

Creekstone Estate Stage N11, Tarneit, Victoria

Level 1 Inspection & Testing Report

5 August 2026



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Winslow Constructors Pty Ltd
50 Barry Road
Campbellfield, VIC 3061

Level 1 Inspection & Testing Report Creekstone Estate Stage N11, Tarneit

C&T Consulting Engineers has prepared this report to summarise the Level 1 Inspection & Testing activities conducted for the abovementioned project.

Distribution

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For and on behalf of C&T Consulting Engineers

Author:



Alhasan Sumer (NER), Geotechnical Engineer
(e) alhasan@ctgeotech.com.au
(m) 0451 218 224

Technical Review:



Gee Singh (RPEng), Director
(e) gee@ctgeotech.com.au
(m) 0404 879 558

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1. Introduction

This report presents the results of the Level 1 inspection activities, compaction control services and laboratory testing services completed for the Creekstone Estate Stage N11 in Tarneit (the site).

2. Project Background

C&T Geotechnical (Melbourne) was engaged to provide Level 1 Inspection and Testing services for the construction of fill materials within the proposed residential allotments. Authorisation to proceed was provided by Winslow Constructors (the 'Client') who was the nominated earthworks contractor.

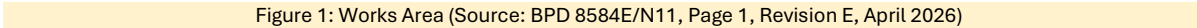
Level 1 Inspection & Testing, as defined in AS3798 (2007) Guidelines on Earthworks for Commercial and Residential Developments provides for full time inspection of the construction of controlled fill and compaction testing in accordance with AS1289 Methods of Testing Soils for Engineering Purposes and AS1726 (2017) Geotechnical Site Investigations.

C&T Geotechnical (Melbourne) performed the role of the project Geotechnical Inspection & Testing Authority (GITA) with all Level 1 Inspection and Testing services undertaken by an experienced GITA site representative.

3. Scope of Works

3.1 Areas & Duration of Works

This report covers Level 1 Inspection & Testing completed on 30 July 2026 requiring one day of filling operations. The area of filling works generally took place within the footprint of Lots 1112 to 1117, as shown on Figure 1 overleaf (red-dashed outline).



3.2 Placement Methodology

A geotechnical bulk earthworks specification was not available for the project. The placement of the controlled fill on the above-mentioned areas was carried out in general accordance with the guidelines presented in AS3798 (2007) Guidelines on Earthworks for Commercial & Residential Developments.

The fill placement methodology for the works generally involved:

- 1) preparing the base by stripping all loose surficial fill, soft material, vegetation, and materials containing significant organic matter to expose a suitable subgrade to support subsequent fill construction.
- 2) removing oversize particles and unsuitable materials from the fill matrix
- 3) placing approved fill material in 150 mm in thick layers (Ref: BPD 8584E/N11, Page 2, Revision A, January 2026)
- 4) moisture conditioning the fill to within $\pm 3\%$ of the Standard Optimum Moisture Content (SOMC)
- 5) compacting the fill to achieve a target density ratio of not less than 95 % Standard Compaction
- 6) completing field density testing at a frequency for large scale developments (Type 1 AS3798) which nominates a frequency of the following:
 - one test per layer or 200 mm per 2500 m²
 - one test per 500 m³ distributed reasonably evenly throughout the full depth and area, or
 - three tests per site visit; whichever requires the most tests
 - it should be noted that a minimum frequency of one field density test per lot was requested by the project contractors.

4. Level 1 Inspection & Testing Results

4.1 Subgrade Preparation

The fill placement zones generally required stripping of topsoil, vegetation and organics to expose a suitable subgrade to support the subsequent fill placement.

4.2 Fill Source Materials

The fill was sourced from onsite stockpiles assumed to be locally derived.

4.3 Inspection of Fill Source Materials

C&T performed a visual assessment of the fill source materials for the following:

- 1) identifying fill material suitability (engineering properties) including cohesion and composition
- 2) observing building debris and vegetative matter
- 3) observing oversize rock particles

- 4) examining the fill moisture.

4.3.1 Material Suitability

The fill material used was noted to be compliant with AS3798 Section 4.0 for the intent and purpose of general filling. The fill material was documented to typically comprised gravelly CLAY of medium to high plasticity, brown.

4.3.2 Building Debris & Vegetative Matter

Building debris and vegetative matter were not observed in the nominated fill material.

4.3.3 Oversize Particles

No oversize particles were observed within the fill matrix

4.3.4 Fill Moisture

The fill was assessed as being on the dry side of the inferred Optimum Moisture Content (OMC).

4.4 Fill Construction

The contractor had the following plant available for the construction of the engineered fill:

1. Compactor
2. Padfoot Roller
3. Water Carts
4. Tandem Trucks.

4.4.1 Climate

Weather conditions ranged from being generally sunny/overcast during the duration of the works.

4.4.2 Filling Process

The filling process was generally consistent throughout the project and involved the following:

- transport suitable clay fill to the site
- spread the fill to form loose horizontal layers

- moisture condition the fill with a water cart to near OMC
- compact the fill with compactor / padfoot roller to achieve 150 mm compacted thickness
- GITA to carry out nuclear density testing
- repeat procedure for the subsequent layer.

