GREENVALE TOWNSHIP
ROAD IMPROVEMENT PROJECT
SUMMARY AND REPORT FOR WORK COMPLETED IN THE 2018 CONSTRUCTION SEASON

PREPARED BY:
Gregory Langer
Greenvale Township Supervisor

March 12, 2019

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2018 Greenvale Township Citizen Road Improvement Committee Members

Jerry Bolton, Chairman 507-291-0388
Mark Malecha 507-291-0320
Chuck Van Eeckhout 507-664-9387
Richard Moore 612-290-7529

2018 Road Improvement Committee meeting dates

January 9, 2018 at 1:30 PM at the Town Hall.

April 27, 2018 at 9:00 AM at the Town Hall for the annual road inspection tour with the Town Board.

May 10, 2018 at 1:15 PM at the Town Hall to discuss the 2018 road tour and to plan the scheduling of the 2018 project work.

November 8, 2018 at 1:00 PM at the Town Hall to review the 2018 finished project work, discuss future bridge upgrading needs and concerns about traffic control on the Township roads during the 2019 construction season.

Copies of the meeting minutes are available at your request

May 15, 2018

The Greenvale Town Board approved the funding for the following Township Road Improvement Project road work for the 2018 construction season:

- Resurface the length of Isle Avenue from 295th Street to Dakota County road #86.
- Resurface 305th Street from the Rice County line to Isle Avenue.
- Resurface Holyoke Avenue from 295th Street to Dakota County #86.
- Resurface295th Street from Dakota County #90 to Holyoke Avenue.
- Give priority consideration to Eveleth Avenue for additional surface aggregate and dust control in anticipation of the Dakota County #23 construction traffic in 2019.

May 15, 2018

The Greenvale Town Board approved continuing the expanded dust control program introduced in 2016 with service provider, ENVIROTECH.

In the spring of 2014, the Road Improvement Committee suggested the requirement of an access permit for the construction or modification of driveways in the Township to assure the property owners that attention would be given to concerns of safety and water flow. The access permit form was approved by the Town Board on May 15, 2014.

A letter was written for the Township's use to inform property owners of concerns regarding the use of the Township road Right of way areas. The letter was approved for use by the Town Board on June 19, 2014. Copies of the Application for Access and the Right of Way use letter are on the following two pages.

GREENVALE TOWNSHIP
31800 Guam Avenue
Northfield, MN 55057
Phone: 507-663-9049 Email: greenvale@greenvaletwp.org

Permit No: _____

APPLICATION FOR ACCESS

The Township Clerk shall be notified at least 48 hours in advance of the actual start of work. The project must be completed by the completion date or a delay penalty may apply.

Application is hereby made for permission to excavate, grade and construct an access onto:
Road Name (#)_____from / at _____
in accordance with the attached sketch. The project is located in Greenvale Township and the Legal Description of the Property or PID# is: _____
_____

Purpose of Access: _____ Residential _____ Agricultural _____ Other

Is a culvert necessary? _____ Yes _____ No what size? _____

Is the property _____ Platted _____ Un-platted Approved Anticipated Plat Name _____

Work to start on _____ and be completed by _____

The applicant in carrying out any and all of the work mentioned or referred to in this permit application, shall strictly conform to and agree to be bound by the terms of the permit, Special Provisions, Construction Specifications and regulations in applicable codes and/or Ordinances all of which are made a part of this Permit. The applicant shall comply with the regulations of all other government agencies for the protection of the public as they apply to the work performed. The work shall be accomplished in a way that will not be detrimental to the right of way and that will safeguard the public. The applicant must obtain a copy of any specifications that Dakota County may have for this proposed work.
Dated this_____ day of_____20___.
Work being done for (owner) _____
Contact Name _____ Telephone Number _____
Address _____ City: _____ Zip: _____

Contractor Name: _____ Contact Name: _____
Address: _____ City:_____ State_____ Zip:_____
Telephone Number: _____ Cell Phone Number: _____
Name and phone number of person in charge of construction: _____
Applicant's signature: _____ Date: _____

Non-refundable Inspection Fee: $150.00, Escrow: $100.00 **TOTAL: $250.00**

A COPY OF THIS PERMIT IS REQUIRED TO BE ON THE JOBSITE AND IS NOT VALID UNTIL IT IS APPROVED AND SIGNED.

