North Dakota Department of Transportation

Grant Levi, P.E.
Director

Jack Dalrymple
Governor

December 7, 2016

ADDENDUM 1 – JOB 14

TO: All prospective bidders on project SS-6-017(045)106, Job No. 14 scheduled for the December 16, 2016 bid opening.

The following plan revisions shall be made:

Plan Revisions:
Remove and replace sheet 2-1 with the enclosed sheet revised 12/1/2016.

Add sheets 180-1 to 180-6.

Sheet 2-1:
Table of Contents has been revised to add Section 180 Pit Plats and Borrow Areas.

This addendum is to be incorporated into the bidder's proposal for this project.

for CAL J. GENDREAU – CONSTRUCTION SERVICES ENGINEER
80:dch
Enclosure

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TABLE OF CONTENTS

PLAN SECTIONS

Section	Page(s)	Description
1	1	Title Sheet
2	1	Table of Contents
4	1	Scope of Work
6	1	Notes
8	1	Quantities
10	1-2	Basis of Estimate
20	1-3	General Details
30	1	Typical Sections
100	1	Work Zone Traffic Control
120	1	Pavement Marking
180	1-6	Pit Plats and Borrow Areas

LIST OF STANDARD DRAWINGS

Number	Description
D-101-1	NDDOT Abbreviations
D-101-2	NDDOT Abbreviations
D-101-3	NDDOT Abbreviations
D-101-20	Line Styles
D-101-21	Line Styles
D-101-30	Symbols
D-101-31	Symbols
D-101-32	Symbols
D-704-2	Traffic Control For Coring Of Hot Bituminous Pavement
D-704-5	Contractor Sign Detail
D-704-7	Breakaway Systems For Construction Zone Signs - Perforated Tube
D-704-8	Breakaway Systems For Construction Zone Signs - U-Channel Post
D-704-9	Construction Sign Details - Terminal And Guide Signs
D-704-10	Construction Sign Details - Regulatory Signs
D-704-11	Construction Sign Details - Warning Signs
D-704-13	Barricade And Channelizing Device Details
D-704-14	Construction Sign Punching And Mounting Details
D-704-15	Road Closure Layouts
D-704-20	Terminal And Seal Coat Sign Layouts
D-704-22	Construction Truck And Temporary Detour Layouts
D-704-26	Miscellaneous Sign Layouts
D-704-27	Traffic Control Plan For Moving Operations
D-704-50	Portable Sign Support Assembly
D-704-56	Mobile Operation - Grinding Shoulder Rumble Strips
D-706-1	Bituminous Laboratory
D-760-3	Rumble Strips Undivided Highways (Shoulders 4' Or Greater)
D-762-1	Pavement Marking Message Details
D-762-4	Pavement Marking
D-762-5	Pavement Marking for Standard 90 Degree Flared Intersection-(No Center Left Turn Lane on Major Road)
D-762-11	Short-Term Pavement Marking

Revised 12/1/2016	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SS-6-017(045)106	180	1

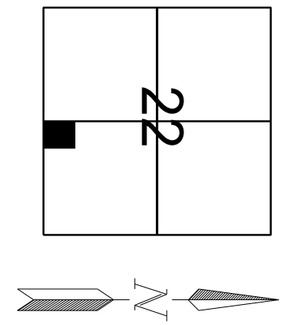
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

