Oregon Department of Transportation

TEST SUMMARY (A)

(NONFIELD TESTED MATERIALS)

CONTRACT NO.	SHEET
12770	13A

ITEM NO.	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY
0730	M2	3500	
0740	MG	2900	
0750	MG	2000	
0760	MG	120	

LINE	DATE OF SAMPLE, TEST, OR INSPECTION	FIR REPORT NO.	DATA SHEET NO. OR MATERIALS LAB. "I" REPORT NO.	LAB REPORT NO.	TEST RESULTS CERTIFICATE	QUALITY COMPLIANCE CERTIFICATE	"Q" WITH MATERIALS "I" REPORT NO.	EQUIPMENT LISTS AND DRAWINGS	CERTIFICATE OF MATERIALS ORIGIN	0730 COLD PLANE PAVEMENT REMOVAL	0740 AGGREGATE BASE	0750 LEVEL 3,12.5 MM DENSE HMAC	0760 PG 70-28 ASPHALT IN THE HMAC			EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION
REVIEWERS AND DATES										ITEM NUMBERS AND DESCRIPTIONS						
										NDR		1/1000mg				
		F		L	T	Q	QI	E	O	INCORPORATED QUANTITIES						
1											x	x				See B Sheets for Field Tested Materials
2	11-8-03		865-213	03-5750									V-1			Does not Comply
3	11-9-03		42860-26	03-5749									1-1			Does not Comply See Adjustment Item #6076
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

734-1902-A (10-01)

This sheet

was intentionally

left blank.

** COPY ** OREGON DEPARTMENT OF TRANSPORTATION ** COPY ** Page 1

MATERIALS LABORATORY (503)986-3100
800 AIRPORT RD. SE SALEM, OR 97301-4798 FAX(503)986-3096

ntract No.: C12770 EA No.: CON01479 Lab No.: 03-005749
Project: SNAKE RIVER (NYSSA) BRIDGE
Highway: CENTRAL OREGON County: MALHEUR Data Sheet No.: F2860 026
Contractor: F.E. WARD INC FA No.: X-BHF-STP-S007(32)
Project Manager: RIC YOUNG Org Unit: 5804 Bid Item No.: 0760 (CCO#7)
Submitted By: RODNEY ROBERTS Org Unit: MTI Sample No.: C-1-1
Material Source: IDAHO Qty Represented: 4000 MGS MIX
Sampled At: AC PLANT Sampled By: Witnessed By:
DATE-Sampled: 03/11/ 7 Received: 03/11/19 Tested: 03/12/ 2 Reported:
Type of Test: QUALITY CONTROL Use: LEVEL 3 12.5MM DENSE GRADED MIX

PETROLEUM LAB REPORT

Material Type : ASPHALT
Brand : IDAHO Grade: PG 70-28 Lot No. : 1 Sub-Lot No. : 1

Method	Test Description	Results	
T313-02	**Bending Beam Rheometer (60sec)**		
	Equipment Manufacturer	Cannon	
	Temperature	-18	C
	Measured Stiffness	201.0	MPa
	m-value	0.321	
T316-02	**Brookfield Viscosity**		
	Spindle #	27	
	Spindle Speed	20	RPM
	Temperature	135	C
	Brookfield Viscosity	0.737	Pa-S
T315-02	**Dynamic Shear Rheometer**		
	Original Temperature	70	C
	Original G*/sin δ	0.94	kPa
	RTFO Temperature	70	C
	RTFO G*/sin δ	2.17	kPa

416A/V =$ 0.

TOTAL CHARGES: $ 0.00

REMARKS:
Material represented by sample **DOES NOT** comply with specifications.
Sample fails ODOT Spec. for Original and RTFO DSR.(Min.1.00 & 2.20)
*
*

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THIS LABORATORY.

C: FILES ; PROJ MGR: RIC YOUNG ; IDAHO ; F.E. WARD INC ; REG 5 Q.A.C.
; B PATTERSON-PAVEMENT DESIGN ; B. PATTERSON - PAVEMENTS D DOMINIC-PAVEMENT DESIGN

** COPY ** OREGON DEPARTMENT OF TRANSPORTATION ** COPY **

MATERIALS LABORATORY
800 AIRPORT RD. SE SALEM, OR 97301-4798
(503)986-3100
FAX(503)986-3096

Contract No.: C12770 EA No.: CON01479 Lab No.: 03-005750

Project: SNAKE RIVER (NYSSA) BRIDGE

Highway: CENTRAL OREGON County: MALHEUR Data Sheet No.: F0865 213
Contractor: F.E. WARD INC FA No.: X-BHF-STP-5007(32)
Project Manager: RIC YOUNG Org Unit: 5804 Bid Item No.: 0760 (CCO#7)
Submitted By: MARK SANGER Org Unit: 5000 Sample No.: V-1
Material Source: IDAHO Qty Represented: 10% QA/QC
Sampled At: PLANT FEED LINE Sampled By: Witnessed By:
DATE-Sampled: 03/11/ 8 Received: 03/11/12 Tested: 03/12/ 2 Reported:
Type of Test: VERIFICATION Use: LEVEL 3 12.5MM DENSE GRADED MIX

PETROLEUM LAB REPORT

Material Type : ASPHALT
Brand: IDAHO Grade: PG 70-28

Method	Test Description	Results	
T313-02	**Bending Beam Rheometer (60sec)**		
	Equipment Manufacturer	Cannon	
	Temperature	-18	C
	Measured Stiffness	207.0	MPa
	m-value	0.318	
T316-02	**Brookfield Viscosity**		
	Spindle #	27	
	Spindle Speed	20	RPM
	Temperature	135	C
	Brookfield Viscosity	0.775	Pa-S
T315-02	**Dynamic Shear Rheometer**		
	Original Temperature	70	C
	Original G*/sin δ	0.93	kPa
	RTFO Temperature	70	C
	RTFO G*/sin δ	2.08	kPa
	PAV Temperature	25	C
	PAV G*sin δ	1480	kPa

416A/V =$ 0.

TOTAL CHARGES: $ 0.00

REMARKS:
Material represented by sample **DOES NOT** comply with specifications.
Sample fails ODOT Spec for Original and RTFO DSR.(Min.1.00 & 2.20)
*
*

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THIS LABORATORY.

C: FILES ; PROJ MGR: RIC YOUNG ; IDAHO ; F.E. WARD INC ; REG 5 Q.A.C.
; B PATTERSON-PAVEMENT DESIGN ; B. PATTERSON - PAVEMENTS D DOMINIC-PAVEMENT DESIGN

Oregon State Department of Transportation

TEST SUMMARY (B-QA)

(FIELD TESTED MATERIALS)

CONTRACT NO.	SHEET
12770	13B

REVIEWERS AND DATES	ITEM NO	DESCRIPTION	UNIT	ORIG. QUANT.	FINAL QUANT.
	74	AGGREGATE BASE (19.0MM-0)	mg	2,900	

LINE	DATE OF SAMPLE, TEST, OR INSPECTION	REPORT NO.	DATA SHEET NO.	LAB REPORT NO.	TESTING BY: QUALITY CONTROL BY CONTRACTOR	TESTING BY: REGION-QUALITY VERIFICATION	TESTING BY: REGION-INDEPENDENT ASSURANCE	TESTING BY: CONTRACTOR-INDEPENDENT ASSURANCE (SPLIT SAMPLE)		TEST METHOD AND FREQUENCY: SOURCE MATERIAL (QUALIFYING)	GRADATION	FRACTURE	SE							DENSITY	STRENGTH	VISUAL	QUANTITIES: IN COMPLIANCE INCORPORATED	NON-COMPLIANCE INCORPORATED	EXPLANATIONS AND NON-COMPLIANCE
1	12/27/02		F2101 078	02-4863																					Source 23-097-5 Compliance
2	06/23/03				X						3	3	3												StatSpec QL Levels
3	06/23/03	V-1				X	X				X	X	X												IA does not comply fails SE
4	06/23/03	Ver-1						X			X	X	X												
5	08/20/03	Memo																							Failing IA SE Resolution Memo
6	10/09/03	CCO																							CCO #11 Spec Change 6.3mm sieve
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									
17																									
18																									
19																									
20																									
21																									

WORK PHASE

X	AGGR. PROD Stockpile
	MIX PRODUCTION
	DENSITY
	OTHER

734-1902-B(4-96)

This sheet

was intentionally

left blank.

