JOHN TURNER
CONSULTING

PAVEMENT CORING SUMMARY REPORT

CLIENT: Mr. Peter M. Levine
Principal
Amber Properties, LLC
1333A North Avenue, PO Box 765
New Rochelle, NY 10804
Ph: 860-885-2228
Cell: 914-522-5935
plevine@amberpropllc.com

PROJECT: Ledge Road ROW
Seabrook, New Hampshire

DATE: January 31, 2020

REPORT #: 20-09-002

General Location: Ledge Road ROW Cul-de-sac
Field Representatives: Nate Cutter / Dave Grodan / John Turner

Summary of Work Performed:

At the request of Amber Properties, and at the direction and observation of Mr. Chris Raymond of TEC Engineers, an asphalt coring and gravel sampling operation was conducted at the entrance to the former Sam's Club in Seabrook, NH. Locations were selected by Mr. Raymond at the time of this field operation.

Eight (8) inch diameter cores were cut at two locations. The cores were labelled and returned to our Dover, NH laboratory for additional evaluation including thickness of the wearing and base course and density determination. Additionally, samples of the underlying base and subbase gravels were collected and the thickness of each layer was recorded. Once the samples were collected and the layers recorded, the core holes were backfilled with gravel and stone, compacted, and patched with cold patch asphalt.

One (1) approximate 3 feet by 2 feet sawcut was cut from the paved section. This pavement section cut was removed and its thickness was recorded. A soil compaction test was performed on the based gravel layer. The base gravel was then excavated and placed in a 5-gallon bucket. JTC technicians observed that the underlying soils had approximately 1" of frost and the material below that was highly saturated.

All gravel materials and cores sampled were transported to our Dover laboratory and a gradation analysis was performed on each roadway base and subbase sample. For comparison, the materials were plotted against applicable NHDOT gradation specifications (304.3 – Crushed Gravel for Base material and 304.2 – Bank Run Gravel for Subbase).

The table below lists the core locations, asphalt thicknesses, base/subbase thicknesses and individual sample numbers. The gradation reports for tested samples are also attached at the end of this report. The asphalt laboratory testing reports are also attached.

TEST HOLE #	CORE / PAVEMENT THICKNESS (overall)	WEARING COURSE THICKNESS & COMPACTION	BINDER COURSE THICKNESS & COMPACTION	BASE GRAVEL THICKNESS & TYPE	SUBBASE GRAVEL THICKNESS & TYPE
C-1	**3.35"**	**1.22" / 95.2%**	**2.13" / 94.4%**	**6":** Base Gravel consisting of Lt. Brown, Fine to Coarse GRAVEL and Fine to Coarse Sand, trace silt **Sample #20-036**	**6"+:** Subbase Gravel consisting of Gray, Fine to Medium SAND, some Fine to Coarse Gravel, trace silt (discontinued @ -20", soil change) **Sample #20-037**
C-2	**3.52"**	**1.75" / 96.3%**	**1.77" / 89.1%**	**6":** Base Gravel consisting of Lt. Brown, Fine to Medium SAND, some Fine to Coarse Gravel, trace silt **Sample #20-038**	**12"+:** Subbase Gravel consisting of Gray, Fine to Medium SAND, some Fine to Coarse Gravel, little silt (discontinued @ -21.5", large 12" rock obstruction) **Sample #20-039**
SC-1	**2.75"**	**N/A**	**N/A**	**6":** Base Gravel consisting of Lt. Brown, Fine to Coarse GRAVEL and Medium to Fine Sand, trace silt **Sample #20-032**	**N/A**

SUMMARY

Pavement

Typical asphalt compaction standards require in-place compaction of 92-97% of the Theoretical Maximum Density, with 95% being optimum. 3 of the 4 cores were found to be within 1.5% of this mark, with the 4th outside of the range. In regards to pavement thickness, no information was provided specifying design requirements so JTC is unable to provide a comparison.

Base Gravel

A total of 3 base gravel samples were collected from C-1, C-2 and SC-1. Samples #20-032 (C-1) and #20-036 (SC-1) both met the NHDOT specification for Crushed Gravel (NHDOT 304.3). Sample #20-038 (C-2) appeared similar to both of these materials, but the gradation indicated a slightly lower gravel percentage. In regards to gravel thickness, no information was provided specifying design requirements so JTC is unable to provide a comparison.

In an attempt to determine the in-place compaction percentage of the in-place base gravel, density tests were taken at the sawcut location (SC-1). A Modified Proctor was then conducted on material collected from here to determine the Maximum Dry Density of the gravel. This value (134.2 pcf at optimum moisture of 5.2%) was then compared against the compaction tests taken in the field. Field density percentage were found to be exceptionally low and indicated that the in-place gravel was frozen at time of testing. Because of this, JTC did not believe the results could be used to determine in-place compaction and were not included in this report.

Subbase Gravel

Two (2) Subbase Gravel samples were taken at C-1 and C-2. Both materials appeared to be similar. Sample #20-037 (C-1) met the NHDOT specification for Gravel (304.2). Sample #20-039 (C-2) met the coarse gradation requirements but was found to exceed the requirements for the fines portion. In regards to subbase gravel thickness, no information was provided to JTC specifying design requirements, therefore JTC is unable to provide a comparison.

PLAN REFERENCES:

1.) "SAM'S CLUB GRADING, DRAINAGE & UTILITY PLAN, SEABROOK, N.H." DATED 6/22/09 AND LAST REVISED ON 3/31/10 BY BOHLER ENGINEERING. RCRD PLAN D-38412

