border States Electric Supply, Farmington NM

PO#:

Various - See Below

Project Name:

CDOT Project No. STE C480-008

Manufacturer Name:

Cantex, inc.

Manufacturer Address:

2407 Martin Luther King Blvd, Mineral Wells, TX;

4045 Bonanza Drive, Kingman, AZ

Products:

TOUUCES:			
6141628	2 UL CPLG CC	10	5501540528
5140045	1 UL ADAPT F CT	16	5501540528
5140048	2 UL ADAPT F CT	194	5501540528
5140050	3 UL ADAPT F CT	12	5501540528
5140103	1/2 UL ADAPT M CT	3	-
5140108	2 UL ADAPT M CT	5	-
A52AE12	1/2 PVC TC-40 10 BE	130	4503419759
A52BA12	1 PVC TC-40 10'BE	80	4503552619
A52CA12	2 PVC TC-40 10'BE	4500	4503507983
A53BA12	1 UL SCH-80 10'BE	90	4503552619
A53CA12	2 UL SCH-80 10'BE	90	5501540528
A53DA12	3 UL SCH-80 10'BE	90	4503552619

To Whom It May Concern:

CANTEX rigid schedule 40 (TC-40) and schedule 80 (TC-80) Polyvinyl Chloride (PVC) electrical conduit, elbows, and fittings are produced, inspected, sampled, and tested in accordance with Underwriters Laboratories (UL) Standard UL 651 and American National Standards Institute (ANSI) Standard ANSI/UL 651-2011. We also comply with NEMA Standard TC-2. The conduit meets the requirements for the UL "Sunlight Resistant" rating and is listed by UL for use in direct sunlight. These items are approved for listing by Underwriters Laboratories and representative samples are routinely examined and tested by Underwriters Laboratories for continuing compliance with UL specifications.

CANTEX rigid schedule 40 and 80 conduit, fittings, Spacers and elbows are listed by Underwriters Laboratories for use with 90 degree centigrade rated conductors. CANTEX conduit may be used in any application where the ambient temperature allows the use of conductors which are rated for 90 degree C (194 degree F), subject only to the limitations listed in Article 347-3 of the National Electrical Code. The conduit is listed by UL for burial with or without concrete encasement and is applicable for use as "Rigid Nonmetallic Conduit" as described in Article 347 of the National Electrical Code, including direct burial in underground installations as defined in Sections 300-5 (d) and 710 (b).

All items manufactured by CANTEX are made in the United States of America.

Sincerely,

Vice President – Sales & Marketing CANTEX INC

I have the legal authority to bind the manufacture or the supplier of the material.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents (quantity and units) of pay item 613-00100 1 Inch Electrical Conduit that was installed on project STE C480-008, 19219.

and Historia Inc.

12-30-17

Date_

3 16 18

Citera 112 marco 41

Region Field sheet # COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 19219 OR MATERIALS DOCUMENTATION Project No. STE (480~00B Metric units Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P. Field Lab phone Cell Phone SPECIAL TRAIL LIGHTING Grading Special Provisions Material Code (LIMS) yes 113 Previous CDOT Form #157 F/S No.(s): Previously used on Project No.: CDOT Form #633 (sack) CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided THE WILLIAM USED FOR SPECIAL-TRAIL LIGHTING WAS FIELD APPROVED BY THE PROJECT ENGINEER ALONG WITH THE MANNEACTURER'S SPECIFICATION DUY AMERICA CERTIFICATION. PERFORMED BY THE CONTRACTORS A COM OF THE VOLTAGE DROP MEASUREMENTS IS INCLUDED/ATTACHED. ELECTRICAL SUBCONTRACTOR Sample ID (#3) Sample ID (#1) Sample ID (#2) Sample ID (#5) Sample ID (#6) Sample ID (#4) Product name: Date checked: APL/QML Acceptance: APL Ref. No. Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date needed Emergency Preliminary Construction Maintenance Supplier Contractor SULTHWIRE & ENCORF WIRE MOSSFIRE LLC Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity Quantity represented O Shipped specified quantity to: Date Via Sample submitted: Yes oN化 Central lab _ 🔲 Region lab É-mail Sampled or inspected by (print name) PROJECT ENGINEER CLIPTON LEE. PF Residency pervisor (Pro./Res./Malis. Engr./Maint. Supt.) (print name) PRESIDENT - DAVIS ENG. \$VC. THIKE DAVIS, PE

Distribution:

White copy - CDOT Central Laboratory

(submit white copy only if sample or information is directed to Staff Materials)

Canary copy - Region Materials Engineer

Pink copy - Resident Engineer

Previous editions are obsolete and may not be used.

One Touch Electric, Inc. 3228 Road 21 Cortez, CO 81321 (970) 565-9684 Office (970) 565-6969 Fax CO License #4005 NM License #86635 otelectric1001@qwestoffice.net

February 16, 2018

Re: CDOT Project # STE C480-008

#### CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the wire manufactured by Southwire and installed on the above-referenced project meets or exceeds the standards and project specifications.

- 2. Southwire
- 3. One Southwire Drive, Carrollton, GA 30119
- 4. Underwriters Laboratories, Inc., various locations in the USA
- 5. THHN wire
- 6. #12 THHN wire, #6 THHN wire, # 10 THHN wire
- 7. S.A.A.
- 8. Invoice #914055593, Invoice #913802533
- 9. See attached spec sheet with UL standards identified
- 10. Meets or exceeds CDOT spec

One Touch Electric, Inc.

Anita Giesler

Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2,0402 of pay item 613-10010 Wiring (Special - Trail Lighting), that was installed on project number STE C480-008.

This for wire



## MANUFACTURER'S CERTIFICATE OF COMPLIANCE

Encore Wire Corporation's type THHN, THWN-2 insulated 600-volt building wire is produced 100% in the United States of America using accepted practices and quality assurance procedures to comply with specifications and testing of regulatory agencies.

CDOT Project #: STE C480-008

Manufacturer: Encore Wire Corporation

1329 Millwood Road, McKinney, TX 75069

Laboratory:

**Encore Wire UL DAP Laboratory** 

1324 Millwood Road, McKinney, TX 75069

Products Description (Name): Thermoplastic Insulated Conductors, known as Type THHN/THWN-2 – UL Listed E123774

Specific Product Model: (3 AWG THHN/THWN-2 [2500R] & 12 AWG THHN/THWN-2 [R500]

ANSI/UL Compliance Initiation Date: 9/1/1999 - Latest UL FUS Date: 6/26/2017 FUS Testing Facility - Millville NY- Underwriters Laboratory

#### Specifications:

American Society for Testing & Materials ASTM B-3, B-8, B-787 Underwriters Laboratories UL-83, UL-1581, UL-1063 C-UL UL 1685 FT4/IEEE 1202 (70,000 Btu/hr.) Flame Test (1/0 AWG and larger) NEMA WC70/ICEA S-95-658 ICEA T-29-520 (210,000 Btu/hr.) Flame Test Canadian Standards C-UL C22.2 No. 75 American National Standards Institute Federal Specification A-A-59544 NFPA 70: National Electrical Code 2017 NFPA 79 AWM 600V 105C (75C in oil) AWM Spec 1316, 1317, 1318, 1319, 1320, 1321 New York State DOS-16120-87-1222-1048 **RoHS Compliant** ARRA 2009 Buy American Compliant

I certify that the above listed material complies with requirements including all applicable standards set forth in this certification. If you have any question or comments, please contact me at (800) 962-9473, Ext.637

Best regards,

Paul W. Abernathy, CMI, CPI Manager of Codes and Standards **Encore Wire Corporation** 1-972-562-9473 ext. 637

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 lump sum of pay item 613-10010, Wiring (Special Trail Lighting), that was installed on project number STE C480-008.

One Touch Electric, Inc.



January 3, 2016

RE: Buy American Act / ARRA / Made in America

#### Dear Customer:

Encore Wire Corporation produces a broad range of electrical building wire and cable at its sole manufacturing location in McKinney, Texas. All Encore products are manufactured 100% in the United States of America.

We are pleased to inform you that all Encore products meet the Buy American Act's provisions in Section 1605 in the American Recovery and Reinvestment Act of 2009 (ARRA). Additionally, all Encore's products conform to the Federal Acquisition Regulation (FAR), subpart 25.6.

We appreciate your interest. Please call if you need additional information.

Sincerely,

Troy Skidmore

Director of Technical Operations and Product Engineering

Encore Wire Corporation

1324 Millwood Rd,

McKinney, TX 75069

972,562,9473 Ext.610

troy.skidmore@encorewire.com

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 lump sum of pay item 613-10010,

Wiring (Special Trail Lighting), that was installed on project number STE C480-008.

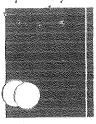
UMULATUSLER
One Touch Electric, Inc.

Date Date

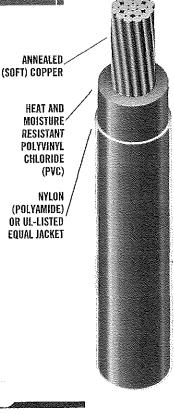
7/ //

Date

Date



ANNEALED



600 Volts

**Copper Conductor** 

Thermoplastic Insulation/Nylon Sheath Heat. Moisture, Gasoline, and Oil Resistant¹

Sizes 8 AWG and Larger Rated THWN-2 **All Stranded Sizes** Rated MTW and THWN

Sizes 14 Through 6 AWG Rated AWM (105°C) Sizes 14 Through 1 AWG Rated VW-1

Size 1/0 AWG and Larger Listed for CT Use Black Size 2 AWG and Larger Listed Sunlight-Resistant

# THHN/THWN/TWN75/T90

#### APPLICATIONS Suitable for use as follows:

- Southwire Type THHN or THWN-2* conductors are primarily used in conduit and cable trays for services, feeders, and branch circuits in commercial or industrial applications as specified in the National Electrical Code²
- When used as Type THHN, conductor is suitable for use in dry locations at temperatures not to exceed 90°C
- When used as Type THWN-2*, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90°C or not to exceed 75°C when exposed to oil or coolant
- When used as Type MTW, conductor is suitable for use in wet locations or when exposed to oil or coolant at temperatures not to exceed 60°C or dry locations at temperatures not to exceed 90°C (with ampacity limited to that for 75°C conductor temperature per NFPA 79)
- Conductor temperatures not to exceed 105°C in dry locations when rated AWM and used as appliance wiring material. Voltage for all applications is 600 volts

#### REFERENCES STANDARDS &

Southwire Type THHN or THWN-2* or MTW (also AWM) meets or exceeds all applicable ASTM specifications, UL Standard 83, UL Standard 1063 (MTW), Federal Specification A-A-59544, and requirements of the National Electrical Code.

#### CONSTRUCTION

- Southwire Type THHN or THWN-2* or MTW copper conductors are annealed (soft) copper, insulated with a tough heat and moisture resistant polyvinyl chloride (PVC), over which a nylon (polyamide) or UL-listed equal jacket is applied
- Available in black, white, red, blue, green, yellow, brown, orange, and gray; some colors standard, some subject to economic order quantity
- Conductor sizes 2 AWG and larger listed and marked sunlight-resistant in black only

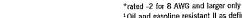
## SPECIFICATIONS

#### MTW or THHN or THWN-2

Conductors shall be UL-listed Type MTW or THHN or THWN-2* gasoline and oil resistant II, suitable for operations at 600 volts as specified in the National Electrical Code. Sizes 14 through  $1\ \mathsf{AWG}$  shall be rated VW-1, larger sizes shall be listed for CT use. Sizes  $2\ \mathsf{AWG}$ and larger listed and marked sunlight-resistant in black only. Conductors shall be annealed copper, insulated with high-heat and moisture resistant PVC, jacketed with abrasion, moisture, gasoline, and oil resistant nylon or listed equivalent, as manufactured by Southwire Company or approved equal.

AWM

Conductors shall be UL-listed Type THHN or THWN-2* or MTW or AWM, suitable for operation at 600 volts at conductor temperatures not to exceed 105°C.



Oil and gasoline resistant II as defined by Underwriters Laboratories











WEIGHTS, MEASUREMENTS AND PACKAGING											
CONDU	CONDUCTOR		JACKET THICKNESS		NOMINAL O.D. APPROX. NET WEIGHT (mils) PER 1000 FT. (lbs)		ALLOWABLE Ampacities†			STANDARD	
SIZE (AWG or kcmil)	NUMBER OF STRANDS	THICKNESS (mils)	(mils)	SOL.	STR.	SOL.	STR.	60°€	75°C	90°C	PACKAGE
1.4	19	15	4	102	109	15	16	15	15	15	DNFP
12	19	15	4	119	128	23	24	20	20	20	DNFP
10	19	20	4	150	161	37	38	30	30	30	DQFP
8	19	30	5		213		62	40	50	55	FP
- 6	19	30	5		249		95	55	65	75	EP
4	19	40	6		318		152	70	85	95	С
3	19	40	6		346		188	85	100	110	BC
2	19	40	6		378		234	95	115	130	С
1	19	50	7	_	435	-	299	110	130	150	В
1/0	19	50	7		474		371	125	150	170	В
2/0	19	50	7		518		461	145	175	195	В
3/0	19	50	7		568		574	165	200	225	В
4/0	19	50	7		624		717	195	230	260	В
250	37	60	8		694		850	215	255	290	В
300	37	60	8		747		1011	240	285	320	В
350	37	60	8		797		1173	260	310	350	8
400	37	60	8		842		1333	280	335	380	В
500	37	60	8		926		1653	320	380	430	В
600	61	70	9		1024		1985	355	420	475	С
750	61	70	9		1126		2462	400	475	535	С
1000	61	70	9		1275		3254	455	545	615	С

Solid construction available in sizes 14 through 10 AWG as Types THHN or THWN or AWM only. Sizes 14 through 6 AWG also suitable for 105°C appliance wiring material (AWM). Sizes 14 and 12 AWG contain four 500 ft, spools per carton. Size 10 AWG contains two 500 ft, spools per carton. Tallowable ampacities shown are for general use as specified by the National Electrical Code, 2005 Edition, section 310.15 unless the equipment is marked for use at higher temperatures the conductor ampacity shall be limited to the following: 60°C - When terminated to equipment for circuits rated 100 amperes or less or marked for size 14 through 1 AWG conductors. MTW wet locations or when exposed to oil or coolant. 75°C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than size 1 AWG. THWN-2 when exposed to oil or coolant. MTW dry locations. 90°C - THHN dry locations. THWN-2 wet or dry locations. For ampacity derating purposes.

#### STANDARD PACKAGE CODES

- B 1000 ft. reel
- C 500 ft. reel
- D 2500 ft. spool
- E 1000 ft. spool
- F = 500 ft. spool
- N 2000 ft. carton
- Q 350 ft. carton P – Drum



Border States Electric Supply

Shealy Electrical Wholesalers | Kriz-Davis K-D Chapman Metering

INVOICE BSE Invoice: 914055593 Cust Acct#: 51935 P.O.#: Pagosa CDOT Sales Order#: 19288921

Sales Order: 10200021
Sales Doc Type: Sales Order
Packing Slip#: 8021671107
Ship Condition: Our Truck

Payment Terms: 1.0 % 10th prox net 25th (25)

Border States Electric - FRM 865 South Browning Parkway Farmington NM 87401-1007 Phone: 505-324-8800

> One Touch Electric Inc 3228 CR 21 Cortez CO 81321-8613

Please remit to: Border States Electric Supply PO Box 911105 Denver CO 80291-1105

Date: 10/27/2017

Page 1 of 1

Ship to: One Touch Electric Inc 3228 CR 21 Cortez CO 81321-8613

Cust Item	BSE Item	Material MFG - Description	Order Qty n	Ship Qty	Back Ordered	Price	Per	UoM	Total Value
<del></del>	000150	156029 THHN - THHN-1	<b>500</b> FT 2-WHT-19STR-C	<b>500</b> U-4@500CTN		138.13 /1	,000	FT	69.07
	000160	12799£	500 EA 2 RED WING CO	500	BAG	79.04 /1	,000	EA	39.52
	000170	127962 IDE - 30-454 45	50 EA 4 BLUE WING CO	<b>50</b> DNNECTOR 25/	вох	286.08 /1	,000,	EA	14.3
rotal due b Mail at leas	y 12/25/2017 t 7 business	days before due			Shipping and Handling Tota State Tax County Tax	[\$ :\$ 2,900 :\$ 0.000	%	3.56 0.00 0.00	0.0 122.8
Please retu	rn invoice w	ith your remittan	ce noting all adji		Local Tax Other Tax1 Other Tax2 Other Tax3 Tax Subtota Invoice Amount	\$ 0.000 \$ 0.000 \$ 0.000	% %	0.00 0.00 0.00	3.5 <b>126.4</b>

A finance charge of 1.5% per month or the maximum allowable by law whichever is greater, will be assessed if payment is not received by invoice due date.

To access BSE's Terms and Conditions of Sale, please go to https://www.borderstateselectric.com

Delivery: 8021671107 Received by:

Del. 10/27/17 Drop off per customer

Drop off per customer request 10/27/2017 12:28:50



Border States Electric Supply Shealy Electrical Wholesalers | Kriz-Davis K-D Chapman Metering

INVOICE

BSE Invoice: 913802533

Cust Acct#: 203315

P.O.#: CDOT WIRE Sales Order#: 19088151 Sales Doc Type: Sales Order

Packing Slip#: 8021480357
Ship Condition: Our Truck
Payment Terms: 1.0 % 10th prox net 25th (25)

Border States Electric - FRM 865 South Browning Parkway Farmington NM 87401-1007 Phone: 505-324-8800

One Touch Elec-CDOT STE C480-008 Job-CDOT STE C480-008 Pinion Causeway Multi-use Trail 3228 CR 21 Cortez CO 81321-8613

Please remit to:

Date: 09/20/2017

Border States Electric Supply

Page 1 of 2

PO Box 911105

Denver CO 80291-1105

Ship to:

One Touch Electric Inc

3228 CR 21 Cortez CO 81321-8613

Cust Item	BSE Item	Material Or MFG - Description	der Qty	Ship Qty	Back Ordered	Price	Per	UoM	Total Value
1	000010	2251656 THHN - SS-THHN-I Batch: R2500 Batch Total:	<b>5,000</b> 6-BLK-19STI <b>5,000</b> F	5,000		520.87 /1,0	00	FT	2,604.35
	000020	2251675 THHN - SS-THHN- Batch: R2500 Batch Total:	5,000 6-RED-19ST <b>5,000</b> F	5,000		520.87 /1,0	00	FT	2,604.35
	000030	2251679 THHN - SS-THHN- Batch: R2500 Batch Total:	5,000 6-WHT-19ST 5,000 F	5,000		520.87 <i>[</i> 1,0	000	FT	2,604,35
	000040	157010 THHN - THHN-10-0 Batch: R2500 Batch Total:	5,000 GRN-19STR 5,000 F	5,000		211.25 <i>[</i> 1,0	000	FT	1,056.25
	0/25/2017 business	by 10/10/2017 days before due days the days before due days ith your remittance			Shipping and Handlin Tot State Te County Te Local Te Other Tay Other Tay Other Tay	al \$ ax \$ 0.000 % ax \$ 0.000 % ax \$ 0.000 % c1 \$ 0.000 % c2 \$ 0.000 % c3 \$ 0.000 %		0.00 0.00 0.00 0.00 0.00 0.00	0.00 8,869.30
				Ne	et Invoice Amoun	ıt\$			8,869.30

A finance charge of 1.5% per month or the maximum allowable by law whichever is greater, will be assessed if payment is not received by invoice due date.

To access BSE's Terms and Conditions of Sale, please go to https://www.borderstateselectric.com

# One Touch Electric, Inc. 3228 Road 21 Cortez, CO 81321 (970) 565-9684 Office (970) 565-6969 Fax CO License #4005 otelectric1001@qwestoffice.net

Crossfire, LLC 820 Airport Road Durango, CO 81303 Attn: Paul Martin

via e-mail: Paul.Martin@crossfire-llc.com

Re:

CDOT Project STE C480-008

Voltage drop testing

Paul,

On Saturday, December 2, 2017, the testing for voltage drop was done. The test results as are follows:

1. LPEA service voltage at the meter for poles 1-17: 250V. At pole #17, the voltage drop is 248V-4.8A.

2. LPEA service voltage at the mter for poles 18 - 34: 250V. At pole #18, the voltage drop is 248V - 4.6A.

Sincerely.

One Touch Electric, Inc.

# Dick Giesler

Dick Giesler President

cc: clifton@daveng.com

I hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 1 | LIMP & LIMP (quantity and units) of pay item | 613-1000 | Wiring 1584 | Vail Light.) (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/26/18

			19219-613-1
COLORADO DEPARTMENT OF TRANS FIELD REPORT FOR SAMPI		Region S	Field sheet # 266289
OR MATERIALS DOCUME		Contract ID 19219	Date Submitted 3-18-18
NA -4-11 14-1	i <del>. /</del> 1	Project No. STE (480-00	<u></u> nQ
Metric units yes	∑ no	Project Location	
			TO ASPEN VILLAGE DR S.U.P.
Material Type LIGHT STANDALOS & L	LIMINAIRE - INSTALL	Field Lab phone	Cell Phone
Material Code (LIMS) Item 613	Class	Grading	Special Provisionsyes
Previously used on Project No.:	Previous CDOT Form #		CDOT Form #633 (sack) CDOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Unit of materi</li> <li>Materials Documentation: Field inspected (desc</li> </ul>	al submitted, describe tests required, cribe appearance, weight/dimensions	, precise location sample re s, model/serial number), CC	emoved from ( stationing), etc. OC &/or CTR provided , etc.
THE LIGHT FIXTURES	POLES AND LU	MINAIRE W	ELE PROVIDED
BY THE TUNN OF F	PAGOSA SPRINGS	. THE CON	STRACTOR INSHILLED
THE PROVIDED ITEMS	. THE PROJECT P	AD BR THE	ITEMS TO
BE INSTALLED. THE	= MANUFACTUREL	s COCISPA	IOVIOED FUR
REFERENCE.			
SEE FORM 475.			
User ID			
Sample ID (#1)	Sample ID (#2)	Sample	ID (#3)
Sample ID (#4)	Sample ID (#5)	Sample	ID (#6)
APL/QML Acceptance: APL Ref. No. Produ	uct name:		Date checked:
APL/QML Acceptance: APL Ref. No. Produ	uct name:		Date checked:
	Maintenance Emergency		Date needed
Contractor CLOSSFILE LLC	Supplier Mo.	DUNTAIN STATI	es lighting
Sampled from (Pit, roadway, windrow, stock, etc.)	Pit name or o		
Quantity represented 34 EA	Previous quantity	Total	I quantity to date 34 EA
Sample submitted: Shipped specified  Yes No Centu		Via	Date
Sampled or Inspected by (print name) CUPTON USE, PE	Title PROJECT ENGIN	E-mail	
Supervisor (Pro./Res./Matts. Engr./Maint. Supt.) (print name)	Title PARCIOENT DAVI	Residency	

For information only. The Town of Pagosa Springs provided the light fixtures, potes, and luminaire for the Contractor to install only.

MANUFACTURER'S CERTIFICATE OF COMPLIANCE

EOD

# FOR MATERIALS FURNISHED FOR STATE AND FEDERAL AID HIGHWAY PROJECTS

CDOT Project # STE-C480-008 Project No: Pinion to Aspen Village Shared use Path Project
Project Location: Pagosa Springs, CO 81147
Contractor: Crossfire, LLC- One Touch Electric – Bought by City of Pagosa Springs
Manufacturer: Mountain States Lighting
Type and Grade of Materials: Aluminum Decorative Pole Assembly with Elastomer Bases
Quantity: 43 each pole assemblies
Quality Control Test based on Aluminum Association "Specifications for Aluminum Structures" Section 8
Date of Tests: 9-30-17
Lot(s) Represented: 1 Lot Pole assemblies as outlined above
We hereby certify that the above material(s) furnished to: City of Pagosa Springs
conform(s) with all the specified
Project Plans and Specification & City  requirements of of Pagosa Springs Standards as indicated by the performed test.
requirements of of Pagosa Springs Standards as indicated by the performed test.  Signing this certificate of compliance certifies that the above information is a true and correct statement and that the undersigned is in a position to legally bind the manufacturer.
Nome: Paul Placha, Mountain States Lighting Faul Plach
Name: Paul Plasha - Mountain States Lighting
President/Owner of
Position: Mountain States Lighting Date: 11-1-17



10001 Prosperity Rd. West Jordan, UT 84081-7500 7 :: (801) 965-9532 Fax: (801) 965-9632 ail: Randy@Teamnsc.com

# **Delivery Memo**

DATE	INVOICE #	
10/4/2017	11323	

#### BILL TO

Mountain States Lighting / Paul Plasha PO Box 449 Conifer CO 80433

#### SHIP TO

Town of Pagosa Springs c/o Crossfire 140 Aspen Village Dr Pagosa Springs CO 81147 24hr B4: Scott Lewandowski 303-808-6462

P.O. NUMBER	SHIP DATE	SHIP VIA	JOB NAME
SCOTT062017NWP	10/8/2017	NSC Truck	Pagosa Springs W & E PH Trail

QUANTITY	ITEM CODE	DESCRIPTION		
9 .	12SRA	12SRA-4.5-OT-SGLExtAm Bk 12' pole height/16' overall height w/arm		
34	16SRA-4.5	16SRA-4.5-OT-SGLExtAm Bk 16' pole height/20' overall height w/arm		
43	Ext-arm	Pole extension type top mounted arm assembly Bk 48" extension w/2' straight arm w/plumbizer		
43	Top Cap	4.5" Top Cap matching Light pole		
43	42Utah	42" Std Utah elastomer wrap-around base Bk		
	A/B 3/4 x 18	Anchor Bolt (set) 3/4" X 18"  ***Anchor bolts shipped separately to customer on 07/28/17		
1 .	Freight	Freight Charges from NSC Plant		

ınk You! Sylvia

Recipient signature, printed name, and date of receipt required above.

All items have been checked for quality and correct quantities prior to shipment. Damages must be reported to carrier within 48 hours of receipt. Shortages must be reported to the shipper within 48 hours of receipt.

Field sheet# Region COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted 19219 OR MATERIALS DOCUMENTATION Project No. STE- C480-008 Metric units Project Location RNON CAWEWAY TO ASPEN VILLAGE DR-S.U.P. Field Lab phone LIGHT CONTROL CENTER PED -SPECIAL Material Type Special Provisions Grading lves Material Code (LIMS) 613 Previous CDOT Form #157 F/S No.(s): Previously used on Project No.: CDOT Form #633 (sack) CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided FOR THE LIGHT CONTROL CENTRE WERE THE MATERIALS INSTALLED PIELD INSPECTED AND APPROVED BY THE PROVEET ENCINEER 3 EACH WERE ESTIMATED IN THE ORIGINAL QUATTITIS WITH 1 FACH REMOVED IN CO. 1. 2 EACH WAS Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: Product name: APL/QML Acceptance: APL Ref. No. Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date needed Emergency Construction Maintenance Preliminary Supplier HOFFMAN ENCLOSURES, INC. Contractor SQUARD D CO./BORDER STATES ELECTRIC GOSSFILE Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity Quantity represented Z EAV

Distribution: White copy - CDOT Central Laboratory

☑ No

Prvisor (Pro./Res./Matis, Engr./Maint, Supt.) (print name)

Sampled or inspected by (print name)

Sample submitted:

Yes

rupion use

MNGE DAVIS

(submit white copy only if sample or information is directed to Staff Materials)

Shipped specified quantity to:

Central lab __

Canary copy - Region Materials Engineer

Pink copy - Resident Engineer Previous editions are obsolete and may not be used.

_ 🗌 Region lab

NESIDENT-

PROJECT ENTINGER

E-mail

Residency

One Touch Electric, Inc. 3228 Road 21 Cortez, CO 81321 (970) 565-9684 Office (970) 565-6969 Fax CO License #4005 NM License #86635 otelectric1001@gwestoffice.net

February 23, 2018

Re: CDOT Project # STE C480-008

#### CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the box manufactured by Hoffman Enclosures, Inc. and installed on the above-referenced project meets or exceeds the standards and project specifications.

- 2. Hoffman Enclosures, Inc.
- 3. 2100 Hoffman Way, Anoka, MN 55303
- 4. N/A
- 5. Continuous Hinge Enclosure
- 6. 12 x 12 x 6 Continuous Hinge Enclosure
- 7. Model #55480, A1212CHNF
- 8. Invoice #913773451
- 9. N/A
- 10. meets or exceeds CDOT spec

One Touch Electric, Inc.

Anita Giesler Sec/Treas.

> I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents of pay item 613-50106, Lighting Control Center (Pedestrian) (Special) that was installed on project number STE C480-008.

One Touch Electric, Inc.

Date



Jill Othoudt Compliance Specialist

EQUIPMENT PROTECTION +1.763.422.2240 main Declaration.requests@pentair.com

2100 Hoffman Way Anoka, MN 55303 www.pentairprotect.com

### **RoHS Declaration**

Date:

December 13, 2017

Requestor:

**CDOT Pagosa Springs Project** 

Reference:

CDOT Project # STE C480-008

Product:

Catalog #	Description
MODEL # 55480	A1212CHNF,
	CONTINOUS HINGE ENCLOSURE,
	12.00 X 12.00 X 6.00

Hoffman Enclosures Inc. declares that as of this declaration date, the product(s) identified above does not contain any restricted substances above the homogeneous material concentration threshold level per the Directive 2011/65/EU (Restriction of Hazardous Substances).

This certifies that Hoffman Enclosures has done due diligence and to the best of Hoffman Enclosures' knowledge, this statement is accurate and the information is true and correct. If the product is labeled RoHS, the product can be considered compliant and no declaration is needed.

Please note that we are making these representations solely to you and not to, or for reliance by, your customers or any third party. If such a representation is needed, please let us know.

Sincerely,	* 3-each 2 EACH
Gill O'Handt	I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 hump sum of pay item 613-50106, Lighting Control Center, that was installed on project number STE C480-008.  One Touch Electric, Inc.
Global Product Compliance	Contractor Rep. Signature Date

* (2) each of item# 613-501000 Lighting Control Center was installed in the project

Wolfman (1) each of item# 615-50106 Lighting Control Center was paid and then removed in Change Order No. 1

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 16, 2018

Re: CDOT Project # STE C480-008

### CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the load center manufactured by Square D/Homeline and installed on the above-referenced project meets or exceeds the standards and project specifications.

- 2. Square D Co
- 3. 1601 Mercer Rd, Lexington, KY 40511
- 4. Underwriters Laboratories, Inc., various locations in the USA
- 5. Homeline panel board
- 6. SQD HOM612L100RB Load Center
- 7. S.A.A.
- 8. Invoice #1932-689131
- 9. See attached UL certificates
- 10. Meets or exceeds CDOT spec

One Touch Electric, Inc.

Anita Giesler Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents to pay item 613-10010 Wiring (Special – Trail Lighting), that was installed on project number STE C480-008.

One Touch Electric, Inc.

Date

31618

Contractor Reo. Signature

each as

Date

## CERTIFICATE OF COMPLIANCE

**Certificate Number** 

20131206 - E215117

Report Reference

E215117 - 20010607

**Issue Date** 

2013-December-06

Issued to:

SCHNEIDER ELECTRIC INDUSTRIES S A S

ELECTROPOLE/EYBENS, POWER / FD 31 RUE PIERRE MENDES FRANCE 38050 GRENOBLE CEDEX 9, FRANCE

This is to certify that representative samples of

Circuit Breakers, Molded Case and Circuit-breaker

**Enclosures** 

Branch circuit breaker, Type C60, rated 0.5, 0.75, 1, 1.2, 1.5, 2, 3, 4, 5, 6, 7, 8, 10, 13, 15, 20, 25, 30, 35A, 1P, 2P,

3P.