OREGON DEPARTMENT OF TRANSPORTATION
MATERIALS LABORATORY
800 AIRPORT RD. SE SALEM, OR 97301-4798
(503)986-3100
FAX(503)986-3096

Contract No.: C12732 EA No.: CON01488 Lab No.: 02-004863
Project: N OREGON STREET - SW 4TH AVE (ONTARIO)
Highway: OLDS FERRY - ONTARIO County: MALHEUR Data Sheet No.: F2101 Q78
Contractor: JC COMPTON FA No.: NH-S455(5)
Project Manager: RIC YOUNG Org Unit: 5804 Bid Item No.: 540
Submitted By: RAY MACE Org Unit: L&H Sample No.: 2002-1
Material Source: 23-097-5 ONTARIO ASPHALT Qty Represented: ANNUAL COMPLIANCE
Sampled At: STOCKPILE Sampled By: Witnessed By:
DATE-Sampled: 02/11/18 Received: 02/11/20 Tested: 02/11/27 Date Reported: DEC 0 2 2002
Class/Type: COMPLIANCE Use: SHOULDER & AGGREGATE BASE

AGGREGATE LABORATORY REPORT - BASEAG

Q or G: GRAVEL Size: 19.0mm-0.0mm

Test	Field	Lab
TM 101 S.E.		
TM 102 L.L.		
TM 103 P.I.		
TM 213 Ttl Frac.		
TM 226 Dust/Clay		
TM 227 Cleanness		
TM 229 Elong pcs		
TM 234 Uncomp. Voids		
TM 311 Moisture		
TM 204/205		
Sieve	Passing	Passing
63 mm		
50		
37.5		
25.0		
19.0		
12.5		
9.5		
6.3		
4.75		
2.36		
2.00		
1.18		
600 µm		
425		
300		
150		
75		

RECEIVED
DEC 0 5 2002
OFFICE OF PROJECT MANAGER
ONTARIO, OREGON
☐ P.M. ☐ A.P.M. ☑ O.M. ☐ C.S

TM 202 F. Grav.	**TM 203 C. Grav.**
Bulk:	Bulk:
S.S.D.:	S.S.D.:
Appar.:	Appar.:
Absorp.:	Absorp.:
TM 206 Soundness	**TM 208 Degrade**
C A: F A:	
37.5-19.0:	
19.0-9.5 :	
9.5-4.75:	Crse Ht: 10 mm
4.75-2.36:	P20: 15.6 %
2.36-1.18:	Fine Ht:
1.18-600 µm:	P20:
600 µm-300 :	
TM 211 Abrasion	**TM 212 Impurity**
19.4 %	Plate #:
Type B	
TM 213 Fracture	**TM 221 Friables**
19.0:	Wt'd Avg :
12.5:	37.5-19.0:
9.5:	19.0-9.5 :
6.3:	9.5-4.75:
4.75-2.00:	4.75-1.18:
TM 222 Lightweight	**TM 225 Woodwaste**
Coarse:	Lab:
Fine:	Field:
AASHTO T 288/289	**AASHTO T 267**
Resist: Ω	Organic:
pH:	
ASTM D 512	**ASTM D 516**
Chloride:	Sulfate:

1	208A	$
1	211	

NSM = Not Sufficient Material

TOTAL CHARGES: $ 0.00

REMARKS:
Material represented by sample **DOES** comply with specifications.

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THIS LABORATORY.

: FILES ; PROJ MGR: RIC YOUNG ; JC COMPTON ; REG 5 Q.A. COORDINATOR ; RAS 5

Kenneth L. Stevenson
STATE CONSTRUCTION AND MATERIALS ENGINEER

4-198

STATISTICAL TESTING INPUT DATA				3.80.00	File:	Valley Paving				Date:	06/25/2003-4:58:20 PM				
Section:	SNAKE RIVER (NYSSA) BRIDGE SEC.				Estimate #:				Source:						
Contract:	12770				Mix Design:				% Lime:						
Contractor:	Valley Paving				Specification #:				% RAP:						
Proj Mgr:	Ric Young				Lot #:				A/C Brand:						
Bid Item #:	740				Level:				A/C Grade:						
Mat'l Type:	19.0-0.0 base agg				Lift:				Plant Type:						
Constituent #	1	2	3	4	5	6	7	8	9	10	11	12			
Constituent	25mm	19mm	12.5mm	9.5mm	6.3mm	4.75mm	2.0mm	%fracture	5E	wood waste		2.0mm/6.3mm	Target		
Weight															
USL	100	100		75	~~60~~ 45			100		0.05		60	Target	0 = -1E+09;	100 =
LSL	100	90		55	40			70		0		40	Value	0 = -1E+09;	100 =
													% Asphalt	Tons or Mg	Test#
Sublot 001 3	100	97	81	72	63	56	35 ~~34.8~~	96	79	0		56			
Sublot 002	100	97	80	70	62	54	33 ~~33.4~~	97	79	0		54			
Sublot 003 1	100	99	80	71	62	55	34 34.1	96	81	0		55			
QV	100	92	69	59	51	45	27	98				53			

CCO #11 CHANGES GRADATION SPEC FOR 6.3 SCREEN.

C. [illegible]
11-25-03

StatSpec 3.70
© 20 Oregon Department of Transportation, all rights reserved

STATISTICAL COMPUTATIONS				3.80.00	File:	NEWPROJ.SS			Date:	06/25/2003-4:58:20 PM		
Section:	SNAKE RIVER (NYSSA) BRIDGE SEC.				Estimate #:				Source:			
Contract:	12770				Mix Design:				% Lime:			
Contractor:	Valley Paving				Specification #:				% RAP:			
Proj Mgr:	Ric Young				Lot #:				A/C Brand:			
Bid Item #:	740				Level:				A/C Grade:			
Matl Type:	19.0-0.0 base agg				Lift:				Plant Type:			
Constituent #	1	2	3	4	5	6	7	8	9	10	11	12
Constituent	25mm	19mm	12.5mm	9.5mm	6.3mm	4.75mm	2.0mm	%fracture		wood waste		2.0mm/6.3mm
Weight												
Sum X	300	293	241	213	187	165	102.3	289		0		165
Sum X^2	30000	28619	19361	15125	11657	9077	3489.41	27841		0		9077
Samples	3	3	3	3	3	3	3	3		3		3
Mean	100.0000	97.6667	80.3333	71.0000	62.3333	55.0000	34.1000	96.3333		0.0000		55.0000
Std Dev	0.0000	1.1547	0.5774	1.0000	0.5774	1.0000	0.7000	0.5774		0.0000		1.0000
Qu	1E+09	866025319	-139.14	4	-4.04	-55	-48.71	1.732E+09		1E+09		5
Ql	1E+09	6.64	139.14	16	38.68	55	48.71	45.61		1E+09		15
Pu	100	100	0	100	0	0	0	100		100		100
Pl	100	100	100	100	100	100	100	100		100		100
P	100	100	0	100	0	0	0	100		100		100
Pay Factor	1.05	1.05	0.00	1.05	0.00	0.00	0.00	1.05		1.05		1.05
Wtd. Factor												
Sum of Weight Factors:												
Composite Pay Factor:												

DK

/ CB 6-25-03

StatSpec 3.70

© 2000, Oregon Department of Transportation, all rights reserved

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION)	SNAKE RIVER (NYSSA) BRIDGE SECTION		CONTRACT NUMBER 12770
CONTRACTOR OR SUPPLIER	Valley Paving	PROJECT MANAGER RIC YOUNG	BID ITEM NUMBER 740
SOURCE NAME	Valley Paving	SOURCE NUMBER 23-097-5	MATERIAL SIZE 19.0mm - 0

TEST NO.	DATE	TIME	SAMPLED AT	TO BE USED IN
1	6/23/03	10:40am	stockpile	agg base

SIEVE ANALYSIS AASHTO T27/11

SIEVE SIZE	SPECS. LIMITS	MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
25mm	100	0.0				0.0	0.0	100	
19.0	90-100	77.4				77.4	1.4	99	
12.5		1038.0				1038.0	18.2	80	
9.5	55-75	539.9				539.9	9.5	71	
6.3	40-80 65	489.7				489.7	8.6	62	ok
4.75		405.3				405.3	7.1	55	
2.00	20-41	1196.4				1196.4	21.0	34.1	
PAN		1937.8				1937.8	34.1		

B = INITIAL DRY MASS: 5687.8 D =MASS AFTER SIEVING: 5684.5

PERCENT FRACTURE IN AGG TM 1

SIEVE SIZE	SPECS. LIMITS	FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	ELONGATED PIECES TEST MASS	ELONG MASS
19.0mm	one face	45.3	0.0	32.1	59%		
12.5	one face	994.3	0.0	43.7	96%		
9.5	one face	532.0	0.0	7.9	99%		
6.3	one face	478.8	0.0	10.9	98%		

SE T 176

1	2	3	Samp
4.5	4.5	4.6	Clay
3.6	3.6	3.5	Sand
80	80	77	S.E.
	79	AVG.	

PAN TARE	1593.2
WET MASS & PAN	7403.4
DRY MASS & PAN	7281
AFTER WASH DRY MASS & PAN	7281

C = DRY MASS AND PAN AFTER WASH - PAN

A = WET MASS & PAN - PAN

[X] DRY [ ] WET WAQTC AASHTO T-27/T11

[ ] Round [ ] Square [X] Rectangle 16" X 24" Size

		RESULT	SPEC
Combine % Fracture	TM 1	96%	70 - 100
Wood Waste	TM225	0.00%	0 - 0.05%
CleannessValue	TM 227		
Flat & Elongated	TM 229		
Fineness Modulus	T 27/T11		
MOISTURE %=((A-B) / B) X 100		2.15%	
SIEVE LOSS %=((C-D) / C) X 100		0.1%	0 - 0.3%
Base Agg 2.00mm / 6.3mm		55%	40 - 60%

REMARKS

[X] QUALITY CONTROL [ ] VERIFICATION [ ] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
RODNEY ROBERTS # 42860	Materials Testing & Inspect	Rodney Roberts	6/24/03

1782-02 9-02

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION)			CONTRACT NUMBER
SNAKE RIVER (NYSSA) BRIDGE SECTION			12770
CONTRACTOR OR SUPPLIER	PROJECT MANAGER		BID ITEM NUMBER
Valley Paving	RIC YOUNG		740
SOURCE NAME	SOURCE NUMBER		MATERIAL SIZE
Valley Paving	23-097-5		19.0mm - 0

TEST NO.	DATE	TIME	SAMPLED AT	TO BE USED IN
2	6/23/03	10:50am	stockpile	agg base

SIEVE ANALYSIS AASHTO T27/11

SIEVE SIZE	SPECS. LIMITS	MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
25mm	100	0.0				0.0	0.0	100	
19.0	90-100	181.1				181.1	3.0	97	
12.5		1020.9				1020.9	16.7	80	
9.5	55-75	613.1				613.1	10.0	70	
6.3	40-60 65	518.1				518.1	8.5	62	
4.75		454.6				454.6	7.4	54	
2.00		1285.0				1285.0	21.0	33.4	
PAN		2040.6				2040.6	33.4		

B = INITIAL DRY MASS: 6113.2 D =MASS AFTER SIEVING: 6113.4

PERCENT FRACTURE IN AGG TM 1 / ELONGATED PIECES

SIEVE SIZE	SPECS. LIMITS	FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	TEST MASS	ELONG MASS
19.0mm	one face	149.6	0.0	31.5	83%		
12.5	one face	999.1	0.0	21.8	98%		
9.5	one face	594.1	0.0	19.0	97%		
6.3	one face	514.9	0.0	3.2	99%		

SE T 176

1	2	3	Semp
4.5	4.5	4.4	Clay
3.6	3.5	3.4	Sand
80	78	78	S.E.
	79	AVG.	