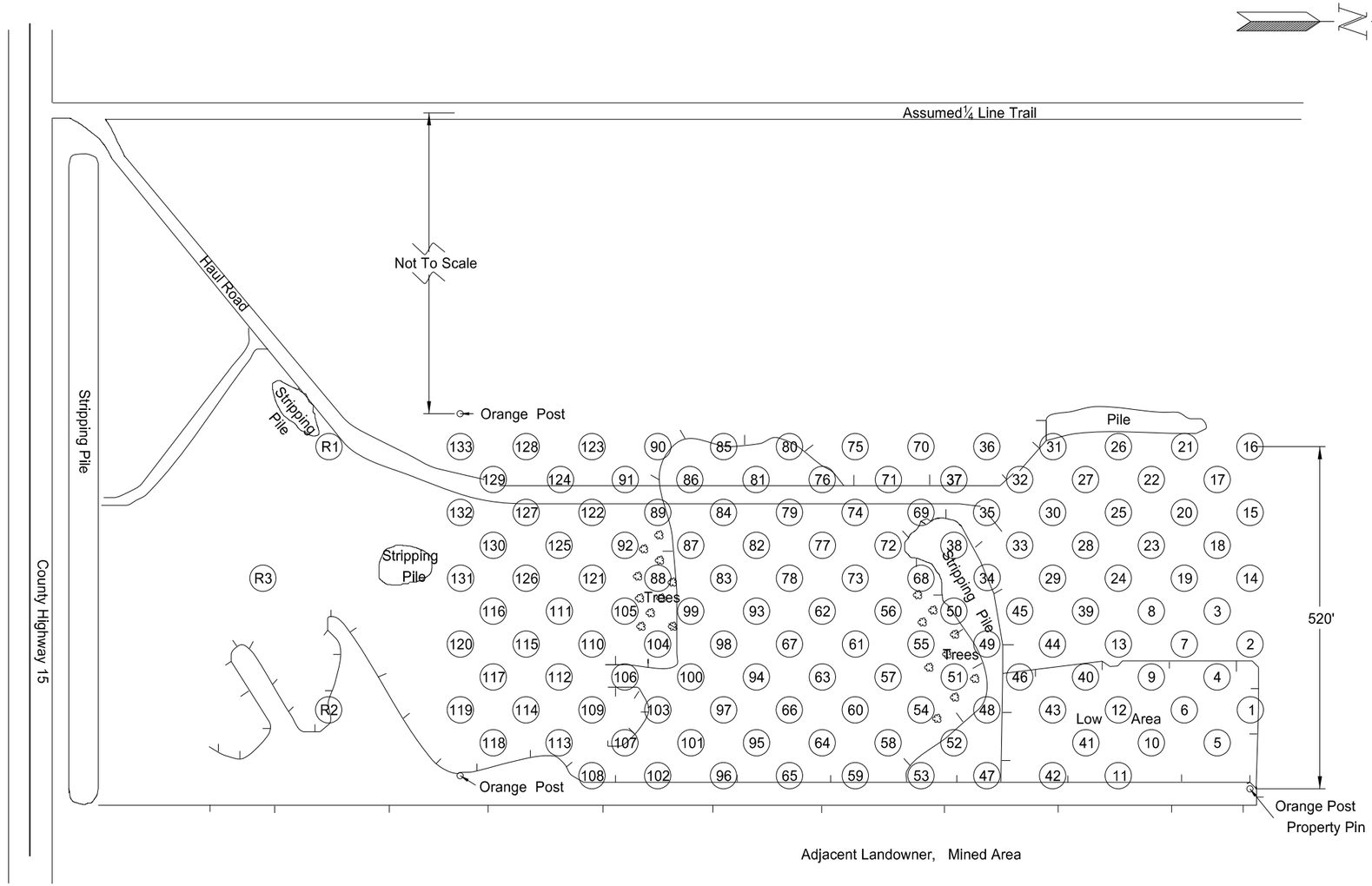
TEST HOLE PLAT

Location: SW1/4SE1/4 22-156-56 County: Walsh

Ownership: State Owned

LOCATION OF PIT IN SECTION





Legend:
gr = gravel
sd = sand
FS = fine sand
Fgr = fine gravel
CS = coarse sand
sh = shale
SiCl = silt clay
rk = rock
FeO = Iron oxide
CoS = Coal Slack
WL = water line
NG = no gravel

Area "A" consists of Test Holes 1 - 13
Area "B" consists of Test Holes 14 - 26
Area "C" consists of Test Holes 27 - 38
Area "D" consists of Test Holes 39 - 52
Area "E" consists of Test Holes 53 - 67
Area "F" consists of Test Holes 68 - 80
Area "G" consists of Test Holes 81 - 92
Area "H" consists of Test Holes 93 - 107
Area "I" consists of Test Holes 108 -120
Area "J" consists of Test Holes 121- 133

Scale 1" = 200'