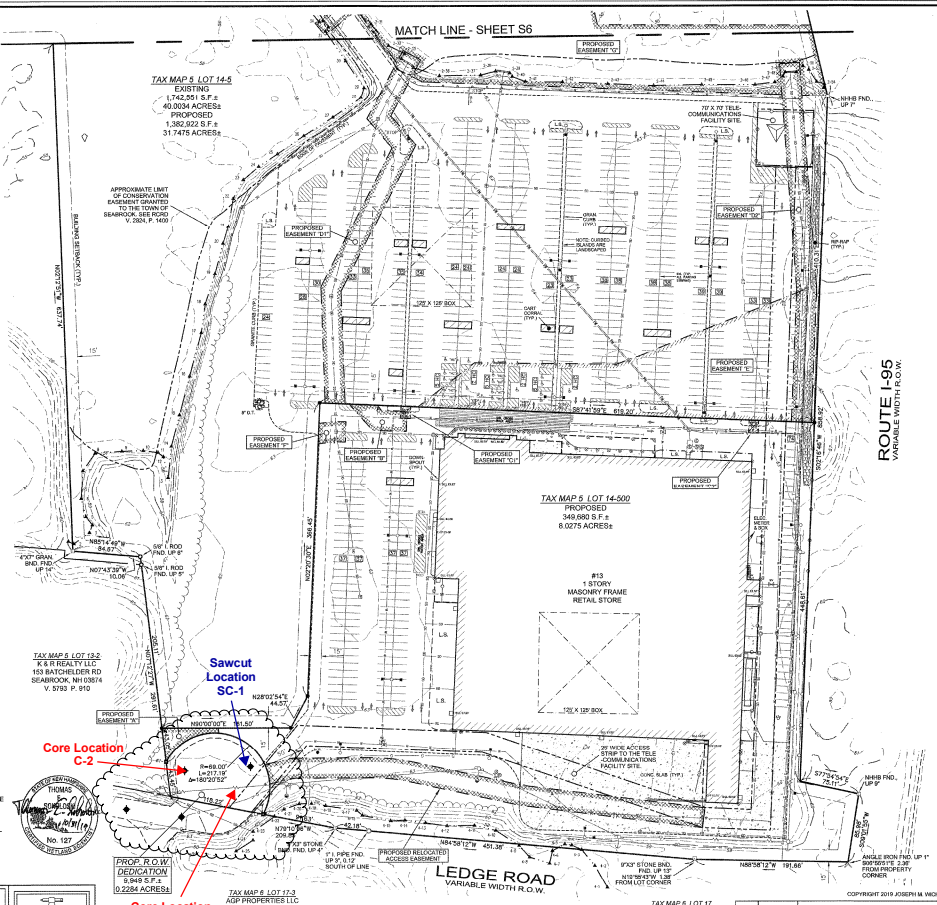
2.) "LOT LINE ADJUSTMENT FOR TAX MAP NO. 5, LOTS NO. 14-2 & 14-4, BATCHELDER ROAD, SEABROOK NEW HAMPSHIRE 03874", DATED 6/6/1995 AND PREPARED BY J.A. DAVIS & ASSOCIATES AND FRANCIS M. DeCESARE. RCRD PLAN #D-24187.

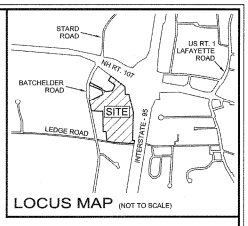
3.) "PLAN SHOWING ADDITIONAL RIGHT-OF-WAY BATCHELDER ROAD FOR WAL-MART STORES INC, SEABROOK, N.H." DATED AUGUST 1991 AND LAST REVISED ON 9/6/91 BY CLD. RCRD PLAN D-21311

4.) "EASEMENT PLAN AND LOT LINE RELOCATION FOR SEABROOK INVESTMENT PROPERTIES, BATCHELDER ROAD, COUNTY OF ROCKINGHAM, SEABROOK, N.H." DATED MARCH 1988 AND LAST REVISED ON 12/22/89 BY RICHARD P. MILETTE AND ASSOC. RCRD PLAN D-21227

5.) "SUBDIVISION OF LAND SEABROOK, N.H. FOR ROBERT W. HOTIN" DATED JULY OF 1982 AND LAST REVISED ON NOV. 16, 1982 BY JOHN W. DURGIN ASSOC., INC. RCRD PLAN D-13254

6.) ALTA/NSPS LAND TITLE SURVEY PREPARED FOR WALMART, 13 BATCHELDER ROAD, SEABROOK, NEW HAMPSHIRE" DATED JULY 31, 2018. NOT RECORDED COPY PROVIDED BY CLIENT





LOCUS MAP (NOT TO SCALE)

N

NHSPC 83/11

NOTES:

1.) THE SUBJECT PARCEL IS LOT 14-5 ON THE TOWN OF SEABROOK TAX MAP 5. THE OWNER OF RECORD IS AMBER SEABROOK ASSOCIATES, LLC OF 1333A NORTH AVENUE, NEW ROCHELLE, NY 10804. SEE RCRD V. 6022 P. 314.

2.) THE SUBJECT PARCEL IS IN ZONE 3 (INDUSTRIAL). MINIMUM LOT SIZE IS 30,000 SQ. FT. MINIMUM LOT FRONTAGE = 125'. SETBACKS ARE AS FOLLOWS: FRONT = 50', SIDE = 15' AND REAR = 15'. THE SETBACKS SHOWN ARE FOR REFERENCE ONLY AND NEED TO BE VERIFIED WITH THE ZONING COMPLIANCE OFFICER.

3.) THIS PLAN IS THE RESULT OF AN ACTUAL FIELD SURVEY PERFORMED BY THIS OFFICE IN MAY AND JUNE OF 2019. I, JOSEPH M. WICHERT, NHLLS #783, CERTIFY THAT THE WORK WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION.

4.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED SUBDIVISION OF THE SUBJECT PARCEL TO CREATE ONE NEW BUILDING LOT AND A RECONFIGURED REMAINDER PARCEL, WITH THE EXISTING BUILDING AND NEW FRONTAGE ON LEDGE ROAD. THE EXISTING BUILDING IS SERVICED BY MUNICIPAL SEWER AND WATER AND THE NEW LOT WILL ALSO BE SERVICED BY MUNICIPAL SEWER AND WATER.

5.) THE SUBJECT PARCEL IS LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN) AS SHOWN ON FLOOD INSURANCE RATE MAP, ROCKINGHAM COUNTY, COMMUNITY PANEL NUMBER 33015C0420E, EFFECTIVE DATE MAY 17, 2006.

7.) THE UTILITY INFORMATION SHOWN IS BASED ON THE ABOVE GROUND LOCATION OF VISIBLE UTILITIES. THE CONTRACTOR NEEDS TO FIELD VERIFY ALL UTILITIES PRIOR TO ANY CONSTRUCTION. THIS OFFICE DOES NOT GUARANTEE THE LOCATION AND ACCURACY OF THE UTILITY DATA. DIG SAFE SHALL BE CONTACTED 72 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION (811).