PAN TARE	1631.1
WET MASS & PAN	7873.3
DRY MASS & PAN	7744.3
AFTER WASH DRY MASS & PAN	7744.3

C = DRY MASS AND PAN AFTER WASH - PAN

A = WET MASS & PAN - PAN

[X] DRY [ ] WET

WAQTC AASHTO T-27/T11

[ ] Round [ ] Square [X] Rectangle 16" X 24" Size

		RESULT	SPEC
Combine % Fracture	TM 1	97%	70 - 100
Wood Waste	TM225	0.00%	0 - 0.05%
CleannessValue	TM 227		
Flat & Elongated	TM 229		
Fineness Modulus	T 27/T11		
MOISTURE %=((A-B) / B) X 100		2.11%	
SIEVE LOSS %=((C-D) / C) X 100		0.0%	0 - 0.3%
Base Agg 2.00mm / 6.3mm		54%	40 - 60%

REMARKS

[X] QUALITY CONTROL [ ] VERIFICATION [ ] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
RODNEY ROBERTS # 42860	Materials Testing & Inspect	Rodney Roberts	6/24/03

1792-02 9-02

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION)	SNAKE RIVER (NYSSA) BRIDGE SECTION		CONTRACT NUMBER 12770
CONTRACTOR OR SUPPLIER	Valley Paving	PROJECT MANAGER RIC YOUNG	BID ITEM NUMBER 740
SOURCE NAME	Valley Paving	SOURCE NUMBER 23-097-5	MATERIAL SIZE 19.0mm - 0
TEST NO. 3 / DATE 6/23/03 / TIME 11:00am	SAMPLED AT stockpile	TO BE USED IN agg base	

SIEVE ANALYSIS AASHTO T27/11

SIEVE SIZE	SPECS. LIMITS	MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
25mm	100	0.0				0.0	0.0	100	
19.0	90-100	189.1				189.1	3.2	97	
12.5		909.1				909.1	15.5	81	
9.5	55-75	543.8				543.8	9.3	72	
6.3	40-60 60-65	531.1				531.1	9.1	63	ok
4.75		428.6				428.6	7.3	56	
2.00		1219.1				1219.1	20.8	34.8	
PAN		2040.3				2040.3	34.8		

B = INITIAL DRY MASS: 5863.1 D =MASS AFTER SIEVING: 5861.1

PERCENT FRACTURE IN AGG TM 1

SIEVE SIZE	SPECS. LIMITS	FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	ELONGATED PIECES TEST MASS	ELONG MASS
19.0mm	one face	170.9	0.0	18.2	90%		
12.5	one face	857.5	0.0	51.6	94%		
9.5	one face	539.9	0.0	3.9	99%		
6.3	one face	526.8	0.0	4.3	99%		

SE T 176

1	2	3	Samp
4.1	4.5	4.4	Clay
3.4	3.5	3.5	Sand
83	78	80	S.E.
	81	AVG.	

PAN TARE	1605.2
WET MASS & PAN	7596.8
DRY MASS & PAN	7468.3
AFTER WASH DRY MASS & PAN	7468.3

C = DRY MASS AND PAN AFTER WASH - PAN

A = WET MASS & PAN - PAN

[X] DRY [ ] WET WAQTC AASHTO T-27/T11

[ ] Round [ ] Square [X] Rectangle 16" X 24" Size

		RESULT	SPEC
Combine % Fracture	TM 1	96%	70 - 100
Wood Waste	TM225	0.00%	0 - 0.05%
CleannessValue	TM 227		
Flat & Elongated	TM 229		
Fineness Modulus	T 27/T11		
MOISTURE %=((A-B) / B) X 100		2.19%	
SIEVE LOSS %=((C-D) / C) X 100		0.0%	0 - 0.3%
Base Agg 2.00mm / 6.3mm		56%	40 - 60%

REMARKS

X QUALITY CONTROL [ ] VERIFICATION [ ] INDEPENDENT ASSURANCE

CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
RODNEY ROBERTS # 42860	Materials Testing & Inspect	Rodney Roberts	6/24/03

1792-02 9-02

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION): SNAKE R. (NYSSA) BR.			CONTRACT NUMBER: 12770
CONTRACTOR OR SUPPLIER: F.E. WARD	PROJECT MANAGER: RIC YOUNG		BID ITEM NUMBER: 740
SOURCE NAME: VALLEY PAVING	SOURCE NUMBER: 23-97-5		MATERIAL SIZE: 19MM -0
TEST NO.: V-1	DATE: 6/23/03	TIME: 10A	SAMPLED AT: STOCKPILE
TO BE USED IN: BASE AGGREGATE			

SIEVE ANALYSIS AASHTO T27/11

SIEVE SIZE	SPECS. LIMITS	MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED	QC
25	100	0 / 0	0			0	0	100		100
19	90-100	97.4 / 143.6	210.3			441.3	7.0	93		92
12.5		297.1 / 520.8	563.7			1381.6	22.0	71		69
9.5	55-75	210.3 / 310.4	279.4		808.1	808.1	13.0	58		59
6.3	40-60	153.0 / 161.4	168.1			482.5	7.7	50		51
4.75		118.7 / 112.1	93.2			324.0	5.2	45		45
3.35		190.4 / 189.0	145.9			525.3	8.4	37		
2.00		234.2 / 195.9	158.4			588.5	9.4	27		27
PAN		701.1 / 888.0	441.9			1731.0	27.6			

B = INITIAL DRY MASS: 6276.0 D = MASS AFTER SIEVING: 6282.3 6282.3

PERCENT FRACTURE IN AGG TM 1

SIEVE SIZE	SPECS. LIMITS	FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	ELONGATED PIECES TEST MASS	ELONG MASS
	70% MIN						
6.3	1 FACE	3065.2		58.3			

SE T 176 30 MIN

1	2	3	Samp	QC
4.7			Clay	
3.5			Sand	90
75			S.E.	
		AVG.		

PAN TARE 256	261.4
WET MASS & PAN	902.2
DRY MASS & PAN	883.7
AFTER WASH DRY MASS & PAN	

WAQTC AASHTO T-27/T11 A = WET MASS & PAN - PAN C = DRY MASS AND PAN AFTER WASH - PAN

☑ DRY WET ☐

		RESULT	SPEC
Combine % Fracture	TM 1	98%	70% MIN
Wood Waste	TM225		
CleannessValue	TM 227		
Flat & Elongated	TM 229		
Fineness Modulus	T 27/T11		
MOISTURE %=((A-B) / B) X 100			
SIEVE LOSS %=((C-D) / C) X 100		.3% .1%	.3% MAX
Base Agg 2.00mm / 6.3mm		54	40-60% 53

REMARKS

☐ QUALITY CONTROL ☑ VERIFICATION ☑ INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
MARK SANGER 865	R-5 QA	Mark Sanger	6/24/03

IA Complies except for SE.
Verif does not comply QC data.

1792 9-01

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION)	SNAKE RIVER (NYSSA) BRIDGE SECTION		CONTRACT NUMBER 12770
CONTRACTOR OR SUPPLIER	Valley Paving	PROJECT MANAGER RIC YOUNG	BID ITEM NUMBER 740
SOURCE NAME	Valley Paving	SOURCE NUMBER 23-097-5	MATERIAL SIZE 19.0mm - 0

TEST NO.	DATE	TIME	SAMPLED AT	TO BE USED IN
ver - 1	6/23/03	10:30am	stockpile	agg base

SIEVE ANALYSIS AASHTO T27/11

SIEVE SIZE	SPECS. LIMITS	MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
25mm	100	0.0				0.0	0.0	100	
19.0	90-100	415.3				415.3	7.5	92	
12.5		1291.0				1291.0	23.4	69	
9.5	55-75	582.0				582.0	10.6	59	
6.3	40-60	433.8				433.8	7.9	51	
4.75		337.2				337.2	6.1	45	
2.00		963.0				963.0	17.5	27	
PAN		1488.2				1488.2	27.0		

B = INITIAL DRY MASS: 5514 D =MASS AFTER SIEVING: 5510.5

PERCENT FRACTURE IN AGG TM 1

SIEVE SIZE	SPECS. LIMITS	FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	ELONGATED PIECES TEST MASS	ELONG MASS
19.0mm	one face	401.2	0.0	14.1	97%		
12.5	one face	1258.2	0.0	32.8	97%		
9.5	one face	582.0	0.0	0.0	100%		
6.3	one face	429.1	0.0	4.7	99%		

SE T 176

1	2	3	Samp
4.0	4.1	4.1	Clay
3.6	3.6	3.7	Sand
90	88	91	S.E.
	90	AVG.	

