CIVIL GEOTECHNICAL SERVICES
ABN 26 474 013 724
PO Box 678 Croydon Vic 3136
Telephone: 9723 0744 Facsimile: 9723 0799

26th September 2024

Our Reference: 24312:NB1985

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
OFFICER CENTRAL – STAGE 11 (OFFICER)

Please find attached our Report No's 24312/R001 to 24312/R005 and Chadwick Geotechnics Report No HDR:W24DS01503 which relate to the field density testing that was conducted within the filled allotments at the above subdivision. The level 1 inspections and associated field density testing commenced in June 2024 and was completed in September 2024.

The inspections and testing of the earthworks was undertaken in general accordance with the Level 1 requirements of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments.

The site inspections and supervision were performed by experienced geotechnicians from this office. Any areas that were deemed unsatisfactory were reworked and retested under their supervision. The testing was performed to the relevant Australian Standards and the accompanying test reports carry NATA endorsement. The attached compaction results, which were located randomly throughout the fill profile, are considered to be representative of the bulk fill materials that were placed across the reported allotments by Winslow Constructors during the aforementioned period. The approximate locations of the field density tests can be seen on the attached plan (Figure 1).

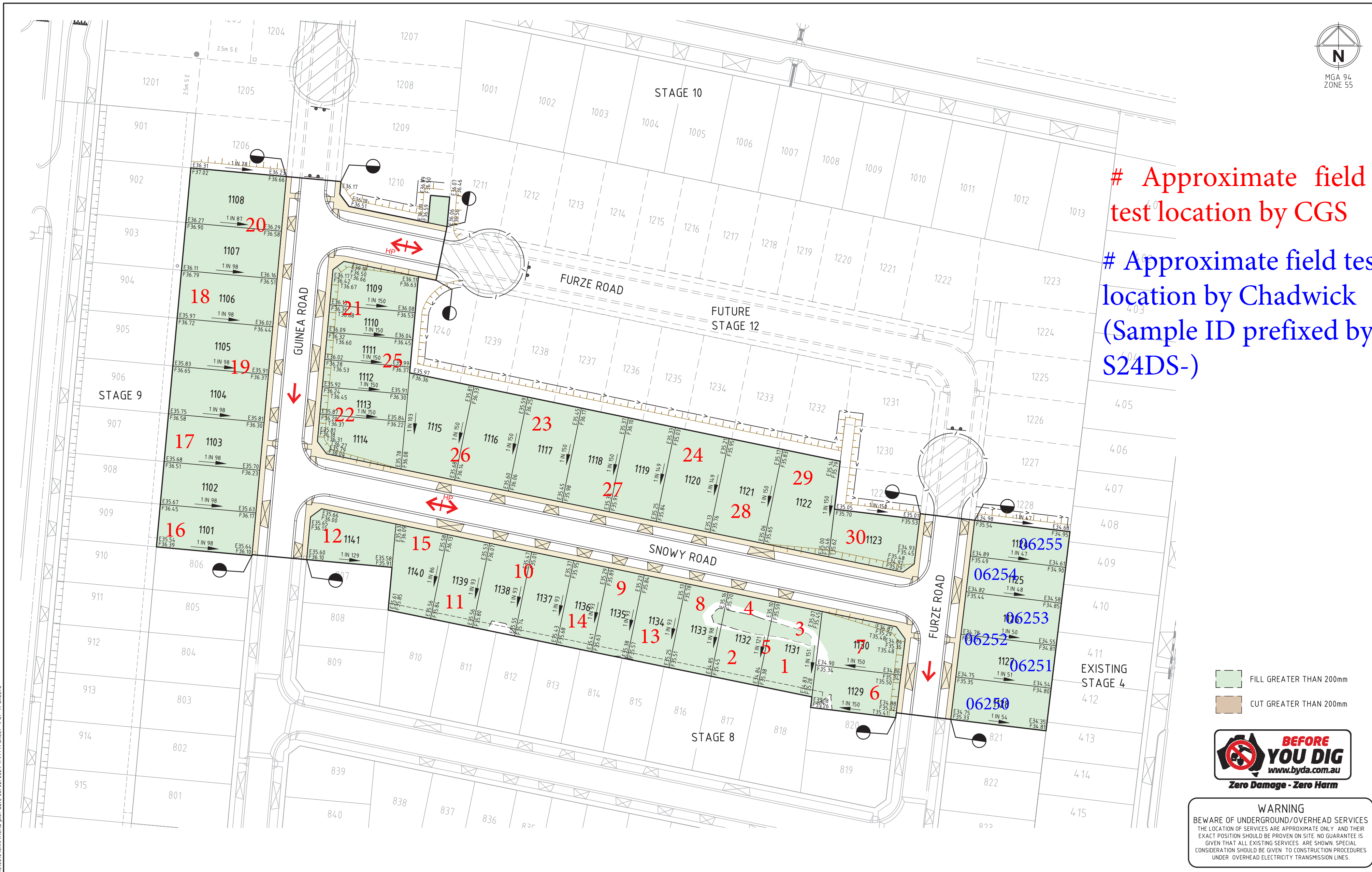
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1