Greenvale Township
31800 Guam Avenue
Northfield, Minnesota 55057

RE: Use of Township Road Right of way

Dear Township Property Owner,

Greenvale Township needs your help in protecting travelers and improving safety. The Township has been seeing an increase in improper uses of the right of way such as the planting of crops. This type of activity can reduce visibility and cause traffic accidents and other serious consequences. Disturbing the vegetation along the road contributes to erosion, which can affect runoff water quality, drainage and plug culverts. Plowing or tilling could also damage utility lines buried in the right of way and create a potentially dangerous situation or interrupt service.

Township right of way is defined as the roadway, shoulders and ditches up to the property or easement lines. Generally the right of way is 33 feet on each side of the road's centerline.

Greenvale Township prohibits plowing and/or planting of crops in the right of way. Fencing and other objects must be removed or the Township may remove them at the owner's expense.

Thank you for your help in maintaining the roadway safety and improving the environment along the roadsides in Greenvale Township. If you have any questions or need more information, please call the Township office at 507-663-9049 or email us at greenvale@greenvaletwp.org .

Sincerely,

The Greenvale Township Board of Supervisors

Greenvale Township Road Improvement Project

Road Aggregate Material Delivery Information Summary

July 11, 2018: Isle Avenue, 48- loads ..... 1153.40 tons.

July 12, 2018: Isle Avenue, 48-loads ..... 1132.45 tons.

July 13, 2018: Holyoke Avenue North, 42-loads ..... 1006.65 tons.

July 16, 2018: Holyoke Avenue North, 39-loads ..... 931.10 tons.

July 17, 2018: Holyoke Avenue North,, 20-loads ..... 475.75 tons.

July 17, 2018: 305th Street, 1-load ..... 23.70 tons.

July 17, 2018: 305th Street, 23-loads ..... 548.15 tons.

July 18, 2018: 305th Street, 36-loads ..... 868.00 tons

Total tons: 6139.20

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:	
Greenvale TWP	7/11/2018	1	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	Isle Ave	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
43.2	CAA		

Coarse Sieves:	(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass Sieve, Ret. 1 1/2" Sieve	0.0		43.0	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	43.0	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.0	1"	43.0	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	4.7	3/4"	43.0	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	3.0	1/2"	38.3	89%	
*Pass 3/8" Sieve, Ret. #4 Sieve	8.6	3/8"	35.3	82%	50-90%
*Pass #4 Sieve, Ret. Bottom	26.7	#4	26.7	62%	35-70%
Check Total -	43.0	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 561.3
(C) Wash and dry other sample and record weight. 394.9
(D) Loss in washing (B-C) (Enter Below) 166.4

	(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass Sieve, Ret. #4 Sieve						
*Pass #4 Sieve, Ret. #10 Sieve	167.7	#4	561.0	100.0%	62%	35-70%
*Pass #10 Sieve, Ret. #30 Sieve	136.6	#10	393.3	70.1%	43%	20-55%
*Pass #30 Sieve, Ret. #40 Sieve	24.9	#30	256.7	45.8%	28%	
*Pass #40 Sieve, Ret. #50 Sieve	18.2	#40	231.8	41.3%	26%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	22.0	#50	213.6	38.1%	24%	
*Pass #100 Sieve, Ret. #200 Sieve	18.3	#100	191.6	34.2%	21%	
*Pass #200 Sieve, Ret. Bottom	6.9	#200	173.3	30.9%	19.2%	10-15%
Loss by washing-	166.4					
Check Total -	561.0	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:	
Greenvale TWP	7/11/2018	2	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	Isle Ave	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
25.7	CAA		

