GREENVALE TOWNSHIP
ROAD IMPROVEMENT PROJECT
SUMMARY AND REPORT FOR WORK COMPLETED IN THE 2017 CONSTRUCTION SEASON

PREPARED BY:
Gregory Langer
Greenvale Township Supervisor

March 1, 2018

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April 28, 2017

Greenvale Township Road Improvement Committee

The Greenvale Township Road Improvement Committee, the Township Supervisors and our Road Maintenance Contractor toured the township to view the roads and discuss the work to be done during the 2017 construction season.

Road Improvement Committee Members that attended:
Jerry Bolton, Mark Malecha and Richard Moore

Township Supervisors that attended:
Darcy White, David Roehl and Gregory Langer

Road Maintenance Contractors that attended:
Bryce and Jason Otte of Otte Excavating, Inc.

2017 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

2017 Road Improvement Committee meeting dates

April 5, 2017 at 2:00 PM at the Town Hall.

April 28, 2017 at 9:00 AM at the Town Hall for the annual road inspection tour with the Town Board.

August 21, 2017, Road Superintendent Jerry Bolton, Supervisor David Roehl, Supervisor Gregory Langer and R.I. Committee member Richard Moore, toured the Township roads to inspect the ditches for needed weed control work and needed brush and tree trimming work.

Copies of the meeting minutes are available at your request

May 16, 2017

The Greenvale Town Board approved the funding for the following Township Road Improvement Project road work for the 2017 construction season:

- Finish the work started in 2016 on Jamaica Avenue and add aggregate as needed, from 305th Street to the south end.
- Improve and resurface the entire length of 307th Street from Foliage Avenue to Eveleth Avenue.
- Crack seal the paved surface on South Dresden Avenue.
- Shape and clean the ditches on Isle Avenue, north of 295th Street.
- Continue brushing and tree trimming along the roadways as needed.
- Improve Holyoke Avenue South from 320th Street to Highway 19 by adding aggregate and shaping as needed.
- Add surface aggregate to 300th Street from Foliage Avenue to Eveleth Avenue.

May 16, 2017

The Greenvale Town Board approved continuing the expanded dust control program introduced during the 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

Spot loads.

April 3, 2017: 307th Street, 8-loads ..... 188.70 tons.

April 3, 2017: Eveleth Avenue, 2-loads ..... 47.60 tons.

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Total Spring spot loads: 236.30 tons.

July 24, 2017: 307th Street, 57-loads ..... 1352.40 tons.

July 24, 2017: 300th Street, 7-loads ..... 166.60 tons.

July 25, 2017: 300th Street, 6-loads ..... 143.65 tons.

July 27, 2017: 300th Street, 40-loads ..... 932.85 tons.

July 27, 2017: Holyoke Avenue, 320th St. to Highway 19, 27-loads ..... 640.95 tons.

July 28, 2017: Holyoke Avenue, 320th St. to Highway 19, 55-loads ..... 1286.00 tons.

July 28, 2017: Jamiaca Avenue, 12-loads ..... 285.05 tons.

July 31, 2017: Jamaica Avenue, 57-loads, mid-section to 305th Street ..... 1353.45 tons.

July 31, 2017: Jamaica Avenue, 9-loads, south end ..... 211.60 tons.

August 1, 2017: Jamaica Avenue, 19-loads, north area to 305th Street ..... 442.80 tons.

September 8, 2017: Aggregate load delivered to the Township for repair needs ..... 23.45 tons.

Total tons: 6838.80

Work Sheet for Sieve Analysis of Granular Material

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

Project No:	Date:	Test No:	
Greenvale TWP	7/24/2017	1	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	West End 307	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
28.3	CK		

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	0.4	1"	28.1	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	6.3	3/4"	27.7	99%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	3.1	1/2"	21.4	76%	
*Pass 3/8" Sieve, Ret. #4 Sieve	6.5	3/8"	18.3	65%	50-90%
*Pass #4 Sieve, Ret. Bottom	11.8	#4	11.8	42%	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. 578.6
(C) Wash and dry other sample and record weight. 435.3
(D) Loss in washing (B-C) (Enter Below) 143.3