PAN TARE	1582.1
WET MASS & PAN	7187.4
DRY MASS & PAN	7096.1
AFTER WASH DRY MASS & PAN	7096.1

C = DRY MASS AND PAN AFTER WASH - PAN [X] DRY [ ] WET WAQTC AASHTO T-27/T11

A = WET MASS & PAN - PAN [ ] Round [ ] Square [X] Rectangle 16" X 24" Size

		RESULT	SPEC
Combine % Fracture	TM 1	98%	70 - 100
Wood Waste	TM225		0 - 0.05%
CleannessValue	TM 227		
Flat & Elongated	TM 229		
Fineness Modulus	T 27/T11		
MOISTURE %=((A-B) / B) X 100		1.66%	
SIEVE LOSS %=((C-D) / C) X 100		0.1%	0 - 0.3%
Base Agg 2.00mm / 6.3mm		53%	40 - 60%

REMARKS

[X] QUALITY CONTROL [ ] VERIFICATION [ ] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
RODNEY ROBERTS # 42860	Materials Testing & Inspect	Rodney Roberts	6/24/03

1792-02 9-02

Oregon

DEPARTMENT OF TRANSPORTATION

HIGHWAY DIVISION
Ric Young
Project Manager

DATE: 8-20-03

TO: File

FROM: Eric T. Knapp ETK

SUBJECT: Snake River (Nyssa) Bridge Project, C12770

RE: Aggregate Base Material, BI 740,
S.E. results not meeting I.A. parameters and QA results not verifying QC Data

The aggregate base material proposed for this project was being supplied by Valley Paving who already had an existing stockpile. The aggregate base stockpile was sampled by QC and QA at the same time and witnessed by myself. On June 23, 2003 the aggregate base was sampled and split by QC and QA personnel and the appropriate tests performed.

Comparison of QA/QC sand equivalent results indicated that independent parameters had not been met and that the IA/Verif. sample did not verify the QC data according to the MFTP. The QC data also showed that the material was out of specification while the IA/Verif. data indicated the material met specification. No resolution was pursued on the S.E. results because it was not sure if this material would be used due to the QC data indicating that it did not meet specification.

On August 13,2003 a price adjustment was figured to accept the "out of specification" material based on the QC data provided. Previous QC data indicated that the S.E. was on the order of 83 to 84. Based on this information, the 2 month time delay in acceptance of the material, and the results of all the testing was well above the minimum 30 required by specification the S.E. resolution was not pursued further and accepted as presented.

In the same line of thinking, since the QA/QC met independent assurance parameters for the T27/11 but the QA results indicated the material met specification versus the QC data showing the material was out of specification, there was no benefit in re-testing.

1508 East Idaho Ave.
Ontario, OR 97914
(541) 889-8558
FAX (541) 889-8568

Oregon Department of Transportation

CONTRACT CHANGE ORDER

NOTICE: THIS FORM MUST BE TYPEWRITTEN

PROJECT NAME (SECTION)				CONTRACT NO.
SNAKE RIVER (NYSSA) BRIDGE SECTION				12770
HIGHWAY	PROJECT MANAGER			F. A. PROJECT NO.
CENTRAL OREGON HIGHWAY	RIC YOUNG			XBHF-STP-S007(32)
CONTRACTOR NAME AND ADDRESS	REASON CODE	REASON FOR TIME	REGION	CONTRACT CHANGE ORDER NUMBER
FE WARD 2710 NE 78TH ST VANCOUVER, WA 98665	9	0	5	11
	REQUESTED BY			SUB JOB
	CONTRACTOR			21

THIS CONTRACT IS HEREBY MODIFIED AS FOLLOWS:

DESCRIPTION AND LOCATION OF WORK OR ITEMS COVERED BY THIS ORDER:

MODIFY THE GRADATION SPECIFICATION FOR THE BASE AGGREGATE (BI 0740) ON THE PROJECT. rEDUCE THE UNIT COST OF TEH BASE AGGREGATE BASED ON STATISTICAL ANALYSIS.

SPECIFICATIONS AND PROVISIONS - THE WORK TO BE DONE UNDER THIS ORDER IS TO BE PERFORMED, MEASURED, AND PAID FOR IN ACCORDANCE WITH THE TERMS FOR THE ABOVE CONTRACT EXCEPT AS MODIFIED AS FOLLOWS -

MODIFY SECTION 02630.10(A) tABLE 02630-1 AS FOLLOWS:
FOR 19.0 mm - 0 CHANGE THE PERCHENT PASSING THE 6.3 mm SIEVE FROM 40-60 TO 40-65. A CREDIT OF $0.50/mg WILL BE MADE TO THE CONTRACT UNDER ITEM 4011B.

PAY ITEM	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
4011A	GRADATION SPEC CHANGE				
4011B	CREDIT ON AGGREGATE BASE	2,900.00	mg	($0.50)	($1,450.00)

ESTIMATED NET COST EFFECT OF THIS AGREEMENT ON THE CONTRACT: INCREASE ☐ DECREASE ☑ ($1,450.00)

CONTRACTOR SIGNATURE ☒ IS ☐ IS NOT NECESSARY
CONTRACTOR SIGNATURE MAKES THIS CONTRACT CHANGE ORDER A SUPPLEMENTAL AGREEMENT.

FOR SUPPLEMENTAL AGREEMENTS ONLY: Please indicate your agreement by signing,dating and returning the original to the Project Manager. Work shall not begin until you are notified that the agreement has either been approved or that work may commence under advance approval. Your signature further indicates agreement that payments in accordance with this agreement constitute full and complete compensation for all costs, both direct and indirect, arising out of the described work covered by this agreement, and releases and discharges the State from other costs except as provided herein.

9-22-03
CONTRACTOR SIGNATURE DATE

APPROVAL RECOMMENDED BY LOCAL AGENCY DATE

☑ RECOMMENDED ☐ APPROVED BY PROJECT MANAGER DATE
Ric Young 09/24/03

☐ NOTED ☑ RECOMMENDED ☐ APPROVED BY AREA MGR DATE
9/25/03

☐ NOTED ☒ APPROVED BY CONSTRUCTION DATE
10-9-03

DISTRIBUTION: After obtaining the contractor's signature (if needed) Project Manager submits the original through the Area Manager to Construction. Construction distributes copies to the contractor and others as appropriate.

734-1169 (9-03)

Oregon State Department of Transportation

TEST SUMMARY (B-QA)

(FIELD TESTED MATERIALS)

CONTRACT NO.	SHEET
12770	13C

REVIEWERS AND DATES

ITEM NO	DESCRIPTION	UNIT	ORIG. QUANT.	FINAL QUANT.
74	AGGREGATE BASE (19.0MM-0)	mg	2,900	

LINE	DATE OF SAMPLE, TEST, OR INSPECTION	REPORT NO.	DATA SHEET NO.	LAB REPORT NO.	TESTING BY: QUALITY CONTROL BY CONTRACTOR	TESTING BY: REGION-QUALITY VERIFICATION	TESTING BY: REGION-INDEPENDENT ASSURANCE	TESTING BY: CONTRACTOR-INDEPENDENT ASSURANCE (SPLIT SAMPLE)	TEST METHOD AND FREQUENCY: MAX. DENSITY CURVE	TEST METHOD AND FREQUENCY: DENSITY	TEST METHOD AND FREQUENCY: STRENGTH	TEST METHOD AND FREQUENCY: VISUAL	QUANTITIES: IN COMPLIANCE INCORPORATED	QUANTITIES: NON-COMPLIANCE INCORPORATED	EXPLANATIONS AND NON-COMPLIANCE
1	09/30/03	V-1				X	X		X						IA Complies
2	09/30/03	Ver-1						X	X						
3	10/31/03	1-5			X					X			2000		Sta 5+00-5+36 Moisture out of Spec.
4	10/31/03	V1-5				X				X					Passing Verification
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															

WORK PHASE

	AGGR. PROD
	MIX PRODUCTION
X	DENSITY
	OTHER

734-1902-B(4-96)

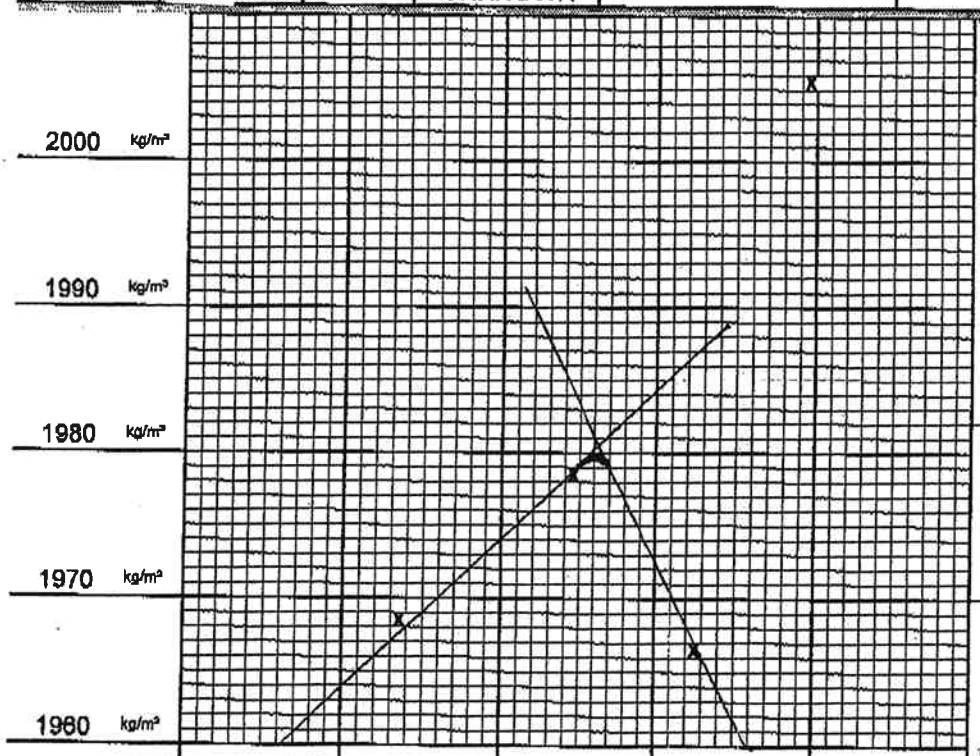
This sheet

was intentionally

left blank.