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety:

ANSI/UL 489, "Molded-Case Circuit Breakers, Molded-

Case Switches and Circuit-Breaker Enclosures."

Additional Information:

See the UL Online Certifications Directory at

www.ul.com/database for additional information

Only those products bearing the UL Listing Mark should be considered as being covered by UL's Listing and Follow-Up Service.

The UL Listing Mark generally includes the following elements: the symbol UL in a circle: (4) with the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.

William R. Carney, Director, North American Certification Programs

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized ficensee of UL. For questions, please contact a local UL Costomer Service Representative at <a href="https://www.ul.com/contactus">www.ul.com/contactus</a>



# Certificate of Compliance

Certificate Number Report Reference

20090306 - E6294A

Issue Date

E6294, 1988 January 08 2009 March 06



Page 1 of 1

Issued to:

**SQUARE D CO** 

1601 MERCER RD

LEXINGTON, KY 40511 USA

This is to certify that representative samples of **Panelboards** 

Model Descriptions: Panelboards and enclosed panelboards, Type HOM.

Have been investigated by Underwriters Laboratories Inc.® in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:

The basic standards used to investigate products in this category are ANSI/UL 67, "Panelboards" and CSA-C22.2 No. 29, "Panelboards and Enclosed Panelboards."

Additional Information:

Ratings:

Main lug - 225 maximum amperes, 120/240 maximum volts. Main breaker - 225 maximum amperes, 120/240 maximum volts.

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers: [U]us the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product

Issued by:

Jim Larin

Reviewed by: Thomas Skibbs

Jim Larin, Customer Service Specialist

Thomas Skibbs, Staff Engineering Associate

Underwriters Laboratories Inc.

Underwriters Laboratories Inc. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized

For questions in The United States of America you may call 1-877-UL-HELPS.

AMERICAN ELECTRIC 1197 COLORADO HWY. 3 DURANGO CO 81301 TEL: (970)259-2885 FAX: (970)259-5616

# Order Acknowledgement

PAGE 1 OF 1
ORDER NO. ORDER DATE
1932-689131 10/24/2017

*** ORDER ***

*** ACKNOWLEDGEMENT ***

SOLD TO: ONE TOUCH ELECTRIC 3228 ROAD 21 CORTEZ, CO 81321

SHIP TO: ONE TOUCH ELECTRIC 3228 ROAD 21

CORTEZ, CO 81321

ACCOUNT NO. G7-64100	JOB NAME AND ADDRESS	CUSTOMER ORDER NO. PAGOSA CDOT	
SALESPERSON 0979 CTR	SHIPPING INFORMATION PREPAID	OUR TRUCK	WHEN SHIP 10/24/2017

QUANTITY ORDERED PRODUCT CODE	DESCRIPTION	© QUANTITY D SHIPPED E	PRICE R DISC	EXTENSION C/D PX
1 IDEAL 31315	1300FT BUCKET MULE TAPE	1	202.47 E	202.47 2.0 T
1 SQD HOM612L100RB	LD-CNTR BOX&INT	1	38.10 E	38.10 T
2 SQD HOM250	2P-120/240V-50A CB	2	8.23 E	16.46 T
1 SQD Q0250	2P-120/240V-50A CB	1	16.10 E	16.10 T

# Thomas@Betts

A Member of the ABB Group 442 East Stonewall Rd. Byhalia, MS 38611 (901) 435-7500

	CERTIFICATE OF COMPLI	ANCE	
DATE: December 19, 2017	· .		
Consumer Name & Address: BORDER STATES #41-FARMING 865 S BROWNING PKWY	GTON	Consumer P.O.	
FARMINGTON, NM 87401			
Attention: PROJECT # CDOT	STE C480-008		
CC: Distributor - Name & Addres	ss:	RE: Distributor P.O.	4503491131
ATTN: ACCTS PAYABLE		•	
PO BOX 2767 FARGO, ND 58108-2767 Attention:			
Thomas & Betts Order:	0005-0358719 27368076	<del>200</del>	
T&B Part Number A1200HS 10EG	Mil. Spec. Number	Quantity 1000	Date Code N/A
made in strict accordance with Th	sted above and shipped against Thomas & Betts drawings, specification d to any other specifications or req	ons and quality systems.	
nereby certify under penalty of perjury the ertificate of Compliance represents 1-lum ght Control Center (Pedestrian)(Special), TE C480-008.	p-sum of pay item 613-50106,	Regards,	D0
ne Touch Electric, Inc.	Date		** \ Y

Style A, Form #0002-F23, Revision 0 -

CDOT Form #157





Picoma Industries 9208 Jeffrey Drive Cambridge, OH 43725 740-432-2146 ext. 7106

Sold To:

Border States Elect Supply PO Box 2767

Fargo, ND 58103

PO No:	Quantity
4503526753	30
4503557139	20
4503631352	20

Ship To:

Border States Elect Supply

865 S Browning Pky Farmington, NM 87401

SAP No: / Delivery No:	
821370 / 81506673	
829489 / 81520652	
849737 / 81556945	

Material:

2 ELBOW RIGID 90 DEG STD RAD

Ref:

Made in the USA

### Dear Valued Customer:

Please let this letter serve as documentation that all of Picoma's galvanized rigid conduit elbows are manufactured in the United States of America.

If I can be of any further assistance, please do not hesitate to contact me.

Sincerely,

Jay D. Burris

Quality Assurance Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Nexaed (quantity and units) of pay item (p12 - WD 200) 2 inch cleed (undust (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

Date



ANCHOR BOUTS? ASSOCIATED COMPONENTS PARCHASED? PROVIDED BY THE TOWN OF PAGOSA SPRINGS. FOR REFERENCE DULY.

10001 Prosperity Rd. West Jordan, UT 84081-7500
Ph: (801) 965-9532 Fax: (801) 965-9632 Email: Randy@Teamnsc.net

# Certificate of Origin

RE: Purchase Order SCOTT062017NWP - Pagosa Springs W & E PH Trail

We do hereby certify under penalty of law that products manufactured by Northwest Standard Corp for the above referenced purchase order are Made in the USA. Further, all materials used, as required, do conform and comply with the Buy America requirements of the Surface Transportation Act of 1982 (S.T.A.A) and the American Recovery and Reinvestment Act of 2009 (A.R.R.A.) Any documents contained herein do further testify to this fact.

By Randal D Orban for Northwest Standard Corporation – a United States of America Corporation



Zekelman Industries Wheatland Tube Division 4435 South Western Boulevard Chicago, IL 60609 USA

CERTIFICATE OF COMPLIANCE

Picoma Industries 9208 Jeffrey Drive Cambridge, OH 43725

SOLD TO:

BORDER STATES ELECT SUPPLY (AD) PO Box 2767 FARGO ND 58103

SHIP TO:

BORDER STATES ELECT SUPPLY 865 S BROWNING PKY FARMINGTON NM 87401-4411

**CUSTOMER PO#** 

4503631352

SALES ORDER # **DELIVERY #** 

849737 81556945

DATE OF CREATION 01/23/2018

PLANT

Allied Group Sales - Phoenix, AZ

CDOT Project No.: STE C480-008 CDOT Project Code: 19219

Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC.

Electrical Subcontractor: One Touch Electric, Inc.

Item Description	Quantity	Unit
2 FLBOW RIGID 90 DEG STD RAD	20	EA

### COMMENTS:

This is to certify the Rigid Steel Conduit, Conduit Couplings and Elbows produced by the WHEATLAND TUBE COMPANY and its affiliated divisions are manufactured in the U.S.A. All items have been tested and inspected in accordance with normal manufacturing processes and inspections as outlined in the applicable standards U.L. 6 and ANSI C80.1 to assure acceptable quality levels consistent with the specification requirements. Rigid Steel Conduit is supplied in nominal lengths as required by the U.L. 6 and ANSI C80.1 standards.

Rigid Steel Conduit manufactured by Wheatland Tube Company is registered and listed by Underwriter's Laboratory, listing number E32152.

Jay D. Burris

Quality Assurance Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Neclect (quantity and units) of pay item 613-2000 2110th deet conduit (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature



CERTIFICATE OF COMPLIANCE

Picoma Industries 9208 Jeffrey Drive Cambridge, OH 43725

SOLD TO:

BORDER STATES ELECT SUPPLY (AD) PO Box 2767 FARGO ND 58103

SHIP TO:

BORDER STATES ELECT SUPPLY 865 S BROWNING PKY FARMINGTON NM 87401-4411

**CUSTOMER PO#** 

SALES ORDER # **DELIVERY** #

DATE OF CREATION 01/31/2018

PLANT

4503526753, 4503557139, 4503631352

821370, 829489, 849737

81506673, 8152065281556945

Allied Group Sales - Phoenix, AZ

CDOT Project No.: STE C480-008 CDOT Project Code: 19219

Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC.

Electrical Subcontractor: One Touch Electric, Inc.

Ite	m Description	PO	Quantity	Unit
2	ELBOW RIGID 90 DEG STD RAD	4503526753	30	EA
2	ELBOW RIGID 90 DEG STD RAD	4503557139	10	EA
2	FLBOW RIGID 90 DEG STD RAD	4503631352	10	EA

### COMMENTS:

This is to certify the Rigid Steel Conduit, Conduit Couplings and Elbows produced by the WHEATLAND TUBE COMPANY and its affiliated divisions are manufactured in the U.S.A. All items have been tested and inspected in accordance with normal manufacturing processes and inspections as outlined in the applicable standards U.L. 6 and ANSI C80.1 to assure acceptable quality levels consistent with the specification requirements. Rigid Steel Conduit is supplied in nominal lengths as required by the U.L. 6 and ANSI C80.1 standards.

Rigid Steel Conduit manufactured by Wheatland Tube Company is registered and listed by Underwriter's Laboratory, listing number E32152.

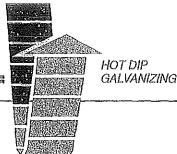
Jay D. Burris

Quality Assurance Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents As needed (quantity and units) of pay item 613-500200 2 Inch elect Conduit (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinen-Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

# ROGERS BROTHERS INC.



March 11, 2016

Unytite, Inc. Unytite Quality Department One Unvtite Drive Peru, IL 61354

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following material on your Purchase Order number 6004 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications. The hot dip galvanizing is ROHS compliant. The galvanizing process was conducted in a temperature range of 830F to 850F.

117,729 Pieces

79,778 Pieces 3/4"-10 A563 DH HHN 3/4"-10 A563 DH HHN Lot#22685-166188 Lot#22684-166188

4.00 Avg. Mils. 4,20 Avg. Mils.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

This product was galvanized in Rockford, IL USA

rainershelburgo

Yours very truly,

ROGERS BROTHERS INC.

Lorraine P. Shelburne Vice President

LPS:pd

SUBSCRIBED AND SWORN BEFORE ME THIS 11TH DAY OF MARCH 2016, AD

OFFICIAL SEAL JUDITH A FEROLIE

## STAMPING THE FUTURE

# VASHER MFG., INC.



June 3, 2016

Certification of Compliance

011767 PLATTE ANCHOR BOLT 4950 JACKSON ST. DENVER, CO 80216

Wrought Washer Ordr/Lot Number 294692

HT ORDER 293082

Chemical Analysis

 $\mathbf{C}$ Mn 0.330

P 0.840 0,010 0.002

0.260

Purchase Order Number 136097

Heat Number

158681

Part Description 3/4 F436 S MARK HDG

Date Shipped 06/03/2016 Quantity Shipped 40,800

We hereby certify that the subject parts conform to the requirements of the applicable specification indicated for the subject parts and are in complete conformance to F436-11. We hereby certify that the subject parts were hardened to RC 26-45. We hereby certify that the subject parts were hot dip galvanized in accordance with specification ASTM A153 CLASS D.

We hereby certify that all statutory requirements as to American Production and Labor Standards and all conditions of purchase applicable to the transaction have been complied with and that the subject parts were melted and manufactured in the U.S.A. No weld repairs were made to the material.

Truly yours,

Wrought Washer Mfg., Inc.

Susan M. Traoust

Paul Schaefer Q.C. Manager Sworn and subscribed before me on June 3, 2016 My commission expires April 24, 2017.



(032) SMARK, HT, HDG, F436 WW INTERNAL USE: 63611301/002/017295/55745

# ROGERS BROTHERS INC.



HOT DIP GALVANIZING

### CERTIFICATE OF COMPLIANCE

### FOR HOT DIP GALVANIZING

CUSTOMER:

WROUGHT WASHER MFG., INC.

DATE:

**DECEMBER 11, 2015** 

**PO#**:

294692-01

ROGERS ORDER#:

105331

DESCRIPTION:

(1.468 OD - .828 ID - .128 THK) 3/4" S MARK

WWIC#:

017295

### COATING THICKNESS

TAG#

<u>QTY.</u>

**AVERAGE** 

HIGH

LOW

691193

148.806

5.30

11.90

2.60

WE HEREBY CERTIFY THAT THE ABOVE SIZE AND LOT NUMBER WHICH WAS HOT DIP GALVANIZED IN OUR PLANT MEETS THE SPECIFICATIONS OF ASTM A153, CLASS D.

THE ABOVE SIZES AND LOT NUMBERS COMPLY WITH THE COATING, WORKMANSHIP, FINISH, AND APPEARANCE REQUIREMENTS OF ASTM F2329.

THE HOT DIP GALVANIZING IS ROHS COMPLIANT. THE GALVANIZING PROCESS WAS CONDUCTED IN A TEMPERATURE RANGE OF 830F TO 850F.

THIS PRODUCT WAS GALVANIZED IN ROCKFORD, IL USA.

ROGERS BROTHERS INC.

Lonaine PShelburn

Lorraine P. Shelburne

Vice President

LPS:pd

SUBSCRIBED AND SWORN BEFORE ME THIS 11TH DAY OF DECEMBER 2015, AD

Goldith) D. FLADUR

OFFICIAL SEAL
JUDITH A FEROLIE
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:01/23/20

# Anchor Bolt, Inc.. Manufacturing & Distributing Since 1954

4950 Jackson Street, Denver, CO 80216 Office: (303) 321-5100 Fax: (303) 321-5110 **CERTIFICATE OF COMPLIANCE** 

This is to certify that the indicated items on your PO# scott062017nwp, our Invoice # 144498

comply with the stated specifications

Customer : Northwest Standard

Attn: Svlvia

			Attn: Sylvia			
TEM NO.	QUANTITY	HEAT/LOT#	DESCRIPTION	SPECIFICATION		
1	172	3070747	3/4 x 18 + 4 Anchor Bolt HDG	F1554 Grade 55		
2	344	22684-166188	Hex Nut HDG	DH		
3	344	294692	Flat Washer HDG	F436		
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
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23						
24						
25			and correct to the best of my knowledge			

certify that the infor	mation herein is true	and correct to the	best of my	knowledg	jе
------------------------	-----------------------	--------------------	------------	----------	----

Signature:

Jordan Winograd

Date: 7/26/2017

Jordan Winograd

SSAB

# **Test Certificate**

Form TC1: Revision 2: Date 23 Apr 2014

1770 Bill Sham Roulevard, Muscaline, IA, 52781-9412, US

	1770	JIN GHOTP DOUBLE	-1-1		Comment.		C 11- 140	00404		100	III Order N	0.4	1-502	2085-	07	Shipp	ing Ma	nliest	MR319587
Gustomer: RELIANCE STEEL & ALUM CO -DIV 10 RELIANCE METALCENTER PO BOX 27555						Customer P.O.No.:10-80494   Mill Order No. 41-502085-07   Shipping Manifest: MR31 Product Description: CSA 640.21(2013)35W/260W / ASTM A36(14)   Ship Date: 30 Jun 17   Cert No: 05165 A703(16A)36/ASME SA36(15)   MANGANESE .80-1.20%   Cert Date: 30 Jun 17   Cert No: 05165							061651977						
SALT LAKE C														-					
UT 84127						Size: 0.625 X 96.00 X 240.0 (IN)  Tensiles: Charpy impact Tests													
	Tested	Places:				ensile			(family nex	Aho E.	nergy(FTLE				Impact lests Shear Tst Tst Tst BDWIT				
Heat fd		Tested Thickness	Tst Loc	(KSI)	(KSI)		Elong % 2in Bin	Dir	Hardness	1 2	3 Avg	<u>"</u> 1			Avg	Tmp	Dir	Siz (mm)	Tmp %Shr
A7E340	28	0.498 (DISCRT) 0.371 (DISCRT) 0.632 (DISCRT)	L	50	66 63		45 43 46	T T											
A7£340  D	121	ower (property)		<del></del>	LT:5		Ob	icel An	ahrafa										
Heat	c	Mn P	8	Si 1	ot A! Se	of Al		Gr	Mo C	b V		В		N					ORGN USA
1d A7E340	1.08		003 ]			1 ].31		,16	.05  .00	,005	.007 .0	1003	.008	85					USA
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(P)	Cus	t Pert#:	<del></del>	,			TESTE	DINA	CERTIFY THA CCORDANCE VTS OF, THE	WITH, A	nd meets t	HE	ATIO	N	Bri SENIOR I	an Wa		PRODUC	)7



CMC STEEL TEXAS
1 STEEL MILL DRIVE
SEGUIN TX 78155-7510

0

3033215110

## For additional copies call 830-372-8771

We hereby certify that the test results purited here are accurate and conform to the reported grade specification

Tommy House

### Quality Assurance Manager

HEAT NO.:3070747 S S Platte Anchor Bolt Co Delivery#: 82067338 Platte Anchor Bolt Co 0 Н SECTION: ROUND 3/4 x 20'0" A529-55 BOL#: 72022864 GRADE: ASTM A529-14 Grade 55 4950 Jackson St 4950 Jackson St CUST PO#: 143291 D Denver CO ROLL DATE: 04/22/2017 Denver CO CUST P/N: MELT DATE: 04/19/2017 US 80216-3018 US 80216-3018 DLVRY LBS / HEAT: 4566.000 LB Cert. No.: 82067338 / 070747A244 3033215100 3033215100 DLVRY PCS / HEAT: 152 EA

0

3033215110

Characteristic	Value	Characteristic Value		Characteristic Value
С	0.19%	Reduction of Area test 1	49%	
Mn	1.09%	Yield Strength test 2	65.9ksi	
P	0.008%	Tensile Strength test 2	90.1ksi	
s	0.028%	Elongation test 2	28%	
Si	0.25%	Elongation Gage Lgth test 2	2IN	
Cu	0.27%	BHN @ Surface test 1	193BHN	
Cr	0.13%			
Ni	0.09%			
Mo	0.039%			
V	0.026%			
Cb	0.003%			
Sn	0.011%			The Following is true of the material represented by this MTR:
AI	0.002%	-		*Material is fully killed
Carbon Eq F1554	0.39%			*100% melted and rolled in the USA
Carbon Eq A529	0.48%			*EN10204:2004 3.1 complaint
				*Contains no weld repair
Yield Strength test 1	66.2ksi			*Contains no Mercury contamination
Tensile Strength test 1	91.2ksi			*Manufactured in accordance with the latest version
Elongation test 1	22%			of the plant quality manual
Elongation Gage Lgth test 1	8IN			*Meets the "Buy America" requirements of 23 CFR635.410

### REMARKS:

ALSO MEETS THE REQUIREMENTS OF SPECIFICATION ASTM F1554 GRADE 55 SUPPLEMENT 1, INCLUSIVEMEETS THE REQUIREMENTS OF AASHTO M314 GRADE 55; SUPPLEMENT 31 INCLUSIVE

04/24/2017 18:32:41

Page 1 OF 1



Unyfite, Inc. One Unylite Drive Peru, IL 61354 Tel 815-224-2221 Fax 815-224-3434

## INSPECTION CERTIFICATE

Job No: 22684

Job Information

Certified Date: 3/17/16

Customer: PLATTE ANCHOR BOLT

SHIP TO: PLATTE ANCHOR

**Customer PO No:** 

137135

Shipped Qty: 26,972

Lot Number: 22684-166188

Part Information

Part No: A563 3/4-10 +0.020 DH HHN HDG BLUE DYE

Name: ASTM A563 Heavy Hex Nut, Grade DH, Hot Dipped

Galv. Blue Dve

Manufactured Quantity: 117,729

	1 teptious o	* *	
Specification	Amend	Specification	Amend
ASME B1.1	2003	ASME B18.2.2	2015
ASME B18.2.6	2010	ASTM A563	2015
ASTM F2329	2013	ASTM F606/606M	2014
ASTM E842/E842M	2012		

Test No: 10711 Test: A563 DH Mechanical Properties

escription Hardness (HRC)			pering Tem _l degree F Mil		Proof Load (Pa (ASTM M		Shape & Din ASME B1		Thread Pr ASME B	Visual ASTM F812	
Sample Inspection	Sample 27.9		1,202		50,100		Pass	,	Pass		Pass
			:	C	ertified Che	mical Anal	lysis	***************************************			^
Heat No	Grade	Manufacturer	Orlgin	С	Mn	Р	S	Si	Cr	Ni	Gu
166188	1045	Alton Steel Inc.	USA	0,4500	0.7400	0.006	0.0300	0.2100	0.1990	0,0760	0.1900

### Notes

All tests are in accordance with the latest revisions of the methods prescribed in the applicable SAE and ASTM Specifications.

The samples tested conform the specifications as described/listed above and were manufactured free of mercury contamination and there is no welding performed in the production of the products. No heats to which Bismuth, Selenium, Tellurium, or Lead was intentionally added have been used to produce

The steel was melted and manufactured in the U.S.A. and the product was manufactured and tested in the U.S.A.

We certify that this data is true representation of information provided by the material supplier and our testing laboratory. This certified material test report relates only to the items listed on this document and may not be reproduced except in full.

OFFICIAL SEAL Jean Marcherio NOTARY PUBLIC - STATE OF ILLINOIS MY COMMISSION EXPIRES: 10/18/17

3/17/16

Savage, Dan - Supervisor, Quality

Date

Plex 3/17/16 8:28 AM dsavage Page 1



# **CERTIFIED MILL TEST REPORT**

Alton Steel Test Lab #5 Cut Street Alton, IL, 62002-9011 (618) 463-4490 EXT 2486 (618) 463-4491 (Fax)

BILL TO		Jnytite, Ind One Unytite					s	нір то		îte, Inc. Civic Road							
	j.	Peru, IL 61	354						LaSa	lle, IL 6130	1						
Date ASI Ord No. ASI Ord Line Item	•	79774	istomer PC istomer PT		B1045SC:	P00580 1.0000	61-9		Specific SAE :							·	
Item Description Steel Bar, Hot Rolled,	1,0000, 2	25' 0 "		· · · · · · · · · · · · · · · · · · ·											Strano	Cast, RR	=62,39;1
Heat Number	::::::				CHEMI	CAL ANAL	VSTS TES	:::::::	Yield PS	M E-415 &	Tensile	PSI	% Elong	ation (	% ROA	Bend	Test
Heat Number	, с	Mn	P.	s	Si	Cu	Ni	Cr	Mo	Sn	AI	Nb/Cb	Ιv	В.	Ti	N	Ca
156125 166188	0.46 0.45	0.79 0.74	0.008 0.006	0.034 0.030	0.23 0.21	0.16 0.19	0.067 0.076	0,128 0,199	0.021	0,008	0.003 0.003	0.025 0.023	0.006 0.005	0.0005	0.0014 0.0012	0.0107 0.0138	0.0019
	1 0.10	1 411 1					· · · · · · · · · · · · · · · · · · ·			LATED FRO			1 0,005	10,0001		0.0130	1 0,000,
Heat Number 156125 166188	GS . 7 . 7	DI 1,45 1,59					SPECIAI	L TEST RE	SULTS			<u></u>					- "
			ASTM E-45 A	lethod A:	· · · · · · · · · · · · · · · · · · ·		ASTM E	45 Method	C;	SAE J422	ASTM	E-381	Ch	агру	Har	dness	
Heat Number	TA	тв то	TD	на н	в нс	HD	s	0		s o	s (	R C			RC	RB BHN	
156125					· · · · · · · · · · · · · · · · · · ·				Decarb: .I	2 1	1	i i					
166188									Decarb: .	3 3 005	1 3	2 1					
							ADDITIO	NAL COM	MENTS								
RMS 021										•							
No mercury, lead, radium equipment is used or del steel. No weld or weld re	iberately ad epairs were	lded in the performed	production of on this mate	rfal.		· · ·	•	allow	ed withou	production of t written appr orporated.							
This Steel is 100% Electr U.S.A. Material qualifies	as NAFTA (	origination.								that the abor of ALTON STE			contained				
Subscribed and sworn to the county of Madison, S			ıblic, in and	for				Qua	lity Lead	er: Josh L	.evl						
thist My commission expires_									<b>*</b>	Zeh,	fev.	, >					
(Notary Public)								-			1						

Certificate Number: 627224

Customer Name: LROUGHT WASHER MFG INC

MILLIAUKEE

H3120

Customer Address: 2100 S BAY ST

Cust PO Number:

Date Issued: 08/18/2015

Page: 1 of 3

**WI** 53207

# SHEET MILL GROUP

Nucor Steel-Crawfordsville 4537 South Nucor Road Crawfordsville, IN 47933-0907

Order Number: 266145 - 0013

Order Dimensions: 0.1240 in X 49.0000 in

HRPO, MILL, 1035

ASTM A568-14

SAE J403 1035

Coil Number 2014320.000

Rockwell B:

Part Number 842122-120 TONS

Weight:

42,260 LBS

CHEMICAL ANALYSIS

Slab Νi  $\operatorname{cr}$ Heat 0.002 0.260 0.145 0.009 0.050 0.087 0.017 0.034 0.009

Coil Number

2014321.000

Rockwell B:

Part Number

842122-120 TONS

Weight:

42,610 LBS

CHEMICAL ANALYSIS

Heat Slab Si.  $\operatorname{\mathtt{Cr}}$ Al 0.260 0.145 0.009 0.050 0.087 0.017 0.034 0.009 0.001 <0.001 0.004 <0.0005 0.003 0.840 0.010

> WE HEREBY CERTIFY THE ABOVE IS CORRECT AS CONTAINED IN THE RECORDS OF THE CORPORATION MELTED AND ROLLED IN THE USA

# Standard Heat Treating, LLC

# Certification

Order No.: 191044

Date: 11/03/2015

Entry Date: 10/31/2015

Page: 1 of 1

To:

Wrought Washer Mfg., Inc 2100 South Bay Street

Purchase Order No.: 293082

Packing List No.:

Milwaukee

WI 53207

Material: 1033

Standard Heat Treating certifies the listed results of inspection and testing to accurately reflect the processes performed and data obtained as a result of our heat treatment of the specified product.

Quantity	Part Number / Part Name / Part Description	Pounds
407,083	017290	16206
•	416262	

		*********									
Insp. Type	Scale	Minimum	Maximum	Number	Other						
Customer Requirements:											
Test	RC	38.	45.		38-45 HRC						

Austentized, quenched and tempered to obtain a hardness of 40-43 HRC.

Alternate signature may include James Perkne (Dir., Customer Service) or Efrain Santoyo (Dir., Production) or Walter Santoyo (Plant Manager).

John Christ Quality Manager

Standard Heat Treating, LLC

Phone: (708)447-7504

Fax: (708)780-5106



19001 Prosperity Rd. West Jordan, UT 84081-7500 ( 801) 965-9532 Fax: (801) 965-9632 . il: Randy@Teamnso.com

# **Delivery Memo**

DATE	INVOICE #					
10/4/2017	11323					

## BILL TO

Mountain States Lighting / Paul Plasha PO Box 449 Conifer CO 80433

## SHIP TO

Town of Pagosa Springs c/o Crossfire 140 Aspen Village Dr Pagosa Springs CO 81147

24hr B4: Scott Lewandowski 303-808-6462

P.O. NUMBER	SHIP DATE	SHIP VIA	JOB NAME
SCOTT062017NWP	10/8/2017	NSC Truck	Pagosa Springs W & E PH Trail

9 .	1	
	12SRA	12SRA-4.5-OT-SGLExtAm Bk
		12' pole height/16' overall height w/arm
. 34	16SRA-4.5	16SRA-4.5-OT-SGLExtAm Bk
	100147-4.5	16' pole height/20' overall height w/arm
43	Ext-arm	Pole extension type top mounted arm assembly Bk
		48" extension w/2' straight arm w/plumbizer
43	Top Cap	4.5" Top Cap matching Light pole
43	42Utah	42" Std Utah elastomer wrap-around base Bk
•	A/B 3/4 x 18	Anchor Bolt (set) 3/4" X 18"
		***Anchor bolts shipped separately to customer on 07/28/17
	77. 4.1.	
1	Freight	Freight Charges from NSC Plant
		·
•		
•		
	,	
•		
•		

Recipient signature, printed name, and date of receipt required above.

All items have been checked for quality and correct quantities prior to shipment. Damages must be reported to carrier within 48 hours of receipt. Shortages must be reported to the shipper within 48 hours of receipt.

	19219-614-3
COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATIO OR MATERIALS DOCUMENTATION	N Region S Field sheet #  Contract ID Date Submitted 3-18-18
	Project No. STE C400-008
Metric units	Project Location PINON CA-USEWAY TO ASPEN VILLAGE M-
Material Type "A-CCESS IBLE PEDESIRIAN SIGNAL	Field Lab phone Cell Phone
Material Code (LIMS) Item Class	Grading Special Provisions yes
Previously used on Project No.: Previous CDOT Fo	rm #157 F/S No.(s):
<ul> <li>Sample Identification: Quantity &amp; Unit of material submitted, describe tests requi</li> <li>Materials Documentation: Field inspected (describe appearance, weight/dimens</li> </ul>	red, precise location sample removed from ( stationing), etc.
THE ACCESSIBLE PEDESTRIAN SIGNAC	
A 2000/150 /1.1 The Paris - 100	Wisher Horce in the
APPROVED BY THE PROJECT ENGINEE	
THE MANUFACTUREE'S COCIS ATTA	YCHEO,
Jer ID	
Sample ID (#1) Sample ID (#2)	Sample ID (#3)
Sample ID (#4) Sample ID (#5)	Sample ID (#6)
APL/QML Acceptance: APL Ref. No. Product name:	Date checked:
IPL/QML Acceptance: APL Ref. No. Product name:	Date checked:
Preliminary Construction Maintenance Emergenc	y Date needed
Contractor Supplier CNOSSAME, LLC	AMPBELL COMPANY
Sampled from Pit name ∃t, roadway, windrow, lock, etc.)	
uantity represented Previous quantity 2 EA	Total quantity to date
ample submitted: Shipped specified quantity to:  Yes A No Central lab Central lab Region lat	
ampled or inspected by (print name) Title PROJECT END	
AVISOR (Pro/Res./Matts, Engr./Maint, Supt.) (print name)  Title  PUESIDENT - PU	Residency

Distribution:

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(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.



January 2018

### **RE: Certificate of Compliance**

CDOT Project No. STE C480-008 Gades PO: 0052592

Campbell Company 450 W. McGregor St., Boise, ID 83705

Guardian APS

Machined aluminum pedestrian notification push button system
502-0801/512

Campbell Company hereby certifies that its Guardian stations meet the requirements set forth in accordance with CDOT specification section 614 – ACCESIBLE PEDESTRIAN SIGNALS. This certification is valid for the Guardian and all of its components and accessories.

Additionally, Campbell Company hereby certifies that all of its products, including the Guardian station, meet all applicable Buy America requirements.

Please contact us with any further questions.

Respectfully,

Dakota Reed

**Customer Solutions Coordinator** 

Campbell Company

, 2 each cm

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1-lump sum of pay item 614-70200, Accessible Pedestrian Signal, that was installed on project number STE C480-008

ling Gresler

2-4-1

One Touch Electric, Inc.