Revised 12/1/16

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-6--017(045)106	180	2

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
1	0.0	4.0 FS	0	2	6	13	+WL 7.0
		3.0 Fgr					
2	0.0	19.5 gr sh	1	13	29	43	+WL 19.5
3	0.0	8.0 gr sh	0	11	26	39	+
		1.0 sd sh					
		7.0 gr sh					
		4.0 CS sh					
4	0.0	3.0 gr Si Cl	0	7	18	29	+WL 16.0
		1.0 gr					
		4.0 sd sh					
		3.0 gr					
		3.0 gr sh					
		2.0 Fgr sh					
5	0.0	1.0 FS	0	0	4	17	+WL 3.0
		1.0 gr sh					
		1.0 sd					
6	0.0	1.5 gr	0	5	13	24	+WL 9.5
		1.5 FS sh					
		2.0 gr					
		3.0 CS					
		1.5 Fgr					
7	0.0	8.0 gr	0	9	22	36	+WL 19.5
		5.0 gr sh					
		1.0 sd					
		3.0 gr					
		2.5 Fgr sh					
8	0.5	7.5 gr	1	10	22	39	+WL 17.5
		3.0 gr sh					
		2.0 sd sh					
		4.5 gr					
9	0.0	8.0 gr sh	0	6	17	28	+WL 17.0
		9.0 sd sh					
10	0.0	3.0 sd sh	0	5	13	23	+WL 7.0
		1.0 gr					
		3.0 gr sh					
11	0.0	2.5 Fgr sh	0	2	11	23	+WL 12.0
		2.0 sd					
		7.5 Fgr sh					
12	0.0	9.5 Fgr sh	0	1	9	22	+WL 9.5
13	0.0	7.0 gr sh	0	3	20	34	+WL 18.5
		3.0 Fgr sh					
		3.0 sd sh					
		2.0 Fgr sh					
		3.5 sd sh					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
14	1.0	7.0 gr	0	8	20	30	+
		2.0 gr sh					
		3.0 sd sh					
		1.5 Fgr					
		1.5 sd sh					
		1.0 Fgr sh					
		1.0 Si Cl					
		2.0 sd sh					
15	1.0	3.0 gr sh	1	14	29	40	+
		3.0 gr Si Cl					
		5.0 gr					
		1.0 gr sh					
		3.0 sd sh					
		1.0 gr					
		2.0 sd sh					
16	0.5	2.5 gr Si Cl	0	7	18	31	+
		3.0 gr sh					
		1.5 sd sh					
		3.5 CS sh					
		2.0 gr sh					
		2.0 Fgr sh					
		3.5 CS					
		1.5 sd sh					
17	0.5	2.5 gr sh	1	11	24	39	+
		2.0 gr Si Cl					
		3.0 gr					
		3.0 Fgr sh					
		1.0 FS					
		1.0 gr Si Cl					
		4.0 Fgr sh					
		3.0 sd sh					
18	0.0	7.0 gr sh	0	7	18	30	+
		2.5 Fgr sh					
		5.5 sd sh					
		2.0 Fgr sh					
		3.0 sd sh					
19	0.0	10.0 gr sh	1	17	29	42	+
		5.0 sd sh					
		2.0 gr sh					
		3.0 sd sh					
20	0.0	1.5 gr sh	0	7	17	27	+
		1.5 sd sh					
		2.0 gr sh					
		1.0 CS					
		3.0 Fgr sh					
		2.0 CS sh					
		1.0 Fgr					
		4.0 CS sh					
		4.0 sd sh					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
21	0.5	1.5 gr	1	11	21	33	+
		1.0 gr Si Cl					
		4.0 gr					
		4.0 CS sh					
		1.0 gr Si Cl					
		3.0 gr Si Cl					
		5.0 sd sh					
22	0.5	3.0 gr	0	5	14	25	+ Cave
		2.5 CS sh					
		3.0 sd sh					
		3.0 Fgr sh					
		1.5 CS sh					
		1.0 Fgr sh					
		3.5 CS sh					
23	0.0	3.0 gr sh	1	16	30	40	+
		4.0 gr					
		1.0 sd sh					
		3.0 gr Si Cl					
		4.0 Fgr sh					
		2.0 sd sh					
		1.0 Fgr					
		2.0 CS sh					
24	0.5	9.5 gr sh	0	8	18	30	+WL 19.0
		2.0 sd sh					
		4.0 gr sh					
		3.0 sd sh					
25	0.0	3.0 gr	0	6	13	24	+WL 19.0
		2.0 gr sh					
		1.0 sd					
		2.0 gr					
		2.0 sd sh					
		1.0 gr					
		2.0 sd sh					
26	0.5	2.5 gr Si Cl	0	7	19	32	rk
		3.0 gr sh					
		2.0 sd sh					
		6.0 gr sh					
27	0.5	1.5 gr	0	14	24	37	rk
		1.0 sd sh					
		6.0 gr					
		1.0 Si Cl					
		4.0 Fgr sh					
		2.0 gr sh					
28	0.0	5.0 gr	0	6	18	31	+WL 18.5
		5.0 CS sh					
		3.0 Fgr sh					
		5.5 CS sh					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
29	0.5	2.5 gr Si Cl	0	12	25	36	+WL 17.0
		2.0 gr					
		2.0 sd					
		1.0 sd sh					
		6.0 gr sh					
		2.0 gr					
		1.0 Fgr sh					
30	0.5	3.5 gr	0	3	13	26	+WL 17.5
		6.0 CS sh					
		3.0 Fgr sh					
		4.5 CS sh					
31	2.0	8.0 gr	0	9	23	37	+WL 19.5
		6.0 Fgr sh					
		3.5 sd sh					
32	0.5	0.5 gr	0	9	23	37	rk
		1.0 sd					
		8.5 gr					
		0.5 CS					
33	0.5	4.5 gr	0	6	16	29	+WL 17.5
		5.0 CS sh					
		3.0 Fgr sh					
		4.5 CS sh					
34	10.0	1.0 gr Si Cl	1	7	19	33	+
		1.0 sd sh					
		2.0 gr					
		2.0 Fgr sh					
		2.0 gr					
		2.0 sd					
35	0.0	10.0 gr	0	12	22	34	+WL 18.0
		6.0 Fgr sh					
		2.0 sd					
36	0.0	1.0 gr	0	1	7	15	+WL 13.5
		4.0 sd sh					
		3.5 CS sh					
		5.0 sd sh					
37	0.5	7.5 gr	1	15	26	38	+
		1.0 sd					
		4.0 Fgr sh					
		2.0 Fgr					
		5.0 sd					