Rev	Amendments	Approved	Date
A	PRELIMINARY ISSUE	B.W	29/01/24

Scale H 1:500 SCALE @ A1 — 0 5 10 15 20 25

System Certified

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L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

YourLand Developments

Designed D.PRATT
Checked B.IBBS - PE0007167
Authorised B.WAREHAM
Date JANUARY 2024

OFFICER CENTRAL STAGE 11
ROAD AND DRAINAGE
ROAD LAYOUT PLANS - EARTHWORKS PLAN
CARDINIA SHIRE
YOURLAND PTY LTD

PRELIMINARY Drg No 310310CR202 Rev A

file name 310310CR200.dwg layout name CR202 plotted by Dillon Pratt plot date 06/02/2024, 4:41 PM Sheet 4 of 17 Sheets

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24312
		Report No	24312/R001
		Date Issued	23/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	OFFICER CENTRAL - STAGE 11	*Date tested*	25/06/24
Location	OFFICER	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 14:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**1**	**2**	**3**	**4**	**5**	**6**
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL							
Measurement depth	*mm*	175	175	175	175	175	175
Field wet density	*t/m³*	2.04	1.98	1.98	2.09	2.03	2.10
Field moisture content	*%*	21.3	17.3	17.5	16.9	18.8	17.2

Test procedure AS 1289.5.7.1

Test No		1	2	3	4	5	6
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	2.08	2.03	2.01	2.14	2.07	2.14
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	22.0	19.5	18.0	19.0	19.0	19.5

Moisture Variation From Optimum Moisture Content		0.5% dry	2.0% dry	0.5% dry	2.0% dry	0.5% dry	2.0% dry

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

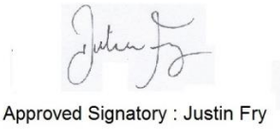
Density Ratio (R_{HD})	*%*	**98.0**	**98.0**	**98.5**	**97.5**	**98.0**	**98.0**

Material description

No 1 - 6 Clay Fill

AVRLOT HILF V1.10 MAR 13

NATA Accredited Laboratory No 9909
Accredited for compliance with
ISO/IEC 17025 - Testing



Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24312
		Report No	24312/R002
		Date Issued	20/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	OFFICER CENTRAL - STAGE 11	*Date tested*	26/06/24
Location	OFFICER	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:12

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**7**	**8**	**9**	**10**	**11**	**12**
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL							
Measurement depth	*mm*	175	175	175	175	175	175
Field wet density	*t/m³*	2.09	2.13	2.08	2.16	2.00	2.08
Field moisture content	*%*	18.7	15.7	16.5	16.0	14.0	15.8

Test procedure AS 1289.5.7.1

Test No		7	8	9	10	11	12
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	2.12	2.17	2.05	2.19	2.04	2.11
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	19.0	16.0	17.0	16.5	14.5	16.0

Moisture Variation From Optimum Moisture Content		0.5% dry	0.0%	0.5% dry	0.5% dry	0.5% dry	0.5% dry

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	*%*	**98.5**	**98.5**	**101.5**	**98.5**	**98.5**	**98.5**

Material description

No 7 - 12 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon 3136

		Job No	24312
		Report No	24312/R003
		Date Issued	20/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	OFFICER CENTRAL - STAGE 11	*Date tested*	08/07/24
Location	OFFICER	*Checked by*	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	09:47

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**13**	**14**	**15**	**16**	**17**	**18**
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL							
Measurement depth	*mm*	175	175	175	175	175	175
Field wet density	*t/m³*	2.01	1.94	1.88	1.98	2.04	1.99
Field moisture content	*%*	24.1	24.1	19.9	22.5	20.0	18.9

Test procedure AS 1289.5.7.1

Test No		13	14	15	16	17	18
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	2.04	1.98	1.92	2.02	2.01	2.04
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	24.0	26.0	20.0	25.0	20.0	21.5

Moisture Variation From Optimum Moisture Content		0.0%	2.0% dry	0.0%	0.0%	0.0%	2.5% dry

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	*%*	**98.5**	**98.0**	**98.0**	**97.5**	**101.5**	**97.5**

Material description

No 13 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13

NATA Accredited Laboratory No 9909
Accredited for compliance with
ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24312
		Report No	24312/R004
		Date Issued	26/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	OFFICER CENTRAL - STAGE 11	*Date tested*	24/07/24
Location	OFFICER	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 12:04