Date

Contractor Rep. Signature

Date 16/1

Date



450 W. MCGREGOR BOISE, ID 83705 WWW.PEDSAFETY.COM

### **BUY AMERICA CERTIFICATION**

Manufacturer: Campbell Company, 450 W. McGregor Drive, Boise, ID 83705

Campbell Company hereby certifies on behalf of itself that it complies with 49 U.S.C. 5323(j) and 49 CFR Part 661, which state that federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver.

Campbell Company certifies that all of its products meet the guidelines and requirements set forth in the American Recovery and Reinvestment Act to be considered Made in America.

If you need further information, please contact us.

Respectfully,

Karen Swofford

Operations Manager

2 each au

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 1 lump sum of pay item 614-72863,

Pedestrian Push Button Assembly, that was installed on

project number STE C480-008.

One Touch Electric, Inc.

12-30-17

Contractor Rep. Signature

Date

		and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t
COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION	Region 5 Field started Contract ID Date S	heet# 266291/
OR MATERIALS DOCUMENTATION	<u>[</u> 9219 Project No.	3-18-18
Metric units	STE C480-008	3
mento dinto	Project Location PINON CASSEMA-Y TO	ASPEN VILLAGE DE-S.
Material Type PEDESTRIAN PUSH BUTTON POST ASSEMBLY	Field Lab phone	Cell Phone
Material Code (LIMS)  Item  Class	Grading Special	al Provisions yes
Previously used on Project No.: Previous CDOT Form	#157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)
<ul> <li>Sample Identification: Quantity &amp; Unit of material submitted, describe tests required</li> <li>Materials Documentation: Field inspected (describe appearance, weight/dimension</li> </ul>	s, model/serial fluffiber), COC &/or	OTT provided , etc.
THE PEDESTRUAN PUSH BUTTON POST ASSE	MBLY WAS (TECK	o INSPECTED ACTORS
AND APPROVED BY THE PROJECT ENGINE	ER. THE ALAMER	HOTHINGS COC
15 ATTACHEO FOR THE PEDESTRIAN PUSH BUTTON.	THE MANUFACTURER	S OTR FOR IS
ATTACHED FOR THE ANCHOR BOLTS.		
THE CONTRACTOR INSESSEROXY ANCHORING MATERIAL	ION THE APL. THE COM	JTRACTOR'S
SCHOOL LATTER IS ATTACHED.		
User ID		
Sample ID (#1)  Sample ID (#2)	Sample ID (#3)	)
Sample ID (#4) Sample ID (#5)	Sample ID (#6	)
APL/QML Acceptance: APL Ref. No. Product name:		Date checked:
4092-16/ HILTI HIN KESWVS		252018 Date checked:
APL/QML Acceptance: APL Ref. No. Product name:		
Preliminary Construction Maintenance Emergency		Date needed
Contractor Supplier -	TIPS INDICATIONS	·
Sampled from (Pit, roadway, windrow, stock, etc.)	r owner	
Quantity represented Previous quantity	Total quan	I FA
Sample submitted: Shipped specified quantity to:  Shipped specified quantity to:  Central lab Region lab	Via	Date
Sampled or inspected by (print name)  Title PROJECT ENS	INEEL E-mail	
Sampled of inspected by (print name)  1 FTON LEE, PE  Supervisor (Pro./Res./Matts. Engr./Maint. Supt.) (print name)  Title  PUESIDENT-	NES Residency	
THUR DRUK PU	-	

Distribution:

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(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.

CDOT Form #157 3/15

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 23, 2018

Re: CDOT Project # STE C480-008

## CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the housing manufactured by TIPS Indications and installed on the above-referenced project meets or exceeds the standards and project specifications.

- 2. Manufacturer: TIPS Indications
- 3. 22480 Co Rd 75, St. Cloud, MN 56301
- 4. Laboratory N/A
- 5. Pedestrian Push Button Station
- 6. GP3 APS Pedestrian Push Button Station
- 7. S.A.A.
- 8. Invoice #0072465-IN
- 9. Meets or exceeds project specifications
- 10. N/A

One Touch Electric, Inc.

Anita Giesler Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents of pay item 614-72863, Pedestrian Push Button Assembly that was installed on project number STE C480-008.

One Touch/Electric, Inc.

2-25-1

Date

Contractor Rep. Signature

3/16/18 Date

# TIP INDICATIONS 22480 CO ROAD 75 ST. CLOUD, MN 56301

10/12/2017

# MADE IN AMERICA

All products designed and manufactured are designed and manufactured in St. Cloud, Minnesota.

Our products meets buy American requirments within the 2009 ARRA.

THANK YOU:

**Darrell Bruestle** Sales Manager Tip Indications

1 each our

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 4-tump-sum of pay item 614-72863, Pedestrian Push Button Assembly, that was installed on project number STE C480-008. One Touch Electric, Inc.

Coutractor Rep. Signature



# CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

2/7/2018

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

QML Part/Sub-Part:

614-72863

APL Category:

Adhesive\Anchoring

APL Sub-Category:

Lateral\Epoxy

APL Base Category:

Adhesive, Concrete Anchoring Agent

APL Reference No.:

4092-16

Product Name:

HIT RE500v3

Manufacturer:

Hilti, Inc.

Date of Web Site Review & Selection: 2/05/18

Crossfire, LLC

Paul Martin,

Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Needed (quantity and units) of pay item:

614-72863 Pedestrian Push Button Post Assembly

(Pay item # and description) that will be installed in Conformance with the plans

and-specifications on Project No. STE C480-008, 19219

Contractor

Date

### APL Reference No. COLORADO DEPARTMENT OF TRANSPORTATION 4092-16 / PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY Material code: Product Evaluation Coordinator 712.10.02.00 Colorado Department of Transportation Material code description full name: 4670 North Holly Street, Unit A Adhesive, Concrete Anchoring Agent Denver, Colorado 80216 PART 1 Product category: Product name: Adhesive\Anchoring, Lateral\Epoxy HIT RE500v3 Manufacturer (name & address): Product Representative (name & address): Attn: Pete Anderson Attn: Pete Anderson Hitti, Inc. Hilti, Inc. 7250 Dallas Parkway, Suite 1000 7250 Dallas Parkway, Suite 1000 Plano, Texas 75024 Plano, Texas 75024 E-mail: Peter.Anderson@hilti.com Phone: (972) 403-5948 E-mail: Peter.Anderson@hilti.com Phone: (972) 403-5948 Web-site address: www.us.hitti.com Web-site address: www.us.hilti.com Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.) HIT RE500v3 is a two component 100% solids, high modulus, structural epoxy paste. It is a solvent free, high strength, high modulus, moisture insensitive non-sag paste epoxy system. Base material temperature range from 41°F to 104°F. Bond strength 2146 psi @ 14 days (for Class C at 50° F). Compressive Strength 12,000 psi @ 7 days (for Class B at 50°F). Gel Time 300 minutes @ 35°F, 36 minutes @ 50°F, and 16 minutes @ 75°F. Technical data available for both rebar and threaded rod installations. Product is available in 11.1 oz, 16.9 oz. and 47.3 oz. cartridges. The 11.1oz. and 16.9 oz. cartridge uses a manual or battery operated dispenser. The 47.3 oz, cartridge uses a pneumatic dispenser. Restrictions, (installation and/or use): Base material temperature from 41°F to 110°F. Use of the product, (be specific to CDOT highway activities only): Primary uses: rebar dowels for concrete repair, road widening and renovations. Secondary uses: safety barriers, sound barriers, and safety railings. Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products): HIT RE500v3 is an economical and versatile adhesive anchoring system. The three sizes of cartridges allow usage from a few anchoring or dowelling uses to large sizes with large volume. The mixing nozzle provides consistent mixing and injection with little waste. The system can be used for rebar or solid bar dowelling or attachment of threaded rods in a variety of applications. Specifications: (listing those applicable is required) CDOT : C881: Types I, II, IV, & V, Grade 3, Classes A, B & C ASTM AASHTO: **FHWA** Certificate of Verification (COV) provided for select categories ONLY other Certificate of Compliance (COC) provided Product Testing: (National/independent laboratories or universities with Report Date.) Certified Test Report (CTR) provided to validate all claims. NTPEP-AASHTO: : Element Materials Technology - ASTM C881 (March 7, 2016) : ICC-ES [ESR-3814] (1-01-2016) other

Alternate Product Category:

Sample submitted: yes

State DOT Approvals, (current documentation required):

Uno

Additional Comments:

other

Hilti has over 10 manufacturer representatives in Colorado that are available for job site installation training of the HIT RE 100 adhesive system. Hilti is the only manufacturer that will train and certify installer with a Hilti certification card after completion of the training. A Hilti field engineer is available in Colorado that can be available for job site technical assistance and can assist with any technical anchoring questions. Contact the Product Rep. at 800-879-8000.

√ yes

Safety Data Sheets (SDS):

∐n/a

Re-submittal Cycle: 4 years

Date:

12/28/2017

Customer:

COLORADO CONCRETE ACCESSORIES

Customer PO:

Subject: Certificate of Conformance - HIT RE-500 V3 Adhesive

Quantity:

40 PCS / 2123404 / Injectable mortar HIT-RE 500 V3/500/1

To Whom it May Concern:

This is to certify that the HIT-RE 500 V3 provided on the above referenced order is a high-strength, slow cure two-part epoxy adhesive contained in two cartridges separating the resin from the hardener.

Tulsa, OK 74121 F: 800-879-8000

F: 800-879-7000

Additionally, this certifies that the product has been seismically and cracked concrete qualified as represented in ICC-ES report ESR- 3814.

Sincerely,

B. Mitchell

B. Mitchell, Certification Specialist

HILTI, Inc. cocRE500 V3

as needed cun

I hereby certify/under penalty of perjury that the material listed in this Certified Test Report represents 1-15-8. of pay item 614-72863 Pedestrian Push Button Assembly that was installed on project number STE C480-008.



614-72863 PED, PUSH BUTTON POST IDE ASSEMBLY

All America Threaded Products, Inc.

731 Martha Avenue Lancaster, Pennsylvania 17601 Phone: (717) 283-4344 Fax: (717) 283-4677

www.AATProd.com

.380

.430

0.75

Min

Max

.000

.035

.000

.040

.150

.350

I hereby certify under penulty of perjury that the material listed in this Certified Test Report represents A TERUNZED (quantity and units) of pay item (13 "COUT LIGHT TO FOUNDE MATERIAL (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspon Village Drive SUP, STE C480:008.

recovery and see

## Oil Wash, Electro-Zinc-Plated, and Hot-Dipped Galvanized Steel Specifications

1 Low carbon steel specification ranges from AATP's steel mills are as below. AATP uses the steel for plain oil finish products (oil wash) for general purpose applications, electro-zinc plated products for applications that require excellent corrosion resistance, and hot-dipped galvanized products that provide corrosion resistance for harsh environments.

Contractor Rep.

Signature

- Products will meet the chemical and physical requirements for SAE J429 Grade 1 and metric Property Class 4.6 (ASTM F568 1979), but AATP does not provide the mechanical testing results. Products 3/4-10 and larger will meet the tensile requirements of SAE J429 Grade 2.
- Products will meet specifications for ASTM A108 and for the tensile of ASTM A307 grade A only.
- > AATP relies upon the steel mills and suppliers to provide tensile and chemical tests only.
- AATP will not sell products certified to SAE Grade 1, metric Property Class 4.6 or A307.
- Steel designations are 1008 through 1022 and may vary depending on product diameter. AATP may use other grades upon customer requirement or approval or general industry standards.
- 2 Rod sizes: range from 1/4-20 through 3/4-10 pitch diameter sizes cold-drawn from hot-rolled coll
- 3 Bar sizes: above 3/4-16 through 2-4 1/2 pitch diameter sizes
- 4 Wire diameter sizes: sizes 4-40 through 12-24
- 5 Low carbon non-resulferized steel chemistry and minimum tensile varies on material designation and amount of cold-drawing in the process. Raw material melt specifications are as follows (restricted within AISI specifications).
- 6 Chemical and physical information per IFI manual (except C1008-C1022 which AATP determined with its suppliers).

7 C	hemical	Analysis			ind S re				01022	********			******	-J	-,-
Grade	Grade 1008:														
	C	MN	Р	S	SI	cu	NI	CR	МО	SN	l N	В	AL	V	CB
Min	.050	0.30	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Max	.100	0.50	.040	.050	.200	.400	.400	.400	,200	.060	.020	.000	.000	.000	.000
Grade	Grade 1018														
	C	MN	Р	S	SI	CU	NI	CR	MO	SN	N	В	AL	V	CB
Min	.150	0.60	.000	.000	.150	.000	.000	.000	.000	,000	.000	.000	.000	.000	.000
Max	.200	0.90	.040	.050	.250	.270	.150	.150	.100	.025	.010	.000	.000	.000	.000
_Grade	1038														
	С	MN	P	S	SI	CU	NI	CR	MO	SN	N	В	AL	V	CB
Min	.350	0.60	.000	.000	.000									<u> </u>	
Max	.420	0.90	.040	.050	.300							<u>L</u>	<u> </u>		<u>                                     </u>
Grade	Grade 1040														
	С	MN	Р	S	SI	CU	NI	CR	MO	SN	N	В	AL	V	CB
Min	.370	0,60	.000	.000		[					<u></u>				
Max	.440	0.90	.040	.050							]	<u> </u>	<u></u>		
Grade	1045														
	С	MN	Р	S	SI	CU	NI	CR	MO	SN	N	В	AL	V	CB
Min	.430	0.60	.000	.000										ļ <u></u>	<u>                                       </u>
Max	.500	0.90	.040	.050								J	<u> </u>		
Grade	4140						-							-	
	С	MN	P	S	SI	CU	NI	CR	MO	SN	N _	В	AL	V	CB
1	,		-									1		1	1

.080

Grade	C1008-C1022 low carbon	ASTM A193 B7 (Chromium Molybdenum)	304 Stainless	316 Stainless	
Tensile Strength (psi)	60,000 minimum APPROX. max. depends on area reduction in drawing	125,000 minimum 1,100 deg. F tempering temp	70,000 minimum	75,000 minimum	
Yield Strength (psi)	50,000 minimum APPROX. max. depends on area	105,000 minimum	30,000 minimum	30,000 minimum	
	reduction in drawing	0.37-0.49	0.08 max.	0.08 max.	
		0.65-1.10	2.00 max.	2.00 max.	
Mn		0.035	.045 max.	.045 max.	
P max.		0.040	.030 max.	.030 max.	
S max.		0.15-0.35	1.00 max.	1.00 max.	
Silicon			18.00-20.00	16.00-18.00	
Chromium		0.75-1.20	8.00-10.50	10.00-14.00	
Nickel		0.45.0.05	0.00 10.00	2.00-3.00	
Molybdenum		0.15-0.25			
Hardness	Rockwell B mid 80's to upper 90's *	Rockwell C26-32 through-hardened			

^{*} ESTIMATES ONLY - hardness in low carbon varies by product diameter, drawn raw material diameter, and depth of test.

Additional Comparison Information

Additional Comparison Information Steel	Proof Load (minimum lbs.)	Yield (minimum lbs.)	Tensile (minimum lbs.)	Rockwell Hardness
4045	(IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		92,000	
1045			110,000	
4140		92,000	120,000	C25-C34
Grade 5		02,000	,	222 222
4140 heat-treated quenched and tempered to ASTM A193B7		105,000	125,000	C26-C32
Grade 8 (heat treated after threading)	120,000	130,000	150,000	C33-C39



# All America Threaded Products, Inc. MID-ATLANTIC DIVISION

731 Martha Avenue | Lancaster, Pennsylvania 17601 1-717-283-4344 FAX 1-717-283-4677 www.aatprod.com

Date: April 2, 2018

Customer Name and Address:

Norther States Supply 600 Industrial Drive

Willmar, MN 56201

Customer Purchase Order Number: 00077445

INVOICE NUMBER: 478340

To Whom It May Concern:

This letter certifies that All America Threaded Products, Inc., Mid-Atlantic Division has supplied to you 304/18-8 stainless steel material on the above order number(s), consisting of the domestically produced products below, in our manufacturing facility located either in Lancaster, PA, from 304 stainless steel in accordance with AISI 304. As such, we comply with the Buy American Requirements for Construction Material, OPCO Regulatory Advisory 09-16 Revision 1, dated May 19, 2009.

611 pieces of SKU 61479 - 5/8"-11 x 7-1/2" All Thread Stud Stainless 304

Kindest Regards,

Melody Keown

Senior Account Manager 4661 Monaco Street

Denver, CO 80216

303-285-3282 DIRECT

303-355-1499 FAX

mkeown@aatprod.com

Field sheet # COLORADO DEPARTMENT OF TRANSPORTATION Region FIELD REPORT FOR SAMPLE IDENTIFICATION Date Submitted Contract ID 19219 R MATERIALS DOCUMENTATION Project No. STE C480-00B Metric units Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR-SUP Field Lab phone (16) COLVIDOUN PEDESTILIAN Special Provisions ves Grading Class Material Code (LIMS) 614 Previous CDOT Form #157 F/S No.(s): CDOT Form #633 (sack) Previously used on Project No.: CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided PEDESTRIAN SIGNAL FACE COUNTDOWN HARDWARE & MATRIALS FIELD INSPECTED AND APPROVED BY THE PROJECT MANUFACTURES COCS ARE ATTACHED Jser ID Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date needed Emergency Construction Maintenance Preliminary M Supplier Contractor MOBOTREX MOSSFIRE Sampled from (Pit, roadway, windrow, stock, etc.) Total quantity to date Previous quantity 2*15A* Quantity represented ()EA Via Shipped specified quantity to: Sample submitted: _ 🔲 Region lab L Central lab Yes E-mail Sampled or inspected by (print name) 'I PTON LEE Residency

White copy - CDOT Central Laboratory (submit white copy only if sample or information is directed to Staff Materials)

upervisor (Pro./Res./Matts. Engr./Maint. Supt.) (print name)

المتعارض والمستحد والمستحد والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض

CDOT Form #157

One Touch Electric, Inc. 3228 Road 21 Cortez, CO 81321 (970) 565-9684 Office (970) 565-6969 Fax CO License #4005 NM License #86635 otelectric1001@qwestoffice.net

February 16, 2018

Re: CDOT Project # STE C480-008

# CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the housing manufactured by GTX and installed on the above-referenced project meets or exceeds the standards and project specifications.

- 2. Manufacturer: GE/GTX
- 3. 1975 Noble Road 338E, E. Cleveland, OH 44112
- 4. Intertek ETL verified compliant/compliant with ITE PTCSI LED Signal Modules
- 16" Countdown Insert
- S.A.A.
- 7. UPS7-CFF1-VLA
- 8. Invoice #0072172-IN
- 9. Meets or exceeds ITE specifications
- 10. N/A

One Touch Electric, Inc. ta Gresler

Anita Giesler Sec/Treas.

> I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 2 of pay item 614-70150, Pedestrian Signal Face (16)(Countdown) that was installed on project number STE C480-008. One Touch/Electric, Inc.



# Lighting

1975 Noble Road 338E East Cleveland, OH 44112-6300 USA

T +1 216 266 4800 F +1 216 266 2158 www.led.com

October 20, 2017

RE: CDOT Project # STE C480 □ 008

GE Certifies that all equipment listed below, being supplied by Gades Sales Co., Inc. to One Touch Electric on the above referenced project complies with the Buy America Act and meets or exceed the standards and project specifications.

QTY 2 - U PS7-CFF1-VLA 16IN - 16inch Countdown Insert

Sincerely

Patrick Rossetti Sales Manager 617-817-1555

patrick.rossetti@ge.com

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

February 16, 2018

Re: CDOT Project # STE C480-008

## CERTIFICATE OF COMPLIANCE

One Touch Electric, Inc. certifies that the housing manufactured by Eagle Traffic control Systems and installed on the above-referenced project meets or exceeds the standards and project specifications.

- 2. Manufacturer: Mobotrex
- 3. 301 West Howard Lane, Suite 200, Austin, TX 78753
- 4. Laboratory N/A
- 5. 16" aluminum pedestrian housing with clam shells
- 6. 16" aluminum pedestrian housing with clam shells
- 7. SG7MZ21C0BB010-49, right housing & SG7MZ22C0BB010-49, left housing
- 8. Invoice #0072172-IN
- 9. Meets or exceeds ITE specifications
- 10. N/A

One Touch Electric, Inc.

Anita Giesler Sec/Treas.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 10 pay item 614-70150, Pedestrian Signal Face (16)(Countdown) that was installed on project number STE C480-008.

One Touch Electric Inc.

Date.

1.

Contractor Rep. Signature

Date



# **Buy America Act Certification**

January 3, 2018

RE: CDOT Project # STE C480-008

To whom it may concern:

We certify that Mobotrex complies with the Buy America Act with the following exceptions: The content of foreign steel consists of miscellaneous hardware (nuts, bolts washers, etc.). See the table below for details by part number. The manufacturing process of the finished product is completed in the United States of America.

SG7MZ21C0BB010-49	PED,16",ALM,NOVSR,M-R	\$ 1.27
1 3(1) (()(221000000000000000000000000000000000	PED,16",ALM,NOVSR,M-L	\$ 1.27
30/MZZZCODOOTO 13		

Please let me know if you have any questions.

# Bret Di Giovanni

Bret Di Giovanni
Channel Sales Representative
MoboTrex
301 West Howard Lane, Suite 200
Austin, TX 78753
P: (512)521-3073
bdigiovanni@mobotrex.com

I hereby certify under penalty of perjury that the material listed in this
Certificate of Compliance represents 1 lump sum of pay item 614-70150, Pedestrian Signal
Face (16) (Countdown), that was installed on project number STE C480-008.

One Touch Electric, Inc.

Date

Contractor Rep. Signature

Date

Date

301 W. Howard Lane, Suite 200, Austin, TX 78753 | MoboTrex.com



# **Buy America Act Certification**

January 3, 2018

RE: CDOT Project # STE C480-008

To whom it may concern:

We certify that Mobotrex complies with the Buy America Act with the following exceptions: The content of foreign steel consists of miscellaneous hardware (nuts, bolts washers, etc.). See the table below for details by part number. The manufacturing process of the finished product is completed in the United States of America.

SG7MZ21C0BB010-49	PED,16",ALM,NOVSR,M-R	\$ 1.27
SG7MZ22C0BB010-49	PED,16",ALM,NOVSR,M-L	\$ 1.27

Please let me know if you have any questions.

# Bret Di Giovanni

Bret Di Giovanni Channel Sales Representative MoboTrex 301 West Howard Lane, Suite 200 Austin, TX 78753 P: (512)521-3073 bdigiovanni@mobotrex.com

I hereby certify under penalty of perjury that the material listed in this
Certificate of Compliance represents 1 leasy sum of pay item 614-70150, Pedestrian Signal
Face (16) (Countdown), that was installed on project number STE C480-008.

One Touch Ejectric, Inc.

Date

Contractor Rep. Signature

Date

301 W. Howard Lane, Suite 200, Austin, TX 78753 | MoboTrex.com

# ROADWAY SUPPLY

# CERTIFICATE OF COMPLIANCE

TO: ACM Construction, LLC

ORDER: Posts, Signs, and Delineators for Ste 480-008

DATE: 12/6/17

**SIGNS** 

Manufacturer:

Lyle Signs Date ordered: 06/12/17

6294 Bury Drive

Eden Prairie, MN 55346

Aluminum:

.080 Thickness: Vulcan Aluminum mill See attached Mill

Certs

900 Vulcan St, Foley, AL 36535

PO# 2554-1

Sheeting:

High Intensity Prismatic 3M 3930

APL Reference # 2648-11

**POSTS** 

Manufacturer:

RM Components: See attached Mill Certs

Post Type:

2" POZ LOC post with wedge

PO# 2012490

**DELINEATORS** 

Manufacturer:

Shur-Flex:

Post Type:

Surface mount 36", 42" or 48" round post, flattened for the upper 3

1/2" or 13". APL Reference # 3125-10

Manufacturer:

3M: Maplewood MN

Reflectors:

3"X3" Yellow High Intensity Prismatic 3M 3930 Sheeting Tab

APL Rererence #2648-11

This letter is to certify that all the above material meets the specifications of the Colorado Department of Transportation. All steel incorporated into materials originated within the United States of America.

Signature:

President, Roadway

Date: Crossfires Certified Test Ri, of

Compliance on Back

4501 Hwy 377 South Brownwood, TX 76801-5907 325-646-3551



# CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M High Intensity Prismatic Reflective Sheeting 3930

Series

MATERIAL: QUANTITY SIZE - IN X YD LOT NO MAC2-1

PURCHASE ORDER NO: 000002585

INVOICE NO: SS56309

SPECIFICATIONS:

ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for Traffic Control", TYPE III/IV

April 4, 2017 Document Received From:

Lefy in James

FACTORY QUALITY ASSURANCE TRAFFIC SAFETY SYSTEMS DIVISION BROWNWOOD, TEXAS 76801

4501 Hwy 377 South Brownwood, TX 76801-5907 325-646-3551



# CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN COMPLIES TO THE SPECIFICATION LISTED BELOW:

**DESCRIPTION:** 3M High Intensity Prismatic Reflective Sheeting 3930

 MATERIAL:
 QUANTITY
 SIZE - IN X YD
 LOT NO

 3930 White
 12 Rolls
 23.9687 X 100
 2BIE31

 3932 Red
 4 Rolls
 18 X 50
 BIE2

PURCHASE ORDER NO: 000002594

INVOICE NO: SS57051

## SPECIFICATIONS:

ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for Traffic Control", TYPE III/IV

April 13, 2017 Document Received From:

Ly my man

FACTORY QUALITY ASSURANCE TRAFFIC SAFETY SYSTEMS DIVISION BROWNWOOD, TEXAS 76801

4501 Hwy 377 South Brownwood, TX 76801-5907 325-646-3551



# CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M High Intensity Prismatic Reflective Sheeting 3930

Series

MATERIAL: QUANTITY SIZE - IN X YD LOT NO BIO1

PURCHASE ORDER NO: 000002792

INVOICE NO: SS63679

## SPECIFICATIONS:

ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for Traffic Control", TYPE III/IV

May 23, 2017
Document Received From:

Lody traffrom

FACTORY QUALITY ASSURANCE TRAFFIC SAFETY SYSTEMS DIVISION BROWNWOOD, TEXAS 76801

4501 Hwy 377 South Brownwood, TX 76801-5907 325-646-3551



# CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M Brand Reflective Sheeting Diamond Grade Series

4090 White 6 Rolls 24 4090 White 6 Rolls 30 4090 White 5 Rolls 30	1 X 50 1 X 50 0 X 50 6 X 50 6 X 50	BIE5 BIE5 BIN1 BIN1 BINI1
-------------------------------------------------------------------	------------------------------------------------	---------------------------------------

PURCHASE ORDER NO: 000002715

INVOICE NO: SS60689

## SPECIFICATIONS:

3M Company Specifications for Prismatic Full Cubed Reflective Sheeting ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for Traffic Control", TYPE XI

May 3, 2017 Document Received From:

July war film

Cody W. Golson FACTORY QUALITY ASSURANCE TRAFFIC SAFETY SYSTEMS DIVISION BROWNWOOD, TEXAS 76801

4501 Hwy 377 South Brownwood, TX 76801-5907 325-646-3551



# CERTIFICATE OF CONFORMANCE

TO: Lyle Signs Inc

THIS IS TO CERTIFY THAT THE MATERIAL SHIPPED AS INDICATED HEREIN COMPLIES TO THE SPECIFICATION LISTED BELOW:

DESCRIPTION: 3M Brand Reflective Sheeting Diamond Grade Series

MATERIAL:	QUANTITY	SIZE - IN X YD	LOT NO BIN3
4083 Fluor Ylw/Grn	2 Rolls	36 X 50	222.0
4083 Fluor Ylw/Grn	1 Roll	30 X 50	BIN4

PURCHASE ORDER NO: 000002907

INVOICE NO: SS67531

## SPECIFICATIONS:

3M Company Specifications for Prismatic Full Cubed Reflective Sheeting ASTM D 4956-16 "Standard Specification for Retroreflective Sheeting for Traffic Control", TYPE XI

June 13, 2017 Document Received From:

July to Jam

Cody W. Golson FACTORY QUALITY ASSURANCE TRAFFIC SAFETY SYSTEMS DIVISION BROWNWOOD, TEXAS 76801





# A PART OF Vulcan, Inc.

# CERTIFICATE OF ANALYSIS

	<i>CTUAL)</i> Others Each Total	Max Max	0.15
	(ACTUAL) Others Each To	Max	0.05
	NOLL	Zu	0.007
5052	MPOS	ប៉	2,409 0.167 2,434 0.165
ALLOY: 5052	CHEMICAL COMPOSITION (ACTUAL) Othe Each	Mg	2.409
∢	CHEMI	Мîn	0.017
		3	0.033
		ir o	0.366
	JAL)	:S	0.055
,	(TIES (ACTL EL %	IN 2".	7.880
	. PROPER YIELD	IN PSI	38,328 34,987
Lyle Signs 000002554-1 382333	MECHANICAL PROPERTIES (ACTUAL) ULTIMATE YIELD EL %	IN PSI	43,103
	TEMPER		H38 H38
CUSTOMER: CUSTOMER PO NO.: VA ORDER NO.:	D WIDTH	(NI)	12
CUSTOM	ORDERED ITEM GAUGE	(N)	0.080
	ITEM	NO.	H 7
	COIL	NUMBER NO.	5318-13

BEND TEST

PASS PASS

(quantity and units) of pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008. i hereby certify under penalty of perjury that the material listed in this Certified Test Report represents 74.25 5.F. (quantity and units) of pay item

Contractor Rep. Signature

May 26th 2017 DATE ISSUED:

COMPLIES WITH THE LATEST REVISION OF ASTM B209, ASME SB-209, AMIS QQ-A-250/8C and SAE AMS 4015 (O), 4016 (H32), and 4017 (H34) STANDARDS WHERE APPLICABLE

MELTED AND MANUFACTURED IN THE USA

RoHS COMPLIANT

AUTHORIZED BY:

DATE CALFORNAL MARK STROBEL

METALLURGICAL & QUALITY MANAGER





# APART OF VUICAM, INC.

# CERTIFICATE OF ANALYSIS

Lyle Signs, Inc. CUSTOMER: CUSTOMER PO NO.:

VA ORDER NO.:

000002354-1 379516

ALLOY: 5052

CHEMICAL COMPOSITION (ACTUAL)

ORDERED

WIDTH

GAUGE

ITEM

COIL

MECHANICAL PROPERTIES (ACTUAL) ULTIMATE YIELD TEMPER

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IN PSI

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NUMBER

<u>ა</u> Ξ

0.335

0.063

5.890

37,331

40,494

H38

24

0.080

5282-21

COMPLIES WITH THE LATEST REVISION OF ASTM B209, ASME SB-209, AMS QQ-A-250/8C and SAE AMS 4015 (O), 4016 (H32), and 4017 (H34) STANDARDS WHERE APPLICABLE

MELTED AND MANUFACTURED IN THE USA

ROHS COMPLIANT

April 18th 2017

DATE ISSUED:

METALLURGICAL & QUALITY MANAGER

MARK STROBEL

AUTHORIZED BY:

0.004 0.028 2.450 0.175 0.008

0.05

uZ

0.15

Max Max

BEND TEST

Each Total

ბ





# APART OF Vulcan, Inc.

# CERTIFICATE OF ANALYSIS

Lyle Signs, Inc. 000002267-1 **CUSTOMER:** CUSTOMER PO NO.:

ALLOY: 5052

BEND

TEST

Total Max

Others Each Tot

Max

占

378109 VA ORDER NO.:

MECHANICAL PROPERTIES (ACTUAL)

El %

ULTIMATE YIELD

TEMPER

WIDTH

ITEM

<u> 100</u>

ORDERED GAUGE

CHEMICAL COMPOSITION (ACTUAL) 0.197  $\ddot{c}$ 2.418 Σg 0.033 불 0.022 J 0.306 a)

ŝ

N 2

IN PSI

IN PSI

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NUMBER

2.379 2.402 0.034 0.048 0.011 0.022 0.296 0.305

> 0.116 0.074

0.197 0.197

**PASS** PASS PASS

PASS

0.15 0.15 0.15

0.05 0.05

0.015 0.019 0.015

> 0.031 0.004

> > 0.115

9.120 6.620

40,533

30 36

5262-16

5270-5

5.960 9.020

> 39,035 36,238 37,096

43,267 41,171

36,650

41,857

H38 H38 H38 H38

30 30

0.080 0.080 0.080 0.100

5262-8 5262-9

0.377

0.057

2.315

0.167

0.15

0.008

0.05 0.05 COMPLIES WITH THE LATEST REVISION OF ASTM B209, ASME SB-209, AMS QQ-A-250/8C and AMS 4015 (O), 4016 (H32), and 4017 (H34) STANDARDS WHERE APPLICABLE

MELTED AND MANUFACTURED IN THE USA

ROMS COMPLIANT

AUTHORIZED BY:

MARK STROBEL

METALLURGICAL & QUALITY MANAGER

DATE ISSUED: March 29th 2017





# APART OF Vulcan, Inc.

# CERTIFICATE OF ANALYSIS

CUSTOMER: Lyle Signs, inc.
CUSTOMER PO NO.: 000002517-1
VA ORDER NO.: 384674

r

ALLOY: 5052

BEND TEST PASS PASS 0.15 0.15 Others Each Total Nax CHEMICAL COMPOSITION (ACTUAL) Max 0.05 0.05 0.018 0.019 Z 0.163 0.163 ပ 2.486 2.515 Σg 0.079 0.080 Zu 0.035 0.035  $\overline{\mathbf{c}}$ 0.327 0.331 ā 0.069 0.070 Š MECHANICAL PROPERTIES (ACTUAL) 5.510 7.000 EL % <u>"</u>2 ULTIMATE YIELD 39,964 39,308 IN PSI 43,256 44,224 IN PSI TEMPER H38 H38 WIDTH Ê 36 O ORDERED GAUGE 0.080 0.080 Ê ITEM ġ NUMBER 5311-6 5311-5 

COMPLIES WITH THE LATEST REVISION OF ASTM B209, ASME SB-209, AMS QQ-A-250/8C and SAE AMS 4015 (O), 4016 (H32), and 4017 (H34) STANDARDS WHERE APPLICABLE MELTED AND MANUFACTURED IN THE USA ROHS COMPLIANT

AUTHORIZED BY:

MARK STROBEL

METALLURGICAL & QUALITY MANAGER

DATE ISSUED: May 22nd 2017

Supplier:

**RM** Components

505 Woodland Park Georgetown, Texas 78633

RM Components hereby certifies that all material required to produce the below listed products were melted and manufactured in the USA. All of the below listed material meets or exceeds the minimum listed requirements as noted and conforms to the

THE BELOW LISTED MATERIAL WAS MELTED AND MANUFACTURED IN THE USA AND COMPLIES WITH THE BUY AMERICAN ACT.