RANGE 56 **TWP** 156 **SEC.** SW1/4SE1/4 22

COUNTY Walsh Oct-05

PROSPECTED BY Volk & Nelson

INSPECTED & APPROVED Carter Nov-05

Revised 12/1/16

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-6--017(045)106	180	3

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
38	10.0	3.0 gr Si Cl	2	15	29	42	+
		3.5 gr sh					
		1.5 sd					
		2.0 gr					
39	0.5	11.5 gr sh	0	10	23	35	+WL 16.5
		4.5 sd sh					
40	0.0	3.0 gr Si Cl	0	4	15	27	+WL 14.0
		2.0 sd					
		3.0 gr					
		2.0 sd sh					
		2.0 gr					
		2.0 sd sh					
41	0.0	4.0 Fgr sh	0	0	9	22	+WL 6.5
		2.5 CS					
42	0.0	8.0 Fgr sh	0	1	11	24	+WL 8.0
43	0.0	4.0 gr sh	0	0	7	22	+WL 9.0
		1.0 sd sh					
		2.0 CS					
		2.0 Fgr sh					
44	0.0	2.5 gr Si Cl	0	9	18	27	+WL 16.5
		2.5 sd sh					
		2.0 Fgr Si Cl					
		2.0 sd sh					
		1.0 gr					
		5.0 sd sh					
		1.5 Fgr					
45	2.0	4.0 gr sh	0	8	21	36	+WL 17.5
		4.0 Fgr sh					
		1.0 CS sh					
		3.0 gr sh					
		3.5 sd sh					
46	0.5	5.5 gr Si Cl	0	9	20	31	+WL 17.0
		1.5 gr sh					
		1.5 sd sh					
		3.0 gr					
		4.0 sd sh					
		1.0 sd					
47	8.0	1.0 sd Si Cl	0	6	18	32	+
		2.0 gr Si Cl					
		4.0 gr sh					
		1.5 sd sh					
		1.0 CS sh					
		2.0 Fgr sh					
		0.5 CS sh					
48	11.0	6.0 gr Si Cl	0	8	20	33	+
		2.0 sd sh					
		1.0 gr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
49	10.0	3.0 gr Si Cl	0	14	27	40	+
		1.0 gr					
		2.0 sd					
		3.5 gr					
		0.5 CS					
50	13.0	4.0 gr	0	13	24	33	+
		1.0 sd					
		2.0 gr sh					
51	3.0	3.0 gr	0	9	16	23	rk
		2.0 gr Si Cl					
		2.0 Fgr sh					
		2.0 gr sh					
		1.0 Fgr sh					
		2.5 gr sh					
		2.5 Fgr sh					
52	11.0	2.0 gr	0	13	26	40	+
		1.0 gr sh					
		3.0 gr Si Cl					
		2.0 sd sh					
		1.0 gr					
53	10.0	5.0 gr Si Cl	2	26	41	54	rk
		4.0 gr					
54	2.0	2.0 gr Si Cl	1	8	17	29	+WL 19.5
		1.0 gr					
		5.0 Fgr					
		1.0 sd sh					
		4.0 Fgr sh					
		2.0 Fgr					
		1.0 sh					
		1.5 sd					
55	4.0	1.0 gr	0	8	21	34	+
		4.0 gr Si Cl					
		3.0 gr sh					
		2.5 Fgr sh					
		1.5 sd					