MAXIMUM DENSITY OF CONSTRUCTION MATERIALS

PROJECT NAME (SECTION)					CONTRACT NUMBER
SNAKE RIVER (NYSSA) BRIDGE SECTION.					12770
CONTRACTOR OR SUPPLIER: F.E. WARD			PROJECT MANAGER: RIC YOUNG		BID ITEM NUMBER: 740
SOURCE NAME: VALLEY PAVING			SOURCE NUMBER: 23-097-5		MATERIAL SIZE: 19.0mm - 0
TEST NO.: V - 1	DATE: 9-30-2003	TIME:	SAMPLED AT: UNKNOWN	MATERIAL DESCRIPTION:	TO BE USED IN: BASE AGG



TEST METHOD

T 99 [X] T 180 [ ]

A [ ] D [X]

SAMPLE

+ 4.75	8794
- 4.75	10901
Total	19695
Pc	45 %
+ 19 mm	528
- 19 mm	19167
Total	19695
Pc	3 %

SOILS

MAX DRY DENSITY OF THE FINES Dr [ ] kg/m³

OPTIMUM MOISTURE % THE FINES MCr [ ] %

BASE AGG

Stock Pile AVE. Pc [ ] %

RELATIVE MAX DRY DENSITY Dd 1980 kg/m³

COMBINED OPTIMUM MOISTURE % MCT 6.2 %

TEST NO.	MASS OF MOLD AND MATERIALS	MASS OF MOLD	(M) MASS OF WET MATERIAL	(A) WET DENSITY kg/m³	SPEEDY MOISTURE % WET (B)	SPEEDY MOISTURE % DRY (C)	OVEN MOISTURE % WET(a)	OVEN MOISTURE % DRY(b)	OVEN MOISTURE % % M (C)	(D) DRY DENSITY kg/m³
1	10006.0	5669.3	4336.7	2043			3318.5	3197.6	3.8	1969
2	10113.9	5669.3	4444.6	2093			3448.6	3258.9	5.8	1978
3	10156.5	5669.3	4487.2	2113			3402.9	3166.9	7.5	1966
4	10308.0	5669.3	4638.7	2184			3457.4	3173.4	8.9	2005
5										
6										
7										
8										

101.6mmMOLD (A) =(M) X 1.060
152.4mmMOLD (A) =(M) X 0.471

SPEEDY MOISTURE % $(C) = \frac{(B)}{100 - (B)} \times 100$

OVEN MOISTURE % $(C) = \frac{(a) - (b)}{(b)} \times 100$

$(D) = \frac{(A)}{(C)+100} \times 100$

AASHTO T85 SPECIFIC GRAVITY OF COARSE AGGREGATE	Oven Dry Mass (A)	SSD Mass (B)	Weight in Water (C)	Gsb (A) / [(B)-(C)]	Gsb SSD (B) / [(B)-(C)]	Gsa (A) / [(A)-(C)]	ABSORPTION [(B)-(A)]/(A)X100

Pr = 1.00 - Pc k = Gsb x 1000 If Material is manufactured, use Average Pc from T 84 MCc = ABSORPTION

AASHTO T224 COARSE PARTICLE CORRECTION

MAXIMUM COMBINED DRY DENSITY: $100 / (Pr / Df + Pc / k) = Dd$

OPTIMUM COMBINED MOISTURE: $(MCr \times Pr + MCc \times Pc) / 100 = MCT$

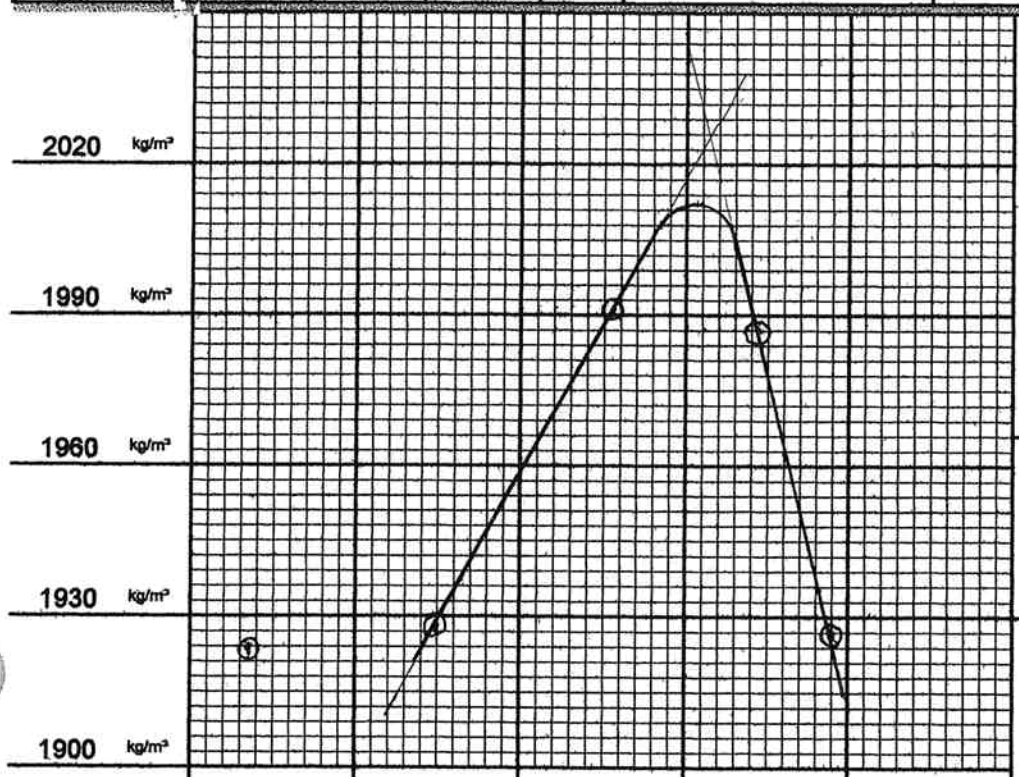
[ ] QUALITY CONTROL [X] VERIFICATION [X] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
RALPH E. DEPUY 235	ODOT REG 5 QA	Ralph E. DePuy	9/30/03

3488 9-02

MAXIMUM DENSITY OF CONSTRUCTION MATERIALS

PROJECT NAME (SECTION)					CONTRACT NUMBER
Snake River (Nyssa) Bridge					C12770
CONTRACTOR OR SUPPLIER: F. E. Ward			PROJECT MANAGER: Ric Young		BID ITEM NUMBER: 740
SOURCE NAME: Valley Paving			SOURCE NUMBER: 23-097-5		MATERIAL SIZE: 19.0mm - 0
TEST NO.: VER-1	DATE: [illegible]/30/2003	TIME:	SAMPLED AT: Stockpile	MATERIAL DESCRIPTION:	TO BE USED IN: Aggregate Base



TEST METHOD

T 99 [X] T 180 [ ]

A [ ] D [X]

SAMPLE

+ 4.75	9997.7
- 4.75	9600
Total	19598
Pc	51 %
+ 19 mm	701.2
- 19 mm	18897
Total	19598
Pc	4 %

SOILS

MAX DRY DENSITY OF THE FINES D_f [ ] kg/m³

OPTIMUM MOISTURE % THE FINES MC_f [ ] %

BASE AGG

Stock Pile AVE. P_c [ ] %

RELATIVE MAX DRY DENSITY D_d 2012 kg/m³

COMBINED OPTIMUM MOISTURE % MC_T 8.1 %

TEST NO.	MASS OF MOLD AND MATERIALS	MASS OF MOLD	(M) MASS OF WET MATERIAL	(A) WET DENSITY kg/m³	SPEEDY MOISTURE % WET (B)	SPEEDY MOISTURE % DRY (C)	OVEN MOISTURE % WET(a)	OVEN MOISTURE % DRY(b)	OVEN MOISTURE % % M (C)	(D) DRY DENSITY kg/m³
1	10656.1	6450.0	4206.1	1977			3164.2	3080.1	2.7	1924
2	10746.9	6450.0	4296.9	2024			3358.9	3200.4	5.0	1928
3	10979.1	6450.0	4529.1	2133			3243.8	3028.4	7.1	1991
4	11043.6	6450.0	4593.6	2164			3157.1	2898.6	8.9	1987
5	10940.0	6450.0	4490	2115			3572.8	3255.0	9.8	1927
6										
7										
8										