Item description:

2.375" x 14ga. G210 P-Posts with 15 hole pattern

Produced to Specification ASTM A-513

Heat # A78734

Slab Mill:

Nucor Steel Gallatin - Ghent, KY.

Slitting:

Monarch steel - Cleveland, OH>

Pipe Rolling Mill:

Tapco Tube Meadville, PA.

Hole Punching/Fabrication

Regal Machine - Tyler, Texas

Supplier:

RM Components/Regal Machine - Tyler, Tx.

I hereby certify and warrant the statements listed hereon to be true and correct as

listed in the company records.

Robert A. Walton

Sec./Treasurer

RM Components, Inc.

19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

## Nucor Steel Gallatin

4831 U.S. Highway 42 West Ghent, KY 41045-9704 Phone: 1(800)581-3853 Fax: (859)567-3165



# METALLURGICAL TEST REPORT

Invoice To: Monarch Steel Company 4650 Johnston Parkway Cleveland, OH 44128

Ship To: Monarch Steel Company

Monarch Steel Co. 4650 Johnston Pkwy Cleveland, OH 44128

Date: 3/4/2016 Customer No: 766

Customer P.O. No: 1160169

Mill Order No: 196086-5

rucce' HUCOR STEEL GALLATIN

Gustomer Reference No: NA

Load No: 652704

This product was melted and manufactured in the USA to meet the requirements of:

AISI/SAE C1010 with S and P max of 0.035 wt% HR P&O Galv G90

Ordered Size: Nom 0 089 (In.) X 45.10 (In.) X Coil

Coil Number(s): 1333530

Nom 2.261 (mm) X 1146 (mm) X Coil

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ļ	والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والم والمراوي والمراوي والمراوي والمراوي والمراوي والمراوي والمراو	والمعارجين والمساورين والمساورين							Wo
IALICANOS	L ANALYSIS	(Weight %	(0)		Di Di	Cu	l Ni	(J)	1910
		Mn	p	S	51		0.05	0.08	0,01
Heat No	Ç		2010	0.002	0.03	0.15	0.03		
A78734	0.09	0,36	0.010	0.002		Ti	N	211	*********
MIDIO		Ca	Nb	V		0.004	0.0083	0.007	
3	Al		0.002	0.002	0.0001	0.001	0.000	<u> </u>	Law -
<u> </u>	0.028	0.0017	0.002	0,044	<u>)</u>				
-	LEODE .	CTICS				<del></del>	1		

0.002 0.0017 0.002		
0.028 0.0017 0.002		
MECHANICAL PROPERTIES		
WECHANICAET	J	
Coil Tested		
Yield Strength(ksi) Yield Strength(mpa)		
Tensile Strength(ksi)		
Tensile Strength(mpa)		
Tensie strengthous		
% Elongation		
N-Value		,,
N-Value Range		
Hardness(HRBW)		
Test Section	T	
Orientation		
Test Method		

ä						
	REND TES	T RESULTS	Diameter/radius of mandrel	No of	Size of	Pass/
Ì		Guiantation	Diameter/radius	cracks	cracks	Fail
	Coll ID #	Offeritation	of mandier	GIAONO I		
Ì						
	[					·
	<u> </u>					
	E					i i

Hot redied code manufactured through Nucer Steel Gallatin do not contain velos or weld repairs at the enter of shipment (fca mill). Mercury was not added during production of this material. The material was produced using a fully killed line grain practice.

Above tests performed in accordance to ASTM standards E8 (yield strength determined usur) 0.2% citest method and elongation determined using after fracture method) or JIS Z2241. E18, E415, and E1019 and are correct as conserved in the records of the company

The clongation original gauge length is 2 inches for ASTM test method and 1.97 inches for JIS test method. Above test results were performed in accordance to EN 10204-3-1.

Bend tests were conducted in accordance with ISO 7498, ASTM E290, or JIS 22248 using the press, gelded, two support and a mandret bend method at a 189 degree band. Bend tost specimen is longer than 6° and wider than 0.5°

This report shall not be reproduced, except in full, without written approval of the undersigned laboratory managers.

* This nectionical property has been tested at a subcontractor's laboratory.

Stephen S. Sipple Chemical Laboratory Mechanical Laboratory steve.sipple@nucor.com

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# CERTIFICATE OF CONFORMANCE

MONARCH STEEL COMPANY 4650 JOHNSTON PARKWAY CLEYELAND, OH 44128

Page#

4/28/16

:OT

TAPCO TUBE CO. P.O. BOX 457 SHARON CENTER, OH 44274 SHIP TO:

TAPCO TUBE CO. 10748 S. WATER ST. EXT MEADVILLE, PA 16335

SIZE: .086 MIN X 5.18400 X COIL GRADE: HDGAL SLIT COIL MELTED & MFG'D IN THE USA HSLA 050 MIN TUBE

Cust. P/Og: BRO-OV	n Heat#	A78734 F : .01 Mo: .03	Sales Ordr 956605 01 ,284-,095-G98  MaguerTag# 2012490 01 S:.002 Al:.028 Cu:.lb V:.002 D:.0083 B:.0001	Si: .03 Cr: .08 Ti: .001 Elng: 28.0
Ni: .05	Cb: .000	A78734 P: .01 Mo: .01	MasterTag# 1012490 01 S : .002 A1: .028 CD: .15 V : .002 N : .0083 B : .0001 SV Y1d: 51.50	Si: .93 Cr: .08 Ti: .001 Elng: 28.0
Tag# 3095167 C : .08 Mi: .05	ol Heath Mn: .35 Sn: .00	C77071 F: .008 Mo: .01 7 Ca: .002 Tens: 64	MasterTag# 2012505 01 S: .002 Al: .024 Cu: .12 V: .001 W: .0079 B: .0001 .50 Yld: 49.30	S): .04 Cx: .06 Fi: .001 Elig: 33.0%
rag# 3055168 C : .08 Mi: .05	01 Heat# Mn: .35 Sn: .00	C77071 p::.608 Mo:.01 Ca:.002 Tens: 63	MascerTag# 2012505 01 S::.000 Al:.024 C0: 13 V :.001 S::.0079 B::.0004 .50 Yid: 49.30	S1: .04 Cr: .05 Ti: .001 Elng: 33.0%
1937 - 1938 1931 - 1938 1931 - 1938 1931 - 1938	ol Heats Mn: .35 Sn: .00	C77071 p: .008 Mo: .01 Ca: .007 Tens: 63	Mascattage	Si: .04 Or: .06 Ti: .001 Elng: 33.0%
ag# 3055170 C : .08 Ni: .05	0: Heat: Mn: .3	Mo: .01	MasterTags 2012505 01 S: .002 AJ: .024 Cu: .13 V: .001 B: .0079 B: .0001 3.50 7lg: 49.30	

ontinued...

MONARCH STEEL COMPANY 4650 JOHNSTON PARKWAY CLEVELAND, OH 44128

Page#

TO:

TAPCO TUBE CO. P.O. BOX 457 SHARON CENTER, OH 44274 SHIP TO:

TAPCO TUBE CO. 10748 S. WATER ST. EXT MEADVILLE, PA 16335

5.18400 X COLL SIZE: .086 MIN GRADE: HDGAL SLIT COIL MELTED & MFG'D IN THE USA HSLA 050 MIN TUBE

Sales Ordr: 856605

B/L Date 4/28/16 9111/Ladng# 080135 Part No.: 5,184-.095-090 Cust. P/OH: BPO-000234 8878

MasterTag# 2012505 si: .04 Heat# 077071 S : .002 AL: .034 Tag# 3055171 Cr: .06 P : .008 7 : .001 Mn: .35 R: 10000 B: 10001 C: .08 10. :cM Ti: 001 Ni: .05 Elng: 33.0% ca: .002 71a: 49.30 sn: .007 Tens: 63.50

MasterTaga 2012505 Si: .04 Heat# C77071 S: .002 Al: .024 Taga 3055175 800.: 3 Cr: .06 Mn: .35 1001 Cu: .13 80. : 5 Mo: .01 Ti: ,001 N: .007) B: .0001 mi: .05 Elng: 33.0% Ca: .000 Sn: .007 Yld: 49.30 Tens: 63.50

THIS REPORT CERTIFIES THAT THE ABOVE TEST RESULTS REPRESENT THOSE CONTAINED IN THE RECORDS OF MOMARCH STEEL AND CONFORM TO THE REQUIREMENTS OF THE SPECI-FIGATION CITED. THE MATERIAL WAS TESTED IN ACCORDANCE WITH APPLICABLE STAN-DARDS. TESTING WAS PERFORMED BY MONARCH, ITS RAW MATERALL SUPPLIER, AND/OR AN INDEPENDENT TESTING LABORATORY. THE MATERIAL IS NOT GUARANTEED OR WARRANTED TO MEET A SPECIFIC PRODUCT APPLICATION UNLESS STATED IN THE CUSTOMER'S PURCHASE ORDER AND AGREED TO IM ADVANCE BY MONARCH. ANY MODIFICATION MADE TO THIS RE-PORT SUBSEQUENT TO ITS PROVISION BY MONARCH TO ITS CUSTOMER MEGATES ITS VALIDITY.

> Crystal Morrow QUALITY MANAGER

Crystal D. Merrow

Supplier:

RM Components 505 Woodland Park

Georgetown, Texas 78633

RM Components hereby certifies that all material required to produce the below listed products were melted and manufactured in the USA. All of the below listed material meets or exceeds the minimum listed requirements as noted and conforms to the specifications listed.

THE BELOW LISTED MATERIAL WAS MELTED AND MANUFACTURED IN THE USA AND COMPLIES WITH THE BUY AMERICAN ACT.

Item description:

27" & 33" Sockets

Produced to Specification ASTM A-1011 Grade 55

Heat # C76807

Sheet:

Nucor Steel Gallatin - Ghent, KY.

Galvanizing:

Great Lakes Coil - Adrian, MI>

Pipe Rolling Mill:

Tapco Tube Meadville, PA.

Fabrication/Hole Punching

Regal Machine Tyler, Texas

I hereby certify and warrant the statements listed hereon to be true and correct as listed in the company records.

Robert A. Walton

Sec./Treasurer RM Components, Inc.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents INCIDENTAL (quantity and units) of pay item 6/4-0/502 Steel Sign Support (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number __(quantity and units) of pay 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

## **Nucor Steel Gallatin**

4831 U.S. Highway 42 West Ghent, KY 41045-9704 1(800)581-3853 Fax: (859)667-3165



4650 West US 223 Adrian, MI 49221  Bill Order No: 2006 19-1  Customer Reference No: NA  Load No: 668695  Illi Order No: 2006 19-1  Customer Reference No: NA  Load No: 668695  Illi Order No: 2006 19-1  Customer Reference No: NA  Load No: 668695  Into USA to meet the requiroments of:  Excess HR Sheet Steel Bands  Coli Number(s): 1329445  HEMICAL ANALYSIS (Weight %)  eat No C Mn P S Si Cu Ni Cr Mo  276807 0.06 0.84 0.008 0.003 0.03 0.12 0.04 0.05 0.02  Al Ca Nb V B Ti N Sn  Al Ca Nb V B Ti N Sn  O.027 0.0017 0.000 0.074 0.0001 0.002 0.0137 0.009  MECHANICAL PROPERTIES  Coli Tested (Viola Strengthi(ss))  Tomaile Strengthi(ss)  Tensile Strengthi(ss)  Tensile Strengthi(ss)  Tensile Strengthi(ss)  Mechanical Laboration  Navalue Range  Hardness(HRRW)  Test Method  BEND TEST RESULTS  Coli ID 8 Orlentation  Diameter/radius No. of Size of Pass/  Coli ID 80 Orlentation  Diameter/radius No. of Size of Pass/  Coli ID 80 Orlentation  Diameter/radius No. of Size of Pass/  Coli ID 80 Orlentation  Diameter/radius No. of Size of Pass/  Coli ID 80 Orlentation  Diameter/radius No. of Size of Pass/  Coli ID 80 Orlentation  Diameter/radius No. of Size of Pass/  Coli ID 80 Orlentation  Diameter/radius No. of Size of Pass/  Coli ID 80 Orlentation  Test Method  BEND TEST RESULTS  Coli ID 80 Orlentation  Test Method  Bend tast wate conducted in secondance with 150 Orlentation and in accordance as constrained in the recents of the conduction of the radius of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the size of the	BCOR S	TEEL GALL	A 1 1 N		,	1101101 1		, , -				•	- 1	1
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in Fred USA to meet the requirements of:  Excess HR Sheet Steel Bands  File USA to meet the requirements of:  Excess HR Sheet Steel Bands  File USA to meet the requirements of:  Excess HR Sheet Steel Bands  File USA to meet the requirements of:  Excess HR Sheet Steel Bands  File USA to meet the requirements of:  Excess HR Sheet Steel Bands  File USA to meet the requirements of:  File Emical ANALYSIS (Weight %)  Each No C Mn P S SI Cu Ni Cr Mo  Congress O.0.00 0.003 0.03 0.12 0.04 0.05 0.02  All Ca Nb V B TI N Sn  O.0.027 0.0017 0.000 0.074 0.0001 0.002 0.0137 0.009  Emic Hanklick PROPERTIES  Coil Tested  File Strength(Rsi)  File Strength(Rsi)  File Strength(Rsi)  File Strength(Rsi)  File Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)  Forsile Strength(Rsi)				····-		ector to	Pat	eranc	e No:	NA		Load No: 6	368695	
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AI Ca Nb V B II N C  0.027 0.0017 0.000 0.074 0.0001 0.002 0.0137 0.009  MECHANICAL PROPERTIES  Coil Tested  (ricel Strength(Resi)  (ricel Strength(Resi)  (ricel Strength(Resi)  (ricel Strength(Resi)  (ricel Strength(Resi)  (rensile Strength(mpa)  % Elongation  N-Value  N-Value  N-Value  N-Value  N-Value  N-Value  N-Value  N-Value  Marange  Hardness(IRBW)  Test Section  Orientation  Test Method  BEND TEST RESULTS  Coil ID# Orientation  Diameter/radius or mandrel  of mandrel  Cracks oracks Fall  Hot roided coils manufactured through Neers Steel Goalsh do not contin works or word reports at the time of shipment (fice mil).  Microlywas not evided during production of this makerial. The material was produced using a fully killed line grait practice.  Hot roided coils manufactured through Neers Steel Goalsh do not contin works or word reports at the time of shipment (fice mil).  Microlywas and evided during production of this makerial. The material was produced using a fully killed line grait practice.  Hot roided coils manufactured through Neers Steel Goalsh do not contin works or word reports at the time of shipment (fice mil).  Microlywas and evided during production of this makerial. The material was produced using a fully killed line grait practice.  Above tests performed in accordance to ASTM testedards E8 (fyridd strength determined using 0.2% offset method and elongation determined using offset method and elongation and correct se contained in the records of the contained in the records of the contained in the records of the contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained in the records of the Contained		0.06	0.8	4	0.	800	(				1			V.02
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Tensile Strength (tes) Tensile Strength (tes)  **Elongation N-Value N-Value N-Value N-Value Hardness(HRBW) Test Section Orientation Trest Method  BEND TEST RESULTS  Coil ID # Orlentation Diameter/radius of mandrel cracks cracks Fall  Hetroled cois manufactured through Nucar Steel Galatin do not contain walds or weld repairs at the time of shipment (fea mill).  Mercury was not edded during production of this material. The materiel was produced using a fully killed line grain practice.  This product is in compliance with DFARS 252 225, the Buy American Act.  Above bet results were performed in accordance to ASTM standards E8 (yield strength determined using 0.2% offset method and elongation determined using dauge longth is 2 inches for ASTM test method and 1.97 inches for JIS test method.  Stephon S. Sipplic Chemical Laboratory Mechanical Laboratory Mechanical Laboratory The decogration actional gauge longth is 2 inches for ASTM test method and 1.97 inches for JIS test method.  Stephon S. Sipplic Chemical Laboratory bend method in a 180 degree back. Bend lost spectrums list spectrums list appearance in an and size of the understand the long test for the produced, except in (til, without written approved of the understanded laboratory managers.														
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Tensile Strength(mpa)  ½ Elongation  N-Value  N-Value Range  Hardness(HRBW)  Test Section  Orientation  Test Method  BEND TEST RESULTS  Coil ID # Orlentation  Diameter/radius of mandrel  cracks Fall  Hot roled coils manufactured through Nucer Steel Galatin do not contain walds or wald repairs at this time of shipment (fice mit).  Mercury was not added during production of this malarial. The matarial was produced using a fully killed line grain practice.  This product is in compliance with DFARS 252 225, the Buy American Act.  Above tests performed in accordance to it ASTM standards EB (yield strength determined using 0.2% offset method and elongation dottermined using other fracture method) or JIS 22241, E18, E415, and E1019 and are correct as contained in the records of the company.  The delongation engined gauge length is 2 niches for ASTM test method and 1.97 inches for JIS test method.  Above test results were conducted in accordance with ISO 7436, ASTM E290, or JIS 22248 using the press, guided, two support and a mandrel Mechanical Laboratory bond method at a 180 degree bend. Bend first specimen is longer than 6° and wider than 0.8'  Stephan S. Sipple Chemical Laboratory Steve. sipple@enucor.com	Yield St	rength(mpa)	<u></u>											
% Elongation N-Value N-Value Range Hardness(IRBW) Test Section Orientation Test Method  BEND TEST RESULTS  Coil ID # Orientation Of mandrel  Flot rolled coils manufactured through Nucer Steel Galath do not contain works or weld repairs at the time of shipment (fea mit).  Mercury was not edded during production of this material. The material was produced using a fully killed fine grain practice.  This product is in compliance with DFARS 252 225, the Buy American At the Above basis performed in accordance to ASTM standards EB (yield strength detarmined using 0.2% offset method and alongation dotominated using other fracture method) or JIS ZZZ41, E19, E415, and E1019 and are correct as contained in the records of the company.  The alongation explant gatupe length is 2 niches for ASTM test method and 1.97 inches for JIS test method.  The alongation explant gatupe length is 2 niches for ASTM test method and 1.97 inches for JIS test method.  Stephan S. Sipple Chemical Laboratory and the stream of the conditional of the stream of the conditional test of the stream of the stream of the conditional test of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the str	Tensile	Strenguics	າສາ										<del></del>	
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N-Value Range Hardness(HRBW)  Test Section Orientation Orientation Diameter/radius No. of Size of Pass/ Coil ID # Orientation Diameter/radius No. of Cracks Fall  Hot reled coils manufactured through Nucer State Galatin do not contain walds or wald regains at this time of shipment (fee mill).  Mexicury was not edded during production of this material. The material was produced using a fully killed fine grain practice.  This product is in compliance with DFARS 252 225, the Buy American Act.  Above tests performed in accordance to ASTM standards E8 (yield strength determined using 0.2% offset method and alongation dots mined using after fracture method) or Jis 22241, E18, E415, and E1019 and are correct as contained in the records of the company.  The eleogation original gauge length is 2 inches for ASTM test method and 1.97 inches for Jis test method.  Stephon S. Sipple Chemical Laboratory Mahove test results were performed in accordance with ISO 7438, ASTM E290, or Jis 22248 using the press, guided, two support and a mandred to the method and a 180 degree bend. Bend test spectmen is longer than 6° and wider than 0.8°  This report shall not be reproduced, except in full, without written approval of fine undersigned laboratory managers.										<b></b>			<del>                                     </del>	
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Above tests performed in accordance to ASTM standards E8 (yield strength determined using 0.2% offset method and elengation determined using offset method and elengation determined using offset method of the records of the determined using offset fracture method) or JIS 22241, E18, E415, and E1019 and are correct as cantained in the records of the company.  The elengation exhibit gauge freeth is 2 inches for ASTM test method and 1.97 inches for JIS test method.  Stephan S. Sipple Chemical Laboratory Above test results were performed in accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve conducted in accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with ISO 7438, ASTM E290, or JIS 22248 using the press, guided, two support and a mandred serve sipple accordance with	Mercury	mas in a complian	on with C	FARS 25	2 225.	the Buy An	erica	n Act					a	00.
Company.  The elengation original gauge teosith is 2 inches for ASTM instructed and 1.97 inches for JIS test metrod.  The elengation original gauge teosith is 2 inches for ASTM instructed and 1.97 inches for JIS test metrod.  Chemical Laboratory Mechanical Laboratory with ISO 7438, ASTM E290, or JIS 72248 using the press, guided, two support and a mandrel should not a 180 degree bend. Bend test spectmen is longer than 6° and wider than 0.8° steve_sipple@nucor.com  This report shall not be reproduced, except in full, without writing approval of the undersigned laboratory managers.	1442 broo	uctes it explain	oooldane	o to AST	M etan	dards F8 (v	reld s	trength (	ieemir	ed using 0.25	A offsetmethod an	delengation	Stellen.	& Lipl
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This report shall not be reproduced, except in till, which when appears one analysis of the use of the individual or entity named. The information contained in this report may be confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or page 1 copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and destroy the original message. Thank You.	E DON'S MIR	เสดเลเอ เจษ จะน	LCC LCtA.	DOWN ED.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	******	,					p=11 and a 11 and	steve sipple	
The information contained in this report may be confidential information intended only for use the second of the intended in this report may be confidential information and hereby notified that any dissemination, distribution, or page 1 above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or page 1 copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately but the plant and destroy the original message. Thank You.	This repo	nt shall not bo rej echanical propert	has been	excopt a n tosted a	ries, v	ocontractor	slabo	talony.	410 0010		l. Seethause of	the individual	or entity named	
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TAPTU

GREAT LAKES COTL, LLC 4650 W. US 223 ADRIAN, MI 49221

Page# 1 SHIP DATE 7/19/16

SOLD TO: TAPCO TUBE PO BOX 457 SHAROM CENTER, OH 44274 SHIP TO: TAPCO TUBE COMPANY
10748 SOUTH WATER STREET EXT
MEADVILLE, PA 16335

TAG#	SKIDS	PIECES	WEIGHT TARE	GROSS	HEAT#	MASTER TAG#
PO# 8907		PART# YIELD G210	6.982109 GV55 .098	- G2 1.0	= •	312824 01
G210 CHEM 8000055486-	TREAT, 0101 20.0	MIN SPANGLE 1 0000	7980 OD:			3754545-03
CONTRACTAGE.	0203	1	8055	2055	C76807	3754545-03
	65.63	1	8040	8040	C76807	3754545-03
0.000.000	0.003	1	8015	8015	C76807	3754545-03
8000055486~	0501	1.	8005	8005	C76807	3754545-03
8000055486- SUBTOTAL	0601	1				3754545-03
TOTAL >	6	5 6	48095	48095		

# CERTIFICATE OF CONFORMANCE

GREAT LAKES COIL, LLC 4650 W. US 223 ADRIAN, MI 49221 (517) 264-2222

DATE: 7/19/16

SOLD TO: TAPCO TUBE

PO BOX 457

SHARON CENTER, OH 44274

SHIP TO: TAPCO TUBE COMPANY

10748 SOUTH WATER STREET EXT

MEADVILLE, PA 16335

Cust. P/O#: 8907

Part No.: 8.982-.109-G210

SIZE: .098 MIN X 8.98200 X COIL

GRADE: GALVANIZED 55 MIN YIELD G210

DATE SHPPD: 7/19/16

Bill/Ladng# 534699

WT.SHIPPED: 48095

Sales Ordr: 312824

01

CHEMICAL ANALYSIS

Heat Number C76807

C: .06

Mm: .84

800, : q

S: .003

Si: .030

Ti: .002 Cr: .050

Mo: .020

Cu: .120

Al: .027

Cb: .000

V ; .074

PHYSICAL PROPERTIES

Rockwell: 77

Yield: 67156

Tensile: 78290

Elongation: 23.15

QUALITY ASSURANCE MANAGER



2611 Arroyo Dr, Durango, CO 81301
Office# 970-459-4455 Fax# 888-505-3039 Email: acmconstruction@hotmail.com

# **BUY AMERICA CERTIFICATION**

Date: 11/29/17

CERTIFICATE OF CONTRACTOR'S COMPLIANCE TO BUY AMERICA CLAUSE

All steel and/or iron products to be permanently incorporated into the CDOT Project Number STE C480-008, by ACM Construction have been produced or manufactured in the United States of America, Puerto Rico, District of Columbia, or in any of the territories and possessions of the United States of America, except as listed below:

No Exceptions

Our actions were in full compliance with Colorado DOT's Standard Specifications for Road and Bridge Construction, Section 106.11

Signature: Date	d:d:
Title: President	
I, <u>Crickett Holme</u> , as <u>Office Administration</u> .  LLC hereby affirm that the foregoing certificate was signed the <u>November</u> , 20 11 by <u>Tennifer Holmes</u> , we <u>President</u> of ACM Construction, LLC Corporation to this Certificate.	Structor of ACM Construction, his 2 9 deep day of ho is duly constituted as and who is authorized to bind the



## **Certificate of Compliance Letter**

Certificate of Compliance as outlined by section 106.12 of the 2011 Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

Date:

1/17/2018

Project Number:

STE C480-008

Project Code & Name:

19219 Pinon Causeway to Aspen Village

Manufacturer's Name:

Quikrete

Manufacturing facility Address:

2462 1/2 Highway 6 And 50, Grand Junction, CO 81505

**Laboratory Name and Address:** 

2462 Highway 6 And 50, Grand Junction, CO 81505

**Product Name or Assembly:** 

Quikrete 5000 Concrete Mix

**Description of Material:** 

Concrete Mix is a commercial grade blend of stone or grave

sand and cement specially designed for higher early strength

Model, Catalog, Stock Number:

1007

Lot / batch number:

ACM PO# 506654

Date or Frequency of Lab Testing:

Sieve analysis is done on every 5th pallet (pallet weighs 3,360#).

Cylinder strength testing is conducted on a weekly cycle.

**Applicable Specifications:** 

The material above has been reviewed according to subsection

601 of the CDOT Specifications for Road and Bridge Construction

The above product or assembly to be incorporated into the project has been sampled and tested, and the samples have passed all specified tests.

Paul Martin, Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Newscot (quantity and units) of pay item 64-01502 Steel Sign Support (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008

Region S COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION Contract ID Date Submitted OR MATERIALS DOCUMENTATION 19219 Project No. STE (480-008) ves Metric units Project Location PINON CAUSEWAY TO ASPEN VILLAGE DR. - S.U.P. Field Lab phone SIGN PANEL S STEEL SIGN SUPPORT Special Provisions Grading yes Material Code (LIMS) Item 614 Previous CDOT Form #157 F/S No.(s): CDOT Form #633 (sack) Previously used on Project No.: CDOT Form #634 (can) Sample Identification: Quantity & Unit of material submitted, describe tests required, precise location sample removed from ( stationing), etc. Materials Documentation: Field inspected (describe appearance, weight/dimensions, model/serial number), COC &/or CTR provided THE SIGN PANELS WERE FIELD INSPECTED AND APPRONED FOR USE THE PROJECT ENGINEER. THE MANUFACTURERS COC IS ATTACHED FOR THE NETROREFLECTIVE SHEETING SO ATTACHED MILL TEST REPORTS THE STEEL SIGN SUPPORTAL (2 IN ROUND) (POST & SOCKET) WERE FIELD INSPECTED AND APPROVED FOR USE BY THE PROJECT ENGINEER. THE MANUFACTURER'S COC IS ATTACHED. SEEFORM 47% FOR CONCRETE INFO. ON QUIKRETE 5000 TESTING & APPROVAL Sample ID (#3) Sample ID (#2) Sample ID (#1) Sample ID (#6) Sample ID (#5) Sample ID (#4) Date checked: APL/QML Acceptance: APL Ref. No. Product name: PRUSMATIC (#3930) 3 M HIGH INTENSITY 12-7-17 2648-11 Date checked: APL/QML Acceptance: APL Ref. No. Product name: Date needed Emergency Maintenance Construction Preliminary 3 M, & RM COMPONENTS Supplier LYCE SIGNS Contractor CROSSFIRE LLC Pit name or owner Sampled from (Pit, roadway, windrow, stock, etc.) STEEL SIGN Total quantity to date Previous quantity Quantity represented STEEL SIGN Supportables U 0 SIGN PANEL (Class 1 = 72.25 SP Sign Panel (Class)=72.25 \$1 SUPPORT = 165 LA Date Via Shipped specified quantity to: Sample submitted:

Yes

White copy - CDOT Central Laboratory Canary copy - Region Materials Engineer

Pink copy - Resident Engineer

ZLN0

Supervisor (Pro./Res./Matts. Engr./Maint. Supt.) (print name)

Sampled or inspected by (print name)

CLIPTON LEE, PE

MIKE DAVIS, PE

(submit white copy only if sample or information is directed to Staff Materials)

Central lab .

Previous editions are obsolete and may not be used.

E-mail

NO.

Residency

___ 🔲 Region lab

PROJECT ENGINEER

PRESIDENT - DAVIS ENG.