	(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						35-70%
*Pass #4 Sieve, Ret. #10 Sieve	234.4	#4	577.3	100.0%	42%	20-55%
*Pass #10 Sieve, Ret. #30 Sieve	122.9	#10	342.9	59.4%	25%	
*Pass #30 Sieve, Ret. #40 Sieve	21.6	#30	220.0	38.1%	16%	
*Pass #40 Sieve, Ret. #50 Sieve	15.3	#40	198.4	34.4%	14%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	18.6	#50	183.1	31.7%	13%	
*Pass #100 Sieve, Ret. #200 Sieve	15.3	#100	164.5	28.5%	12%	
*Pass #200 Sieve, Ret. Bottom	5.9	#200	149.2	25.8%	10.9%	10-15%
Loss by washing-	143.3					
Check Total -	577.3	- 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	7/24/2017	2	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	East End 307th	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
28.0	CK		

Coarse Sieves:

*Pass / Sieve, Ret.	(1) Indiv. Weights	(2) Sieve Size	(3) Cumulative Wts. Passing	(4) Total % Passing	Gradation Requirements
*Pass Sieve, Ret. 1 1/2" Sieve	0.0		27.8	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	27.8	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.3	1"	27.8	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	5.9	3/4"	27.5	99%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	4.3	1/2"	21.6	78%	
*Pass 3/8" Sieve, Ret. #4 Sieve	7.7	3/8"	17.3	62%	50-90%
*Pass #4 Sieve, Ret. Bottom	9.6	#4	9.6	35%	35-70%
Check Total -	27.8	- 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. 522.3
(C) Wash and dry other sample and record weight. 385.0
(D) Loss in washing (B-C) (Enter Below) 137.3

*Pass / Sieve, Ret.	(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	230.9	#4	522.3	100.0%	35%	35-70%
*Pass #10 Sieve, Ret. #30 Sieve	99.6	#10	291.4	55.8%	20%	20-55%
*Pass #30 Sieve, Ret. #40 Sieve	15.4	#30	191.8	36.7%	13%	
*Pass #40 Sieve, Ret. #50 Sieve	10.7	#40	176.4	33.8%	12%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	12.9	#50	165.7	31.7%	11%	
*Pass #100 Sieve, Ret. #200 Sieve	11.5	#100	152.8	29.3%	10%	
*Pass #200 Sieve, Ret. Bottom	4.0	#200	141.3	27.1%	9.5%	10-15%
Loss by washing-	137.3					
Check Total -	522.3	- 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

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	7/25/2017	3	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	300th St	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
26.1	CK		

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		26.0	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	26.0	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.2	1"	26.0	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	3.4	3/4"	25.8	99%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	2.5	1/2"	22.5	87%	
*Pass 3/8" Sieve, Ret. #4 Sieve	6.8	3/8"	20.0	77%	50-90%
*Pass #4 Sieve, Ret. Bottom	13.2	#4	13.2	51%	35-70%
Check Total -	26.0	- 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. 693.3
(C) Wash and dry other sample and record weight. 518.8
(D) Loss in washing (B-C) (Enter Below) 174.5

	(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	281.8	#4	692.4	100.0%	51%	35-70%
*Pass #10 Sieve, Ret. #30 Sieve	149.2	#10	410.6	59.3%	30%	20-55%
*Pass #30 Sieve, Ret. #40 Sieve	23.6	#30	261.4	37.8%	19%	
*Pass #40 Sieve, Ret. #50 Sieve	16.1	#40	237.8	34.3%	18%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	19.5	#50	221.7	32.0%	16%	
*Pass #100 Sieve, Ret. #200 Sieve	16.7	#100	202.2	29.2%	15%	
*Pass #200 Sieve, Ret. Bottom	11.0	#200	185.5	26.8%	13.7%	10-15%
Loss by washing-	174.5					
Check Total -	692.4	- 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	7/25/2017	4	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	Holyoke & 19	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
26.7	CK		

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		26.6	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	26.6	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.0	1"	26.6	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	2.3	3/4"	26.6	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	2.1	1/2"	24.3	92%	
*Pass 3/8" Sieve, Ret. #4 Sieve	6.4	3/8"	22.2	84%	50-90%
*Pass #4 Sieve, Ret. Bottom	15.9	#4	15.9	60%	35-70%
Check Total -	26.6	- 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. 573.3
(C) Wash and dry other sample and record weight. 428.5
(D) Loss in washing (B-C) (Enter Below) 144.8

	(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	219.0	#4	572.8	100.0%	60%	35-70%
*Pass #10 Sieve, Ret. #30 Sieve	131.5	#10	353.8	61.8%	37%	20-55%
*Pass #30 Sieve, Ret. #40 Sieve	23.6	#30	222.3	38.8%	23%	
*Pass #40 Sieve, Ret. #50 Sieve	15.6	#40	198.7	34.7%	21%	15-35%
*Pass #50 Sieve, Ret. #100 Sieve	18.8	#50	183.1	32.0%	19%	
*Pass #100 Sieve, Ret. #200 Sieve	15.0	#100	164.3	28.7%	17%	
*Pass #200 Sieve, Ret. Bottom	4.5	#200	149.3	26.1%	15.6%	10-15%
Loss by washing-	144.8					
Check Total -	572.8	- 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.