		4.0 gr sh					
56	3.0	2.0 gr	0	8	18	29	+
		1.0 Fgr					
		1.5 gr					
		1.5 gr Si Cl					
		2.0 Fgr sh					
		1.0 gr sh					
		2.0 Fgr sh					
		1.0 gr sh					
		5.0 Fgr sh					
57	3.0	1.0 gr Si Cl	1	10	21	35	+
		1.0 sd					
		7.0 gr					
		3.0 Fgr sh					
		5.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
58	2.0	2.0 gr Si Cl	0	9	20	30	+
		2.0 gr					
		4.0 gr sh					
		3.0 Fgr					
		2.0 Fgr sh					
		1.5 sd					
		3.5 sd sh					
59	1.5	4.5 gr	0	4	13	27	+
		1.0 gr sh					
		3.0 Fgr sh					
		3.0 gr sh					
		3.5 Fgr sh					
		3.5 CS					
60	3.0	5.0 gr	1	14	25	37	+
		2.0 sd					
		2.0 Fgr sh					
		5.0 gr sh					
		3.0 sd sh					
61	2.0	5.0 gr Si Cl	0	9	20	30	+
		4.0 CS sh					
		1.0 Fgr sh					
		3.0 sd sh					
		2.0 gr					
		2.0 Fgr sh					
		1.0 gr					
62	2.0	4.0 gr Si Cl	0	10	28	42	+
		2.0 gr sh					
		2.0 Fgr sh					
		4.0 gr sh					
		2.0 gr					
		1.0 Fgr sh					
		3.0 CS sh					
63	1.5	4.5 gr Si Cl	0	8	18	29	+
		1.0 Fgr					
		4.0 sd sh					
		3.0 Fgr					
		6.0 CS					
64	1.0	7.5 gr Si Cl	0	9	19	31	+
		0.5 Fgr sh					
		1.0 gr Si Cl					
		2.0 sd					
		2.0 Fgr sh					
		1.0 gr sh					
		1.5 Fgr sh					
		3.5 sd sh					
65	2.0	3.0 gr Si Cl	0	10	29	47	+ CAVE
		3.0 gr					
		2.0 sd					
		1.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
66	1.0	9.0 gr	1	18	31	41	+
		1.0 sd sh					
		2.0 gr					
		5.0 Fgr sh					
		2.0 gr					
67	2.0	1.0 gr	0	6	15	26	+
		2.5 gr Si Cl					
		1.0 Fgr					
		2.0 gr sh					
		7.0 sd sh					
		0.5 gr Si Cl					
		4.0 sd sh					
68	11.0	7.0 gr Si Cl	1	18	33	45	+
		2.0 Fgr					
69	3.0	4.0 gr sh	0	14	28	41	+
		4.0 gr					
		3.0 sd					
		5.0 gr					
		1.0 CS					
70	0.5	2.5 gr	0	2	11	23	+WL 14.5
		4.0 sd sh					
		4.0 Fgr					
		3.5 sd sh					
71	3.0	1.0 gr	0	8	21	35	+
		6.0 gr Si Cl					
		2.0 Fgr					
		1.0 sd					
		1.0 Fgr					
		1.5 sd					
		4.5 gr sh					
72	1.5	5.5 gr	1	13	27	40	+
		2.0 gr Si Cl					
		1.0 gr sh					
		2.0 CS					
		4.0 Fgr					
		1.0 sd sh					
		1.0 gr sh					
		2.0 sd sh					