101.6mmMOLD (A) =(M) X 1.060
152.4mmMOLD (A) =(M) X 0.471

SPEEDY MOISTURE % $(C) = \frac{(B)}{100 - (B)} \times 100$

OVEN MOISTURE % $(C) = \frac{(a) - (b)}{(b)} \times 100$

$(D) = \frac{(A)}{(C)+100} \times 100$

AASHTO T85 SPECIFIC GRAVITY OF COARSE AGGREGATE

Oven Dry Mass (A)	SSD Mass (B)	Weight in Water (C)	Gsb (A) / [(B)-(C)]	Gsb SSD (B) / [(B)-(C)]	Gsa (A) / [(A)-(C)]	ABSORPTION [[(B)-(A)]/(A)]X100
4694	4748.6	2937.8	2.592	2.622	2.673	1.2

AGGREGATES $P_f = 1.00 - P_c$ k = Gsb x 1000 k Material is manufactured use Average Pc from T 27 MC_c = ABSORPTION

AASHTO T224 COARSE PARTICLE CORRECTION

MAXIMUM COMBINED DRY DENSITY

$100 / (P_f / D_f + P_c / k) = D_d$

521510400 / 256880 = 2030

OPTIMUM COMBINED MOISTURE

$(MC_f \times P_f + MC_c \times P_c) / 100 = MC_T$

777.6 + 4.8 = 7.8

[X] QUALITY CONTROL [ ] VERIFICATION [X] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
Charley Samples #37501	Materials Testing	Charley Samples	10-7-03

3468 9-02

NUCLEAR COMPACTION TEST REPORT FOR BASE AGGREGATE

PROJECT NAME (SECTION)				CONTRACT NUMBER
Snake River (Nyssa) Section Bridge				12770
CONTRACTOR OR SUPPLIER			PROJECT MANAGER	BID ITEM NUMBER
F.E. Ward			Ric Young	740
CONTROL STRIP NO.	PANEL WIDTH	LIFT THICKNESS	TYPE GAUGE-SERIAL NUMBER	MIX NOMINAL SIZE
	6 m	150mm	Troxler 3430 Ser# 26144	19.0mm

ROLLER TYPE AND DESCRIPTION (MANUFACTURE, WEIGHT, ETC)

SDV / DYNAPAC - CA25A

TEST NUMBER		1*1*1	1*1*2	1*1*3	1*1*4	1*1*5
DATE OF TEST		10/21/03	10/22/03	10/23/03	10/24/03	10/31/03
TEST LOCATION (STATION)		0+452	0+454	0+911	0+879	0+978
DISTANCE LT. OR RT. OF CENTERLINE (METERS)		13.3m Lt	15 m lt	4.5 m lt	6.5 m lt	5 m lt
SOURCE POSITION		150mm	150 mm	150 mm	150 mm	150 mm
LIFT	DIST BELOW GRADE	1/150mm	2/0 mm	1/150 mm	2/0mm	2 / 0 mm
WET DENSITY kg/m³	1D	2222	2217	2182	2294	2259
	2D	2236	2214	2186	2296	2260
MOISTURE kg/m³	1M	131	102	105	132	87
	2M	129	93	104	134	89
AVE. WET DENSITY kg/m³	AD	2229	2216	2184	2295	2260
AVE. MOISTURE kg/m³	AM	130	98	105	133	88
DRY DENSITY kg/m³	3	2099	2118	2079	2162	2172
% MOISTURE	4	6.2	4.6	5.1	6.2	4.1
Curve # - Source #		V-1 / 23-097-5	v-1/23-097-5	v-1/23-097-5	v-1/23-097-5	v-1/23-097-5
RELATIVE MAXIMUM DRY DENSITY	5	2012	2012	2012	2012	2012
Optimum Moisture		8.1	8.1	8.1	8.1	8.1
% COMPACTION FOR INDIVIDUAL TESTS (LINE 3 / LINE 5) X 100	% REQ 6	104%	105%	103%	107%	108%

REPRESENTS MATERIAL INCORPERATED WITH NO OBSERVED DEFLECTION OR REACTION UNDER MOVING LOAD

FROM STATION	TO STATION	0+368 / 0+750	0+520/ 1+016
FROM OFFSET	TO OFFSET	6m Lt of CL / 3 m lt of cl	9m Lt of CL / 9 m lt of cl

REMARKS

Material Also included: From Sta. 5+00 to 5+36 From Offset 4m Rt of CL & 4m Lt of CL (N Line) Deflection Checked with a loaded water truck. No deflectin was noted. Tina ODOT onsite inspector accepted moisture out of spec. based on visual observation at time of placement and watering. contractor then scheduled testing.

X QUALITY CONTROL ☐ VERIFICATION

CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
Randy G. Crum #43262	Materials Testing & Inspect	Randy G. Crum	10/31/03

1793 B 9-01

NUCLEAR COMPACTION TEST REPORT FOR BASE AGGREGATE

PROJECT NAME (SECTION): SNAKE R. (NYSSA) BR			CONTRACT NUMBER: 12770
CONTRACTOR OR SUPPLIER: F. E. WARD		PROJECT MANAGER: RIC YOUNG	BID ITEM NUMBER: 740
CONTROL STRIP NO.	PANEL WIDTH	LIFT THICKNESS: 150 MM	TYPE GAUGE-SERIAL NUMBER: HUMBOLT 1350
			MIX NOMINAL SIZE: 19mm-0

ROLLER TYPE AND DESCRIPTION (MANUFACTURE, WEIGHT, ETC)

TEST NUMBER		V-1-1	V-1-2	V-1-3	V-1-4	V-1-5
DATE OF TEST		10/22/03	10/22/03	10/31/03	10-31-03	10-31-03
TEST LOCATION (STATION)		"N" 5+020	0+490	0+860	0+940	0+990
DISTANCE LT. OR RT. OF CENTERLINE (METERS)		2 m LT.	4 m. LT.	3.1 m Lt	3.6 m Lt	4.1 m Lt
SOURCE POSITION		200 mm	200 mm	200 mm	200 mm	200 mm
LIFT / DIST BELOW GRADE		2 / 0	2 / 0	2 - 0	2 - 0	2 - 0
WET DENSITY kg/m³	1D	2116	2151	2207	2168	2184
	2D	2118	2142	2211	2165	2179
MOISTURE kg/m³	1M	110	110	102	102	103
	2M	118	115	102	97	111
AVE. WET DENSITY kg/m³	AD	2117	2147	2209	2167	2182
AVE. MOISTURE kg/m³	AM	114	113	102	100	107
DRY DENSITY kg/m³	3	2003	2034	2107	2067	2075
% MOISTURE	4	5.7	5.6	4.8	4.8	5.3
Curve # - Source #		1/23-97-5	→	→	→	→
RELATIVE MAXIMUM DRY DENSITY	5	2012	→	→	→	→
Optimum Moisture		8.1	→	→	→	→
% COMPACTION FOR INDIVIDUAL TESTS (LINE 3 / LINE 5) X 100 — 100% REQ.	6	100	101	105 ~~104.7~~	103 ~~102.7~~	103.1

FROM STATION / TO STATION	WEST SIDE OF BRIDGE LT. OF ℄ & "N" LINE
FROM OFFSET / TO OFFSET	

REMARKS *V-1-1 & V-1-2

V-1-3, V-1-4, & V-1-5 ON TOP LIFT ON EAST SIDE OF BRIDGE

☐ QUALITY CONTROL ☑ VERIFICATION

CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
Robert Kerr 536	ODOT	Robert Kerr	10-31-03

1793 B 9-01

Oregon State Department of Transportation

TEST SUMMARY (B-QA)

(FIELD TESTED MATERIALS)

CONTRACT NO.	SHEET
12770	13D

REVIEWERS AND DATES

ITEM NO	DESCRIPTION	UNIT	ORIG. QUANT.	FINAL QUANT.
75	Level 3, 12.5 mm Dense HMAC	mg	2,000	

LINE	DATE OF SAMPLE, TEST, OR INSPECTION	REPORT NO.	DATA SHEET NO.	LAB REPORT NO.	TESTING BY: QUALITY CONTROL BY CONTRACTOR	REGION-QUALITY VERIFICATION	REGION-INDEPENDENT ASSURANCE	CONTRACTOR-INDEPENDENT ASSURANCE (SPLIT SAMPLE)		TEST METHOD AND FREQUENCY: SOURCE MATERIAL (QUALIFYING)		SIEVE ANALYSIS	FRACTURE	ELONGATION	WOOD WASTE	S.E.				DENSITY	STRENGTH	VISUAL	QUANTITIES: IN COMPLIANCE INCORPORATED	NON-COMPLIANCE INCORPORATED	WORK PHASE / EXPLANATIONS AND NON-COMPLIANCE
1	02/26/03		F3106 010	03-0716						X															12.5 mm -4.75 mm Material does comply
2	02/26/03		F3106 009	03-0717						X															4.75 mm - 0 Material does comply
3	02/26/03	V-1& QV-1				X	X	X				X	X	X	X										12.5 mm -4.75 mm Verif./IA Complies
4	02/26/03	V-1& QV-1				X	X	X				X				X									4.75 mm - 0 Verif./IA Complies
5	03/13/03				X							3	3	3	3										StatSpec QL 12.5mm-4.75mm CPF=1.05
6	03/13/03				X							3				3									StatSpec QL 4.75mm-0 CPF=1.05
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									
17																									
18																									
19																									
20																									
21																									

WORK PHASE

- [X] AGGR. PROD — Source 23-097-5
- [ ] MIX PRODUCTION
- [ ] DENSITY
- [ ] OTHER

734-1902-B(4-96)

This sheet

was intentionally

left blank.