8.) THE HORIZONTAL DATUM OF THE PLAN IS NHSPC 83/11 AND THE VERTICAL DATUM OF THE PLAN IS NAVD 88. BOTH ESTABLISHED ON SITE THROUGH STATIC GPS OBSERVATIONS MADE BY THIS OFFICE IN MAY OF 2019.

9.) THE FOLLOWING VARIANCES WERE GRANTED FROM THE TOWN OF SEABROOK ZONING BOARD OF ADJUSTMENT AT A MEETING ON: AUGUST 29, 2019. SEE CASE #2019-014:
SECTION 7 - DIMENSIONAL REQUIREMENTS: OPEN SPACE OF 14% ON LOT 14-500 WHERE 25% IS REQUIRED
SECTION 6 - PERMITTED LAND USES - TO UTILIZE LOT 14-5 FOR A BUS TERMINAL AND TRANSPORTATION CENTER WITH ASSOCIATED PARKING

10.) THE FOLLOWING WAIVERS HAVE BEEN REQUESTED FROM THE TOWN OF SEABROOK PLANNING BOARD:
SECTION 13.320 - FOR NO 10 FOOT WIDE LANDSCAPE BUFFER ALONG THE NORTH AND WEST PROPERTY BOUNDARY OF LOT 14-500 AND THE SOUTH PROPERTY BOUNDARY OF LOT 14-5
SECTION 8.116 - LOT LINES - FOR LESS THAN 75' OFF RIGHT OF WAY ON LOT 14-500

11.) THIS IS A 6-SHEET PLAN SET. SHEETS 1, 2, 3 & 4 WILL BE RECORDED AT THE R.C.R.D. AND THE REMAINING SHEETS WILL BE KEPT ON FILE AT THE TOWN OF SEABROOK PLANNING DEPARTMENT.

WETLANDS NOTE:

THOMAS SOKOLOSKI, CERTIFIED WETLAND SCIENTIST #127, OF TES ENVIRONMENTAL CONSULTANTS, L.L.C. OF BOW, NH, PERFORMED THE WETLAND MAPPING ON MAY 9, 2019 ACCORDING TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL, AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012, US ARMY CORPS OF ENGINEERS.

THOMAS SOKOLOSKI — No. 127 — CERTIFIED WETLAND SCIENTIST

I CERTIFY THAT THIS PLAN IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE WITH A TOPCON GT 503. THE ERROR OF CLOSURE ON ALL LOT LINES WITHIN AND BORDERING THE SUBJECT PROPERTY IS BETTER THAN 1 IN 10,000.

1 NOV. 2019
DATE

No. 783 JOSEPH M. WICHERT
SIGNATURE

APPROVED BY THE SEABROOK PLANNING BOARD CASE #_____

CHAIRMAN DATE

NO.	DATE	DESCRIPTION	BY
1	11/1/19	REVISE FOR PB SUBMISSION	JMW

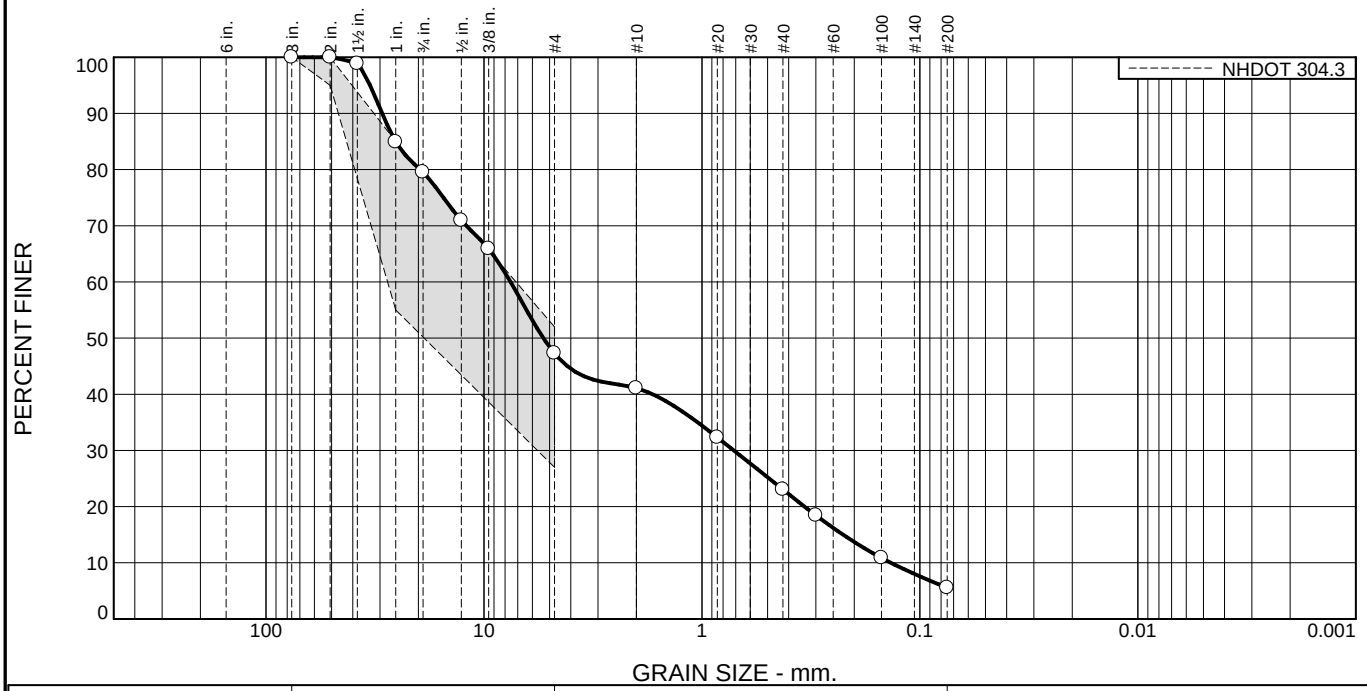
TOPOGRAPHIC
SUBDIVISION PLAN FOR
AMBER SEABROOK ASSOCIATES, LLC
TAX MAP 5 LOT 14-5
13 BATCHELDER ROAD
SEABROOK, NEW HAMPSHIRE
DATE: JUNE 10, 2019 SCALE: 1" = 60'