RANGE 56 **TWP** 156 **SEC** SW1/4SE1/4 22

COUNTY Walsh Oct-05

PROSPECTED BY Volk & Nelson

INSPECTED & APPROVED Carter Nov-05

Revised 12/1/16

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-6--017(045)106	180	4

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
73	1.0	5.0 gr Si Cl	1	9	22	36	+
		3.0 gr					
		3.0 gr sh					
		3.0 sd					
		1.0 Fgr sh					
		4.0 CS sh					
74	2.0	3.0 gr Si Cl	0	7	16	26	+
		2.0 Fgr					
		2.0 gr					
		3.0 sd sh					
		1.0 sd					
		1.0 gr					
		1.0 CS					
		1.0 gr Si Cl					
		3.0 Fgr					
		1.0 sd sh					
75	0.0	2.0 sd sh	1	8	18	28	+WL 17.5
		2.0 gr sh					
		1.5 sd sh					
		2.5 Fgr sh					
		5.0 CS sh					
		3.0 sd sh					
		1.5 gr sh					
76	1.0	3.0 gr Si Cl	0	8	20	31	+
		2.0 gr sh					
		4.0 gr Si Cl					
		1.0 gr sh					
		1.0 Fgr sh					
		1.0 CS sh					
		4.0 sd					
		1.0 Fgr sh					
		1.0 gr sh					
		1.0 Fgr sh					
77	2.0	2.0 gr Si Cl	0	11	24	35	+
		3.0 gr sh					
		2.0 sd sh					
		1.0 Fgr sh					
		2.0 FS sh					
		6.0 gr					
		2.0 CS					
78	2.0	4.0 gr Si Cl	0	8	20	32	+
		1.0 gr sh					
		1.0 Fgr sh					
		1.0 gr sh					
		1.0 sd sh					
		2.0 Fgr sh					
		2.0 gr Si Cl					
		1.0 gr sh					
		2.0 Fgr sh					
		3.0 sd sh					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
79	1.0	2.0 Fgr sh	0	10	20	30	+
		4.0 gr					
		6.0 sd					
		2.0 sd sh					
		4.0 gr					
		1.0 sd sh					
80	1.0	5.0 gr sh	0	6	14	24	+
		4.5 Fgr sh					
		5.0 sd sh					
		0.5 Fgr sh					
		2.0 sd sh					
		2.0 Fgr sh					
81	1.5	1.5 sd sh	0	5	15	26	+
		1.0 Fgr					
		2.0 gr					
		3.0 sd					
		3.0 Fgr					
		3.0 sd					
		1.0 Fgr					
		1.0 sd					
		3.0 Fgr sh					
82	2.0	4.0 gr	0	2	11	21	+
		1.0 Fgr					
		1.5 Fgr sh					
		7.0 sd sh					
		3.5 Fgr sh					
		1.0 sd sh					
83	0.5	1.5 gr	0	12	22	33	+
		1.0 Fgr					
		2.0 gr					
		3.0 sd sh					
		3.0 gr					
		1.0 FS					
		3.0 Fgr					
		5.0 Fgr sh					
84	1.0	1.0 gr Si Cl	0	11	25	39	+
		4.5 gr					
		1.5 Fgr					
		1.0 sd sh					
		1.0 gr					
		2.0 gr					
		2.0 gr sh					
		2.0 gr					
		2.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
85	0.5	4.5 gr	0	9	17	26	+
		1.0 sd sh					
		2.0 gr					
		1.0 gr sh					
		7.0 sd sh					
		4.0 Fgr sh					
86	0.5	3.0 gr	0	4	11	20	+
		2.5 Fgr					
		2.0 gr					
		8.5 sd					
		1.0 CS					
		0.5 Fgr					
		2.0 sd					
87	2.0	3.0 gr	0	9	21	33	+
		3.0 sd sh					
		1.0 Fgr sh					
		3.0 Fgr					
		2.0 sd sh					
		4.0 Fgr sh					
		1.0 sd sh					
		1.0 gr					
88	7.0	1.0 CS	0	8	17	32	+
		1.0 Fgr					
		1.0 gr					
		2.0 Fgr					
		5.0 Fgr sh					
		3.0 gr sh					
89	2.0	2.0 Fgr sh	0	3	10	20	+WL 19.0
		4.0 sd sh					
		6.0 Fgr					
		4.0 Fgr sh					
		1.0 sd					
90	2.5	0.5	0	8	16	26	+WL 19.0
		3.5					
		1.0					
		1.0					
		5.0					
		2.0					
		3.5					
91	6.0	2.0 sd sh	0	5	17	30	+WL 18.5
		2.0 sd					
		1.0 gr sh					
		3.0 gr					
		1.0 gr sh					
		3.5 Fgr					
92	4.0	3.5 gr	0	6	17	29	+WL 15.5
		2.5 sd sh					
		3.5 gr sh					
		2.0 CS sh					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
93	1.0	6.0 gr Si Cl	1	14	27	37	+ CAVE
		2.0 sd					
		2.0 gr					
		3.0 sd					
		2.0 Fgr					
94	2.0	6.0 gr Si Cl	2	15	30	45	+
		8.0 gr sh					
		4.0 Fgr sh					
95	1.0	6.0 gr Si Cl	1	9	23	38	+
		2.0 gr					
		3.0 CS sh					
		5.0 Fgr					
		3.0 gr					
96	1.0	2.0 gr sh	0	8	20	35	+WL 18.0
		0.5 gr Si Cl					
		1.5 gr sh					
		1.0 Fgr sh					
		1.0 sd sh					
		0.5 gr Si Cl					
		0.5 Fgr sh					
		2.0 gr sh					
		1.0 sd sh					
		1.0 Fgr sh					
		2.0 sd					
		4.0 gr					
97	1.0	6.0 gr Si Cl	0	8	20	30	+
		1.0 gr sh					
		3.0 sd sh					
		6.0 Fgr					
		2.0 sd sh					
		1.0 Fgr sh					
98	2.0	2.5 gr	0	10	20	30	+
		0.5 gr Si Cl					
		1.0 sd					
		0.5 gr					
		3.5 sd					
		5.0 gr					
		3.0 Fgr					
		2.0 gr sh					