Coarse Sieves:	(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass Sieve, Ret. 1 1/2" Sieve	0.0		25.4	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	25.4	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.0	1"	25.4	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	4.0	3/4"	25.4	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	2.9	1/2"	21.4	84%	
*Pass 3/8" Sieve, Ret. #4 Sieve	6.9	3/8"	18.5	73%	50-90%
*Pass #4 Sieve, Ret. Bottom	11.6	#4	11.6	46%	35-70%
Check Total -	25.4	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 524.8
(C) Wash and dry other sample and record weight. 408.4
(D) Loss in washing (B-C) (Enter Below) 116.4

	(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass Sieve, Ret. #4 Sieve						
*Pass #4 Sieve, Ret. #10 Sieve	244.4	#4	526.2	100.0%	46%	35-70%
*Pass #10 Sieve, Ret. #30 Sieve	110.2	#10	281.8	53.6%	25%	20-55%
*Pass #30 Sieve, Ret. #40 Sieve	16.1	#30	171.6	32.6%	15%	
*Pass #40 Sieve, Ret. #50 Sieve	10.4	#40	155.5	29.6%	14%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	12.2	#50	145.1	27.6%	13%	
*Pass #100 Sieve, Ret. #200 Sieve	11.1	#100	132.9	25.3%	12%	
*Pass #200 Sieve, Ret. Bottom	5.4	#200	121.8	23.1%	10.6%	10-15%
Loss by washing-	116.4					
Check Total -	526.2	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:	
Greenvale TWP	7/13/2018	3	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	Holyoke Ave	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
23.5	CAA		

Coarse Sieves:	(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass ____ Sieve, Ret. 1 1/2" Sieve	0.0		23.4	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	23.4	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.0	1"	23.4	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	3.1	3/4"	23.4	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	2.4	1/2"	20.3	87%	
*Pass 3/8" Sieve, Ret. #4 Sieve	5.8	3/8"	17.9	76%	50-90%
*Pass #4 Sieve, Ret. Bottom	12.1	#4	12.1	52%	35-70%
Check Total -	23.4	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 772.4
(C) Wash and dry other sample and record weight. 539.4
(D) Loss in washing (B-C) (Enter Below) 233.0

	(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass ____ Sieve, Ret. #4 Sieve						
*Pass #4 Sieve, Ret. #10 Sieve	276.4	#4	772.3	100.0%	52%	35-70%
*Pass #10 Sieve, Ret. #30 Sieve	156.8	#10	495.9	64.2%	33%	20-55%
*Pass #30 Sieve, Ret. #40 Sieve	26.6	#30	339.1	43.9%	23%	
*Pass #40 Sieve, Ret. #50 Sieve	20.0	#40	312.5	40.5%	21%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	26.0	#50	292.5	37.9%	20%	
*Pass #100 Sieve, Ret. #200 Sieve	22.3	#100	266.5	34.5%	18%	
*Pass #200 Sieve, Ret. Bottom	11.2	#200	244.2	31.6%	16.4%	10-15%
Loss by washing-	233.0					
Check Total -	772.3	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:	
Greenvale TWP	7/13/2018	4	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	Holyoke	Anderson pit	
Total Wt. of Sample: lbs (kg)		Tester Name or Certification No:	
28.3		CAA	

Coarse Sieves:	(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass ____ Sieve, Ret. 1 1/2" Sieve	0.0		28.1	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	28.1	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.0	1"	28.1	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	4.2	3/4"	28.1	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	2.9	1/2"	23.9	85%	
*Pass 3/8" Sieve, Ret. #4 Sieve	7.2	3/8"	21.0	75%	50-90%
*Pass #4 Sieve, Ret. Bottom	13.8	#4	13.8	49%	35-70%
Check Total -	28.1	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 801.6
(C) Wash and dry other sample and record weight. 583.7
(D) Loss in washing (B-C) (Enter Below) 217.9