SUBDIVISION PLAN BY:

802 AMHERST STREET
MANCHESTER, NH 03104
TEL: (603) 647-4282 OR 736-8203
FAX: (603) 623-1910
WEB: WWW.JMWLLS.COM
Joseph M. Wichert LLS, INC.
LAND SURVEYOR & SEPTIC SYSTEM DESIGNER

SHEET S5 SHEET 5 OF 6 F.B. - P. - JOB #2019124

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	20.5	32.2	6.2	18.1	17.5	5.5	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100.0	100.0	
2	100.0	95.0 - 100.0	
1.5	98.9		
1	84.9	55.0 - 85.0	
3/4	79.5		
1/2	70.9		
3/8	65.9		
#4	47.3	27.0 - 52.0	
#10	41.1		
#20	32.3		
#40	23.0		
#50	18.4		
#100	10.9		
#200	5.5		

* NHDOT 304.3

Material Description

Fine to coarse gravel and fine to medium sand trace silt
(1 1/2" Brown Crushed Gravel)

Atterberg Limits (ASTM D 4318)

PL= - **LL=** - **PI=** -

Classification

USCS (D 2487)= **AASHTO (M 145)=** -

Coefficients

D_{90}= 29.3188 D_{85}= 25.4685 D_{60}= 7.5562
D_{50}= 5.3410 D_{30}= 0.7144 D_{15}= 0.2251
D_{10}= 0.1359 C_u= 55.59 C_c= 0.50

Remarks

% Passing #200 in Fine Portion: 11.6% Spec=0-12%

Date Received: 1-27-20 **Date Tested:** 1-28-20

Tested By: Mike Bronstein

Checked By: Jeff Young

Title: Lab Manager

Location: SC-1
Sample Number: 20-032

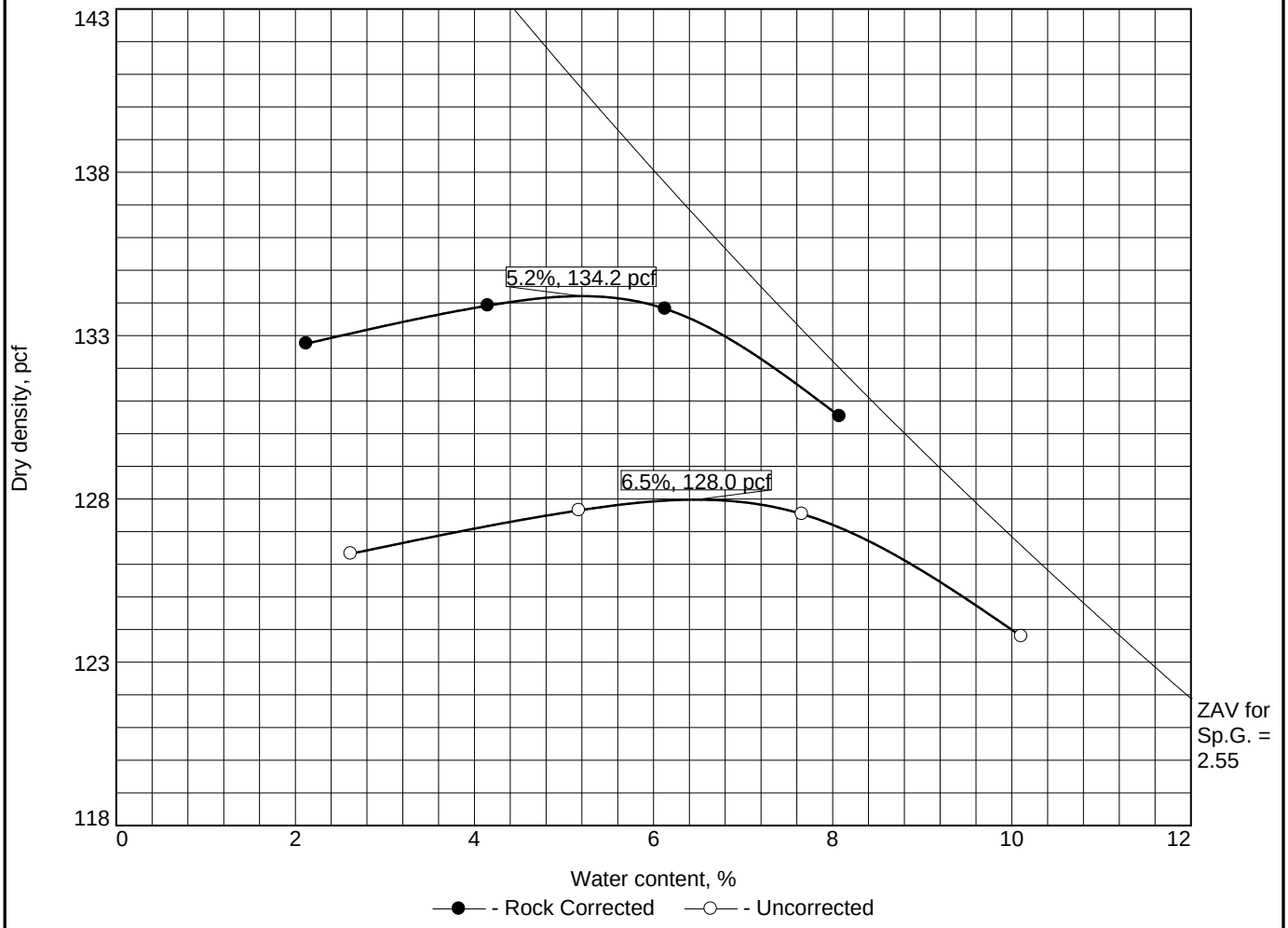
Date Sampled: 1-24-20

JOHN TURNER CONSULTING

Client: Amber Properties
Project: Ledge Road - Seabrook, NH

Project No: 20-09-002 **Figure** 032A

Moisture Density Report For Curve No. 20-032



Test specification: ASTM D 1557-00 Method C Modified
ASTM D4718-15 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
		-		2.65	-	-	20.5	5.5