CDOT Form #157



# CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

3/16/2018

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

OML Part/Sub-Part:

APL Category:

Traffic Control

APL Sub-Category:

Sign Sheeting

APL Base Category:

ASTM D 4956, Type IV

APL Reference No.:

2648-11

Product Name:

3M High Intensity Prismatic (#3930)

Manufacturer:

3M Company

Date of Web Site Review & Selection: 3/16/18

Crossfire, LLC

Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 12.25 5.5. (quantity and units) of pay item: 614-100011 Sign Panel (Class I)

(Pay item # and description) that will be installed in Conformance with the plans

and specifications on Project No. STE C480-008, 19219

Contractor

Date

# COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 2648-11

	Mark white and as
Product Evaluation Coordinator Colorado Department of Transportation	Material code: 713.04.01.00  Material code description full name: Traffic Control, Reflective Sheeting

e IV
9293
ed vertically in service
products):
tions): 548)
s):
- /-
n/a
•

	<u> </u>							
COLORADO DEPARTMENT OF TRANSPORT CONCRETE SPECIMEN TRANS	Contract ID 19219 Region 5			Field Sheet # 166006 /				
☐ English ☐ Metric	Project No. 5TE 480-008			Date Submitted				
Ready Mix Supplier:  Quelecte 5000	Project Location PC to	Project Location PC to AVD SUP			Item & Description .  614 - Stan bases			
i i	Station Resident Engineer Robert Shorts			CDOT Mix# NA				
Slump MA inches (mm) Entrained air	NA % Uni	itweight AA lbs/ft³	(kg/m³) Yield	NA	Concrete te	mperature #A	°F (°C)	
Cylinders for design adequacy	Date molded 10 - み4 ~ 1子	Time [0:20	Cured hrs. Days in molds	Days in 20	□ Damp sand ✓ Water	at Temp.	°F (°C)	
Cylinders for structural strength information	Date molded	Time	Cured hrs. Days in molds	Days at str site		□ Central la □ Region la		
Mark Cylinders as indicated	Set no. Conc. class	Days cured Break date	No. of cylinders	L	_aboratory test res	ults		
Sample ID	1 8	JX 21 11-19-11			eter Totalload	PSI/MPa	Break Type	
Sample ID			28		03" 41360	3230	5	
Sample ID			28	- 4.0	⁷³ " 39820	3/10	4	
Specified strength (PSI/MPa) QA/QC	C specification (broke @	28 days)	□ yes □ no 2}	= 4.0		3/70	4	
Specimen type:	eam 🛚 Splitting	☐ Cube						
☐ 6 x 12 cylinder ☐ C	Core Tensile							
Quantity represented Previous cubic yards/meters	This placement	To date						
Field Comments:			Lab comme	ents: Taqu	MINER LAB NE	: #50	95	
						-		
		-		····•	·	rolet P-VIII elde service.		
	CURE BOX: blue	101 temp= 54-	58"		2000 (Marie Carago)			
I.A.T./Remarks: A SEE FORM 473	-		A-6499-00-				* · *****	
· ·					***************************************	<i>/</i> -		
Cast by: (print name) Title Transpor	rted by:(Name/Title/Company		enumber o - 749-4241	E-mail ac	ddress wes Ethat	ur er ette	h. com	
Distribution:	☐ Project File	Region (only if I/			bsolete and may not be u			

COLORADO DEPARTMENT OF TRANSPORTATION FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION	Region
Metric units yes no	Project Location PINON CAUSEWAY TO ASPEN VILLAGEDR-S M.
Material Type PRE FORMED THEMMERASTIC FUNT MICK.	Field Lab phone Cell Phone
Material Code (LIMS)  Item  (27	Grading Special Provisions yes
Previously used on Project No.: Previous CDOT Form	n #157 F/S No.(s):
<ul> <li>Sample Identification: Quantity &amp; Unit of material submitted, describe tests require</li> <li>Materials Documentation: Field inspected (describe appearance, weight/dimension</li> </ul>	ns, model/serial number), COC &/or CTR provided , etc.
THE PREFORMED THERMOPLASTIC PAJES	~
FIELD INSPECTED AND APPROVED FOR USE	
THE MATERIAL IS ON THE APL	
SELECTION LETTERS FORM 5955 ALE	ATTACKED, THE TOUGHING
ITEMS WELL INSTAULD:	
(IV OR	AN OTY FINAL WTY 6 SF 15,5 SF
11D	912 (5
Sample ID (#1)    KEROLIMED THE ID (#2)	75.7 SF Sample ID (#3)
Campio 15 (i/1)	
Sample ID (#4) Sample ID (#5)	Sample ID (#6)
APL/QML Acceptance: APL Ref. No.  Product name:  VCEMACIC, NITTE  APL/QML Acceptance: APL Ref. No.  Product name:	Date checked:  H26 113 17  Date checked:
Preliminary Construction Maintenance Emergency	/ Date needed
CROSSIGNE, LLC EN	INIS-FLINT
Sampled from (Pit, roadway, windrow, stock, etc.)	or owner
Quantity represented  SEE ABULE  O	Total quantity to date  SEE ABUVE
Sample submitted: Shipped specified quantity to:  Yes No Central lab Region lab	Via Date
Sampled or inspected by (print name)  CUFTIN USE PE  Title  PROJECT ENGIN	E-mail
Visor (Pro./Res./Matts. Engr./Maint. Supt.) (print name)  Title  VEESIVENT - V	Residency

Distribution:

White copy - CDOT Central Laboratory
(submit white copy only if sample or information is directed to Staff Materials)
Canary copy - Region Materials Engineer
Pink copy - Resident Engineer
Previous editions are ob

Previous editions are obsolete and may not be used.

CDOT Form #157 3/15



# CERTIFICATE OF CONTRACTOR'S COMPLIANCE FOR APL/QML SELECTION

Date:

11/03/2017

CDOT Project No:

STE C480-008

CDOT Project Location:

Pinon Causeway to aspen Village

CDOT Project Code

19219

The following material was selected from the CDOT Approved Products List in accordance with the project plans, the 2011 Standard Specification for Road and Bridge Construction, and the 2017 Field Materials Manual.

OML Part/Sub-Part:

627-30405 (713.14.01.00)

APL Category:

Traffic Control

APL Sub-Category:

Pavement Marking

APL Base Category:

Thermo Plastic Preformed No Heat

APL Reference No.:

4010-16

Product Name:

Pre Mark White

Manufacturer:

**Ennis Flint** 

Date of Web Site Review & Selection: 11/03/17

Crossfire, LLC

Paul Martin,

Project Manager

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents 15.5 S.F. (quantity and units) of pay item 627-30405 Pymt Marking Words Pay item # and description) that will be installed in Conformance with the plans and specifications on Project No. STE C480-008, 19219

Contractor

01 24 18

Date

Preformed Thermoplastic Pavement Marking (Word-Symbol)

820 Airport Rd, Durango, CO 81137 p(970) 884-4869 f(970) 403-1129

# COLORADO DEPARTMENT OF TRANSPORTATION PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

Product Evaluation Coordinator

☐ FHWA other

other other

Alternate Product Category: Additional Comments:

: Future Labs, LLC (May 22, 2015)

n/a

State DOT Approvals, (current documentation required):

✓ no

APL Reference No. 4010-16 /

Colorado Department of Transportation	713.14.01.00				
and the state of the A	Material code description full name:				
4670 North Holly Street, Unit A	Traffic Control, Preformed Thermoplastic				
Denver, Colorado 80216					
PART 1					
Product name:	Product category: TC\PMM\Thermoplastic, Preformed, No Preheat				
PreMark®, White					
Product Representative (name & address): Attn: Mark Lamar	Manufacturer (name & address): Attn: QPL Administration				
Ennis-Flint	Ennis-Flint				
115 Todd Court	115 Todd Court				
Thomasville, NC 27360	Thomasville, NC 27360				
Phone: (800) 331-8118 E-mail: mlamar@ennisflint.com	Phone: (800) 331-8118 E-mail: qpladmin@ennisflint.com				
Web-site address: www.ennisflint.com	Web-site address: www.ennisflint.com				
Description of the product: (Include specific quantifiable details from tech of	data sheet. Advertising generalities are not appropriate.) al suitable for use as roadway, intersection, commercial or private pavement delineation				
to the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of th	he use of the normal heat of a propane torch. The material can be applied without any preheating of the pavement to a specific temperature. The material is locket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.				
Restrictions, (installation and/or use):					
Restrictions, (installation and/or use): Pavement should be clean and dry. Application on non-bituminous sur	faces requires a compatible primer sealer.				
Pavement should be clean and dry. Application on non-bituminous sur Ise of the product, (be specific to CDOT highway activities only): Primary use-intersection grade pavement marking: crosswalks: stop ba	ars; turn arrows; pavement legends; use on asphalt or non-bituminous surfaces.				
Pavement should be clean and dry. Application on non-bituminous sur Ise of the product, (be specific to CDOT highway activities only): Primary use-intersection grade pavement marking: crosswalks: stop ba	ars; turn arrows; pavement legends; use on asphalt or non-bituminous surfaces.				
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Safety Data Sheets (SDS): 🔽 yes

Material code:

CDOT Form #595 2/16

Re-submittal Cycle: 5 years

	ANCDOTATION	Region 5	Field sheet#	266294-1
COLORADO DEPARTMENT OF TR FIELD REPORT FOR SAM OR MATERIALS DOCU	VIPLE IDENTIFICATION	Contract ID 19219	Date Submitted	
·	yes 🔀 no	Project No.  STE C400-  Project Location PINON CAUSEUM		uge DrS.U.P.
	Λ	Field Lab phone	Cell Ph	one
Material Type FONCE ACCOUNT  Material Code (LIMS)		Grading	Special Provis	ions yes
Previously used on Project No.:	Previous CDOT For		☐ CDOT	Form #633 (sack) Form #634 (can)
Sample Identification: Quantity & Unit of Materials Documentation: Field inspecte A FORCE ACCOUNT W	IRS WTILIZED TO P	Ay FOR THE	CULVER	T REPAIR
THE CMP MID G	ONNECTIONS. THE FILL WAS APPROVE	MANUFACU	inels (	OC 15
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Sample ID (#1)	Sample ID (#2)		mple ID (#3)	
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APL/QML Acceptance: APL Ref. No.	Product name:			Date checked:
APL/QML Acceptance: APL Ref. No.	Product name:	•		Date checked:
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Sampled or inspected by (print name)  CUFTON UEE PE  Supervisor (Pro./Res./Matts. Engr./Maint, Supt.)	(print name)  Title PROJECT E PRESIDENT	NGNEEL Resid	dency	
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Distribution:

White copy - CDOT Central Laboratory
(submit white copy only if sample or Information is directed to Staff Materials)
Canary copy - Region Materials Engineer

Additional Material ordered for the culturt repoir at STA 16+21. Purchased by TDPS. Fax: 970-255-9018 819 21-1/2 ROAD BLDG A and B.HE. to reimbures. GRAND JUNCTION, CO 81505 8/28/17 Date * * * * * * * Ship To - PAGOSA SPRINGS - CASH SALE Page PACKING LIST HIGHWAY 160 AND ALPHA DRIVE ***DO NOT MAIL*** 16,42,18 Time * * * * * * JD 970-442-1318 Customer No.-CKENNE PAGOSA SPRINGS, CO 81147 GRAND JUNCTION, CO 81505 Order No. - 044989-00 970-255-9015 Check # **********0370 THANKS FOR YOUR BUSINESS! * NON-STOCK ITEMS ARE NON RETURNABLE Date Requested - 8/28/17 Date Printed - 8/28/17 Ordered By - CLIFTON Cust. Order # - CLIFTON-PINON CAUSEW
Salesman # - 010 Job Name - PINON CAUSEWAY SHARED USE PATH
Taken By - CASEY Payment Terms - CASH, CHECK, CREDIT CARD Shipped - 8/28/17 ed By -Via - GJWW .00 Line Bin Extended Extended Freight No. of No. Location Unit Price Price Weight Class Packages In rder Shipped On B/O Hold UM Description/Stock Number 1.0 A10-A01 32.7500 1965.00 FT 30X20 CMP 16GA 466803020 EA 30 CMP DIMPLE BAND 2.0 A10-A05 50.6400 50.64 1 466801030 3.0 A10-A05 49.1200 98.24 EA 30 CMP BANDS 16GA 466800130 Subtotal---> 2,113.88 Total Tax\$--> 56.99 Order Total--> 2,170.87 State Tax\$--> 56.99 te Tax%--> 2,900 2,170.87 Cash \$ Paid--> .00 Cash Difference--> END OF PACKING LIST : You agree that the sale of these products/services is subject to all of our standard terms and conditions of sale located at www.winsupplyinc.com/tcsale ** MATERIAL RECEIVED IN GOOD CONDITION ** Customer Signature: ==== TRANSACTION RECORD ============= CARD TYPE: VI CARD NUMBER: **********0370 EXP DATE: **/** REFERENCE #: W00014398725 2,170.87 \$ AUTH #: 028985 SIGNATURE:

CMP material and connections were purchased by the Town of Payosa Springs and the Contractor installed this in the Force Account Culvert Repair Work.



8/31/2017

Contractor: Pagosa Springs, CO

Project: Pinon Causeway to Aspen Village Shared Use Path Project

Project #: STE C480-008 Reference Order #: 044989-00

This letter is to certify that we supplied Pagosa Springs, CO 30 CMP Pipe, and Bands on the above referenced project. The 30" CMP Pipe, and

Bands was manufactured in accordance to the attached certification of compliance.

30" 16 Gage Galvanized Coated Corrugated Metal Pipe Quantity - 60'

30" 16 Gage Galvanized Coated Corrugated Metal Pipe Annular Band 30" 16 Gage Galvanized Coated Corrugated Metal Pipe Dimple Band Quantity - 2ea

Quantity - 1ea

Please contact me with any questions.

Casey Kenney

Sales Manager Grand Junction Winwater 819 21 1/2 Road Grand Junction CO, 81505

Ph: 970-255-9015 Fax: 970-255-9018



# **F COMPLIANCE**

Clern	nont Street	;			Project:	Pinon Causeway Pagosa Springs, CO		
merce	City, CO	80022	SO#		Location.			Total
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CHEMICAL/PHYSICAL CERTIFICATION

Butler, IN 46721 USA 4500 County Road 59 Fax (260) 868-8955 Telephone (260) 868-8000

0 3518 West 73rd Street Precision An Store-T Anderson, IN 46013 United States

O

O O Suite 400 9025 Centre Pointe Drive Contech Engineered Solutions LLC West Chester, OH 45069 United States EDI Contact

543938 Order # Chem Treat: Yes 1,394.6 mm 54.906 in Width Line Item # Oil Type: No 15G264846日日 0.0570 in - Min 1.448 mm - Min \$ E Gauge 11516680 Teat # 1,731 ft Length 528 m ³0000332709 - ` P 0 # Coil Weight 724396900 19,600 lbs Coil Alias 8,898 kg CO2GVL16M Part # Act. Ct. Wt. (oz/ft?) Operator Prime Galv Hot Rolled Sheet Product Description Material Specification ASTM A 929 - 01(0 G210/G210 Center 2.30 Drive 2.13

Testing Direction	22	ი -			
n Yield Strength	0.04   0.22   0.007   0.003   0.03   0.037   0.10   0.05   0.06   0.03   0.006   0.05	Q Q	CI VI Cr Mo SI		
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		0.00		7	<b>≠</b> 4

Made in USA

Longitudinal

38.4 4.80 4.80

(MPa) 265

(25.7

(MPa) 377

63 (Rb)

Welted, thin slab cast and rolled by proud Americans in Butler, IN.

All tests were performed according to applicable standards and are correct as contained in the records of the company.

Metallurgist

\ - = \28/2016 14:54:15

Retriev

Quality Assurance,

Steel Dynamics, Inc. Rev ' svel 4.5 [602] - coil

Page ( · * 1









Liverycop

#### OLDCASTLE SW GROUP, INC.

Submittal # 17-355-003

Version 1

8/4/2017

ONE TOUCH ELECTRIC, INC 3228 RD 21 CORTEZ CO 81321

Job: CDOT STE C480-008

Job Description: Pinion Causeway & Aspen Village, Pag Sprgs CO

Attn: Dick Giesler

All materials and concrete delivered to this project conform to ASTM C-94, ACI 301 and ACI 318 Specifications for Ready Mixed Concrete. Four Comers Materials will not be responsible for concrete compromised by the addition of water, improper placing, finishing or curing techniques.

This submission contains the following mix designs:

Mix Code	Mix Description	Usage
37023344	CLASS D AG GCC	VARIOUS USES
36923344	CLASS BZ AG GCC	VARIOUS USES
30023344	AG CDOT FLOW FILL GCCP	FLOW FILL

Please have your personnel place the order for concrete using the designated mix number. The concrete will come from Plant 355. The phone number is (505) 324-3900.

PLEASE NOTIFY THIS OFFICE AS TO THE ACCEPTANCE OR REJECTION OF THIS MIX SUBMITTAL. LACK OF RESPONSE PRIOR TO FIRST POUR SHALL RESULT IN ACCEPTANCE.

NOTE: ALL CONCRETE MUST BE ORDERED BY THE APPROVED MIX DESIGN NUMBER. EVALUATION OF THIS CONCRETE MUST BE CONDUCTED ACCORDING TO ASTM AND ACI STANDARDS.

Thank you for giving us this opportunity to be of service to you, feel free to contact me if you should need any further assistance.

Sincerely yours,

Tack

Ray Taulli







### Concrete Mix Design Submittal

Date: 08/04/2017

No.

17-355-003

Version 1

Mix Code: 30023344

Description:

AG COOT FLOW FILL GCCP

Customer

ONE TOUCH ELECTRIC, INC

Air Content

**Tolerance** 

Contact

Dick Giesler

2 8

Office Phone

970-565-9684

Slump

Project Name

**CDOT STE C480-008** 

Design Strength

60 psi

Project Description

Pinion Causeway & Aspen Village, Pag Sprgs CO

Unit Weight

136.7 lb/ft3

Usage/ Placement

FLOW FILL

W/C Ratio

3.79

Design

Material	Material	Material Supplier	Material Source	Standard	Design Quantity	Specific Gravity	Volume (ft3)
Code	Description			C-33	1632 lb	2,66	9.84
AG-#67	ANIMAS GLACIER # 67	FCM	ANIMAS GLACIER		<u> </u>	0.00	9.23
	ANIMAS GLACIER SAND	FCM	ANIMAS GLACIER	C-33	1532 lb	2.66	
AG-SND		<del>_</del>	PUEBLO	C-150	60 lb	3.15	0.31
GCC-VII	GCC CEMENT	GCC	POEBLO		50.15	1.99	0.40
1.001100	FOUR CORNERS FLYASH	SRMG	4 CORNERS	C-618	50 lb	1,55	<del> </del>
4-CRNRS		WATER -	WATER	C-1602	50.0 gal	1.00	6.68
WATER	WATER	WATER	WATER	Air Content	2.00 %		0.54
				Yield	3691 lb	-	27.00

NOTES

Prepared By:

Paul Appel



### **DELIVERY INVOICE**

### PAGOSA

BATCH PLANT: 970-731-5194 FAX: 970-731-5197

P.O. BOX 1969 BAYFIELD, CO 81122

No. 053388

EST RESULTS LUMP ONC. TEMP. CYLINDERS TAP	AIR %	CORNERS MATER and shall indemnify a making delivery as a This concrete will mo otherwise warranted to which water or oth of this concrete mus	IALS to traver on the jound hold harmless FOL uithorized and directed eet the specifications for it. FOUR CORNERS More material has been to to be in strict accordance.	DO SITE PRIMES OF JR CORNERS MA  or the working stream  ATTERIALS will no added at the insist a with ASTM process.	ength marked of accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired to accept respired	ility and responsibility for acent thereto as a means its employees from any land on the delivery slip if pro- onsibility for the strength urchaser after it leaves the sed on past due account the event legal action	oss, cost, damag perly poured and and consistency e plant. Any sam	e, or expense in cured but is not of any concrete pling and testing	ARRIVE JOB FINISH POURING
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FHIS LOAD	ORDERED								
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davis Engineering Service, inc.

Date:

8/28/2017

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 01

The work performed on 8/28/2017 was to use an excavator and compactor to locate an abandon culvert outlet.

beontractor Estimated La Work	abor Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash		Fotal Rate	10	otal 
Classification				raid in Cash	\$		\$	-
Code	or the Subcontractor Required	<del> </del>			\$		\$	_
No rador R	of the Buscontinues				\$	_	\$	-
* * * * * * * * * * * * * * * * * * * *					\$	-	\$	-
, ÷					\$	_	\$	-
				<del></del>	3		\$	
							\$	-
Total Direct Compensation Subcontractor Administra	otive/Overhead @ 67%			<b>7</b>				
Subcontractor Administra	ative/Overhead @ 67% es used based on the Minimun	n Wage Decision dated	<u>d 01-27-201</u>	/			<u> </u>	
*Work classification coal	es riseu buseu on							
Estimated Labor Total:								
To the order	Materials					Unit	,	<b>Total</b>
Subcontractor Estimated I	Description	Estimated				Price		
		Quantity				_		
	<u> </u>			<del></del>	\$	<b>-</b>	\$	
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140 Iviator	in 101 12-1						\$	-
							\$	-
							\$	·
	·						\$	-
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Subcontractor Mark-Up	a@ 15%							
Subcontractor Marie of							\$_	
<b>Estimated Materials </b>	Cotal:							
Estimated Materials -								
Subcontractor Estimated	l Equipment			Estimated	1	Shift Rate	•	Total
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Ownorship								
						_ <del>-</del>	\$	-
No equi	pment for the Subcontractor F	Required					\$	-
	<b>*</b>						\$	-
							\$	
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Total Direct Compens	sation				,		\$	
	happtractor Related Overhea	d Costs @ 10%	20 2017					
Dontal Equipment - S	HDCOHUACIOI ICOLATO							
Total Direct Compens Rental Equipment - S	ased on blue book rental rate	sheet dated November	7 20, 2017				\$	
Rental Equipment - S  *Shift rate per hour b  Estimated Equipmen	ased on blue book remainate	Sheet dated November						



davis Engineering service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 01
The work performed on 8/28/2017 was to use an excavator and compactor to locate an abandon culvert outlet.

mated Labor	<b>.</b>			,	Base	Er	inge	7	Cotal .		To	tal
Work	-	Description	Estimated	_			nefits		Rate			-
Classification			Hours	` .	Rate		in Cash		-			
Code				<u>~</u>	14.48	\$	3.53	\$	18.01	\$		9.01
1511	Common Labor	er (Juan Morales)	0.5	\$	20.21	\$	3.75	\$	23.96	5 \$		119.80
1525	Backboe/Trackl	noe Oper. (Juan Morales)	5	\$	13.70	\$	3.53	\$	17.23	3 \$		86.15
1511	Common Labor	er (Castor Morales)	5	\$	19.24	\$	4.96	\$	24.20	0 \$		12.10
1568	Roller/Compact	tor Oper. (Castor Morales)	0.5	\$	33.50	\$	-	\$	33.50	0 \$	_	67.00
N/A	Superintendent	(Jason Vavrina)	2	\$	33.30	Ψ.				\$		294.06
Total Direct (	Compensation									\$		197.02
		erhead @ 67%		10	1 27 2012	,						
*Work classi	fication codes us	rerhead (b) 0176 red based on the Minimum W	age Decision dat	ea vi	-27-2017					\$		491.08
Estimated L	abor Total:			.—–								
Estimated 2		<del></del>										
timated Mat	erials		-0.4						Unit		Ί	'otal
timiatett itzer		Description	Estimated						Price			
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Contractor !	Mark-Up @ 15%										\$ \$	-
Contractor !	ial Cost Mark-Up @ 15% Materials Total										\$ \$	
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Contractor   Estimated	Mark-Up @ 15%  Materials Total  uipment		Estimated	1					Shift Ra	ate	\$ \$	
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Estimated Estimated Eq Ownershi	Mark-Up @ 15%  Materials Total  mipment  p  2011 Caterpi  2005 Caterpi	Description  Har Vib. Soil Compactor CS  Har Hydr. Excavator 314C I	Hours 44 0.5	1					Per Ho	ate our	\$ \$ \$ \$ \$	Total 26.9: 357.2
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8/28/207

Date:

## COLORADO DEPARTMENT OF TRANSPORTATION INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK

Project No.: STE C480-008

Project Code (SA#): 19219

CMO or F/A No.: FA03 - Culvert

Contractor's Name:	Crossfire ILC
Contractor a recine	C10331101

Subcontractor's Name: No subcontractor participated with this force account

Description of Work: Use of Crossfire equipment and personnel to locate abandoned culvert. Packet 01.

cription of Work:					equipm		/7109573					L		Total H	ours		
* ADOP	<del>-</del>		Date:	8-28-1	// //41021	L	1	H	ours		<del></del>	ST	OT	ST	OT		
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											<del> </del> -	<del> </del>	+	5	0		
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CASTOR MORALES			LABOR	5		2	-		T			<del> </del>		5	0		
JASON VAVRINA			NTENDENT	<del></del>		5	-	1				<del></del>		0.5	0		
JUAN MORALES			PERATOR	-3		-5	+	1	T		<del></del>		+	0	0		
CASTOR MORALES	1	1568- O	PERATOR	<del> </del>		1		1	T				-	0	0		
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ŀ	Contractor/Subcontractor Initials		والمستوال المستوال
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I	Billing procedures shall conform to applicable project specifications.  I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the	Date:	
	lander of our period of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the sta		
	Signed: ( ) A	CDOT Form 10	04/1
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davis Engineering Service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 02
The work performed on 8/30/2017 was to use a hydrovac truck to locate the SourceGas gas line and then remove material below the gas line and slope the trench back.

8/30/2017

Date:

ubcontractor Estimated Lab Work Classification	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash		Cotal Rate		`otal
Code				1 444 1	\$		\$	-
No Labor for	the Subcontractor Required	d			\$		\$	
					\$		\$	-
	•				\$		\$	-
					ŝ		\$	-
			· .		Φ		\$	
Total Direct Compensation							\$	-
	- in lOursehood (a) NY/o						Ψ.	
*Work classification codes	used based on the Minimu	m Wage Decision dated	<u>101-27-201</u>	7			<u>s</u>	
Estimated Labor Total:	ubou ousts						ф	
Estimated Labor Total.								
Subcontractor Estimated Ma	aterials					T1.12		Total
Subcontractor Estimated Ma	Description Description	Estimated				Unit		Total
	Description	Quantity				Price		
		ζ., ,						
	C. H. C. L. andreador Page	aired			\$	-	\$	
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							\$	-
*							\$	-
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Total Material Cost							\$	-
Subcontractor Mark-Up @	0, 15%							
Buscommusas							\$	
<b>Estimated Materials Tot</b>	al:					<del></del>		
Subcontractor Estimated E	<u>quipment</u>			Estimated	9	Shift Rate		Total
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Tto oquip							\$	_
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Total Direct Compensation	OII	d Costs @ 10%					\$	-
Rental Equipment - Subo	contractor Related Overhead	about dated November	28. 2017					<u>-</u>
*Shift rate per hour base	ed on blue book rental rate	Sheet adied Hovember					\$	
Estimated Equipment	<u> Cotal:</u>							
		Total Estimated (	act to Euri	nish and Install	(Su	bcontracte	or) \$	
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davis Engineering service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 02

The work performed on 8/30/2017 was to use a hydrovac truck to locate the SourceGas gas line and then remove material below the gas line and slope the trench back.

8/30/2017

Date:

Total Direct Compensation Contractor Administrative/Overhead @ 67% *Work classification codes used based on the Minimum Wage Decision dated 01-27-2017  Estimated Labor Total:  Estimated Materials  Description  Total Material Cost Contractor Mark-Up @ 15%  Estimated Equipment Ownership  Description  Estimated Hours  Owned  Total Direct Compensation Contractor Required  Total Materials Total:  Estimated Materials Total:  Estimated Materials Total:  Estimated Materials Total:  Estimated Materials Total:  Estimated Materials Total:  Estimated Equipment Ownership  Description  Estimated Hours  Total Direct Compensation Rental Equipment - Contractor Related Overhead Costs @ 10% (Owned Equipment)  Estimated Equipment Total:	fits Cash_		Total Rate		Total
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## COLORADO DEPARTMENT OF TRANSPORTATION INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK

Project No.: STE C480-008

Project Code (SA#): 19219

CMO or F/A No.: FA 03 - Culvert

Contractor's Name:	Crossfire, LLC

Subcontractor's Name: No subcontractor participated with this force account.

Description of Work: Use of Hydrovac truck to locate and exposed gas line at culvert. Packet 02.

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Contractor/Subcontractor Initials	
Billing procedures shall conform to applicable project specifications.  I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the a	bove modification
I certify that this is a correct record or employee a equipment or agreement.  Title: Provide Engineer	Date: 3 7 18
Signed: (M	CDOT Form 10 04/17

Distribution: Region Finals Engineer (original) Project File

Previous editions may be used until supplies are exhausted

Contractor



engineering Service, inc.

Date:

8/28/2017 8/31/2017

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

The work performed on 8/29/2017 was to remove material around the potholed area. The work performed on 8/31/2017 was for removing material in preparation for work by Black Hills Energy.

ubcontractor Estimated Labor Work Description Classification	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate	To	otal
Code  No Labor for the Subcontractor Requ	nired		Pald in Cash	\$ \$ \$	- \$ - \$ - \$	-
<u> </u>	·			\$	<u>- \$ .</u>	<del>-</del>
Total Direct Compensation Subcontractor Administrative/Overhead @ 67% *Work classification codes used based on the Min	imum Wage Decision dated	d 01-27-2017	7		\$ 	<u>-</u> 1
*Work classification codes used based on the trans- Estimated Labor Total:					Ψ	
Subcontractor Estimated Materials  Description	Estimated Quantity			Uni Prio	it.	Total
No Material for the Subcontractor	Required			\$	- \$ \$	-
MO Marchar for the page	•			٠.	\$ \$ \$	- - -
Total Material Cost Subcontractor Mark-Up @ 15%						
Estimated Materials Total:					<del>`</del>	
Subcontractor Estimated Equipment Ownership Description			Estimated Hours		t Rate Hour	Total
No equipment for the Subcontrac	otor Required	· ·			\$ \$ \$	-
				· _ ·	\$ _\$	
Total Direct Compensation Rental Equipment - Subcontractor Related Ove	erhead Costs @ 10%				\$ \$	
Rental Equipment - Subcontractor Related Ove *Shift rate per hour based on blue book rental Estimated Equipment Total:	Tate Briter water				\$	
Estimated Equipment 2	Total Estimated	Cost to Fur	nish and Insta	ll (Subco	ntractor) S	<u> </u>



davis Engineering Service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date:

8/28/2017

8/31/2017

The work performed on 8/29/2017 was to remove material around the potholed area. The work performed on 8/31/2017 was for removing material in preparation for work by Black Hills Energy.

