AGGREGATE SAMPLE WORKSHEET

North Dakota Department of Transportation, Materials & Research

SFN 9987 (Rev. 04-2006)

PCN	
Laboratory No.	
Field Sample No.	
Pit Location	
Owner	
Project	
County	
Material/Specification	
Date Received	
Date Sampled	
Sampled From	
Submitted By	

(mm)	Ret.	Wt. Ret.		% Ret.	% Pass	ND Spec.
		Non-Cum.	Cum.			
100	4"					
90	3 1/2"					
75	3"					
63	2 1/2"					
50	2"					
37.5	1 1/2"					
25.0	1"					
19.0	3/4"					
16.0	5/8"					
12.5	1/2"					
9.5	3/8"					
4.75	No. 4					
Minus No. 4						
Wt.Check						
Original Wt.						

AASHTO T-27 Tested By: _____

FRACTURED FACES

FF = Percentage of particles with fractured faces

WF = Weight of fractured particles

WQ = Wt. of questionable fractured particles

WA = Weight of total sample

FF = [WF + (WQ/2)]/WA X 100

FF =

ND Spec

(mm)	Ret.	Wt. Ret.		% Ret.	% Pass	% Pass Tot. Smpl.	ND Spec.
		Non-Cum.	Cum.				
2.36	No. 8						
2.00	No. 10						
1.18	No. 16						
600µm	No. 30						
425µm	No. 40						
300µm	No. 50						
150µm	No. 100						
75µm	No. 200						
Minus No. 200 (75µm)							
Original Wt.							
Wt. After Wash							
Wash Loss							
Wt.Check							

Tested By: _____ AASHTO T-27 Tested By: _____ AASHTO T-11 Tested By: _____

LIGHT WEIGHT PIECES

+ No. 4 (4.75mm) Material				– No. 4, + No. 30 Material		
(A) % Retained on No.4 Sieve	=		%	(I) Weight of Lt Wt Pieces, -No. 4, + No. 30 Mtrl.	=	g
(B) % Passing No. 30, Total Sample	=		%	(J) Weight of – No. 4, + No. 30 Material	=	g
(C) % Pass No. 4 – % Pass No. 30, [100–(A+B)]	=		%	(K) Lt Wt Pieces, – No. 4, + No. 30 (I/J)x100	=	%
(D) Total Sample A+B+C	=	100.0	%	(L) Lt Wt Pieces, – No. 4, + No. 30 Material % of Total Sample (KxC)/100	=	%
(E) Weight of Lt Wt Pieces in + No. 4 Mtrl.	=		g			
(F) Weight of + No. 4 Material	=		g			
(G) Lt Wt Pieces, + No. 4 Mtrl (E/F)x100	=		%			
(H) Lt Wt Pieces, + No. 4 Mtrl., % of Total Sample (GxA)/100						%
				(M) Light Weight Pieces in Total Sample (H+L)	=	%

AASHTO T-113 Tested By: _____

* Attention Advised

Distribution:

☐ _____ District

☐ Central Lab.

_____ Date

_____ Testing Lab Supervisor

Laboratory Number

Liquid Limit, Plastic Limit, and Plasticity Index

Liquid Limit

A. Can no. tare weight	
B. Can and wet soil	
C. Can and dry soil	
D. Moisture loss (B - C)	
E. Dry soil weight (C - A)	
F. Moisture at blows (D/E) x 100	
Moisture corrected (F x K)	
G. Liquid Limit	

AASHTO T 89 tested by: _____

#Blows

Number of blows N	Factor for Liquid Limit K
22	0.985
23	0.990
24	0.995
25	1.000
26	1.005
27	1.009
28	1.014

Plastic Limit

H. Can No. tare weight	
I. Can and wet soil	
J. Can and dry soil	
L. Moisture loss (I - J)	
M. Dry soil weight (J - H)	
Moisture content (L/M) x 100	
O. Plastic Limit	
Plastic Index (G - O)	

AASHTO T 89 tested by: _____

LA Abrasion

Grading Used: A B C D	(indicate by circling)	
Weight of original sample	(A) =	grams
Weight of sample retained on No. 12	(B) =	grams
Loss	(C) =	grams
LA Abrasion = C/A x 100	=	% Loss

AASHTO T-96 Tested By: _____

Unit Weight

Wt. Loose, lbs	lbs/cf
Wt. Rodded, lbs	lbs/cf

AASHTO T-19 Tested By: _____