	(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass ____ Sieve, Ret. #4 Sieve						
*Pass #4 Sieve, Ret. #10 Sieve	319.0	#4	801.6	100.0%	49%	35-70%
*Pass #10 Sieve, Ret. #30 Sieve	162.6	#10	482.6	60.2%	30%	20-55%
*Pass #30 Sieve, Ret. #40 Sieve	26.2	#30	320.0	39.9%	20%	
*Pass #40 Sieve, Ret. #50 Sieve	18.9	#40	293.8	36.7%	18%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	24.8	#50	274.9	34.3%	17%	
*Pass #100 Sieve, Ret. #200 Sieve	21.4	#100	250.1	31.2%	15%	
*Pass #200 Sieve, Ret. Bottom	10.8	#200	228.7	28.5%	14.0%	10-15%
Loss by washing-	217.9					
Check Total -	801.6	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:	
Greenvale TWP	7/16/2018	5	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	Holyoke	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
37.6	CAA		

Coarse Sieves:

*Pass	Sieve, Ret.	(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass	1 1/2" Sieve	0.0		37.4	100%	
*Pass 1 1/2"	Sieve, Ret. 1" Sieve	0.0	1 1/2"	37.4	100%	
*Pass 1"	Sieve, Ret. 3/4" Sieve	0.0	1"	37.4	100%	100%
*Pass 3/4"	Sieve, Ret. 1/2" Sieve	5.3	3/4"	37.4	100%	90-100%
*Pass 1/2"	Sieve, Ret. 3/8" Sieve	3.7	1/2"	32.1	86%	
*Pass 3/8"	Sieve, Ret. #4 Sieve	8.8	3/8"	28.4	76%	50-90%
*Pass #4	Sieve, Ret. Bottom	19.6	#4	19.6	52%	35-70%
	Check Total -	37.4	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 490.0
(C) Wash and dry other sample and record weight. 365.2
(D) Loss in washing (B-C) (Enter Below) 124.8

*Pass	Sieve, Ret.	(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass	#4 Sieve						
*Pass #4	Sieve, Ret. #10 Sieve	192.6	#4	489.5	100.0%	52%	35-70%
*Pass #10	Sieve, Ret. #30 Sieve	110.1	#10	296.9	60.7%	32%	20-55%
*Pass #30	Sieve, Ret. #40 Sieve	17.3	#30	186.8	38.2%	20%	
*Pass #40	Sieve, Ret. #50 Sieve	12.5	#40	169.5	34.6%	18%	15-35%
*Pass #50	Sieve, Ret. #100 Sieve	15.1	#50	157.0	32.1%	17%	
*Pass #100	Sieve, Ret. #200 Sieve	12.2	#100	141.9	29.0%	15%	
*Pass #200	Sieve, Ret. Bottom	4.9	#200	129.7	26.5%	13.8%	10-15%
	Loss by washing-	124.8					
	Check Total -	489.5	- Shall Check total Wt. Within 5.0 grams				
	Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

CC: Project File

TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:	
Greenvale TWP	7/18/2018	6	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	305th	Anderson pit	
Total Wt. of Sample: lbs (kg)		Tester Name or Certification No:	
34.1		CAA	

Coarse Sieves:

		(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass	Sieve, Ret. 1 1/2" Sieve	0.0		33.9	100%	
*Pass 1 1/2"	Sieve, Ret. 1" Sieve	0.0	1 1/2"	33.9	100%	
*Pass 1"	Sieve, Ret. 3/4" Sieve	0.0	1"	33.9	100%	100%
*Pass 3/4"	Sieve, Ret. 1/2" Sieve	3.3	3/4"	33.9	100%	90-100%
*Pass 1/2"	Sieve, Ret. 3/8" Sieve	2.8	1/2"	30.6	90%	
*Pass 3/8"	Sieve, Ret. #4 Sieve	8.0	3/8"	27.8	82%	50-90%
*Pass #4	Sieve, Ret. Bottom	19.8	#4	19.8	58%	35-70%
	Check Total -	33.9	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 537.3
(C) Wash and dry other sample and record weight. 390.3
(D) Loss in washing (B-C) (Enter Below) 147.0