Estimated Labor  Work  Classification	Estimated Hours		Base Rate	Bei	inge nefits in Cash		Total Rate	1	Cotal
O. 1.			00.50		iii Casii	\$	33.50	\$	67.00
Code N/A 8/29, 8/31 Superintendent (Jason Vavrina)	2	\$	33.50	\$	8.22	\$	31.60	\$	47.40
Dolon)	1.5	\$	23.38	\$	3.53	\$	17.23	\$	17.23
201 Common Laborer (Edmind Watson)	1	\$	13.70	\$	3.53	\$	17.23	\$	17.23
Y -t Alicholas Regavel	1	\$	13.70	\$		\$	23.50	\$	23.50
	1	\$_	19.75	\$	3.75	-tb	23.30	-\$-	172.36
1535 8/31, Backhoe (Michael Bales)								\$	115.48
Total Direct Compensation Contractor Administrative/Overhead @ 67%				_				4	
Contractor Administrative/Overhead @ 67%  *Work classification codes used based on the Minimum Wagu	e Decision date	ed 01	-27-2017				<del></del>	\$	287.84
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Estimated Labor Total:									
Estimated Materials  Description	Estimated Quantity						Unit Price		Total
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Total Material Cost Contractor Mark-Up @ 15%		_,						\$ \$	-
Estimated Materials Total:									
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Leased 2004 Caterpillar Frnt. End Loader 928G	1.5		8/28				\$ 71.		
Trade Trade Tracevetor 144, 14, 1	ξ 1		8/31		-		ψ /1.	9	
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Estimated Equipment Total:	Total Estima	ted	Cost to F	urnis	h and I	ıstal	I (Contra	ctor)	\$ 428.16
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### COLORADO DEPARTMENT OF TRANSPORTATION INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK

Project No.: STE C480-008

Project Code (SA#): 19219

CMO or F/A No.: FA 03 - Culvert

**Total Hours** 

Contractor's Name:	Crossfire.	LLC

LABOR

No subcontractor participated with this force account. Subcontractor's Name:

8-29-17/ 71095

Use of Crossfire equipment and personnel to locate gas line/culvert conflict. Packet 03. Description of Work:

Hours

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Contractor/subcontractor initiates		
Billing procedures shall conform to applicable project specifications.  I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the	above modification	
order or agreement. Title: Driver Cauling and	Date: 3/7/15	
Signed: Un I I I I I I I I I I I I I I I I I I	CDOT Form 10	04/17



DAVIS engineering service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219 Date:

9/5/2017

9/7/2017

Pinon Causeway to Aspen Village Drive Shared Use Path Project

9/8/2017

Force Account 03 - Culvert Repair Packet 04 The worked performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

No Labor for the Subcontractor Required  No Labor for the Subcontractor Required  Subcontractor Administrative/Overhead @ 67%  **Work classification codes used based on the Minimum Wage Decision dated 01-27-2017  **Estimated Labor Total:  Subcontractor Estimated Materials  Description  Description  Total Material Cost Subcontractor Mark-Up @ 15%  Estimated Materials Total:  Subcontractor Estimated Equipment Ownership  Description  Estimated Shift Rad  Shift Rad  Fer Hours  Per Hours  Per Hours  Per Hours  Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Subcontractor Pating Su	\$ \$ \$ \$ \$ \$ \$	Total
Total Direct Compensation Subcontractor Administrative/Overhead @ 67% *Work classification codes used based on the Minimum Wage Decision dated 01-27-2017  Estimated Labor Total:  Subcontractor Estimated Materials Description Estimated Quantity Unit Price  No Material for the Subcontractor Required  Total Material Cost Subcontractor Mark-Up @ 15%  Estimated Materials Total:  Subcontractor Estimated Equipment Description  Bestimated Shift Rate	\$ \$ \$ \$ \$ \$	Total
Total Direct Compensation Subcontractor Administrative/Overhead @ 67% *Work classification codes used based on the Minimum Wage Decision dated 01-27-2017  Estimated Labor Total:  Subcontractor Estimated Materials Description Estimated Quantity Unit Price  No Material for the Subcontractor Required  Total Material Cost Subcontractor Mark-Up @ 15%  Estimated Materials Total:  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Estimated Shift Rate	\$ \$ \$ \$ \$	Total
Total Direct Compensation Subcontractor Administrative/Overhead @ 67% *Work classification codes used based on the Minimum Wage Decision dated 01-27-2017  [Estimated Labor Total:  Subcontractor Estimated Materials  Description  Description  No Material for the Subcontractor Required  Total Material Cost Subcontractor Mark-Up @ 15%  [Estimated Materials Total:  Subcontractor Estimated Equipment  Overwhim Description  Subcontractor Stimated Equipment  Description  Estimated Shift Rate	\$ \$ \$ \$ \$	Total
Total Direct Compensation Subcontractor Administrative/Overhead @ 67% *Work classification codes used based on the Minimum Wage Decision dated 01-27-2017  Estimated Labor Total:  Subcontractor Estimated Materials Description Bestimated Quantity Price  No Material for the Subcontractor Required  Total Material Cost Subcontractor Mark-Up @ 15%  Estimated Materials Total:  Subcontractor Estimated Equipment Description  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment  Subcontractor Estimated Equipment	\$ \$ \$ \$ \$	Total
Subcontractor Administrative/Overhead @ 67%  *Work classification codes used based on the Minimum Wage Decision dated 01-27-2017  Estimated Labor Total:  Subcontractor Estimated Materials  Description  Description  Description  Total Material Cost Subcontractor Mark-Up @ 15%  Estimated Materials Total:  Subcontractor Estimated Equipment  Description  Estimated Shift Rate	\$ \$ \$ \$ \$	Total
Subcontractor Administrative/Overhead @ 67%  *Work classification codes used based on the Minimum Wage Decision dated 01-27-2017  Estimated Labor Total:  Subcontractor Estimated Materials  Description  Description  Description  Total Material Cost Subcontractor Mark-Up @ 15%  Estimated Materials Total:  Subcontractor Estimated Equipment  Description  Estimated Shift Rate	\$ \$ \$ \$	Total
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Subcontractor Mark-Up @ 15%  Estimated Materials Total:  Subcontractor Estimated Equipment  Description  Estimated Shift Rate	\$	-
Estimated Materials Total:  Subcontractor Estimated Equipment  Description  Estimated Shift Rate	\$	•
Subcontractor Estimated Equipment  Description  Estimated Shift Rate	<u>-</u>	
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No equipment for the Subcontractor Required	\$	; <del>-</del>
	\$	}
	\$	
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	\$	
Total Direct Compensation	\$	-
Rental Equipment - Subcontractor Related Overhead Costs @ 10%	, _	
*Shift rate per hour based on blue book rental rate sheet dated November 28, 2017	\$	\$ ·
Estimated Equipment Total:		
Total Estimated Cost to Furnish and Install (Subcontrac		<u> </u>



engineering service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219 Pinon Causeway to Aspen Village Drive Shared Use Path Project

9/1/2017 Date: 9/5/2017 9/7/2017 9/8/2017

Force Account 03 - Culvert Repair Packet 04

The worked performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

imated Labor Work Classification	Description	Estimated Hours		Base Rate	Bei	inge nefits in Cash		`ota <b>l</b> Rate		Cotal
Code			Φ.	20.25	\$	3.75	\$	24.00	\$	216.00
1507	9/5, Water Truck (Jesus Holguin)	9	\$	13.70	\$	3.53	\$	17.23	\$	241.22
1511	9/5. Common Laborer (Thomas Chee)	14	\$	20.25	\$	3.75	\$	24.00	\$	240.00
1599	0/7: Water Truck (Jesus Holguin)	10	\$			3.53	\$	18.00	\$	180.00
1511	9/7, Common Laborer (Joel Archuleta)	10	\$	14.47	Φ	3,33	\$ .		\$	·
1311									\$	877.22
Total Direct C	ompensation								\$	587.74
				1 27 2011	7					
*Work classif	ministrative/Overhead (a, 6776) ecation codes used based on the Minimum Way	ge Decision da	tea v.	1-2/-2017					\$	1,464.96
Estimated La	bor Total:									
130421144	•									
stimated Mate	rials							Unit		Total
3,000	Description	Estimated						Price		
		Quantity								_
						<del>:</del>	-\$	150.00	\$	150.00
9/1/2017	Rental of Jersey Barrier Lift	1					\$	463.97		463.97
9/1/2017	Purchase of Pond Liner for Inlet Protection	I					. Ψ		\$	-
J1 112011									\$	_
									\$	<b>.</b>
			·							613.97
T-tal Materi	al Cost				<u>.</u>			<u> </u>	\$	613.97 92.10
Total Materi			-		<del></del> -	<u></u>		<u> </u>		613.97 92.10
	al Cost Yark-Up @ 15%		-4						\$ \$	92.10
Contractor M	fark-Up @ 15%								\$	
Contractor M									\$ \$	92.10
Contractor M	Mark-Up @ 15%  Materials Total:		·					Chift Pate	\$ \$ \$	92.10 <b>706.07</b>
Contractor M  Estimated M  Estimated Equ	Mark-Up @ 15%  Materials Total:  ipment	Estimate	1					Shift Rate	\$ \$	92.10
Contractor M	Mark-Up @ 15%  Materials Total:  ipment	Estimated Hours						Shift Rate Per Hour	\$ \$	92.10 <b>706.07</b>
Contractor M  Estimated M  Estimated Equ	Mark-Up @ 15%  Materials Total:  ipment		1					Per Hour	\$ \$	92.10 706.07 Total
Contractor M  Estimated M  Estimated Equ  Ownership	Mark-Up @ 15%  Materials Total:  ipment  Description	Hours	1					Per Hour 124.1	\$ \$ \$	92.10 706.07 Total
Contractor M  Estimated M  Estimated Equ  Ownership  Owned	Mark-Up @ 15%  Materials Total:  ipment  Description  9/5 Crossfire Hydroyac Truck (C13-HV35)	Hours	1					Per Hour 124.1	\$ \$ \$ 1 \$ 1 \$	92.10 706.07 Total 1,737.54 1,241.10
Contractor M  Estimated M  Estimated Equ  Ownership	Mark-Up @ 15%  Materials Total:  ipment  Description	Hours	1					Per Hour 124.1	\$ \$ \$ 1 \$ 1 \$	92.10 706.07 Total 1,737.54 1,241.10
Contractor M  Estimated M  Estimated Equ  Ownership  Owned	Mark-Up @ 15%  Materials Total:  ipment  Description  9/5 Crossfire Hydroyac Truck (C13-HV35)	Hours	1					Per Hour 124.1	\$ \$ \$ 1 \$ 1 \$ \$	92.10 706.07 Total 1,737.54 1,241.10
Contractor M  Estimated M  Estimated Equ  Ownership  Owned	Mark-Up @ 15%  Materials Total:  ipment  Description  9/5 Crossfire Hydroyac Truck (C13-HV35)	Hours	1					Per Hour 124.1	\$ \$ \$ 1 \$ 1 \$ \$ \$	92.10 706.07  Total  1,737.54 1,241.10
Contractor M  Estimated M  Estimated Equ  Ownership  Owned  Owned	Mark-Up @ 15%  Materials Total:  ipment  Description  9/5, Crossfire Hydrovac Truck (C13-HV35 9/7. Crossfire Hydrovac Truck (C13-HV35	Hours	11					Per Hour 124.1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	92.10 706.07  Total  1,737.54 1,241.10
Contractor M  Estimated M  Estimated Equ  Ownership  Owned  Owned	Materials Total:  ipment  Description  9/5, Crossfire Hydrovac Truck (C13-HV35 9/7. Crossfire Hydrovac Truck (C13-HV35	Hours 14 10		ipment)				Per Hour 124.1	\$ \$ \$ 1 \$ 1 \$ \$ \$	92.10 706.07  Total  1,737.54 1,241.10
Contractor M  Estimated M  Estimated Equ  Ownership  Owned  Owned	Mark-Up @ 15%  Materials Total:  ipment  Description  9/5, Crossfire Hydrovac Truck (C13-HV35 9/7. Crossfire Hydrovac Truck (C13-HV35	Hours 14 10		ipment)				Per Hour 124.1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	92.10 706.07  Total  1,737.54 1,241.10
Estimated M Estimated Equ Ownership Owned Owned Total Direct Rental Equ	Materials Total:  ipment  Description  9/5, Crossfire Hydrovac Truck (C13-HV35 9/7. Crossfire Hydrovac Truck (C13-HV35 it Compensation ipment - Contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the contractor Related Overhead Costs (cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of the cite of	Hours 14 10 10 10 10 10% (Owned)	Equ				\$	124.1 124.1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	92.10 706.07 Total 1,737.54 1,241.10 3 2,978.66
Estimated M Estimated Equ Ownership Owned Owned Total Direct Rental Equ	Materials Total:  ipment  Description  9/5, Crossfire Hydrovac Truck (C13-HV35 9/7. Crossfire Hydrovac Truck (C13-HV35	Hours 14 10 10 10 10 10% (Owned)	Equ		urnish	and In	\$	124.1 124.1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	92.10 706.07 Total 1,737.54 1,241.10 3 2,978.66
Estimated M Estimated Equ Ownership Owned Owned Total Direct Rental Equ	Materials Total:  ipment  Description  9/5, Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Cr	Hours 14 10 10 10 10% (Owned	Equ	Cost to F			\$	Per Hour 124.1 124.1 (Contrac	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	92.10 706.07 Total  1,737.54 1,241.10 3 2,978.66 5 5,149.6
Estimated M Estimated Equ Ownership Owned Owned Total Direct Rental Equ	Materials Total:  ipment Description  9/5, Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Crossfire Hydrovac Truck (C13-HV35-9/7. Cro	Hours 14 10 10 10 10 10% (Owned)	Equinted (	Cost to F	iich ar	d Insta	\$ \$	Per Hour 124.1 124.1 (Contract	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	92.10 706.07  Total  1,737.54 1,241.10 3 2,978.66 5 5,149.6



### Grand Junction Pipe & Supply Durango Branch

133 KayCee Lane Durango, CO. 81303 970-385-6733 Remit To: P.O. Box 849 Magna, UT 84044 USA

#### INVOICE

### * * * REPRINT * * *

Terms: All Charge Accounts are due and payable 30 days after date of the invoice. All Cash Accounts are due and payable on the date of invoice. Discounts as shown in the discount column are allowed only if accounts are paid in full, by the date below, and if there is no balance past due. No discounts are allowed on sales tax or delivery charges. Finance Charges: All Past Due are allowed only if accounts are paid in full, by the date below, and if there is no balance past due. No discounts are ollowed on sales tax or delivery charges. Finance Charges: All Past Due are allowed only if accounts are paid in full, by the date below, and if there is no balance past due. No discounts are ollowed on sales tax or delivery charges. Finance Charges of collection, including reasonable Accounts are subject to INTEREST at the RATE of 1 I/2 PERCENT PER MONTH (18% PER ANNUM) applied to the principal monthly plus any costs of collection, including reasonable attended by attended Charges of S20.00 and/or other damages provided by attended Charges (1870). The collection of the company for non-payment upon presentment shall be subject to a return check charge of \$20.00 and/or other damages provided by attended Charges (1870). The collection of the company for non-payment upon presentment shall be subject to a return check charge of \$20.00 and/or other damages provided by attended Charges (1870). The collection of the company for non-payment upon presentment shall be subject to a return check charge of \$20.00 and/or other damages provided by attended Charges (1870).

Bill To: Crossfire, LLC

1800 Hughes Landing Blvd

Suite 500

The Woodlands, TX 77380

Ship To:

Crossfire, LLC

820 Airport Road

Durango, CO 81303

Ordered By: Mr. PAUL MARTIN

Attn: Trina Kitzman			Oldolog 27. tota		ORDER NUMBER
CUSTOMER NO. INVOICE NO. 100757 3535283	9/1/2017 15:12:02	DUE DATE 10/1/2017	SALESMAN Ken Thorson	ORDER DATE 9/1/2017 15:11:45	1572990

	PO NUMBER JOB ID 501414123		Ec	j Hallam	2527754	1 of 1
IE.	17EM DESCRIPTION	ITEM ID	QTY SHIP C	TA BIO NOW	PRICE	EXTO PRICE
<u> </u>	Carrier: C.P.U. Customer Pick Up	11280	500.00	SF	0.86	430.00
PO	NDGARD 45MIL EPDM 10' X 50'	11200				
		ļ		-		
	( this invoice that the					
	"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work,					
	represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown				ļ	
	for CDOT Project No. STE C4au-ous and the private are actual costs."					
	1 10 10 10					
	Crossfire, LLC.	1				
	10/13/17					
	Date					
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						•
) 			<u></u>		SUB-TOTAL:	430
To	tal Lines: 1				e of Colorado	12
				I.	aPlata County Durango	12
					OUNT DUE:	463

## Branson Traffic Control Company, Inc.

74 County Road 231 Durango, CO 81303 Ph. 970-382-8761

Svc Date

9/1/17

Email: dbtccl@bresnan.net

### Invoice

Date	Invoice #
9/14/17	2017074

Bill To	
Crossfire - LLC 820 Airport Road Durango, CO 81303	

are actual costs."

Date

Pro	ject Ref.		Pagosa Springs						
	Unit	Unit Price	Qty	Amount					
Description	DAY	75.00	2	150.00					
Rental of Concrete Barrier Lifter									
NOTE: Customer picked-up equipment on 9/1/17 and returned it on 9/12/17. BTC charging only 2 days rental.		·							
"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown									

Total	\$150.00
Terms	Due on receipt



engineering Service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219 Pinon Causeway to Aspen Village Drive Shared Use Path Project

9/1/2017 Date: 9/5/2017 9/7/2017 9/8/2017

Force Account 03 - Culvert Repair Packet 05

The worked performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

bcontractor Estimated Work Classification	<u>Labor</u> Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate		Total
Code	for the Subcontractor Required				\$	\$	-
No Labor	for the Subcontractor required				\$	. \$	-
					\$	- \$	-
-					\$	- \$	-
	,				\$	- <u>\$</u> \$	
Total Direct Compensa	tion	·	4			\$	_
	www.co.lowarhaad @ 67%	_		7		4	
*Work classification co	odes used based on the Minimum Wag	e Decision dated	101-27-201	<del>/</del>		<u> </u>	
Estimated Labor Tota	al:						
ubcontractor Estimated	l Materials	E-timeted			Unit	t	Total
	Description	Estimated			Price	e	
		Quantity					
	D				\$	- \$	-
No Mate	erial for the Subcontractor Required					\$	-
				•		\$	-
				•		\$	
						\$	
·						\$	
Total Material Cost	~ ~ 150/			•		\$	-
Subcontractor Mark-U	Jp @ 15%						
Estimated Materials	Total:						<u> </u>
Estimated Materials							
Subcontractor Estimate	ed Equipment			Estimated	Shift	Rate	Total
Ownership	Description	•		Hours	Per I		
O Military P			•	110013	10.1		
							\$ -
No équ	ipment for the Subcontractor Require	ed,					\$ -
							\$ -
							\$ -
					· ·		\$ <u></u>
			<u></u>				\$ -
Total Direct Compen	sation	- (2) 109/			٠		\$ -
	3t-contractor Related Overhead COSE	S (a) 10%	28 2017				
*Shift rate per hour	based on blue book rental rate sneet t	iaiea November	20, 2011				\$
Estimated Equipme	ent Total:						
		tal Estimated C		* * * T 4-19	(Cubaan	tractor)	\$ -



davis Engineering Service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date:

9/1/2017 9/5/2017 9/7/2017

9/8/2017

The worked performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and Force Account 03 - Culvert Repair Packet 05 to prepare the area to install the new culvert.

timated Labor Work	Description	Estimated Hours	Base Rate	В	ringe enefits in Cash		otal ate		Tota	
Classification			22.5		III Cum	\$	33.5	0 \$		34.00
Code	intendent (Jason Vavrina)	•	33.5		3.53	\$	17.2			34.46
			\$ 13.7		3.53	\$	17.2	3 \$	_	55.07
1511 9/7, Comm	mon Laborer (Christopher Grando)	-	\$ 13.7		3.75	\$	23.5	50 \$		70.50
	ator (Mike Bales)	3	•	5 \$ 15 \$	3.75	\$	23.	50 \$		41.00
	ator (Juan Morales)	6 .	\$ 19.7		3.53	\$	18.	00 \$		54.00
~	mon Laborer (Juan Morales)	3	\$ 14.4		3.53	\$	17.			55.07
1511 9/7, Com	mon Laborer (Castor Morales)	9	\$ 13.	/U &				\$		144.10
1511 9/7, Com	mon Laborer (Custor	-						\$	4	198.55
Total Direct Compensat Contractor Administrat	tion ive/Overhead @ 67% o <u>des used based on the Minimum Wo</u>	ige Decision dat	ed 01-27-2	017				<u> </u>	1,	242.65
*Work classification co	odes used oused on the					<u> </u>				
Estimated Labor Tota	al:	<del></del>								
Estimated Materials	Description	Estimated Quantity					Unit Price		T-	otal
								;	\$	-
	erial for the Contractor Required	<del>-</del>							\$	-
No Mat	erial for the continues								\$	-
	•								\$	_ =
		•							\$	
								-	\$	-
Total Material Cost	2.152/								\$	-
Contractor Mark-Up	@ 15%								<u></u>	
									<u>s</u>	
Estimated Material							Shift	Rate	\$	- Total
Estimated Material		Estimated	i				Shift	Rate Hour	\$	- Total
Estimated Material	s Total:	Estimated Hours					Shift Per	Hour		
Estimated Material  Estimated Equipment  Ownership	S Total:  Description	Hours	i				Shift Per		\$	Total 642.96
Estimated Material  Estimated Equipment  Ownership	S Total:  Description	Hours	i				Shift Per	Hour	\$	·
Estimated Material  Estimated Equipment  Ownership	s Total:	Hours	i				Shift Per	Hour	\$ \$	
Estimated Material  Estimated Equipment  Ownership	S Total:  Description	Hours	i				Shift Per	Hour	\$ \$ \$	·
Estimated Material  Estimated Equipment  Ownership	S Total:  Description	Hours	i		1		Shift Per	Hour	<b>99999</b>	642.96
Estimated Material  Estimated Equipment Ownership  Leased 9/7, 2	Description  Description  Oos Caterpillar Hydr. Excav. 314C	Hours LCR 9					Shift Per	Hour	\$ \$ \$ \$ \$ \$ \$	642.96
Estimated Material  Estimated Equipment Ownership  Leased 9/7, 2	Description  Description  Oos Caterpillar Hydr. Excav. 314C	Hours LCR 9		nt)			Shift Per	Hour	\$ \$ \$ \$ \$ \$ \$ \$	642.96
Estimated Material  Estimated Equipment Ownership  Leased 9/7, 2  Total Direct Comparent Equipment	Description  O05 Caterpillar Hydr. Excav. 314C  ensation - Contractor Related Overhead Cost	Hours LCR 9		nt)			Shift Per	Hour	\$ \$ \$ \$ \$ \$ \$	642.96 - - -
Estimated Material  Estimated Equipment Ownership  Leased 9/7, 2	Description  O05 Caterpillar Hydr. Excav. 314C  ensation - Contractor Related Overhead Cost	Hours LCR 9 s @ 10% (Owner	1 Equipme		nish and		Shift Per	71.44	\$ \$ \$ \$ \$	642.96
Estimated Material  Estimated Equipment Ownership  Leased 9/7, 2  Total Direct Comparent Equipment	Description  O05 Caterpillar Hydr. Excav. 314C  ensation - Contractor Related Overhead Cost	Hours LCR 9	1 Equipme	to Fur	L and Ins	[nsta	Shift Per	71.44  ntract	\$ \$ \$ \$ \$ or)\$	642.96 



engineering service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219 Pinon Causeway to Aspen Village Drive Shared Use Path Project

9/1/2017 Date: 9/5/2017 9/7/2017 9/8/2017

Force Account 03 - Culvert Repair Packet 06

The worked performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

beontractor Estimated Work Classification	Labor Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate		Cotal
Code	No. 100 Per 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<del> </del>			\$ -	\$	-
No Labor	r for the Subcontractor Required				\$ -	\$	-
	•	-			\$ -	\$	-
					\$ -	\$	-
				1 .	\$	\$	
						\$	-
Total Direct Compensa	tion (78)					\$	-
Subcontractor Adminis	strative/Overhead @ 67%	Name Desirion dates	101-27-201	7			
*Work classification co	odes used based on the Minimum	rage Decision date	* O1 27 201	<u> </u>		\$	
Estimated Labor Tota	al:						
ubcontractor Estimated	l Materials	Estimated			Unit		Total
	Description	Quantity	•		Price		
		Quanty					
	( ) a d' d' transferter Dogiste	<u> </u>		_ <del></del>	\$	\$	• -
No Mate	erial for the Subcontractor Require	, u				\$	-
						\$	-
	•					\$	-
			,		·	\$	
						\$	-
Total Material Cost	150/					\$	-
Subcontractor Mark-U	)p @ 15%						
Estimated Materials	Total:					\$	
Subcontractor Estimate	<u>ed Equipmen</u> t			Estimated	Shift Rate		Total
Ownership	Description	•		Hours	Per Hour		
				120		_	
	and Control Base			<del></del>		\$	_
No equ	ipment for the Subcontractor Req	nitea		,		\$	-
						\$	-
						\$	-
	·				_*	\$	
						\$	-
Total Direct Compen	sation Data to the state	la eta (d) 10%		•		\$	-
Rental Equipment - S	Subcontractor Related Overhead C	osis (U 1070	28 2017				
*Shift rate per hour	based on blue book rental rate she	et aatea tvovember .	20, 2017			\$	
	ent Total:						
Estimated Equipme	THE ROCURT	<u> </u>					



davis Engineering Service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

Date: 9/1/2017 9/5/2017 9/7/2017

9/8/2017

The worked performed on 9/5, 9/7, 9/8 was to excavate and remove material around the gas line to remove the existing culvert and to prepare the area to install the new culvert.

imated Labor Work		Description	Estimated Hours	-	Base Rate	Ber	nge nefits in Cash		Fotal Rate		Т	otal
Classification					22.50	\$	er Cush	\$	$-\frac{1}{33}$	.50	\$	100.50
Code	0/0 Cuporint	endent (Jason Vavrina)	3 -	\$	33.50		3.75	\$			\$	94.00
N/A	O/B Owarator	· (Tuan Morales)	4	\$	19.75	\$	3.53	\$		1.23	\$	68.92
	9/8, Operator	Laborer (Castor Morales)	4	\$	13.70	\$	3.75	\$		1.00	\$	120.00
1511	9/8, Common	ruck (Jesus Holguin)	5	\$	20.25	\$	3.13	\$			\$	273.42
1582	9/8, Water 1	ruck (Jesus Holguin)	9	\$	30,38	\$	3.53	\$		7.23	\$	241.22
1582	9/8, Water I	n Laborer (Thomas Chee)	14	\$	13.70	\$	3.33	\$	. *		\$	<b>-</b> , ,
1511	9/8, Commo	II Laborei (Thomas )		\$		3	_ <del></del> _	φ.			\$	898.06
	ation		<del></del>								\$	601.70
Total Direct	Compensation	Overhead @ 67%				-					•	
Contractor A	dministrative	Overhead @ 61% s used based on the Minimum W	age Decision d	ated 0	1-27-201	7					<u>\$</u>	1,499.76
*Work class	fication codes	s asea basea on										
Estimated I	abor Lotai;		·									
									Un	it		Total
stimated Mat	<u>teriais</u>	Description	Estimated						Pri			
		Dobbile	Quantity						1			
								<del></del>			\$	-
	N. Motorio	d for the Contractor Required									\$	-
	No Materia	ii for the consumer									\$	-
											\$	-
											\$	
							<u>-</u> -			<del>- : -</del>		
			<u></u>		<del></del>		<u>·</u>			<u> </u>	\$	-
Total Mate	rial Cost	150/		<u> </u>	<u> </u>		<u>·</u> _					-
Total Mate Contractor	rial Cost Mark-Up @ ¹	15%			· · · · · · · · · · · · · · · · · · ·					_ <del></del>	\$	- - -
Contractor	rial Cost Mark-Up @ ¹ Materials To										\$ \$	-
Contractor Estimated	Mark-Up @ ¹ Materials To								Chie	A Rate	\$ \$ \$	- - Total
Contractor  Estimated  Estimated Ec	Mark-Up @ 1  Materials To	ntal:	Estimat	ed		·				at Rate	\$ \$	
Contractor Estimated	Mark-Up @ 1  Materials To		Estimat Hours			· · · · · · · · · · · · · · · · · · ·				it Rate	\$ \$	
Contractor  Estimated  Estimated Ec	Mark-Up @ 1  Materials To	ntal:	Hours						Per	Hou	\$	Total 214.33
Contractor  Estimated  Estimated Ec  Ownersh	Mark-Up @ 1  Materials To  quipment  ip	ntal:  Description	Hours			· · · · · · · · · · · · · · · · · · ·			Per \$	Hour 71.4	\$ \$ \$	Total 214.33
Contractor  Estimated  Estimated Ec  Ownersh	Mark-Up @ 1  Materials To  quipment  iip  1 9/7, 2005	Description  Caternallar Hydr, Excay, 314C	Hours						Per	Hou	\$ \$ \$	Total 214.32 1,737.5
Contractor  Estimated  Estimated Ec  Ownersh	Mark-Up @ 1  Materials To  quipment  iip  1 9/7, 2005	ntal:  Description	Hours						Per \$	Hour 71.4	\$ \$ \$ 14 \$ 11 \$	Total  214.32 1,737.54
Contractor  Estimated  Estimated Ec  Ownersh	Mark-Up @ 1  Materials To  quipment  iip  1 9/7, 2005	Description  Caternallar Hydr, Excay, 314C	Hours						Per \$	Hour 71.4	\$ \$ \$ 11 \$	Total  214.32  1,737.54
Contractor  Estimated  Estimated Ec  Ownersh	Mark-Up @ 1  Materials To  quipment  iip  1 9/7, 2005	Description  Caternallar Hydr, Excay, 314C	Hours						Per \$	Hour 71.4	\$ \$ \$ 14 \$ 11 \$	Total  214.32  1,737.54  5 -  6 -  6 -
Estimated Ec Ownersh Leased Owner	Mark-Up @ 1  Materials To  quipment  iip  1 9/7, 2005  1 9/8, Cross	Description  Caterpillar Hydr. Excav. 314C sfire Hydrovac Truck (C13-HV	Hours LCR 3 35) 14						Per \$	Hour 71.4	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Total  214.32 1,737.54 6 - 8 - 8 - 8 1,951.8
Estimated Ec Ownersh Leased Owner	Mark-Up @ 1  Materials To  quipment  iip  1 9/7, 2005  1 9/8, Cross	Description  Caterpillar Hydr. Excav. 314C sfire Hydrovac Truck (C13-HV	Hours LCR 3 35) 14		uipment)				Per \$	Hour 71.4	\$ \$	Total  214.32 3 1,737.54 5 - 5 - 5 1,951.8
Estimated Economics Contractor  Estimated Economics Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Counc	Mark-Up @ 1  Materials To  quipment hip  1 9/7, 2005 h 9/8, Cross  ect Compensa quipment - Co	Description  Caterpillar Hydr. Excav. 314C sfire Hydrovac Truck (C13-HV3 tion ntractor Related Overhead Costs	Hours LCR 3 35) 14		uipment)				Per \$	Hour 71.4	\$ \$	Total  214.32 3 1,737.54 6 - 6 - 7 1,951.8
Estimated Economics Contractor  Estimated Economics Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Counc	Mark-Up @ 1  Materials To  quipment  iip  1 9/7, 2005  1 9/8, Cross	Description  Caterpillar Hydr. Excav. 314C sfire Hydrovac Truck (C13-HV3 tion ntractor Related Overhead Costs	Hours LCR 3 35) 14	ed Eq		Furnis	sh and I	ınsta	Per \$ \$	71.4 124.	\$ \$ \$	Total  214.32 1,737.54 5 - 8 - 8 1,951.8
Estimated Economics Contractor  Estimated Economics Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Council Director Counc	Mark-Up @ 1  Materials To  quipment hip  1 9/7, 2005 h 9/8, Cross  ect Compensa quipment - Co	Description  Caterpillar Hydr. Excav. 314C sfire Hydrovac Truck (C13-HV3 ution intractor Related Overhead Costs	Hours LCR 3 35) 14  5 @ 10% (Own Total Estin	ed Equ	Cost to		and Inet	tall (	Per \$ \$ \$	71.4 124.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Total  214.33 1,737.56 5 - 68 5 - 8 1,951.8 \$ 3,451.4
Estimated Ec Ownersh Leased Owner Total Dire Rental Ec	Mark-Up @ 1  Materials To  quipment hip  1 9/7, 2005 h 9/8, Cross  ect Compensa quipment - Co	Description  Caterpillar Hydr. Excav. 314C sfire Hydrovac Truck (C13-HV3 ution intractor Related Overhead Costs	Hours LCR 3 35) 14	ed Equ	Cost to		and Inet	tall (	Per \$ \$ \$	71.4 124.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Total  214.33 1,737.56 5 - 68 5 - 8 1,951.8 \$ 3,451.4

### COLORADO DEPARTMENT OF TRANSPORTATION INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK

Project No.: STE C480-008

Project Code (SA#): 19219

CMO or F/A No.. FA 03 - Culvert

Contractor's Name: Crossfire, LLC

Subcontractor's Name: No subcontractor participated with this force account.