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**19**	**20**	**21**	**22**	**23**	**24**
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL							
Measurement depth	*mm*	175	175	175	175	175	175
Field wet density	*t/m³*	1.92	1.96	2.00	1.91	1.96	1.96
Field moisture content	*%*	18.6	23.8	25.8	24.2	20.3	24.5

Test procedure AS 1289.5.7.1

Test No		19	20	21	22	23	24
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	1.96	1.97	2.01	1.95	1.98	1.98
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	18.5	24.0	25.5	24.5	20.0	24.5

Moisture Variation From Optimum Moisture Content		0.0%	0.0%	0.0%	0.5% dry	0.0%	0.0%

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	*%*	**98.0**	**99.5**	**99.5**	**98.0**	**99.0**	**99.0**

Material description

No 19 - 24 Clay Fill

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	24312
		Report No	24312/R005
		Date Issued	31/07/24
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	CV
Project	OFFICER CENTRAL - STAGE 11	*Date tested*	29/07/24
Location	OFFICER	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 11:33

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**25**	**26**	**27**	**28**	**29**	**30**
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1
Approximate depth below FSL							
Measurement depth	*mm*	175	175	175	175	175	175
Field wet density	*t/m³*	2.06	2.07	2.05	1.93	2.16	1.98
Field moisture content	*%*	16.5	17.4	18.6	19.3	20.4	19.4

Test procedure AS 1289.5.7.1

Test No		25	26	27	28	29	30
Compactive effort		Standard					
Oversize rock retained on sieve	*mm*	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	*wet*	0	0	0	0	0	0
Peak Converted Wet Density	*t/m³*	2.08	2.11	2.08	1.96	2.19	2.04
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	19.0	20.0	20.5	19.5	20.0	22.0

Moisture Variation From Optimum Moisture Content		2.5% dry	2.5% dry	2.0% dry	0.0%	0.0%	2.5% dry

density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R_{HD})	*%*	**99.0**	**98.0**	**98.5**	**98.5**	**99.0**	**97.5**

Material description

No 25 - 30 Clay Fill

AVRLOT HILF V1.10 MAR 13

NATA Accredited Laboratory No 9909
Accredited for compliance with
ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry

CHADWICK GEOTECHNICS

Think Act Safe Be

Dandenong South
ACN 143 009 330
25 Metcalf Street
DANDENONG SOUTH, VIC 3175

Ph: + 61 3 8796 7900
Fax: +61 3 9706 9431

Report No: HDR:W24DS01503
Issue No: 1

HILF Density Ratio Report

Client: Winslow Constructors Pty Ltd
Address: 50 Barry Road
Campbellfield vic 3061
Project: WIN - Officer Central, Stage 11
Project No.: 1096484.06-STG11
Order No.: **CG Request No.:**
TRN: **Lot No.:**

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 12719
Site Number: 12712
Approved Signatory: Krushik Patel (Senior Geotechnician)
Date of Issue: 10/09/2024

Sample Details

Location: Corner of Stephens Road & Rix Road, Officer
Client Request ID:
Specification Requirements: Minimum Hilf Density Ratio of 95%
Field Test procedures: AS 1289.5.8.1
Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)
Source: Onsite
Material: Clay

Sample Data

Sample ID	S24DS-06250	S24DS-06251	S24DS-06252	S24DS-06253	S24DS-06254	S24DS-06255
Field Sample ID	1	2	3	4	5	6
Date Tested	5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024	5/09/2024
Time Tested	10:20	10:26	10:35	10:41	10:49	10:56
Lot:	1128	1127	1127	1126	1125	1125
Layer:	2	2	2	2	2	1
E:	359387	359393	359388	359395	359390	359389
N:	5785320	5785332	5785339	5785351	5785357	5785358
						Retest of S24DS-06203
Field and Laboratory Data						
Depth of Test (mm)	175	175	175	175	175	175
Depth of Layer (mm)	200	200	200	200	200	200
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0	0	0
Field Moisture Content (%)	15.9	13.4	16.0	15.3	16.1	14.9
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1
Field Wet Density (t/m³)	2.06	2.04	2.09	2.05	2.03	2.09
Field Dry Density (t/m³)	1.77	1.80	1.80	1.78	1.74	1.82
Peak Converted Wet Density (t/m³)	2.06	2.06	2.05	2.10	2.09	2.14
Optimum Moisture Content (%)	18.0	15.5	18.5	15.0	16.0	15.0
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	88.5	87.5	86.5	100.5	100.5	99.5
Moisture Variation (%)	2.0 dry	2.0 dry	2.5 dry	0.0	0.0	0.0
Hilf Density Ratio (%)	**99.5**	**99.0**	**102.0**	**98.0**	**97.0**	**97.5**

Comments