RANGE 56 **TWP** 156 **SEC.** SW1/4SE1/4 22

COUNTY Walsh Oct-05

PROSPECTED BY Volk & Nelson

INSPECTED & APPROVED Carter Nov-05

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-6--017(045)106	180	5

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
99	3.0	2.0 gr Si Cl	0	5	18	28	+
		1.0 sd					
		1.0 gr					
		3.0 CS					
		2.0 gr sh					
		3.0 sd					
		1.0 gr					
		4.0 gr sh					
100	2.0	3.0 gr	0	9	23	37	+
		1.5 gr Si Cl					
		0.5 gr					
		1.0 sd sh					
		7.0 Fgr					
		2.0 gr sh					
		2.0 sd sh					
		1.0 Fgr sh					
101	1.0	4.0 gr Si Cl	0	8	21	35	+
		2.0 gr					
		2.0 Fgr sh					
		2.0 CS					
		5.0 gr					
		2.0 CS					
		2.0 sd sh					
102	0.5	1.5 gr	0	9	21	37	+WL 18.0
		1.5 Fgr					
		6.5 gr					
		8.0 CS sh					
103	0.5	3.5 gr	0	7	15	23	+
		4.0 CS					
		3.0 Fgr sh					
		2.0 CS					
		2.0 Fgr					
		3.0 sd sh					
		2.0 Fgr sh					
104	1.0	3.0 gr	0	7	15	28	+WL 15.5
		4.5 sd					
		0.5 sd sh					
		1.0 Fgr					
		5.5 sd					
105	2.0	10.5 Fgr sh	0	6	17	32	+WL 12.5
106	6.0	2.5 sd	0	4	14	31	+WL 16.5
		1.5 Fgr					
		2.0 CS					
		1.0 Fgr					
		1.0 gr sh					
		1.0 Fgr					
		1.0 gr Si Cl					
		0.5 sd					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
107	6.0	2.0 FS	0	2	6	14	+WL 19.0
		2.0 sd					
		4.5 Fgr					
		1.5 sd sh					
		1.0 FS					
		2.0 sd sh					
108	1.5	4.5 gr	0	5	12	20	+
		1.0 FS					
		4.0 sd sh					
		6.0 sd					
		3.0 gr					
109	1.0	4.0 sd sh	0	0	5	13	+WL 9.0
		2.5 Fgr					
		1.5 sd sh					
110	1.0	1.0 sd sh	0	1	6	14	+WL 11.0
		1.5 Fgr					
		3.5 sd sh					
		1.0 Fgr sh					
		3.0 sd sh					
111	0.5	1.5 sd	0	6	18	31	+WL 13.0
		4.0 gr sh					
		1.0 sd					
		2.0 Fgr sh					
		1.0 gr sh					
		2.0 Fgr sh					
		1.0 gr sh					
112	6.5	4.5 sd sh	0	7	11	28	+WL 12.5
		1.0 gr					
		0.5 sd sh					
113	1.0	3.5 gr	0	5	15	27	+
		1.5 gr Si Cl					
		1.0 Fgr					
		8.5 sd					
		3.0 Fgr					
		1.0 gr					
		0.5 sd					
114	1.0	3.0 gr	0	8	16	25	+
		2.0 Fgr sh					
		1.0 sd					
		4.0 Fgr sh					
115	0.5	4.0 gr	0	8	22	40	+WL 16.5
		2.0 Fgr					
		3.0 gr sh					
		2.0 Fgr					
		1.0 sd					
		1.5 Fgr					
		1.0 sd					
		1.5 sd sh					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
116	0.5	1.5 gr	0	4	8	16	+WL 17.5
		1.0 sd sh					
		6.0 Fgr sh					
		3.0 sd					
		1.0 Fgr					
		1.0 sd sh					
		2.0 Fgr sh					
		1.5 sd					
117	0.5	1.5 gr	0	5	17	37	+CAVE
		3.0 Fgr					
		6.0 Fgr sh					
		3.0 sd					
		4.0 Fgr					
118	2.0	2.0 gr Si Cl	0	6	12	19	+
		5.0 Fgr					
		5.0 CS					
		1.0 sd sh					
		5.0 CS					
119	1.0	3.0 CS sh	0	2	7	15	+WL 14.5
		3.0 CS					
		3.0 Fgr sh					
		4.5 sd sh					
120	1.0	2.5 sd	0	3	10	21	+WL 16.0
		2.0 Fgr sh					
		1.0 sd					
		1.0 gr sh					
		2.0 Fgr					
		4.5 sd					
		1.0 Fgr sh					
		1.0 sd					
		1.5 gr					
		1.0 Fgr					
		3.0 sd					
		0.5 sd					
		1.5 Fgr sh					
		3.0 sd sh					
122	3.0	5.0 gr	0	6	16	26	+WL 14.0
		2.0 Fgr					
		4.0 CS sh					
123	2.0	1.0 gr Si Cl	0	7	20	36	+WL 12.0
		5.0 gr					
		3.0 sd					
		1.0 sd sh					
124	4.0	5.0 gr sh Si Cl	1	8	22	34	+WL 16.5
		1.0 gr sh					
		2.0 CS					
		1.0 gr sh					
		3.5 sd					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
125	0.5	3.5 gr	0	7	19	35	+WL 13.5
		2.0 gr Si Cl					
		2.0 sd					
		1.0 Fgr					
		1.0 sd sh					
		1.5 gr					
		0.5 CS					
		1.5 sd					
126	1.0	5.0 sd sh	0	2	9	16	+WL 17.0
		2.0 Fgr sh					
		2.0 CS					
		1.0 Fgr					
		2.0 sd sh					
		2.0 Fgr					
		2.0 sd					
127	2.0	5.5 sd	0	5	16	31	+WL 15.5
		0.5 sd sh					
		4.5 gr					
		3.0 gr sh					
128	0.5	1.5 Fgr	0	3	13	25	+WL17.0
		1.0 FS					
		2.0 gr Si Cl					
		2.0 CS					
		6.0 Fgr sh					
		4.0 sd sh					
129	0.5	1.5 sd	0	3	12	25	+WL 15.0
		3.0 gr					
		2.0 gr Si Cl					
		2.0 Fgr					
		1.0 CS sh					
		2.0 Fgr sh					
		3.0 sd sh					
130	0.5	1.5 Fgr sh	0	2	8	15	+WL 18.0
		2.0 Fgr					
		3.0 sd sh					
		8.0 sd					
		1.5 Fgr					
		1.5 sd sh					