Description of Work: Use of Crossfire equipment and personnel to excavate material around the existing gas line and culvert.

	Date:	9/1/2	2017	9/5/2	017	9/7/	2017	9/7/:	2017	9/8/2	017	Total I	lours
LABOR	<del></del>					Но	urs						OT
Employee Name	Occupation	ST	ОТ	ST	ОТ	ST	OT	ST	OT	ST	ОТ	ST	Uì
		U1						4		3		7	0
JASON VAVRINA	SUPERINTENDENT			ļ			<del> </del>	2				2	- 0_
EDMUND WATSON	1511-LABOR		- 7	<u> </u>			ļ	9		<u> </u>		9	0
CHRISTOPHER GRANO	1511-LABOR			<u> </u>	<u> </u>	ļ	<u> </u>	3				3	0
MIKE BALES	1535- OPERATOR			ļ	ļ		<del> </del>	6	<b> </b>	4		10	0
JUAN MORALES	1535-OPERATOR			<u> </u>	<u> </u>		<del> </del>	9	<b></b> -	4		13	0
CASTOR MORALES	1511-LABOR				ļ		<del> </del>	°	<del> </del>	5	9	29	9
JESUS HOLGEN	1511-LABOR		<u> </u>	14	ļ	10	<del> </del> -	<del>-</del>	+	14	<del>                                     </del>	28	0
THOMAS CHEE	1511-LABOR			14	<u> </u>	<del> </del>	<del> </del>	<b>_</b>				10	0
JOEL ARCHULETA	1511-LABOR			Checke		10		J			L	Date:	<u> </u>

he hours shown here	e we	re che	ecked agains	t the certified	Checked By:	11/2 lu_			3[1(+0				
ayrolls.			Date:	9/1/2017	9/5/2017	9/7/2017	9/7/2017	9/8/2017	Total Hours				
EQUIPMENT		ift	Date.	3) (1201)	Number of Hours								
Code No.	1 st	SB	Rate				9	3	12				
2005 CAT 314C LCR			\$71.44			<del> </del>		14	38				
YDROVAC (C13-HV35)	<del></del>		\$124.11		. 14	10			0				
							<del> </del>		0				
		1							0				
	1						<del> </del>		0				
	<b>†</b>								0				
	1-							+	0				
	1	1					9/7/2017	9/8/2017	Total Unit				
MATERIAL			Date:	9/1/2017	9/5/2017	9/7/2017	9/1/201/	1	10tal Ullic				
Type			Unit	l ad an nort of	hilling	Number of Unit	s						
Note: A Certified Inv	oice	for M		quired as part of	Dilling.				11				
BARRIER LIFTER (\$1			EACH										
POND LINER (\$46	3.97	24_	EACH	<del> </del>									
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									0				
						(Paul	(Val	Tur					
Contractor/Subc	ontra	actor	Initials	57.001	Pn-1								

Contractor/oddocornicates		
Billing procedures shall conform to applicable project specifications.  I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the a	bove modification	
	Date: 3 7 18	)
Claused: ( ) [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [	CDOT Form 10	04/17

### COLORADO DEPARTMENT OF TRANSPORTATION INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK Project Code (SA#): 19219

Project No.: STE C480-008

CMO or F/A No.: FA 03 - Culvert

Contractor's Name: Crossfire, LLC

Subcontractor's Name: No subcontractor participated with this force account.

Description of Work: Use of Crossfire equipment and personnel to excavate material around the existing gas line and culvert.

cription of Work:			Date:		11/2017			2017	9/7/2	2017	9/7/2		9/8/2	2017	Total b	lours
LABOR	Γ								Ho	urs OT	ST	OT	ST	ОТ	ST	ОТ
Employee Name		Occu	pation	ST	- (	ОТ	ST	OT	ST	<u> </u>					3	0
JUAN MORALES		1511-	LABOR					<u> </u>		<b> </b>	3	<del> </del>			0	Ö
JUAN MOTALLO	-								<b> </b>	<del> </del>	<del> </del>				0	0
									<u> </u>	<u> </u>	<del> </del>	<del> </del>	<b>\</b>		0	0
								<u> </u>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	T		0	0
											<del>-</del>	<del> </del>	1		0	0
										<del> </del>	<del></del>	<del> </del>	1		0	0_
				1				_	<del> </del>	<del></del>	<del> </del>	+	1		0	0_
				1								_	-		0	
				1_			Chack	ed By:	11:1	100		_1			Date:	3 7/18
ne hours shown her	e we	re che	cked aga	inst ti	ne cerui		CHECK	ou by						8/2017	Tata	Hours
ayrolls.	- C	ift	Dat	e:l	9/1/20	017	9.	/5/2017	9/	7/2017	9/	7/2017			- 10ta	I Hours
EQUIPMENT	1 st			-					Numb	er of Hou	ırs					0
Code No.	1	36	Rate				T			_						0
	_	11					+						_}-			0
	<u> </u>			- -			+									0
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	4-	<u> </u>		-+-			-									0
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		<del> </del>	ļ											- (0/0D47		
			<u></u>	ate:	9/1/	2017		9/5/2017		9/7/2017		9/7/2017	1	9/8/2017	1	otal Unit
MATERIAL				-+						ber of U	nite					
Type Note: A Certified In	voice	for M	aterials i	s requ	ired as	part o	billing.		Nuit	ibet of o						0
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Contractor/Sub	contr	actor	initials			1										

Contractor/Subcontractor Initials	
Billing procedures shall conform to applicable project specifications.  I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by the a	above modification
I certify that this is a correct record of employee & equipment routs and materials	Date: 3/7/2018
order or agreement. Signed: Title: Project Empire en	CDOT Form 10 04/17
() of Loo	0,000

Contractor



engineering service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219 Date:

9/11/2017

Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 07

The work on 9/11 was for excavation of culvert trench in the north-south direction. The trench excavation was prepared for placement of gravel bedding and then setting of the culvert banding and new culvert section.

bcontractor Estimated Work Classification Code	Description	Estimated Hours	Base Rate	Fringe Benefits Paid in Cash	Total Rate		Total
No Labor	for the Subcontractor Required		-1"	-	\$	- \$	-
110 1100	Tot mo pastomenta and a				\$	- \$	-
					\$	- \$	-
				•	\$	- \$	-
					\$	- \$	
Total Direct Compensat	tion			-	<del></del>	\$	-
Subcontractor Administ	trative/Overhead @ 67%					\$	-
*Work classification co	des used based on the Minimum V	Vage Decision dated	01-27-201	17			
Estimated Labor Tota		<u> </u>				\$	
District Line 1							
bcontractor Estimated	Materials						<b>.</b>
	Description	Estimated			Unit		Total
		Quantity			Price	3	
No Mate	rial for the Subcontractor Require	d			\$	- \$	-
	· · · · · · · · · · · · · · · · · · ·					\$	-
						\$	-
•						\$	-
	•			<u> </u>		- \$	-
Total Material Cost						\$	_
Subcontractor Mark-Up	p @ 15%					\$	
Estimated Materials	l'otal:					\$	-
rbcontractor Estimated	l Equipment						
Ownership	Description			Estimated Hours	Shift I Per H		Total
	Cat Cat Harden Bann	land.	<del></del>	<del></del>		\$	
No equi	pment for the Subcontractor Requ	ireu				\$	
						\$	
						\$	
•						. \$	
				<del></del>		\$	
Total Direct Compensa	ation	-4- (a) 100/				\$	
Rental Equipment - Su	bcontractor Related Overhead Co	ISIS (Ø) 10%	2017			Ψ	
*Shift rate per hour ba Estimated Equipmen	sed on blue book rental rate shee	i aaiea iyovember 20	0, 2017	<u> </u>		\$	
						Ψ	



engineering service, inc.

CDOT No.: STE C480-008

CDOT Project Code: 19219 Pinon Causeway to Aspen Village Drive Shared Use Path Project

Force Account 03 - Culvert Repair Packet 07 The work on 9/11 was for excavation of culvert trench in the north-south direction. The trench excavation was prepared for placement of gravel bedding and then setting of the culvert banding and new culvert section.

timated Labor Work	Description	Estimated Hours	-	Base Rate	Вс	inge nefits		Гotal Rate	,	Fota <b>l</b>
Classification						in Cash	<u> </u>	22.50	\$	201.00
Code	Superintendent (Jason Vavrina)	6	\$	33.50	\$	. <del>.</del> .	\$ -	33,50		103.38
N/A	Superintendent (Jason Vavilla) Common Laborer (Nicholas Begaye)	6	\$	13.70	\$	3.53	\$	17.23	\$	126.40
1511	Common Laborer (Nicholas Begayo)	4	\$	23.38	\$	8.22	\$	31.60	\$	
1557	Loader (Nicholas Begaye)	10	\$	19.75	\$	3.75	\$	23.50	\$	235.00
1535	Operator (Juan Morales)	10	\$	13.70	\$	3.53		17.23	\$	172.30
1511	Common Laborer (Castor Morales)	10	\$	_	\$	_	\$	-	\$	-
			\$	_	\$	· · <u></u> .	\$_		\$_	
· · · <u> </u>									\$	838.08
Total Direct	Compensation								\$	561.51
Contractor A	dministrative/Overhead @ 67% fication codes used based on the Minimum Wo	age Decision da	ted 0	<u> 11-27-201</u>	7				\$_	1,399.59
Estimated I	abor Total:									
										•
stimated Mat	erials Description	Estimated Quantity						Unit Price		Total
				<del></del>					\$	
T	No Material for the Contractor Required								\$	-
									\$	-
									\$	_
•									\$	-
								-	\$	-
Total Mater	rial Cost							-	- \$ \$	-
Total Mater	rial Cost							-	\$ \$	-
Total Mater Contractor	rial Cost Mark-Up @ 15%							-	\$	<u>-</u>
Contractor	rial Cost Mark-Up @ 15% Materials Total:									
Contractor Estimated	Mark-Up @ 15%  Materials Total:							Shift Rat	\$ \$	- - Total
Contractor  Estimated  Estimated Eq	Mark-Up @ 15%  Materials Total:  uipment	Estimate	d					Shift Rat	\$ \$ .e	- - Total
Contractor Estimated	Mark-Up @ 15%  Materials Total:  uipment	Estimate Hours	d					Shift Rat Per Hou	\$ \$ .e	Total
Contractor  Estimated  Estimated Eq	Mark-Up @ 15%  Materials Total:  uipment  p Description	Hours						Per Hou	\$ \$ r	
Contractor  Estimated  Estimated Eq  Ownershi	Mark-Up @ 15%  Materials Total:  uipment  p Description	Hours 7	d					Per Hou	\$ seer	500.08
Contractor  Estimated  Estimated Eq  Ownershi	Mark-Up @ 15%  Materials Total:  uipment  p Description  2005 Caternillar Hydr, Excay, 314C LCR	Hours	di					Per Hou	\$ \$ r \$ 44 \$ \$ 92 \$	500.08 137.76
Contractor  Estimated  Estimated Eq  Ownershi	Mark-Up @ 15%  Materials Total:  uipment  p Description  2005 Caterpillar Hydr. Excav. 314C LCR	Hours 7	d.					Per Hou	\$ se r 44 \$ 92 \$	500.08 3 137.76
Contractor  Estimated  Estimated Eq  Ownershi	Mark-Up @ 15%  Materials Total:  uipment  p Description  2005 Caternillar Hydr, Excay, 314C LCR	Hours 7	di					Per Hou	\$ see r 44 \$ 92 \$	5 500.08 5 137.76 5 -
Contractor  Estimated  Estimated Eq  Ownershi	Mark-Up @ 15%  Materials Total:  uipment  p Description  2005 Caternillar Hydr, Excay, 314C LCR	Hours 7	d					Per Hou	\$ see r 44 \$ 92 \$	5 500.08 5 137.76 5 - 5 -
Contractor  Estimated  Estimated Eq  Ownershi  Leased  Leased	Mark-Up @ 15%  Materials Total:  uipment  p Description  2005 Caterpillar Hydr, Excav. 314C LCR 2004 Caterpillar Frt. End Loader 928 G	Hours 7 3						Per Hou	\$ se r 44 \$ 92 \$	500.08 137.76 5 - 5 - 5 637.82
Contractor  Estimated  Estimated Eq  Ownershi  Leased  Leased	Mark-Up @ 15%  Materials Total:  uipment  p Description  2005 Caternillar Hydr, Excay, 314C LCR	Hours 7 3		nipment)				Per Hou	\$ s	500.08 137.76 5 5 5 5 637.84
Estimated Eq  Estimated Eq  Ownershi  Leased  Leased  Total Dire  Rental Eq	Mark-Up @ 15%  Materials Total:  uipment ip Description  2005 Caterpillar Hydr, Excav. 314C LCR 2004 Caterpillar Frt. End Loader 928 G  act Compensation uipment - Contractor Related Overhead Costs	Hours 7 3		nipment)				Per Hou	\$ s	500.08 137.76 5 - 5 - 5 637.82
Estimated Eq  Estimated Eq  Ownershi  Leased  Leased  Total Dire  Rental Eq	Mark-Up @ 15%  Materials Total:  uipment  p Description  2005 Caterpillar Hydr, Excav. 314C LCR 2004 Caterpillar Frt. End Loader 928 G	Hours 7 3	1 Equ		'urnis	h and It	3	Per Hou § 71. § 45.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 500.08 \$ 137.76 \$ - \$ - \$ 637.84
Estimated Eq  Estimated Eq  Ownershi  Leased  Leased  Total Dire  Rental Eq	Mark-Up @ 15%  Materials Total:  uipment ip Description  2005 Caterpillar Hydr, Excav. 314C LCR 2004 Caterpillar Frt. End Loader 928 G  act Compensation uipment - Contractor Related Overhead Costs d Equipment Total:	Hours 7 3	1 Equ	Cost to E	nich a	nd Inst	stall (St	Per Hou  71. \$ 45.  (Contra	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 500.08 \$ 137.76 \$ -\$ \$ 637.84 \$ 2,037.4
Estimated Eq  Estimated Eq  Ownershi  Leased  Leased  Total Dire  Rental Eq	Mark-Up @ 15%  Materials Total:  uipment ip Description  2005 Caterpillar Hydr, Excav. 314C LCR 2004 Caterpillar Frt. End Loader 928 G  act Compensation uipment - Contractor Related Overhead Costs d Equipment Total:	Hours 7 3	1 Equ	Cost to E	nich a	nd Insta	astall	Per Hou  71. \$ 45.  (Contra	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 500.08 \$ 137.76 \$ 5 \$ 637.84 \$ 2,037.4

9/11/2017

Date:



engineering service. Inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219

Pinon Causeway to Aspen Village Drive Shared Use Path Project

9/12/2017 Date:

Force Account 03 - Culvert Repair Packet 08

The work performed on 9/11/2017 consisted of placing flow-fill around the culvert coupling location, placement of backfill along the culvert, removal of the pond liner/cofferdam.

		Third or		Total		Total
Estimated	Base	Fringe				Join
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ated November 2	8, 2017	<u></u>				
					\$	-
	Estimated Quantity  d	ge Decision dated 01-27-2017  Estimated Quantity  d	Paid in Cash  ge Decision dated 01-27-2017  Estimated Quantity  Estimated Hours d	Paid in Cash  \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Paid in Cash  \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	Paid in Cash  \$ - \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ - \$ \$ \$ \$ \$ - \$ \$ \$ \$ \$ - \$ \$ \$ \$ \$ - \$ \$ \$ \$ \$ \$ - \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$



davis Engineering Service, inc.

CDOT No.: STE C480-008

Pinon Causeway to Aspen Village Drive Shared Use Path Project

CDOT Project Code: 19219

The work performed on 9/11/2017 consisted of placing flow-fill around the culvert coupling location, placement of backfill along the culvert, removal of the pond liner/cofferdam.

9/12/2017

Date:

vert, removal of													
timated Labor Work Classification		Description	Estimated Hours		Base Rate	Ве	ringe enefits in Cas			otal Rate			'otal
0-4-					33.50	\$	<u></u>		\$	33:	50 :: 3	S	201.00
Code	Superintendent (	Jason Vavrina)	6	\$		\$	3.5	3	\$	17.		\$	172.30
	Common Labore	er (Nicholas Begaye)	10	\$	13.70		3.7		\$			\$ .	235.00
	Operator (Juan I	Morales)	10	\$	19.75	\$	3.5		\$	17.		\$	172.30
	Operator (Juan 1	rer (Castor Morales)	10	\$	13.70	\$	3.5		\$			\$	137.84
1511	Common Labor	er (Christopher Grano)	8	\$	13.70	\$	J.,	).)	\$	1.	-	\$	_
1511	Common Pager	Of (Officeopasses)		\$	-	\$			\$		_	\$	-
		*		\$	<del>-</del>		<u> </u>		Ψ_			\$	918.44
			<del></del>									\$	615.35
Total Direct C	dministrative/Ov	verhead @ 67%										•	
Contractor Ac	dministrative	verhead (a) 61% sed based on the Minimum	Wage Decision d	ated	<u>01-27-201</u>	7						\$	1,533.79
*Work classif	fication codes us	seu dasca di											
Estimated La	abor lotal:												
	:-1-									Uni	t.		Total
Estimated Mate	eriais	Description	Estimated							Pric			
		Description	Quantity							1110	•		
										48	2.25	\$	482.25
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Total Materi	ial Cost											\$ \$ . \$	482.25 72.34
Total Materi												\$ \$ \$	
Contractor M	ial Cost	6									·	\$ \$ \$ \$	72.34
Contractor M	ial Cost Mark-Up @ 15% Materials Total	6								OL:ft	Rate	\$ \$ \$ \$	72.34 554.59
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Contractor M Estimated I Estimated Equation Ownership	ial Cost Mark-Up @ 15% Materials Total uipment	6 I: Description	Estimat Hours							Per	Hour	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	72.34  554.59  Total  5 500.08  5 -  5 -  5 -
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P O Box 1969 Baylield, CO 81122

**FOUR CORNERS** 

Crossfire LLC 1800 Hughes Landing Blvd Ste 500 The Woodlands TX 77380

ap@crossfire-llc.com

Four Corners Materials P O Box 1969 Bayfield, CO 81122 (505) 324-3910

**Customer No:** 

**Customer Job:** 

Invoice No:

Inv Date:

Page: **Customer PO:**  9945

1201726

09/12/17

Page 1 of 1

STEC480-008 2017069 Pinion Cause

Delivered To: 2017069 Pinion Causeway

Date	llein	Description	Quantity	UM	Unit Price	MatiTotal	TaxCode	TaxTotal	Total
								From: 05120 Pago	sa Ready-Mix
Ticket #: 35520085 09/12/17 35520085	30023344	AG CDOT FLOW FILL	3.00	CY	160.75	482.25	CO06	0.00	482.25
09/12/17 35520085	901.EC	GCCP ENVIRONMENTAL FEE	1.00	EA	0.00	0.00	CO06	0.00	0.00 482,25
Total		Cubic Yards of Readymix	3.00			482.25		0.00	402,23
		Total invo	lce:		<del></del>	482,25		0.00	482.25

"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."

Date

Total Cubic Yards of Readymix for this Invoice

Finance Charges will be applied to any late involces at a rate of 1.5% per month per credit agreement or the State's Lawful Amount

Invoice Amount:

482.25

Amount Paid:

Customer Name:

Crossfire LLC

**Customer No:** 

9945

Involce #: Date:

1201726

Customer Job:

09/12/17

Customer PO:

2017069 Pinion Cause

Due Date:

10/12/17

STEC480-008

Remit Payment To:

Oldcastle SW Group Inc

If you have any questions about your invoice please call (505) 324-3910

2350 S 1900 W Ste. 200

Ogden, UT 84401

### COLORADO DEPARTMENT OF TRANSPORTATION INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK Project Code (SA#): 19219

Project No.: STE C480-008

CMO or F/A No.: FA 03 - Culvert

**Total Hours** 

Contractor's Name: Crossfire, LLC

LABOR

Subcontractor's Name: No subcontractor participated with this force account.

9-11-17/7109594

Use of Crossfire equipment and personnel to excavate and backfill new culvert section. Description of Work:

Hours

9-12-17/7109597

JASON VAVRINA NICHOLAS BEGAYE NICHOLAS BEGAYE JUAN MORALES CASTOR MORALES CHRISTOPHER GRAN The hours shown here payrolls.  EQUIPMENT Code No.  2004 CAT 928G 2005 CAT 314C LCR	Shi	1517 1557- 1535- 0 151 1511	upation Intercept 1-LABOR LOADER OPERATOR 1-LABOR 1-LABOR ecked again	8T 6 6 4 10 10 nst the ce	OT	5T 6 10 10 10 8 Checke	ОТ	ST	OT	ST	ОТ	ST	OT	12 16 4 20 20 8 0	OT
NICHOLAS BEGAYE NICHOLAS BEGAYE JUAN MORALES CASTOR MORALES CHRISTOPHER GRAN  The hours shown here payrolls.  EQUIPMENT Code No.  2004 CAT 928G	Shi	1511 1557- 1535- ( 151 1511 re che	1-LABOR LOADER OPERATOR 1-LABOR 1-LABOR cked agair	6 4 10 10	rtified	10								16 4 20 20 8	0 0 0 0
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EQUIPMENT Code No. 2004 CAT 928G			Date:				d By:	1/4	<u> </u>	<u>~_</u>		<del></del>		Date: 3	
Code No. 2004 CAT 928G				9-11-17	7/7109594	9-12-17	7 7109597			<u> </u>				Total	Hours
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MATERIAL 1			Date	9-11-17	7/ 7109594	9-12-17	7/ 7109597							— Tof	tal Units
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Contractor/Subcon	itrac	tor ii	ntials	11/4	· · · · · · · · · · · · · · · · · · ·	1/12	~ ·								

Billing procedures shall conform to applicable project specifications. I certify that this is a correct record of employee & equipment hours and material units on the above project as authorized by t	he above modification
I certify that this is a correct record of employee & equipment nours and material units on the destroyed	
order or agraement	Date: 3/7/18
Signed: Project Engineer	
	CDOT Form 10 04/1

www.equipmentwatch.com

All prices shown in US\$

#### Rental Rate Blue Book®

September 11, 2017

Dynapac CS142 N 3-Wheel Compactors

Size Class: 9.0 MTons & Over Weight:

23,815 lbs.

Model Image

Configuration for CS142 N

Horsepower Transmission 73

Hydrostatic

Power Mode

Diesel

**Blue Book Rates** 

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

<del>-</del>	•	, ,	•				
		Ownership (	Costs		Estimated Operating Costs	FHWA Rate**	ĺ
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly	ı
Published Rates	\$6,800.00	\$1,905.00	\$475.00	\$71.00	\$14.20	\$52,84	
Adjustments							
Region (100%)		-	-	-			
Model Year (2011: 96.8%)	(\$217.60)	(\$60.96)	(\$15,20)	(\$2.27)			
Ownership (106%)	\$394.94	\$110.64	\$27.59	\$4.12			
Operating (100%)		•			_		
Total:	\$6,977.34	\$1,954.68	\$487.39	\$72,85	\$14.20	\$53.84	

#### **Rate Element Allocation**

Element	Percentage	Value
Depreciation (ownership)	18%	\$1,224,00/mo
Overhauf (ownership)	64%	\$4,352.00/mo
CFC (ownership)	7%	\$476,00/mo
Indirect (ownership)	11%	\$748.00/mo
Fuel (operating) @ 2.53	33%	\$4.71/hr

Revised Date: 2nd Half 2017

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for THOMAS BOVEE (thomas.bovee@state.co.us)



www.equipmentwatch.com

All prices shown in US\$

## Adjustments for THOMASBOVEE2 in All Saved Models

September 11, 2017

Caterpillar 314CL CR (disc. 2008) Crawler Mounted Hydraulic Excavators

Size Class: 14.1 - 16.0 MTons Weight:

32,590 lbs. Configuration for 314CL CR (disc. 2008)

Operating Weight Power Mode

14.81 mt Diesel

Net Horsepower

Bucket Capacity - Heaped

90 hp .68 cu yd

**Blue Book Rates** 

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

ne monuniy ownersiny				Estimated Operating Costs	FHWA Rate**
Monthly \$6,650.00	<b>Weekly</b> \$1,860.00	<b>Daily</b> \$465,00	Hourly \$70.00	Hourly \$32.75	<b>Hourly</b> \$70.53
	-	-	, -		
(\$226.10)	(\$63.24)	(\$15.81)	(\$2.38)		
\$385.43	\$107.81	\$26.95	\$4.06		
\$6,809.33	\$1,904.57	\$476.14	\$71.68	\$32.75	\$71.44
	Monthly \$6,650.00 (\$226.10) \$385.43	Ownership Co  Monthly Weekly \$6,650.00 \$1,860.00  (\$226.10) (\$63.24)  \$385.43 \$107.81	\$6,650.00 \$1,860.00 \$465.00 \$465.00 \$465.00 \$465.00 \$1,860.00 \$1,860.00 \$465.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860.00 \$1,860	Ownership Costs  Monthly Weekly Daily Hourly \$6,650.00 \$1,860.00 \$465.00 \$70.00  (\$226.10) (\$63.24) (\$15.81) (\$2.38)  \$385.43 \$107.81 \$26.95 \$4.06	Ownership Costs  Monthly Weekly Daily Hourly \$6,650.00 \$1,860.00 \$465.00 \$70.00 \$32.75  (\$226.10) (\$63.24) (\$15.81) (\$2.38)  \$385.43 \$107.81 \$26.95 \$4.06

#### Rate Element Allocation

Element Depreciation (ownership) Overhaul (ownership) CFC (ownership) Indirect (ownership)	Percentage 36% 49% 7% 8%	Value \$2,394.00/mo \$3,258.50/mo \$465.50/mo \$532.00/mo
Indirect (ownership) Fuel (operating) @ 2.53	8% 25%	\$8.20/hr

Revised Date: 2nd Half 2017

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

 $The \ equipment \ represented \ in \ this \ report \ has \ been \ exclusively \ prepared \ for \ THOMAS \ BOVEE \ (thomas. bovee@state.co.us)$ 

www.equipmentwatch.com

All prices shown in US\$

#### Rental Rate Blue Book®

September 11, 2017

Caterpillar 928GZ (disc. 2007) 4-Wd Articulated Wheel Loaders

Size Class: 135 - 149 HP Weight: 27,140 lbs.



Configuration for 928GZ (disc. 2007)

Bucket Capacity - Heaped Net Horsepower

2.6 cu yd 143 hp

Operator Protection Power Mode

EROPS Diesel

**Blue Book Rates** 

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

** FHWA Rate is equal to	the monthly ownersmp	Ownership C		ou - F 0	Estimated Operating Costs	FHWA Rate**
Published Rates	Monthly \$3,580.00	Weekly \$1,000.00	Daily \$250.00	Hourly \$38.00	Hourly \$25.05	Hourly \$45.39
Adjustments Region (100%)	(\$114.56)	(\$32.00)	- (\$8.00)	- (\$1.22)		
Model Year (2004: 96.8%) Ownership (106%)	\$207.93	\$58.08	\$14.52	\$2.21		-
Operating (100%) Total:	\$3,673.37	\$1,026.08	\$256.52	\$38.99	\$25.05	\$45.92

#### **Rate Element Allocation**

	Percentage	Value
Element	41%	\$1,467,80/mo
Depreciation (ownership)	39%	\$1,396.20/mo
Overhaul (ownership)	8%	\$286.40/mo
CFC (ownership)	12%	\$429.60/mo
Indirect (ownership)		\$11.65/hr
Fuel (operating) @ 2.53	47%	<b>V-2</b>

Revised Date: 2nd Half 2017

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 $The \ equipment\ represented\ in\ this\ report\ has\ been\ exclusively\ prepared\ for\ THOMAS\ BOVEE\ (thomas.bovee@state.co.us)$ 

COLORADO DEPARTMENT OF TRANSPORTATION EQUIPMENT RENTAL RATE DETERMINATION REQUEST		Project No.:  STE CABO-GOB  Contractor:  (1095Give, NC  F/A, CMO, MCR No.:  F/A Culvus Papair			
					Model:
Equipment Description:	/o 1 O1		Year: 2012	Make: Western Star	Vavv
Crossfire Hydrovae Truck	tleet of trucies 1		2013 2014	Western Star Peter built	
Series:	Serial No.		HP:	GVW(Loaded	☑ EROPS ☐ ROPS ☐ None
Vary	Vary		Vary	weight): 72,00018	- 140Ne
Trucks: Wheel Combination:  □ 4x2 □ 4x4 ☒ 4x6 □ Other	Fuel Type: ☐ Gas ☑ Dk ☐ Other:	Trailers: Not Applicable  ☐ Gas ☐ Diesel Length:ft. # Axles: ☐ Other: ☐ Gooseneck ☐ ☐		_ □ Tilt Deck □ Non-Tilt Deck Folding Gooseneck □ Other	
Cab Type: ☑ Conventional ☐ Crew	Dump Trucks & Dui ☐ Rear Dump ☐ Bottom Dump	Dump Trucks & Dump Trailers: Capacity (cubic extension, # lights   ☐ Rear Dump ☐ Single axle		yards, gallons, PSI, lift height, s on tower, etc) b S Yukrols	
G GION	☐ Side Dump		ple axle	8" inlet at Tro	nck, b"inlet at all achonient
Equipment Owner Name:	Owner Phone No.		1 .	oment ID (if availabl	e): Atachenock e 3.000PSI
Cross five (Steve House)	970-903-737	Ţ	Varies		
Remarks: (any additional information that should considered?)					
Submitted By:			Region No.:		Date:
Withon Loe			5		September 11, 2017
Equipment No. (Assigned by CDC	oT and may be used or Volume:	Section		ector's Report for F Page:	orce Account Work):  Date (Blue Book Section):
	SHIFT RATE PER HO	UR		·	
Bare Rate (Federal Participating):			\$ <u>.54.91</u>		
Operating Cost (Federal Participating):		\$ <u>69.20</u>			
	4			TOTAL	<u>\$ 124.11</u>
STANDBY RATE PER HOUR					
	Adju	isted Bar	e Rate (Federa	al Participating):	<u>\$_27.46</u>
				TOTAL	\$ <u>27.46</u>
These rates will apply to the above entire F/A, CMO or MCR Line situation. If used on any other force account situation, new rates will be needed to determine if rates have changed per Blue Book Revisions.					
The Colorado Department of Transportation maintains procedures for determining equipment rental costs which are reimbursable to contractors performing force account work on CDOT construction projects. These rates do not include profit or operator's wages or fringe benefits. These rates have no legal status beyond CDOT contracts.					
Signed: COLORADO Degatment of Transportal	Digitally signed by Jeren	ny McDonalo	Title:	dministrator	Date: 10/27/17 CDOT Form 580 05/17

COLORADO DEPARTMENT OF TRANSPORTATION			Reglon 5	Field sheet # 266294-2	
FIELD REPORT FOR SAMPLE IDENTIFICATION OR MATERIALS DOCUMENTATION		Contract ID 19219	Date Submitted 3-21-18		
OK WATERIALS DOCU	MEIAIWII		Project No.		
Metric units	yes 7	no	STE C480- Project Location	-00g	
	, <u>, , , , , , , , , , , , , , , , , , </u>	<del></del>	PINON CAUSEWA	MY TO ABREN VILLAGE DR S.U.P.	
Material Type FORCE ACCOUNT	- WACMI	HET WILLTIES?	Field Láb phone	Cell Phone	
Material Code (LIMS) Iten	n	Class	Grading	Special Provisions yes	
	NIA				
Previously used on Project No.:		Previous CDOT Form #	‡157 F/S No.(s):	CDOT Form #633 (sack) CDOT Form #634 (can)	
Sample Identification: Quantity & Unit of the Materials Documentation: Field inspected.	material submitted. I (describe appear	describe tests required,	precise location samp , model/serial number)	le removed from ( stationing), etc. , COC &/or CTR provided , etc.	
A FURCE ACCOUNT WA	S 471418	LED TO PAN	1 FOR MELL	DCATION OF THE	
WALMART SIGN E			.]		
NEAR THE SIGN.		~		•	
FOR A PULL BOX (13"x24"					
WATER PIPING.					
V 1 (0) - 1 (1) - 1					
'ser ID					
36 10	•				
Sample ID (#1)	Sample I	D (#2)	San	nple ID (#3)	
Sample ID (#4)	(#4) Sample ID (#5)		San	Sample ID (#6)	
APL/QML Acceptance: APL Ref. No.	Product name:			Date checked:	
APL/QML Acceptance: APL Ref. No.	Product name:		•	Date checked:	
Preliminary Constructio	n Maintenar	nce Emergency		Date needed	
Contractor Supplier HUBBELL PAIME CONDUIT					
Contractor CROSSFACE, LLC Supplier HUBBELL PAIME CONDUIT CHARLOTTE PIPER FOUNDAY CUMPANY  Standard From					
Sampled from (Pit, roadway, windrow, stock, etc.)					
Quantity represented	Previou	is quantity		Total quantity to date / LS	
Sample submitted: Shipped sp	ecified quantity to:		Via	Date	
Yes 区 No Central lab Region lab E-mail					
CUPTON LEE, PE	Ŷ'n	ROJECT ENG	INFEAL	·	
Supervisor (Pro/Res./Matts. Engr./Maint. Supt.) (print	name) Title	ROJECT ENG- ESIDENT- DE	Residen	су	

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#### LENOIR CITY, INC.