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 134.2 pcf	128.0 pcf	(1 1/2" Crushed Gravel)
Optimum moisture = 5.2 %	6.5 %	

Project No. 20-09-002 **Client:** Amber Properties
Project: Ledge Road - Seabrook, NH
Date: 1-29-20
○ **Location:** On Site In Place **Sample Number:** 20-032

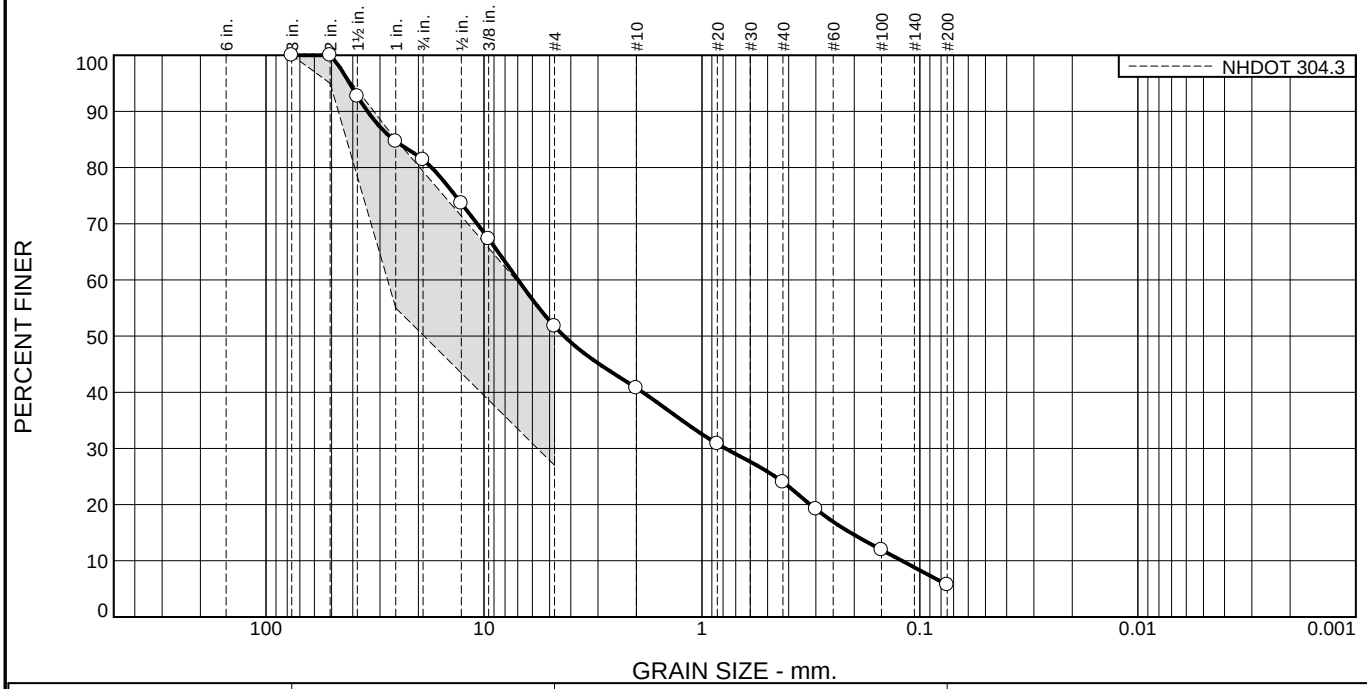
JOHN TURNER CONSULTING

Remarks:

Figure 032B

Tested By: Mike Bronstein **Checked By:** Jeff Young

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	18.6	29.7	10.9	16.8	18.3	5.7	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100.0	100.0	
2	100.0	95.0 - 100.0	
1.5	92.7		
1	84.7	55.0 - 85.0	
3/4	81.4		
1/2	73.6		
3/8	67.3		
#4	51.7	27.0 - 52.0	
#10	40.8		
#20	30.8		
#40	24.0		
#50	19.2		
#100	11.9		
#200	5.7		

* NHDOT 304.3

Material Description

Fine to coarse gravel and fine to coarse sand trace silt
(Light Brown Crushed Gravel)

Atterberg Limits (ASTM D 4318)

PL= - **LL=** - **PI=** -

Classification

USCS (D 2487)= - **AASHTO (M 145)=** -

Coefficients

D_{90}= 34.2559 D_{85}= 26.0568 D_{60}= 6.9791
D_{50}= 4.2914 D_{30}= 0.7805 D_{15}= 0.2080
D_{10}= 0.1208 C_u= 57.75 C_c= 0.72