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	7/31/2017	5	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	Jamaica Ave	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
26.9	Braun		

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		26.7	100%	
*Pass 1 1/2"	Sieve, Ret. 1" Sieve	0.0	1 1/2"	26.7	100%	
*Pass 1"	Sieve, Ret. 3/4" Sieve	0.4	1"	26.7	100%	100%
*Pass 3/4"	Sieve, Ret. 1/2" Sieve	5.0	3/4"	26.3	99%	90-100%
*Pass 1/2"	Sieve, Ret. 3/8" Sieve	3.8	1/2"	21.3	80%	
*Pass 3/8"	Sieve, Ret. #4 Sieve	7.4	3/8"	17.5	66%	50-90%
*Pass #4	Sieve, Ret. Bottom	10.2	#4	10.2	38%	35-70%
	Check Total -	26.7	- 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. 500.9
(C) Wash and dry other sample and record weight. 373.4
(D) Loss in washing (B-C) (Enter Below) 127.5

		(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass	Sieve, Ret. Sieve						
*Pass	Sieve, Ret. #4 Sieve						
*Pass #4	Sieve, Ret. #10 Sieve	200.9	#4	495.0	100.0%	38%	35-70
*Pass #10	Sieve, Ret. #20 Sieve	83.9	#10	294.1	59.4%	23%	20-55%
*Pass #20	Sieve, Ret. #40 Sieve	35.3	#20	210.2	42.5%	16%	15-35%
*Pass #40	Sieve, Ret. #80 Sieve	25.0	#40	174.9	35.3%	13%	
*Pass #80	Sieve, Ret. #200 Sieve	18.1	#80	149.9	30.3%	12%	
*Pass #200	Sieve, Ret. Bottom	4.3	#200	131.8	26.6%	10.1%	10-15%
	Loss by washing-	127.5					
	Check Total -	495.0	- 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	7/31/2017	6	
Material Type:	Station:	Depth From Grading Grade:	
CL5 MOD	Jamaica Ave	Anderson pit	
Total Wt. of Sample: lbs (kg)	Tester Name or Certification No:		
25.9	Braun		

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		25.7	100%	
*Pass 1 1/2" Sieve, Ret. 1" Sieve	0.0	1 1/2"	25.7	100%	
*Pass 1" Sieve, Ret. 3/4" Sieve	0.0	1"	25.7	100%	100%
*Pass 3/4" Sieve, Ret. 1/2" Sieve	2.0	3/4"	25.7	100%	90-100%
*Pass 1/2" Sieve, Ret. 3/8" Sieve	1.8	1/2"	23.7	92%	
*Pass 3/8" Sieve, Ret. #4 Sieve	6.0	3/8"	21.9	85%	50-90%
*Pass #4 Sieve, Ret. Bottom	15.8	#4	15.8	62%	35-70%
Check Total -	25.7	- 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.