OREGON DEPARTMENT OF TRANSPORTATION
MATERIALS LABORATORY
800 AIRPORT RD. SE SALEM, OR 97301-4798

(503)986-3100
FAX(503)986-3096

Contract No.: C12770 **EA No.: CON01479** **Lab No.: 03-000716**
Project: SNAKE RIVER (NYSSA) BRIDGE
Highway: CENTRAL OREGON County: MALHEUR **Data Sheet No.: F3106 010**
Contractor: F.E. WARD INC FA No.: X-BHF-STP-S007(32)
Project Manager: RIC YOUNG Org Unit: 5804 Bid Item No.: 0750
Submitted By: WILLIAM RUSSELL Org Unit: MTI Sample No.: 2003-1
Material Source: 23-097-5 ONTARIO ASPHALT Qty Represented: 0-20,000 MGS
Sampled At: ONTARIO ASPHALT STOCKPILE Sampled By: Witnessed By:
DATE-Sampled: 03/ 2/26 Received: 03/ 2/27 Tested: 03/ 3/20 Date Reported:
Class/Type: COMPLIANCE **Use: COARSE AC AGGR** MAR 21 2003

Q or G: GRAVEL **AGGREGATE LABORATORY REPORT - CACAG** **Size: 12.5mm-4.75mm**

Test	Lab
TM101 S.E.	
TM102 L.L.	
TM103 P.I.	
TM213 Ttl Frac.	
TM226 Dust/Clay	
TM227 Cleanness	
TM229 Elong pcs	
TM234 Uncomp. Voids	
TM201 Unit Wt.	
TM311 Moisture	
TM 204/205	**204 — 205**
Sieve	Passing
63 mm	
50	
37.5	
25.0	
19.0	100 %
12.5	96 %
9.5	70 %
6.3	27 %
4.75	8 %
2.36	2 %
2.00	
1.18	
600 µm	1 %
425	
300	
150	
75	1.1 %

TM 202 F. Grav.
Bulk:
S.S.D.:
Appar.:
Absorp.:

TM 203 C. Grav.
Bulk: 2.591
S.S.D.: 2.629
Appar.: 2.692
Absorp.: 1.45 %

TM 206 Soundness
C A: 2% F A:
37.5-19.0: 0.0 %
19.0- 9.5: 0.2 %
9.5-4.75: 1.6 %
4.75-2.36:
2.36-1.18:
1.18-600 µm:
600 µm-300 :

TM 208 Degrade
Crse Ht: 13 mm
P20: 17.7 %
Fine Ht:
P20:

TM 211 Abrasion
14.9 %
Type C

TM 212 Impurity
Plate #:

TM 213 Fracture
DF: 19.0:
12.5:
9.5:
6.3:
SF: 4.75-2.00:

TM 221 Friables
Wt'd Avg :
37.5-19.0:
19.0-9.5 :
9.5-4.75:
4.75-1.18:

TM 222 Lightweight
Coarse: 0.1 %
Fine:

TM 225 Woodwaste
Lab:
Field:

1	204	$
1	205	
1	203	
2	206	
1	208A	
1	211	
1	222	

NSM = Not Sufficient Material

TOTAL CHARGES: $ 0.00

REMARKS:
Material represented by sample **DOES** comply with specifications.

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THIS LABORATORY.

FILES ; PROJ MGR: RIC YOUNG ; F.E. WARD INC ; REG 5 Q.A.C.

Kenneth L Stoneman
STATE CONSTRUCTION AND MATERIALS ENGINEER

OREGON DEPARTMENT OF TRANSPORTATION
MATERIALS LABORATORY
800 AIRPORT RD. SE SALEM, OR 97301-4798

(503)986-3100
FAX(503)986-3096

Contract No.: C12770 **EA No.: CON01479** **Lab No.: 03-000717**
Project: SNAKE RIVER (NYSSA) BRIDGE
Highway: CENTRAL OREGON County: MALHEUR **Data Sheet No.: F3106 009**
Contractor: F.E. WARD INC FA No.: X-BHF-STP-S007(32)
Project Manager: RIC YOUNG Org Unit: 5804 Bid Item No.: 0750
Submitted By: WILLIAM RUSSELL Org Unit: MTI Sample No.: 2003-1
Material Source: 23-097-5 ONTARIO ASPHALT Qty Represented: 0-20,000 MGS
Sampled At: ONTARIO ASPHALT STOCKPILE Sampled By: Witnessed By:
DATE-Sampled: 03/ 2/26 Received: 03/ 2/27 Tested: 03/ 3/20 Date Reported:
Class/Type: COMPLIANCE **Use: FINE AC AGGR** MAR 21 2003

Q or G: GRAVEL **AGGREGATE LABORATORY REPORT - FACAG** **Size: 4.75mm-0.0mm**

Test	Lab
TM101 S.E.	
TM102 L.L.	ND
TM103 P.I.	NonPlastic
TM213 Ttl Frac.	
TM226 Dust/Clay	
TM227 Cleanness	
TM229 Elong pcs	
TM234	
Uncomp. Voids	
TM201 Unit Wt.	
TM311 Moisture	
TM 204/205	**204 — 205**
Sieve	Passing
63 mm	
50	
37.5	
25.0	
19.0	
12.5	
9.5	100 %
6.3	100 %
4.75	96 %
2.36	71 %
2.00	
1.18	51 %
600 µm	36 %
425	
300	23 %
150	
75	8.5 %

TM 202 F. Grav.
Bulk: 2.596
S.S.D.: 2.626
Appar.: 2.676
Absorp.: 1.14 %

TM 203 C. Grav.
Bulk:
S.S.D.:
Appar.:
Absorp.:

TM 206 Soundness
C A: F A: 2%
37.5-19.0:
19.0- 9.5:
9.5-4.75: 0.2 %
4.75-2.36: 0.9 %
2.36-1.18: 0.4 %
1.18-600 µm: 0.3 %
600 µm-300 : 0.6 %

TM 208 Degrade
Crse Ht:
P20:
Fine Ht: 13 mm
P20: 8.3 %

TM 211 Abrasion

TM 212 Impurity
Plate #:

TM 213 Fracture
DF: 19.0:
12.5:
9.5:
6.3:
SF: 4.75-2.00:

TM 221 Friables
Wt'd Avg :
37.5-19.0:
19.0-9.5 :
9.5-4.75:
4.75-1.18:

TM 222 Lightweight
Coarse:
Fine:

TM 225 Woodwaste
Lab:
Field:

1	204	$
1	205	
1	102/103	
1	202	
5	206	
1	208B	

NSM = Not Sufficient Material
REMARKS:
Material represented by sample **DOES** comply with specifications.

TOTAL CHARGES: $ 0.00

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THIS LABORATORY.

FILES ; PROJ MGR: RIC YOUNG ; F.E. WARD INC ; REG 5 Q.A.C.

Kenneth L Stevenson
STATE CONSTRUCTION AND MATERIALS ENGINEER

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION) SNAKE RIVER (NYSSA) BRIDGE SECTION			CONTRACT NUMBER 12770
CONTRACTOR OR SUPPLIER Valley Paving ~~CLEARWATER CONCRETE~~	PROJECT MANAGER RICK YOUNG		BID ITEM NUMBER 750
SOURCE NAME ONTARIO ASPHALT	SOURCE NUMBER 23 - 97 - 5		MATERIAL SIZE 12.5 - 4.75
TEST NO. V -1 / DATE 2/26/2003 / TIME 12:00P	SAMPLED AT STOCKPILE		TO BE USED IN 12.5 -0 HMAC

SIEVE SIZE	SPECS. LIMITS	SIEVE ANALYSIS AASHTO T27/11 MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED	QC
						0.0	0.0	100		
						0.0	0.0	100		
						0.0	0.0	100		
19.0		0.0	0.0			0.0	0.0	100		100
12.5		98.4	117.6			216.0	9.8	90		90
9.5		341.1	291.0			632.1	28.6	62		63
6.3		441.4	406.6			848.0	38.4	23		
4.75		210.7	143.8			354.5	16.1	7		7
2.36		72.0	31.7			103.7	4.7	2		2
.600		10.2	2.6			12.8	0.6	2		2
.075		6.4	3.9			10.3	0.5	1.4		1.2
PAN		3.1	3.5			6.6	0.3			

B = INITIAL DRY MASS: 2207.2 ✓ D =MASS AFTER SIEVING: 2184.0

SIEVE SIZE	SPECS. LIMITS	PERCENT FRACTURE IN AGG TM 1 FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	ELONGATED PIECES TEST MASS	ELONG MASS
19.0	2 FACE	0.0		0.0			
12.5	75%	181.5		34.5	84%		
4.75						2050.6	1.6
2.36	1 FACE	439.8		18.4	96%		
	75%						

SE T 176			
1	2	3	Samp
			Clay
			Sand
			S.E.
		AVG.	