Remarks

% Passing #200 in Fine Portion: 11.0% Spec=0-12%

Date Received: 1-27-20 **Date Tested:** 1-28-20

Tested By: Mike Bronstein

Checked By: Jeff Young

Title: Lab Manager

Location: C-1 Base
Sample Number: 20-036

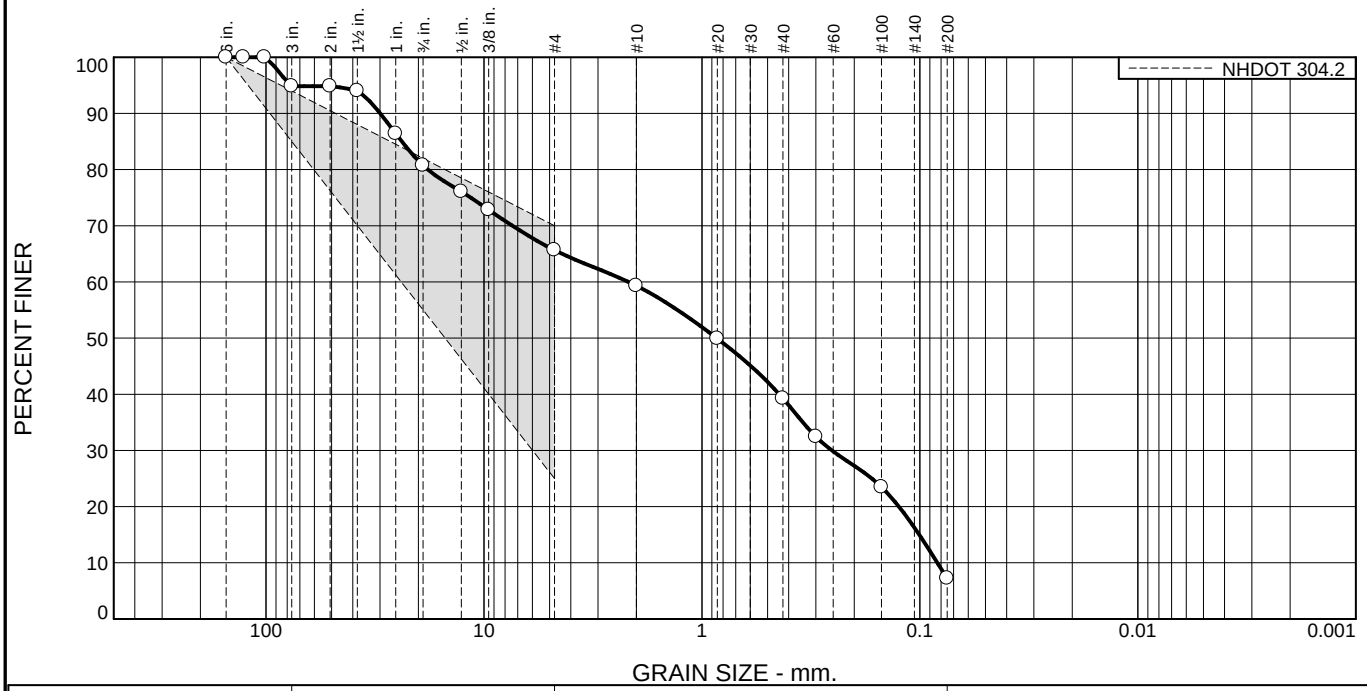
Date Sampled: 1-27-20

JOHN TURNER CONSULTING

Client: Amber Properties
Project: Ledge Road - Seabrook, NH

Project No: 20-09-002 **Figure** 036A

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
5.2	14.1	15.0	6.4	20.0	32.1	7.2	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
6	100.0	100.0	
5	100.0		
4	100.0		
3	94.8		
2	94.8		
1.5	94.0		
1	86.4		
3/4	80.7		
1/2	76.1		
3/8	72.8		
#4	65.7	25.0 - 70.0	
#10	59.3		
#20	49.9		
#40	39.3		
#50	32.4		
#100	23.5		
#200	7.2		

* NHDOT 304.2

Material Description

Fine to medium sand some fine to coarse gravel trace silt (Gray Gravel)

Atterberg Limits (ASTM D 4318)

PL= - **LL=** - **PI=** -

Classification

USCS (D 2487)= - **AASHTO (M 145)=** -

Coefficients

D_{90}= 29.9317 D_{85}= 23.8257 D_{60}= 2.1715
D_{50}= 0.8569 D_{30}= 0.2534 D_{15}= 0.1007
D_{10}= 0.0831 C_u= 26.12 C_c= 0.36

Remarks

% Passing #200 in Fine Portion: 11.0% Spec=0-12%

Date Received: 1-27-20 **Date Tested:** 1-28-20

Tested By: Mike Bronstein

Checked By: Jeff Young

Title: Lab Manager

Location: C-1 Subbase
Sample Number: 20-037

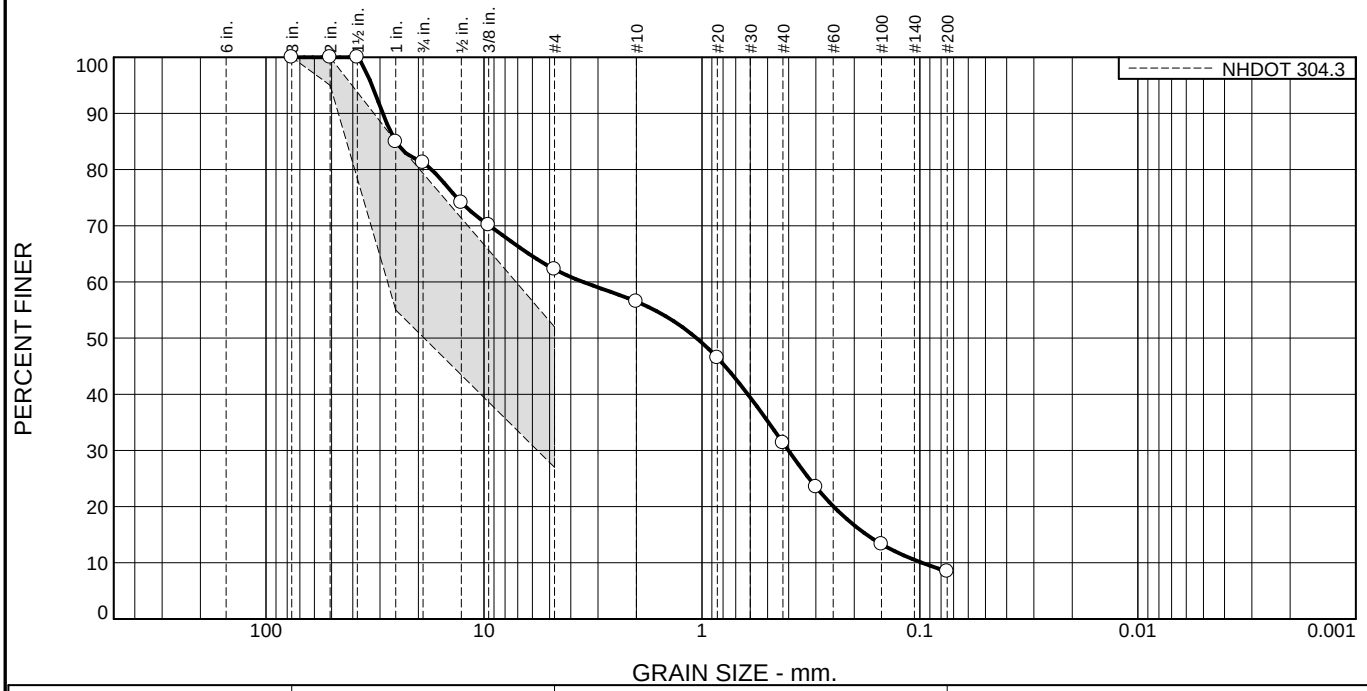
Date Sampled: 1-27-20

JOHN TURNER CONSULTING

Client: Amber Properties
Project: Ledge Road - Seabrook, NH

Project No: 20-09-002 **Figure** 037A

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	18.8	18.9	5.8	25.1	23.0	8.4	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100.0	100.0	
2	100.0	95.0 - 100.0	
1.5	100.0		
1	85.0	55.0 - 85.0	
3/4	81.2		
1/2	74.1		
3/8	70.1		
#4	62.3	27.0 - 52.0	X
#10	56.5		
#20	46.5		
#40	31.4		
#50	23.5		
#100	13.3		
#200	8.4		