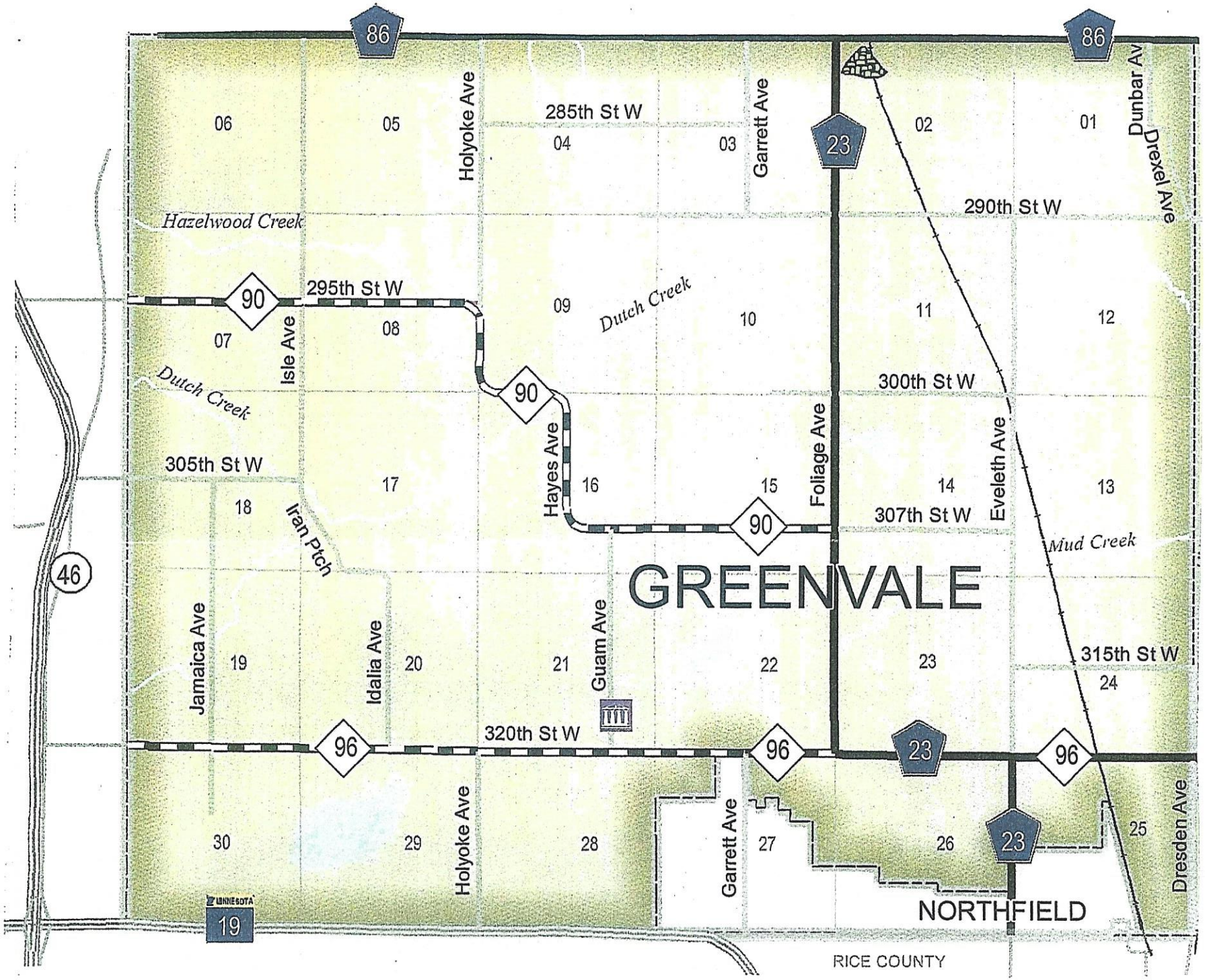
Fine Sieves:

(A) Take two samples identical in condition and damp weight from "passing #4 material".
(B) Dry one sample and record weight. 571.3
(C) Wash and dry other sample and record weight. 442.8
(D) Loss in washing (B-C) (Enter Below) 128.5

	(5) Indiv. Weights	(6) Sieve Size	(7) Cumulative Wts. Passing	(8) Cum. % Passing	(9) % Passing of Total Pass.	Gradation Requirements
*Pass Sieve, Ret. Sieve						
*Pass Sieve, Ret. #4 Sieve						
*Pass #4 Sieve, Ret. #10 Sieve	224.7	#4	571.1	100.0%	62%	35-70
*Pass #10 Sieve, Ret. #20 Sieve	108.4	#10	346.4	60.7%	38%	20-55%
*Pass #20 Sieve, Ret. #40 Sieve	49.0	#20	238.0	41.7%	26%	15-35%
*Pass #40 Sieve, Ret. #80 Sieve	32.9	#40	189.0	33.1%	21%	
*Pass #80 Sieve, Ret. #200 Sieve	22.8	#80	156.1	27.3%	17%	
*Pass #200 Sieve, Ret. Bottom	4.8	#200	133.3	23.3%	14.5%	10-15%
Loss by washing-	128.5					
Check Total -	571.1	- 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


86
86
23
06
05
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03
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01
Holyoke Ave
285th St W
Garrett Ave
Dunbar Av
Drexel Ave
290th St W
Hazelwood Creek
90
295th St W
09
Dutch Creek
10
11
12
07
08
Isle Ave
Dutch Creek
90
300th St W
Hayes Ave
Foliage Ave
Eveleth Ave
305th St W
17
16
15
14
13
18
Iran Ptch
90
307th St W
Mud Creek
46
GREENVALE
Jamaica Ave
19
Idalia Ave
20
21
Guam Ave
22
23
315th St W
24
96
320th St W
96
23
96
30
29
Holyoke Ave
28
Garrett Ave
27
26
23
25
Dresden Ave
MINNESOTA
19
NORTHFIELD
RICE COUNTY