Lenoir City, TN 37771
Tel: 865-635-2135
Fax: 865-635-2160
E-Mail:mfisher@hubbell.com

September 22, 2017

Mr. Clifton Lee Davis Engineering Service, Inc. 188 S. 8Th Street Pagosa Springs, CO 81147

Subject: Enclosure Materials Data

Dear Mr. Lee,

I have been asked to provide you documentation on two of our enclosure sizes. The two sizes provided are: PG1324BA12 (J091716JH1) / PG1324HH00 PG2436BA24 (J072015OA2) / PG2436HH00

These products are going to be used for:

Project No.: STE C480-008 Project Code: 19219

Project Octue: 19219
Project Name: Pinon Causeway to Aspen Village Drive Shared Use Path

Contractor: Crossfire, LLC

Subcontractor: One Touch Electric, Inc.

Supplier: Border States Electric to One Touch Electric, Inc.

These product sizes are made in two of our manufacturing plants. The manufacturing plants are located in Hubbell Lenoir City 2911 Industrial Park Drive Lenoir City, TN 37771

BEL Manufacturera, S.A. de C.V. Boulevard Juan Pablo II #2554 Col. Fray Garcia de San Francisco Cd. Juarez Chih. 32575

These two products are tested at both facilities by Underwriters Laboratories (UL) and our Quality Control Technicians. UL comes to each of the plants quarterly, where they pull random parts from our inventory and test them to the loading we state in our literature. The materials used our products are also verified by UL to make sure we offer what we state in our literature. If you have any additional questions on our products, please call me to discuss.

We appreciate your business.

Sincerely,

Hubbell Lenoir City, Inc.

Michael Fisher

Senior Product Engineer

& Force Account-Walmart Utilities & Irrigation

(1) 13"x24"x24" Pull Box

(3) each, item 613-07023 Pull Box (24"x36"x24")

(1) each, item 613-07023 Pull Box (24" x36" x24") for Change Order No.1

Contractor Rep. Signature

01/26/18

# Prime Conduit

### **CERTIFICATE OF CONFORMITY**

DATE: 09-22-17				
WE HEREBY CERTIFY THAT: (description of the material)	1" Schedule 80 Nonmetallic Electrical PVC Conduit Dated 04/04/17 Line 8E 08:12			
MANUFACTURED BY:	Prime Conduit, Inc.			
FURNISHED TO:	One Touch Electric, Inc.			
SALES ORDER/CUSTOMER PO/PROJECT:	CDOT Project No.: STE C480-008 CDOT Code; 19219			
CERTIFICATE ID NUMBER:	JZOKC092217-1			
APPLICABLE STANDARDS:	ETL Listed, Conforms to UL651 NEMA TC-2 Prime Conduit's Product Specification			

The 1" Schedule 80 product listed above was produced, inspected, and tested per the UL 651 standard at Prime Conduit's manufacturing facility located in Oklahoma City, Ok. This Schedule 80 product conforms to UL651 per ETL listing, NEMA TC-2, and Prime Conduit's product specification.

Jeremy Zeliff

Corporate Quality Manager

Prime Conduit

C: (405) 588-2745

&-Used in the Force Account Work to relocate the Walmart sign electrical wiring. Approximate by & lineal feet was used and paid.

I hereby certify under penalty of perjury that the material listed in this Certificate of Compliance represents AS Necaca 25 L.F. (quantity and units) of pay item Fla-Walmart Utilities ? Ivrigation (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01/26/18 Date

CHARLOTTE PIPE AND FOUNDRY COMPANY	CERTIFICATE OF ANALYSIS		
4210 Old Charlotte Highway	Data	/10/17	Pogo 1 of 1
Monroe, North Carolina 28110	Date: 09 Certificate Recipient	/18/17	Page: 1 of 1
Phone No.: 800-438-6091	_		
Sales Order No.:	Richard Giesler		
Customer PO No.:	One Touch Electrial		
Delivery No.:	Hwy 160 Pagosa Springs, CO 81147		
ExPlant Date:	Material:	F	Run Date:
Delivery Point:	PVC 7200 2"x 10" P	'ipe	05/28/17
Transportaion ID:	Inspection Lot No:		
Compartment/Seals:	Sold-To:		
Sold-To:			
	Product Specifications ASTM D1785		
Physical and Dimensional Testing	ASTM Requiremen	ts I	Results
Short term rupture	890 min psi		Pass @ 890 psi
Wall Thickness	.154" min174" ma	х	.159" avg.
Out of Roundness	.024 max		0.014
Outside Diameter	2.375" nom +/- 0.006	51	2,380"

We guarantee that the above analytical results are in conformity with the agreed upon specifications.

Approved by Charlotte Pipe and Foundry Quality Assurance Department

QC 91 - 11/13

A-Used in the Force Account work to relocate the irrigation piping near the Walmart sign.
Approximately 40 lineal feet was used and paid.

I hereby certify under penalty of perjuty that the material listed in this Certificate of Compliance represents As needed as, 40 L.F. (quantity and units) of pay item HA Walway! Utilities I triagion (pay item # and description) that will be installed in conformance with the plans and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contructor Rep. Signature

bl Zle 18

CHARLOTTE PIPE AND FOUNDRY COMPANY	CERTIFICATE OF ANALYSIS					
4210 Old Charlotte Highway	Date:	09/19/17	Page: 1 of 1			
Monroe, North Carolina 28110		Recipient:				
Phone No.: 800-438-6091	-	CDOT Project No:	STE C480-008			
Sales Order No.: N/A	-	CDOT Project (	1			
Customer PO No.:		Richard (	ļ			
Delivery No.:			1			
ExPlant Date:		One Touch Electrical				
Delivery Point:	1	Hwy 160 Pagosa Sp				
· .	Material:	PVC	<b>Run Date:</b> 5/15/2017			
Transportaion ID:	4010 1" P	10 1" PVC sch40 Solid Wall pipe				
Compartment/Seals:	Inspection	n Lot No:				
Manufactured and Tested at:	Sold-To:					
Charlotte Pipe and Foundry - Cedar City 1177 North 5300 West Cedar City, UT 84721			· ·			
		Product Spe	cifications			
Physical and Dimensional Testing	1	ASTM				
	Requiren		Results			
Pipe Wall Thickness		153" max	.138" avg			
Pipe OD		0.005" / - 0.005"	0.006"			
Pipe out-of-roundness	0.020"  >/= 25%	inner OD	Pass			
Flattening	71- 2370	·				
		<u></u>				
We guarantee that the above analytical results are in conformity with the agreed upon specifications.  Approved by Charlotte Pipe and Foundry  Quality Assurance Department						

A - Used in the Force Account work to relicente the irrigation piping near the Walmart sign.

Approximately 55 lineal feet was used and paid.

I hereby certify under penalty of perjuty that the material listed in this Certificate of Compliance represents AS Neerled 4, 55 L.F. (quantity and units) of pay item FIA-WAWAY UNITIES I IT I (as and specifications on Project Number 19219 Pinon Causeway to Aspen Village Drive SUP, STE C480-008.

Contractor Rep. Signature

01 76 18



davis Engineering Service, Inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219 Date:

9/12/2017

Pinon Causeway to Aspen Village Drive Shared Use Path Project

## Force Account - Walmart Utilities & Irrigation Relocation

Subcontractor Estimated Labor							Total		Total
Work Description	Estimated		Base		ringe		Rate		lotai
Classification	Hours		Rate		enefits		Nate		
Code					in Cash	41	36.00	\$	331.38
1501 Electrician	9	\$	28.06	\$	8.76	\$	36.82		206.76
1511 Laborer (Arch. County)	12	\$	13.70	\$	3.53	\$	17.23	\$	305.50
1535 Backhoe/Trackhoe	13	\$	19.75	\$	3.75	\$	23.50	\$	303.30
•						\$	-	\$	-
						\$		\$	
Total Direct Compensation								\$	843.64
Subcontractor Administrative/Overhead @	67%							\$	565.24
*Work classification codes used based on	the Minimum Wage Decision	on de	ated 01-06	-2017	7				
Estimated Labor Total:					<u>.</u>			\$	1,408.88
G. It. Latimated Materials									
Subcontractor Estimated Materials  Description	Estimated						Unit		Total
Description	Quantity						Price		
	Quantity								
Invoiced Materials	1		· · · · · ·		·-·	\$	562.60	\$	562.60
Involced iviaterials	*							\$	-
								\$	
•								\$	-
•								\$	
								\$	562.60
Total Material Cost								\$	84.39
Subcontractor Mark-Up @ 15%									
Estimated Materials Total:	- Aller							\$	646.99
7 1 4 17 1									
Subcontractor Estimated Equipment Ownership Description				E	stimated	S	Shift Rate		Total
Ownership Description				~=	Hours	]	Per Hour		
	/ LO Presenter	<del></del> .			6	\$	19.01	\$	114.06
Rental Deere 35D - Crawler Moun	ited Comp. Excavior				V.	Ψ	17.01	\$	-
								\$	
								\$	
								\$	_
	·							<u> </u>	114.06
Total Direct Compensation								э \$	11.41
Rental Equipment - Subcontractor Related	d Overhead Costs @ 10%			_				Ф	11,41
*Shift rate per hour based on blue book r	ental rate sheet dated Sept	embe	e <u>r 11, 2011</u>	7			<u> </u>		105 45
Estimated Equipment Total:								<u>\$</u>	125.47
	Total Estimated		to Errunia	h en	d Install	Sub	contracto	<u></u>	2,181.34
	Total Estimated	Cost	to rurnis	n and	1 THEISTAIL	թա	COMILIACIO	- 1 -	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,



davis Engineering Service, inc.

CDOT No.: STE C480-008 CDOT Project Code: 19219 Date:

9/12/2017

Pinon Causeway to Aspen Village Drive Shared Use Path Project

#### Force Account - Walmart Utilities & Irrigation Relocation

timated Labor			÷				
Work	Description	Estimated	Base	Fringe	Total		Total
Classification		Hours	Rate	Benefits	Rate		
Code				Paid in Cash			
No Labo	r for the Contractor Est	imated			\$ -	\$	_
					\$ -	\$	-
		•			\$ -	\$	. <b>-</b>
					\$ -	\$	-
m (10) (d)					\$ -	<u>\$</u> .	<del></del>
Total Direct Compensat Contractor Administrati						\$ \$	-
		Minimum Wage Decision a	latad OL O6	2017		Ф	•
Estimated Labor Total		ummum wage Decision a	iatea VI-00	-2017		\$	<u> </u>
Estimated Labor Total						Ψ	
timated Materials							
	Description	Estimated			Unit		Total
		Quantity			Price		
•		•			:		
No Mate	rial for the Contractor I	Estimated				\$	-
						\$	-
					•	\$	-
						\$	-
•						\$.	
Total Material Cost					-	\$	-
Contractor Mark-Up @	15%					\$	-
Estimated Materials T	otal:					\$	-
stimated Equipment							
Ownership	Description	Estimated			Shift Rate		Total
		Hours			Per Hour		
No Faire	oment for the Contracto	r Fetimoted			·	\$	
140 Txlini	oment for the contracto	I Estimated		-		\$	_
						\$	
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Total Direct Compensat	ion					\$	_
		ad Costs @ 10%				\$	_
Rental Equipment - Cor			er 11, 2017				
•	ed on blue book rental	into succi anien nebicutoc					
Rental Equipment - Cor		Tute sheet dated peptentoe				\$	
Rental Equipment - Con *Shift rate per hour bas		Total Estimated	Cost to Fu	rnish and Install	(Contractor)		
Rental Equipment - Con *Shift rate per hour bas		Total Estimated				\$	
Rental Equipment - Con *Shift rate per hour bas			st to Furnis	sh and Install (S	ubcontractor)	\$	2,185. 159.

# COLORADO DEPARTMENT OF TRANSPORTATION

## INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK

Project No.: STE C480-008

Project Code (SA#): 19219

CMO or F/A No.: F/A OI-WAHWAH Gyng brigation

Contractor's Name: CROSSFIRE, LLC

Subcontractor's Name: ONE TOUCH ELECTRIC, INC.

REPAIR TO SPRINKLER SYSTEM & WIRE WALMART SIGN Description of Work:

			Date:	8/9/	2017	8/10/	2017	8/14/	/2017	8/21/	/2017			Total l	Hours
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GIESLER, DICK			TRICIANIOWNER	4		4				1			ļ.,	9	0 .
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The hours shown her payrolls.	e we	re ch	ecked agai	nst the co	ertified	Checke	d By:	life	h_					Date: q	12 2017
EQUIPMENT	SI	ift	Date	8/9	9/2017	8/10	/2017	8/14	1/2017	8/2	1/2017			Total	Hours
Code No.	1 ^{5t}	J	Rate	-		·		Numbe	r of Hour	's	S				
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MATERIAL	<u></u>		Date	8/9	9/2017	8/1	0/2017	8/14	/2017	8/2	1/2017	<u> </u>		Tot	tal Units
Type			Unit	Ι,				Mounda	er of Unit	e	,			į.	
Note: A Certified Inv	oice	foг Ma	aterials is r	equired a	s part of	uung.			FEET	3			· · · · · · · · · · · · · · · · · · ·		55
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TIER 15 J BOX &	LID	1				-		-	50	+		1		·   -	50
12-2 UFB WIRE		-				<del> </del>		+	35	-		<del>                                     </del>			35
1" SCH. 80 PVC	,	-		-		<del> </del>		+	40					1	40
2" SCH. 40 PVC		-				+		+	5			<del>                                     </del>		1	5
2" PVC COUPLING		1		1	165-	12	184	1 12	JON	+17	401	1	10		, , , , , , , , , , , , , , , , , , ,
Contractor/Subco	ntra	ctor I	าเนลเร	IV	, 10 j	m	~.OH	1 CVV	10/						

Billing procedures shall conform to applicable project specifications.	is the authorized by the 3	hove modification
I certify that this is a correct record of employee & equipment hours and mater	rial units on the above project as authorized by the ar	JOIC BIOGINGARON
order or agreement.	Title: D Gui	Date: alumbana
Signed:	Project Orgineer	1/15/2017

Distribution: Region Finals Engineer (original)

Project File Contractor

Previous editions may be used until supplies are exhausted

CDOT Form 10 04/17

### COLORADO DEPARTMENT OF TRANSPORTATION INSPECTOR'S REPORT FOR FORCE ACCOUNT WORK

Project No.: STE C480-008

Project Code (SA#): 19219

8/21/17

CMO or F/A No.: F/A OI - Wal-Mart Sign ( Irrigation

**Total Hours** 

Contractor's Name: CROSSFIRE, LLC Subcontractor's Name: ONE TOUCH ELECTRIC, INC. Description of Work: REPAIR TO SPRINKLER SYSTEM & WIRE WALMART SING

8/14/17

Employee Name	. Г	_				<u>-                                    </u>		Но	urs			-		Totar	
Employee Name	<b>'</b>	Occ	upation	ST	ОТ	ST	OT	ST	ОТ	ST	OT	ST	от	ST	OT
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EQUIPMENT	Sh	ift	Date	8	/9/17	8/	10/17	8/1	14/17	8/2	1/17		-	Total	Hours
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1° SCH 40 PVC WATER CO	TIUGNO								40						40
1"PVC COUPLIN				<b>—</b>					10						10
1" PVC 90		İ							2						2
PVC GLUE	,			1					1						1
#10 THHN WIRE	····			1.				1	460		-				460
•				T_											- 0
,							18) و				+ (2)				

Billing procedures shall conform to applicable project specifications.		
I certify that this is a correct record of employee & equipment hours	and material units on the above project as authori	zed by the above modification
order or agreement.		Doto: 1 1
Signed: () in a large	Title: Project Engineer	Date: 9 15 2017
		<u></u>

Distribution: Region Finals Engineer (original)

Project File Contractor

Previous editions may be used until supplies are exhausted

CDOT Form 10 04/17

# EquipmentWatch.

www.equipmentwatch.com

All prices shown in US\$

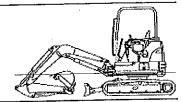
### Rental Rate Blue Book®

September 11, 2017

Deere 35D

Crawler Mounted Compact Excavators

Size Class: 3.1 - 4.0 MTons Weight: 7,672 lbs.



Configuration for 35D

Operator Protection Operating Weight EROPS 3.48 mt Diesel Bucket Capacity - Heaped Net Horsepower 4 cu ft 28,6 hp

**Blue Book Rates** 

Power Mode

* FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

** FHWA Kate is equal to t	re monthly ownersulp	Ownership	•		Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	\$1,795.00	\$505.00	\$125.00	\$19.00	\$8.50	\$18.70
Adjustments						
Region (100%)	• •	<del>-</del>		-		
Model Year (2012: 97.2%)	(\$50.26)	(\$14,14)	(\$3.50)	(\$0.53)		
Ownership (106%)	\$104.68	\$29.45	\$7.29	\$1.11		
Operating (100%)					20.50	\$19.01
Total:	\$1,849.42	\$520.31	\$128.79	\$19,58	\$8.50	\$19.01

Element	Percentage	Value
	43%	 \$771.85/mo
Depreciation (ownership)	37%	\$664,15/mo
Overhaul (ownership)	8%	\$143.60/mo
CFC (ownership)	12%	\$215.40/mo
Indirect (ownership)		\$2.68/hr
Fuel (operating) @ 2.53	32%	ψ2.007 IX

Revised Date: 2nd Half 2017

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

 $The \ equipment\ represented\ in\ this\ report\ has\ been\ exclusively\ prepared\ for\ THOMAS\ BOVEE\ (thomas.bovee@state.co.us)$ 

COLORADO DEPARTMENT O		I N	Project No.:	a none	Project Code (PCN):
<b>EQUIPMENT RENTAL</b>		-	STE (14.80) Contractor:	-000	19219
<b>DETERMINATION RE</b>	QUEST		Crossfire.	LLC	
	· ·		F/A, CMO, MC	RNO.: art Wilikes	
Equipment Description:		-		Make:	Model:
Il dearly Execuative Mi	wi)	ز ا	Year: July 2012	John Deeve	35D
Hydraulic Excavator (Mi Series:	Serial No.		nr.	GVW(Loaded	⊠EROPS □ ROPS
Series: Compact Excavator	*IFF035DXLCG26	09319*	29.9	weight):6358LB	□ None
Trucks: Wheel Combination:	Fuel Type: ☐ Gas	el	Trailers: NOT/ Length:	ft. # Axles: _	_ □ Tilt Deck □ Non-Tilt Deck Folding Gooseneck □ Other
☐ 4x2 ☐ 4x4 ☐ 4x6 🔀 Other	☐ Other:	- 1			yards, gallons, PSI, lift height,
Cab Type: ☑ Conventional ☐ Crew	Dump Trucks & Dump ☐ Rear Dump ☐ Bottom Dump	☐ Sing	gte axle ible axle	extension, # light 20" Wide X Ib	s on tower, etc)
Equipment Owner Name:	☐ Side Dump Owner Phone No.		Owner Equipr	nent ID (if availabl	e):
Rent All Rentals	970-565-4487		None indica		
Remarks: (any additional information	1 <u></u>				
					I D. C.
Submitted By: Clifton Lee (Local Agena)	1)		Region No.:		Date: August 29,2017
		Section:		Page:	Date (Blue Book Section):
BLUE BOOK REFERENCE					
	SHIFT RATE PER HOU	R			
·	Bare	Rate (Fe	adorol Participa		
Į.			edetai Fatticipo	iting):	\$
	Opera	ating Co	st (Federal Pai		\$ \$
	Opera	ating Co			\$ \$ \$
	Opera STANDBY RATE PER			ticipating):	\$ \$ \$
	STANDBY RATE PER	HOUR	st (Federal Pai	ticipating):	\$ \$ \$
	STANDBY RATE PER	HOUR	st (Federal Pai	ticipating): TOTAL	\$
These rates will apply to the a	STANDBY RATE PER Adjus	HOUR sted Bare	st (Federal Par e Rate (Federa R Line situatio	ticipating):  TOTAL  I Participating):  TOTAL  on. If used on a	\$ \$ ny other force account
	STANDBY RATE PER  Adjust  bove entire F/A, CMO eded to determine if ransportation mainta	HOUR sted Bare O or MCI ates have	st (Federal Par e Rate (Federal R Line situation ve changed procedures for de on CDOT co	ticipating):  TOTAL  I Participating):  TOTAL  on. If used on a er Blue Book Resetermining equipenstruction project	\$ ny other force account evisions. ment rental costs which are ets. These rates do not includ

Distribution: Project Engineer (copy) Pro Contractor (copy) Finals Administrator File (original)

Previous editions are obsolete and should not be used

CDOT Form 580 05/17



## More saving. More doing.

17.08V 35.97

1301 S CAMINO DEL RIO DURANGO, CO 81303 (970)2597954

1534 00002 94348 CASHIER CHELSEA 08/07/17 05:06 PM

611942066643 PVC40 PEPIPE <A>
1"X 10' PVC40 PE PIPE
1094,41
611942039494 DWV PIPE <A>
2" X 10' PVC40-DWV PE PIPE
509.38
049081137663 2 PVC CPLG <A>
2" PVC COUPLING 9XS
501.09
088753307565 PURPL PRIMER <A>
802 PURPLE PRIMER NSF/UPC
049081637545 1" 10PK CPLG <A>
1" PVC COUPLING SXS 10 PACK
051411641108 1 IN RIGID <A>
11N RIGID 90 DEGREE ELBOW
208.54
132886266089 12-2 UF 50' <A>
12-2 UF W/G 50 FI 44.10 46.90 5.45 5.96 3.93 /

19% 7 900 SUBTOTAL SALES, TAX TOTAL KXXXXXXXXXXXXX3299 HOME DEPOT AUTH CODE 00704374025013 159,39 12,59 \$171,98 171.98

ONE TOUCH ELECTRIC GIESLER DICK

P.O.#/JOB NAME: PAGSA

***************



RETURN POLICY DEFINITIONS

POLICY ID DAYS POLICY EXPIRES ON
11 365 08/07/2018

THE HOME DEPOT RESERVES THE RIGHT TO
LIMIT / DENY RETURNS, PLEASE SEE THE
RETURN POLICY SIGN IN STORES FOR

PONDEROSA LUMBER COMPANY

06000001 03/10/17 JBC. 99:35;稍 052Ord#: 60153729 Inv#: 60141598

30620 PVC 45060 ELBOW 7TN SLIP(6112866) 1.99 1,990 IFA

> 1,99 SUB TOTAL 0.14 TAX 2.13 MIAL

> > CASH -2.13

NO RETURNS SETTION RECEIPT THANK YOU FOR SUBSTING

"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."

One Touch Electric Inc.

Date

Border States Electric - FRM 865 South Browning Parkway Farmington NM 87401-1007 Phone: 505-324-8000

Border Stales Electric Supply Electrical Wholesale Supply of Ulah | Western Extralite Shealy Electrical Wholesalers

INVOICE BSE Invoice: 913416413 Cust Accili: 203315 P.O.#: Pagosa CDOT Sales Order#: 18790563 Sales Order: 16790003
Sales Order
Packing Slip#: 8020909107
Ship Condition: Our Truck
Payment Terms: 1,0 % 10th prox net 25th (25)

Page 1 of 2

Please remit to: Border States Electric Supply PO Box 911105 Deriver CO 80291-1105

Ship to: One Touch Electric Inc 3228 CR 21 Cortez CO, 81321-8613

Date: 07/20/2017

One Touch Elec-CDOT STE C480-008 Job-CDOT STE C480-008 Pinion Causeway Multi-use Trail 3228 CR 21 Cortez CO 81321-8613

Cust Item	BSE Item	Material Order Qty MFG - Description	Ship Qty	Back Ordered:	Price	Per	UoM	Total Value
	000010	104909 4 EA EPVC - FEM-ADPT-2IN-PVC In Stock	4		48:86 /100		EA	1.95
	000020	109107 2 EA PIC -2IN-90DEG-GALV-ELBOW In Stock	<b>2</b> .		1,138.10 /100		EA	22,76
	000030	114978 3 EA MMM - 1100-PRINTED-2X100FT T In Stock	3 APE		7.27 /1	<del></del>	EÀ	21.81
1	000060	103185 1 EA QUC - PG1324BA12 BOX OB 13X	1 24X12 CORE	ITEM	138,72/1		EĄ	138.72
	000070	103253 1 EA QUÇ -: PG1324HA0017: CVR BD H	1		157:05/1		EA.	157.05
-	000080	106381 1 EA ERVC - ELB-BL-1IN-90DEG-STD-S	1		64.56 /100	}	EA	0.65
	000090	2243871 30 FT EPVC - SCH40-1IN-10FT-PVC-CQ	30		28.69 /100	)	FT	8.61
•.	000100	2243884 40 FT EPVC - SCH80-1IN-10FT-PVC-CO	40		45.70 /100	)	FT	18.28
	000110	2243886 50 FT EPVC - SCH80-2IN-10FT-PVC-CO	50		93.04/100	)	FT	46,52
	000120	2243888 50 FT EPVC - SCH80-3IN-10FT-PVC-CO	50		166.53/100	0	FT	83.27
	000130	109115 4 EA PIC - 3IN-90DEG-GALV-ELBOW	4		2,762.66 /100	Ö	EΑ	110,51
	000140	105012 8 EA EPVC - FEM-ADPT-3IN-PVC	8		135.13/100	Q	ĘĂ	10.81
	000150	162387 20 FT GRC - 1IN-GALV-STEEL CONDU	20		237.53 /100	0	FT	47,51
	000160	109098 2 EA	2		446.84 /10	0 	EA	8.94
	000170	PIC - 1IN-90DEG-GALV-ELBOW - 104875 4 EA EPVC - FEM-ADPT-1IN-PVC	4	<u> </u>	25.32 /10	0	EA	1.01
	000171	103186 3 EA QUG + PG2436BA24 BOX OB 24X	3 (36X24 CO	RE:ITEM	485.00/1		· EA	1,455.00
		040 Packing Slip No. 8021004842						

Date: 07/20/2017

Page 2 of 2

Cust Acct: 203315 One Touch Elec-CDOT STE C480-008

								·- · · · · · · · · · · · · · · · · · ·
Cust Item	BSE Item	Material MFG - Desc	Order Qty ription	Ship Qty	Back Ordered	Price	Per UoM	Total Value
	000172	040	1 EA x436HH0017 CVR BD.I p No: 8021004842	1 HD X3/HW-EL		420.58 /1	EA .	420.58
Cash discount of 25.57 by 08/10/2017 Total due by 08/25/2017 Mail at least 7 business days before due date.					Shipping and Handling \$ Total \$ State Tax \$ County Tax \$	2.900 %	0.00	146.10 2,700.08
Please retu	rn involçe w	ith your ten	ilttance noting all adju		Local Tax S Other Tax S Other Tax S Other Tax S Tax Subtotal I Invoice Amount S	6 0.400 % 5 0.000 % 6 0.000 %	6 10:20 6 0:00	84:29 <b>2,784:3</b>

A finance charge of 1.5% per month or the maximum allowable by law whichever is greater, will be assessed if payment is not received by invoice due date.

To access BSE's Terms and Conditions of Sale, please go to https://www.borderstateselectric.com

Delivery: 8020909107 Received by:

majnesse

Anita Giesler 07/13/2017 15:57:29

The customer signature certifies the materials described herein are being used in construction of the improvements for the above referenced project.

Delivery: 8021004842 Received by:

1 Willy Sove

Kathy Stone 07/13/2017 15:57:29

The customer signature certifies the materials described herein are being used in construction of the improvements for the above referenced project.

"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."

One Touch Electric Inc.

Date

#### POHIERICA LONGER COMPANY

08/08/17 JBE 06000001	PONDEROSA LUMBER COMPANY
15:06:59 psi Ord#: 60152919 Inv#: 60140869. 30710 1 SXS 90 PVC ELBDW(6151500) 1 EA @ 0.990 0.99 30710 1 SXS 90 PVC ELBOW(6151500) 1 EA @ 0.990 0.99 30720 PVC 90DEG ELBOW 2IN SLIP(6121420) 1 EA @ 2.790 2.79	08/10/17
SUB TOTAL 4.77 TAX 0.33 TOTAL 5.10	SUB TOTAL 3.98 TAX 0.27 TOTAL 4.25 CASH -5.00

NO RETURNS WITHOUT RECEIPT THANK YOU FOR SHOPPING

NO RETURNS WITHOUT RECEIPT THANK YOU FOR SHOPPING

CHANGE

-0.75

"We hereby certify, by photocopy of this invoice, that the quantity of material/rental or lease/specialty work, represented by this invoice was purchased and received for CDOT Project No. STE C480-008 and the prices shown are actual costs."

One Touch Electric, Inc.

One Touch Electric, Inc.
3228 Road 21
Cortez, CO 81321
(970) 565-9684 Office
(970) 565-6969 Fax
CO License #4005 NM License #86635
otelectric1001@qwestoffice.net

September 9, 2017

Crossfire, LLC 820 Airport Road Durango, CO 81303

Attn: Paul Martin

Re: CDOT STE C480-008/Force Account invoice #2017-5317

Paul,

One Touch Electric, Inc. hereby certifies that 460 linear feet of #10 THHN stranded wire and 25 linear feet of 1" Schedule 40 PVC conduit was taken from stock owned by One Touch Electric, Inc., and that the price shown accurately reflects the price (less sales tax) that was paid, and that the material was installed on the WalMart Sign force account work done under the above-referenced CDOT project.

Thank you, anta Gilsler

Anita Giesler Sec/Treas