* NHDOT 304.3

Material Description

Fine to medium sand and fine to coarse gravel trace silt
(Light Brown Crushed Gravel)

Atterberg Limits (ASTM D 4318)

PL= - **LL=** - **PI=** -

Classification

USCS (D 2487)= - **AASHTO (M 145)=** -

Coefficients

D_{90}= 29.1246 D_{85}= 25.4333 D_{60}= 3.5127
D_{50}= 1.0581 D_{30}= 0.4012 D_{15}= 0.1754
D_{10}= 0.0978 C_u= 35.93 C_c= 0.47

Remarks

% Passing #200 in Fine Portion: 13.5 Spec=0-12%
X=Fail

Date Received: 1-27-20 **Date Tested:** 1-28-20

Tested By: Mike Bronstein

Checked By: Jeff Young

Title: Lab Manager

Location: C-2 Base
Sample Number: 20-038

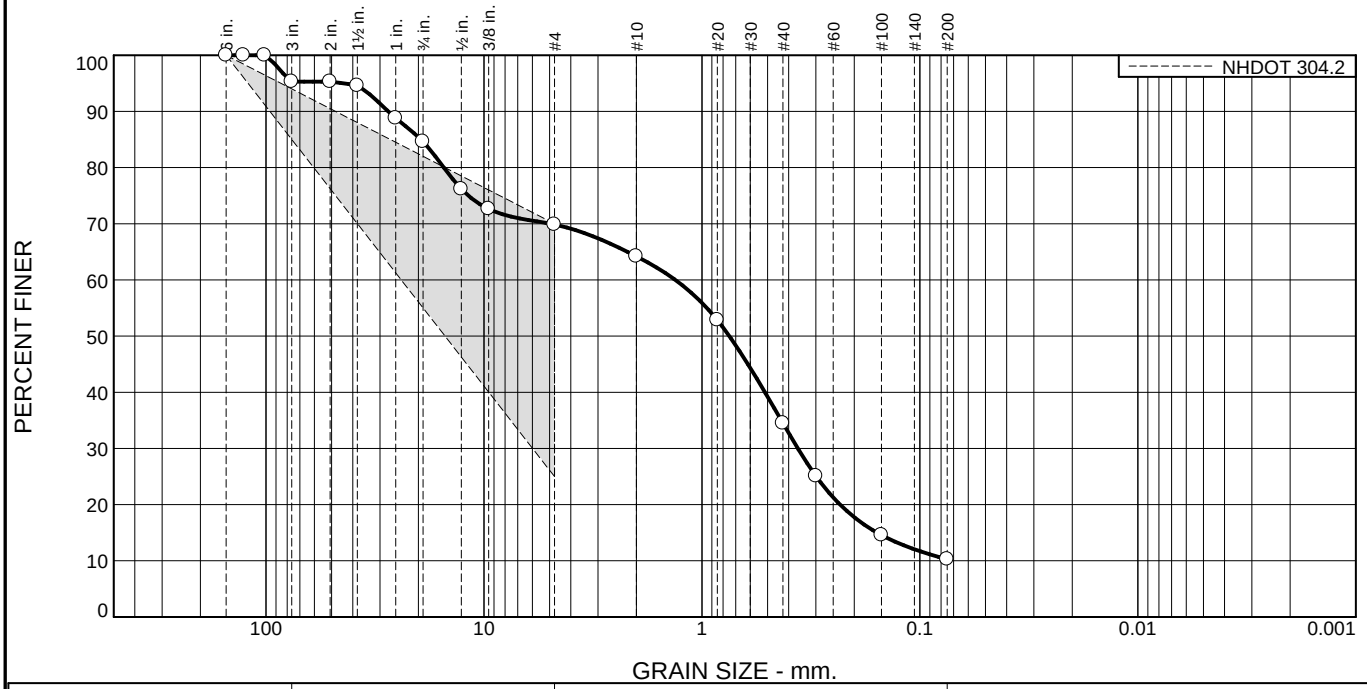
Date Sampled: 1-27-20

JOHN TURNER CONSULTING

Client: Amber Properties
Project: Ledge Road - Seabrook, NH

Project No: 20-09-002 **Figure** 038A

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
4.7	10.7	14.7	5.7	29.7	24.2	10.3	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
6	100.0	100.0	
5	100.0		
4	100.0		
3	95.3		
2	95.3		
1.5	94.6		
1	88.8		
3/4	84.6		
1/2	76.2		
3/8	72.7		
#4	69.9	25.0 - 70.0	
#10	64.2		
#20	52.8		
#40	34.5		
#50	25.1		
#100	14.6		
#200	10.3		

* NHDOT 304.2

Material Description

Fine to medium sand some fine to coarse gravel trace little silt (Gray Gravel)

Atterberg Limits (ASTM D 4318)

PL= - **LL=** - **PI=** -

Classification

USCS (D 2487)= - **AASHTO (M 145)=** -

Coefficients

D_{90}= 27.4872 D_{85}= 19.4710 D_{60}= 1.3239
D_{50}= 0.7487 D_{30}= 0.3629 D_{15}= 0.1572
D_{10}= C_u= C_c=

Remarks

% Passing #200 in Fine Portion: 14.7% Spec=0-12%
X=Fail

Date Received: 1-27-20 **Date Tested:** 1-28-20

Tested By: Mike Bronstein

Checked By: Jeff Young

Title: Lab Manager

Location: C-2 Subbase
Sample Number: 20-039

Date Sampled: 1-27-20

JOHN TURNER CONSULTING

Client: Amber Properties
Project: Ledge Road - Seabrook, NH

Project No: 20-09-002 **Figure** 039A

JOHN TURNER CONSULTING

GEOTECHNICAL ▼ ENVIRONMENTAL ▼ RESIDENT ENGINEERING ▼ TESTING

HMA Theoretical Maximum Specific Gravity Test Report (T 209)