		(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass	Sieve, Ret. #4 Sieve						
*Pass #4	Sieve, Ret. #10 Sieve	201.7	#4	536.9	100.0%	58%	35-70%
*Pass #10	Sieve, Ret. #30 Sieve	123.3	#10	335.2	62.4%	36%	20-55%
*Pass #30	Sieve, Ret. #40 Sieve	19.2	#30	211.9	39.5%	23%	
*Pass #40	Sieve, Ret. #50 Sieve	13.8	#40	192.7	35.9%	21%	15-35%
*Pass #50	Sieve, Ret. #100 Sieve	15.5	#50	178.9	33.3%	19%	
*Pass #100	Sieve, Ret. #200 Sieve	12.5	#100	163.4	30.4%	18%	
*Pass #200	Sieve, Ret. Bottom	3.9	#200	150.9	28.1%	16.3%	10-15%
	Loss by washing-	147.0					
	Check Total -	536.9	- Shall Check total Wt. Within 5.0 grams				
	Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

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TP-02402-03 (8/2009)

Work Sheet for Sieve Analysis of Granular Material

See Grading & Base Manual, Fig. 1 5-692.215

Project No:	Date:	Test No:
Greenvale TWP	7/17/2018	7
Material Type:	Station:	Depth From Grading Grade:
CL5 MOD	305th	Anderson pit
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:	
38.1	CAA	

Coarse Sieves:	(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass Sieve, Ret. 1 1/2" Sieve	0.0		38.0	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	38.0	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.0	1"	38.0	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	4.0	3/4"	38.0	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	3.0	1/2"	34.0	89%	
*Pass 3/8" Sieve, Ret. #4 Sieve	8.4	3/8"	31.0	82%	50-90%
*Pass #4 Sieve, Ret. Bottom	22.6	#4	22.6	59%	35-70%
Check Total -	38.0	- Shall Check Total Wt. Within 0.2lbs (0.1 kg)			

*Enter necessary sieve sizes for class of material to be tested.
Column (1) Enter weights of material between each set of sieves individually.
Column (2) Enter the passing sieves size.
Column (3) Add column (1) from the bottom up to get cumulative weights passing each sieve.
Column (4) Divide column (3) by check total of sample to get total % passing.

Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 667.5
(C) Wash and dry other sample and record weight. 482.3
(D) Loss in washing (B-C) (Enter Below) 185.2

	(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass Sieve, Ret. #4 Sieve						
*Pass #4 Sieve, Ret. #10 Sieve	231.3	#4	666.8	100.0%	59%	35-70%
*Pass #10 Sieve, Ret. #30 Sieve	158.4	#10	435.5	65.3%	39%	20-55%
*Pass #30 Sieve, Ret. #40 Sieve	27.1	#30	277.1	41.6%	25%	
*Pass #40 Sieve, Ret. #50 Sieve	19.2	#40	250.0	37.5%	22%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	23.1	#50	230.8	34.6%	20%	
*Pass #100 Sieve, Ret. #200 Sieve	17.4	#100	207.7	31.1%	18%	
*Pass #200 Sieve, Ret. Bottom	5.1	#200	190.3	28.5%	16.8%	10-15%
Loss by washing-	185.2					
Check Total -	666.8	- Shall Check total Wt. Within 5.0 grams				
Percent Passing #200 Sieve Divided by Percent Passing 1 in. Sieve (if specified)						

Column (5) Enter weights of material between each set of sieves and loss by washing (DO NOT OVERLOAD SIEVES)
Column (6) Enter the passing sieve size.
Column (7) Add column (5) from bottom up to get cumulative weights passing each sieve. Be sure to add loss by washing to weight of material pas of material passing #200 sieve to get first entry at bottom of column (7).
Column (8) Divide column (7) by check total dry weight of fine sample (Column 5) to get cumulative % passing.
Column (9) Multiply column (8) by % passing final sieve from column (4) to get "Percent Passing" based on total sample.

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