RANGE 56 **TWP** 156 **SEC.** SW1/4SE1/4 22

COUNTY Walsh Oct-05

PROSPECTED BY Volk & Nelson

INSPECTED & APPROVED Carter Nov-05

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SS-6--017(045)106	180	6

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)		% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
131	0.5	0.5	sd	0	5	14	26	+WL 17.5
		2.0	CS sh					
		0.5	gr					
		4.0	sd sh					
		0.5	Fgr sh					
		3.0	sd sh					
		1.0	Fgr sh					
		2.0	gr					
		3.5	Fgr					
132	0.5	7.5	gr sh	0	7	16	29	+WL 16.5
		3.0	Fgr sh					
		2.0	Fgr					
		3.5	sd sh					
133	1.0	2.0	gr	0	3	8	17	+WL 15.0
		12.0	sd					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)		% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
R1	1.0	2.0	Fgr	0	1	5	15	+WL 10.0
		7.0	sd sh					
R2	0.5	1.5	Fgr	0	4	9	17	+WL14.0
		3.0	sd					
		2.0	sd sh					
		1.0	sd					
		6.0	sd sh					
R3	0.5	1.5	Fgr	0	2	10	21	+WL 8.0
		2.0	gr					
		4.0	sd sh					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole

RANGE 56 **TWP** 156 **SEC.** SW1/4SE1/4 22

COUNTY Walsh Oct-05

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