Date/Time: 1-27-20	**Lab/Location:** John Turner Consulting - Dover, NH		
Weather:	**Date Rec'd #:** 1/27/2020	**Random Sample:**	No
Project: Ledge Road ROW - Seabrook, NH	**Lab Login #:** 20-034	**Lot #:**	
Contract #: 20-09-002	**Material ID:**	**Sublot #:**	
Contractor:	**Material #:**	**Sample Location:** C-1	
Pay Item #:	**Sample #:** C-1 Top + C-1 Binder	**Station:**	
Source:	**Sample Type:** QA	**Offset:**	
Plant Type:	**Sampled By/Cert. #:**		

Maximum Specific Gravity of HMA (T 209)			
Specimen #:	**C-1 Top**	**C-1 Binder**	
Mass of Dry Sample in Air (A):	**2392.2**	**3809.4**	
Mass of Pycnometer filled with Water (D): er at 25 +/- 1 ºC)	**1616.5**	**1616.5**	
Mass of Pycnometer filled with Sample and Water (E): er at 25 +/- 1 ºC)	**3077.4**	**3966.9**	
Theoretical Maximum Specific Gravity (Gmm): [A/(A+D-E))	**2.569**	**2.611**	
Unit Weight, lb/ft^3: Gmm * 64.2)	**160.3**	**162.9**	
Average Theoretical Maximum Specific Gravity (Gmm):			
Average Unit Weight, Kg/m^3:			

Comments:	
Tested by: Jeff Young	**Reviewed by:** John McCarthy
Certification #: 1052M	**Certification #:** 919m
Date: 1/30/2020	**Date:** 1/31/2020
☐	☐

JOHN TURNER CONSULTING

GEOTECHNICAL ▼ ENVIRONMENTAL ▼ RESIDENT ENGINEERING ▼ TESTING

HMA Theoretical Maximum Specific Gravity Test Report (T 209)

Date/Time: 1-27-20	**Lab/Location:** John Turner Consulting - Dover, NH		
Weather:	**Date Rec'd #:** 1/27/2020	**Random Sample:**	No
Project: Ledge Road ROW - Seabrook, NH	**Lab Login #:** 20-035	**Lot #:**	
Contract #: 20-09-002	**Material ID:**	**Sublot #:**	
Contractor:	**Material #:**	**Sample Location:** C-2	
Pay Item #:	**Sample #:** C-2 Top + C-2 Binder	**Station:**	
Source:	**Sample Type:** QA	**Offset:**	
Plant Type:	**Sampled By/Cert. #:**		

Maximum Specific Gravity of HMA (T 209)			
Specimen #:	**C-2 Top**	**C-2 Binder**	
Mass of Dry Sample in Air (A):	**3075.3**	**2960.5**	
Mass of Pycnometer filled with Water (D): er at 25 +/- 1 ºC)	**1616.5**	**1616.5**	
Mass of Pycnometer filled with Sample and Water (E): er at 25 +/- 1 ºC)	**3494.6**	**3435.6**	
Theoretical Maximum Specific Gravity (Gmm): [A/(A+D-E))	**2.569**	**2.594**	
Unit Weight, lb/ft^3: Gmm * 64.2)	**160.3**	**161.9**	
Average Theoretical Maximum Specific Gravity (Gmm):			
Average Unit Weight, Kg/m^3:			

Comments:	
Tested by: Jeff Young	**Reviewed by:** John McCarthy
Certification #: 1052M	**Certification #:** 919m
Date: 1/30/2020	**Date:** 1/31/2020
☐	☐

New England Transportation Technician Certification Program

HMA Pavement Thickness and Compaction Test Report (D 3549, T 166, T 230, T 269)

Date/Time:	01/27/20	Lab/Location:	John Turner Consulting - Dover, NH		
Weather:		Date Rec'd #:	1/27/2020	Random Sample:	
Project:	Ledge Road ROW - Seabrook, NH	Lab Login #:	20-034 + 20-035	Lot #:	
Contract #:	20-09-002	Material ID:		Sublot #:	
Contractor:		Material #:		Sample Location:	
Pay Item #:		Sample #:	C-1 + C-2	Station:	
Source:		Sample Type:	QA	Offset:	
Plant Type:		Sampled By/Cert. #:			

Core Identification Information				
Sample #:	C-1 Top	C-1 Binder	C-2 Top	C-2 Binder
Lot #:				
Sublot #:				
Station:				
Offset:				

Thickness Determination (D 3549)				
Measured Core Thickness, mm:	1.22	2.13	1.75	1.77
Target Thickness, mm:				

Bulk Specific Gravity of Compacted HMA (T 166)					
Test Specimen Thickness, mm:		1.20	2.02	1.63	1.67
Mass of Dry Specimen in Air (A):		2392.2	3809.4	3075.3	2960.5
Mass of Specimen at SSD (B):		2441.5	3841.2	3132.9	3005.7
Mass of Specimen in Water (C):	(@ 25 +/- 1 ºC)	1463.3	2296.6	1889.1	1724.9
Specimen Volume (V):	(B-C)	978.2	1544.6	1243.8	1280.8
Core Bulk Specific Gravity (Gmbc):	(A / (B - C))	**2.446**	**2.466**	**2.473**	**2.311**
Unit Weight, Kg/m^3:	(Gmbc * 1000)	**2446**	**2466**	**2473**	**2311**

Percent Compaction and Percent Air Voids in HMA (T 230, T 269)					
heoretical Maximum Specific Gravity (Gmm):	(From T 209)	2.569	2.611	2.569	2.594
% Compaction of Gmm:	(Gmbc / Gmm) * 100	**95.2**	**94.4**	**96.3**	**89.1**
Percent Voids in Place (Pa):	(100 * ((Gmm - Gmbc) / Gmm))	**4.79**	**5.55**	**3.74**	**10.91**

Comments:

Tested by:	Jeff Young	Reviewed by:	John McCarthy
Certification #:	1052M	Certification #:	919m
Date:	1/30/2020	Date:	1/31/2020
	□		□