PAN TARE	1317.6
WET MASS & PAN	3572.7
DRY MASS & PAN	3524.8
AFTER WASH DRY MASS & PAN	3503.4

C = DRY MASS AND PAN AFTER WASH - PAN

A = WET MASS & PAN - PAN

[ ] DRY [X] WET WAQTC AASHTO T-27/T11

[X] Round [ ] Square [ ] Rectangle 12" Size

		RESULT	SPEC
Combine % Fracture	TM 1	92% ✓	75%
Wood Waste	TM225	0.00%	0.10%Max
CleannessValue	TM 227		
Flat & Elongated	TM 229	0.1% ✓	10.0%Max
Fineness Modulus	T 27/T11		
MOISTURE %=[(A-B) / B] X 100		2.17% ✓	
SIEVE LOSS %=[(C-D) / C] X 100		0.1% ✓	0.3%Max
Base Agg 2.00mm / 6.3mm			

REMARKS

[ ] QUALITY CONTROL [X] VERIFICATION [X] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
ROBERT KERR 536	ODOT REG 5 QA	Robert Kerr	3/3/03

IA/Verif does Comply

✓ [signature]

1792-Base 9-02

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION)			CONTRACT NUMBER
Snake River (Nyssa) Bridge			10457
CONTRACTOR OR SUPPLIER	PROJECT MANAGER		BID ITEM NUMBER
Valley Paving & Asphalt	Ric Young		750
SOURCE NAME	SOURCE NUMBER		MATERIAL SIZE
Ontario Asphalt	23-097-5		12.5 - 4.75

TEST NO.	DATE	TIME	SAMPLED AT	TO BE USED IN
QV-1	2/26/03		Stockpile	HMAC

SIEVE ANALYSIS AASHTO T27/11

SIEVE SIZE	SPECS. LIMITS	MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
19	-1	0.0	0.0			0.0	0.0	100	
12.5	±5	109.6	99.7			209.3	9.9	90	
9.5	±8	265.4	302.3			567.7	26.9	63	
4.75	±8	602.3	572.4			1174.7	55.7	7	
2.36	±5	50.9	59.0			109.9	5.2	2	
.600	±3	6.0	6.1			12.1	0.6	2	
.075	±1.0	4.1	5.3			9.4	0.4	1.2	
PAN		5.2	0.6			5.8	0.3		

B = INITIAL DRY MASS: 2109.2 ✓ D =MASS AFTER SIEVING: 2088.9

PERCENT FRACTURE IN AGG TM 1

SIEVE SIZE	SPECS. LIMITS	FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	ELONGATED PIECES TEST MASS	ELONG MASS
12.5		204.2	0.0	0.0	100%		
9.5		262.5	9.3	15.8	93%		
4.75		120.6	15.9	4.1	91%	1002.5	20.5
2.36		25.4	0.6	0.9	96%		

SE T 176

1	2	3	Samp
			Clay
			Sand
			S.E.
		AVG.	

PAN TARE	0
WET MASS & PAN	2148.7
DRY MASS & PAN	2109.2
AFTER WASH DRY MASS & PAN	2089.7

C = DRY MASS AND PAN AFTER WASH - PAN

A = WET MASS & PAN - PAN

[ ] DRY [X] WET WAQTC AASHTO T-27/T11

[X] Round [ ] Square [ ] Rectangle 305mm Size

		RESULT	SPEC
Combine % Fracture	TM 1	95%	75 Min
Wood Waste	TM225	0.00%	0.10%
CleannessValue	TM 227		
Flat & Elongated	TM 229	2.0%	10.00%
Fineness Modulus	T 27/T11		
MOISTURE %={(A-B) / B} X 100		1.87%	
SIEVE LOSS %={(C-D) / C} X 100		0.0%	
Base Agg 2.00mm / 6.3mm			

REMARKS

[X] QUALITY CONTROL [ ] VERIFICATION [ ] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
David Kirkland #546	Kleinfelder, Inc.	[signature]	3/12/03

1792-Base 9-02

IA/Verif does Comply

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION): SNAKE RIVER (NYSSA) BRIDGE SECTION			CONTRACT NUMBER: 12770
CONTRACTOR OR SUPPLIER: ~~CLEARWATER CONCRETE~~ Valley Paving	PROJECT MANAGER: RICK YOUNG		BID ITEM NUMBER: 750
SOURCE NAME: ONTARIO ASPHALT	SOURCE NUMBER: 23 - 97 - 5		MATERIAL SIZE: 4.75 ~~4.50~~ - 0
TEST NO.: V -1	DATE: 2/26/2003	TIME: 12:00P	SAMPLED AT: STOCKPILE
TO BE USED IN: 12.5 -0 HMAC			

SIEVE SIZE	SPECS. LIMITS	SIEVE ANALYSIS AASHTO T27/11 MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED	QC
						0.0	0.0	100		
						0.0	0.0	100		
						0.0	0.0	100		
						0.0	0.0	100		
						0.0	0.0	100		
9.5		0.0	0.0			0.0	0.0	100		100
6.3		1.5	3.3			4.8	0.2	100		100
4.75		56.7	53.0			109.7	5.2	95		95
2.36		310.2	305.8			616.0	29.4	65		66
.600		369.3	349.4			718.7	34.3	31		32
.075		164.9	299.0			463.9	22.2	8.6		9.0
PAN		6.1	17.0			23.1	1.1			

B = INITIAL DRY MASS: 2093.5 ✓ D =MASS AFTER SIEVING: 1936.2

SIEVE SIZE	SPECS. LIMITS	PERCENT FRACTURE IN AGG TM 1 FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	ELONGATED PIECES TEST MASS	ELONG MASS

SE T 176			
1	2	3	Samp
5.2			Clay
3.2			Sand
62			S.E.
	62	AVG.	

72

PAN TARE	1302
WET MASS & PAN	3450.7
DRY MASS & PAN	3395.5
AFTER WASH DRY MASS & PAN	3239.2

C = DRY MASS AND PAN AFTER WASH - PAN
A = WET MASS & PAN - PAN

[ ] DRY [X] WET WAQTC AASHTO T-27/T11

[X] Round [ ] Square [ ] Rectangle 12" Size

		RESULT	SPEC
Combine % Fracture	TM 1		
Wood Waste	TM225	0.00%	
CleannessValue	TM 227		
Flat & Elongated	TM 229		
Fineness Modulus	T 27/T11		
MOISTURE %={(A-B) / B} X 100		2.64%	
SIEVE LOSS %={(C-D) / C} X 100		0.1% ✓	0.3%Max
Base Agg 2.00mm / 6.3mm			

REMARKS

[ ] QUALITY CONTROL [X] VERIFICATION [X] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
ROBERT KERR 536	ODOT REG 5 QA	Robert Kerr	2/28/03

IA/Verif Does Comply - Except - SE. for IA
Contractor ~~for~~ & QA to Re run SE

✓ [signature]

* Contractor Re run SE w/results of 63 - meets IA

1792-Base 9-02

FIELD WORKSHEET FOR AGGREGATE

PROJECT NAME (SECTION): Snake River (Nyssa) Bridge			CONTRACT NUMBER: 10457
CONTRACTOR OR SUPPLIER: Valley Paving & Asphalt	PROJECT MANAGER: Ric Young		BID ITEM NUMBER: 750
SOURCE NAME: Ontario Asphalt	SOURCE NUMBER: 23-097-5		MATERIAL SIZE: 4.75-0

TEST NO	DATE	TIME	SAMPLED AT	TO BE USED IN
QV-1	2/26/03		Stockpile	HMAC

SIEVE ANALYSIS AASHTO T27/11

SIEVE SIZE	SPECS. LIMITS	MASS 1	MASS 2	MASS 3	MASS 4	TOTAL MASS	% RET	% PASS	FM CUMULATIVE % RETAINED
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
						0.0	0.0	100	
9.5	±1	0.0	0.0						
4.75	±7	32.5	38.3			70.8	5.2	95	
2.36	±7	195.7	199.3			395.0	29.1	66	
.600	±7	295.6	165.8			461.4	34.0	32	
.075	±3.0	175.4	134.0			309.4	22.8	9.0	
PAN		6.2	8.4			14.6	1.1		

B = INITIAL DRY MASS: 1359 D =MASS AFTER SIEVING: 1251.2

PERCENT FRACTURE IN AGG TM 1 / ELONGATED PIECES

SIEVE SIZE	SPECS. LIMITS	FRAC MASS (F)	QUESTIONABLE MASS (Q)	NON FRAC MASS (N)	INDIVIDUAL FRAC %	TEST MASS	ELONG MASS

SE T 176

1	2	3	Samp
4.9			Clay
3.5			Sand
72			S.E.
	72	AVG.	

PAN TARE	0
WET MASS & PAN	1391.3
DRY MASS & PAN	1359
AFTER WASH DRY MASS & PAN	1250.9

C = DRY MASS AND PAN AFTER WASH - PAN [ ] DRY [X] WET WAQTC AASHTO T-27/T11

A = WET MASS & PAN - PAN [X] Round [ ] Square [ ] Rectangle 305mm Size

		RESULT	SPEC
Combine % Fracture	TM 1		
Wood Waste	TM225		
CleannessValue	TM 227		
Flat & Elongated	TM 229		
Fineness Modulus	T 27/T11		
MOISTURE %={(A-B) / B} X 100		2.38%	
SIEVE LOSS %={(C-D) / C} X 100		0.0%	
Base Agg 2.00mm / 6.3mm			

REMARKS

[X] QUALITY CONTROL [ ] VERIFICATION [ ] INDEPENDENT ASSURANCE

CERTIFIED TECHNICAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE
David Kirkland #546	Kleinfelder, Inc.		3/12/03

1792-Base 9-02

Except for SE - IA/Verif does Comply.
Contractor QA to Review SE