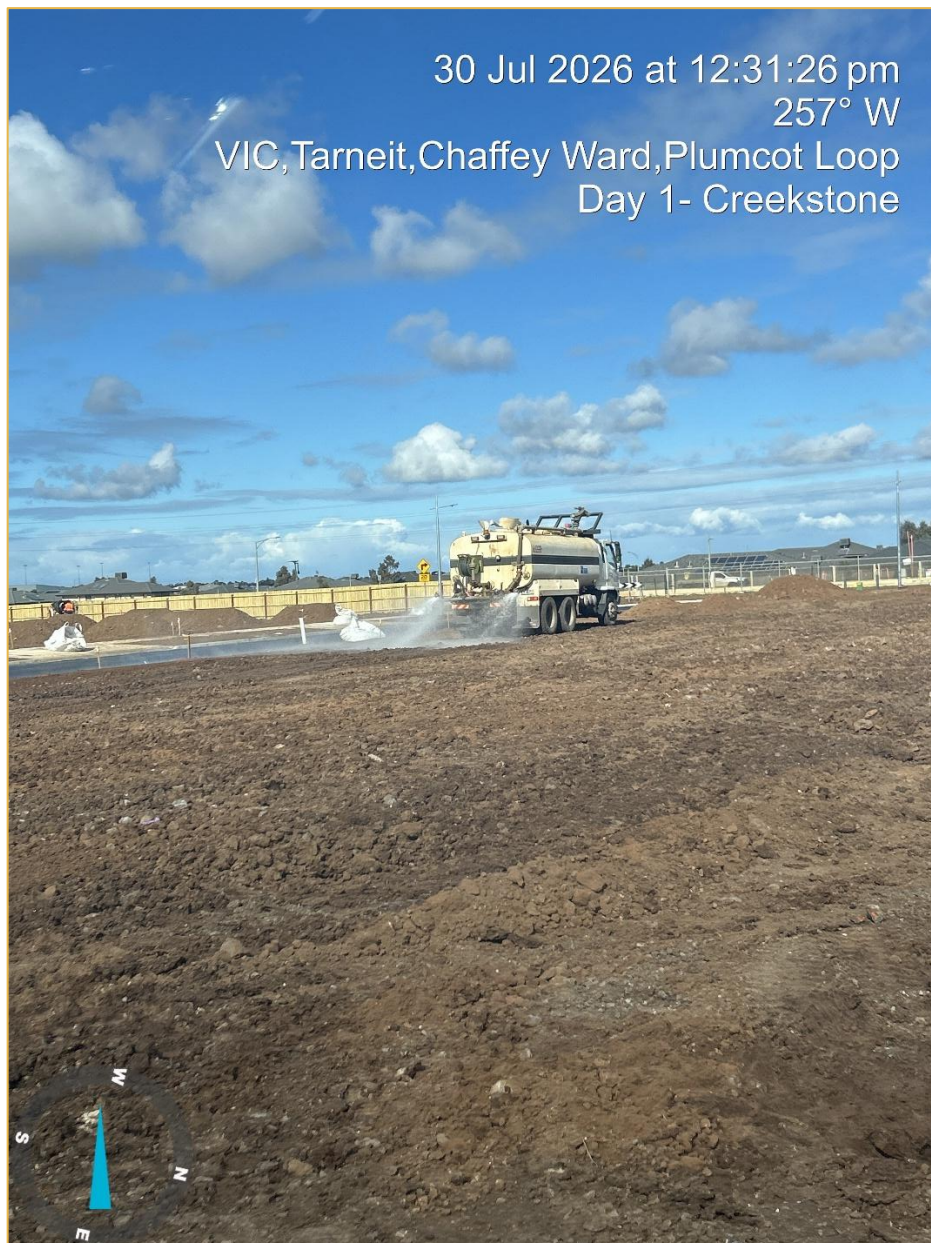


Figure 2: Moisture Conditioning During Fill Placement (Source: C&T)



Figure 3: Fill Compaction (Source: C&T)

4.5 Compaction Control & Moisture Testing Results

Throughout the filling process and/or at the completion of the day's production, compaction control testing was performed to assess the achieved density ratio of each layer. The onsite GITA nominated the location and performed each test. Testing comprised field density tests using a nuclear moisture-density

gauge and rapid HILF compaction tests in C&T Geotechnical's NATA accredited testing laboratory (AS1289 5.8.1 and AS1289 5.7.1).

A summary of the field density tests performed for the project is presented in **Appendix A**. Field density and compaction control testing report sheets are presented in **Appendix B** which also includes test location plans. It should be noted that the tests are a representation of the fill placed and support the visual assessment of the works completed.

All tests achieved the minimum target density ratio of 95 % Standard Compaction and moisture variation within ± 3 % of OMC.

4.6 Compliance Statement

C&T Geotechnical (Melbourne) has undertaken Level 1 Inspection and Testing services for the construction of the fill in the aforementioned areas. **Based on observations made and the results of density tests, it is considered that the controlled fill placed has been constructed in accordance with the guidelines provided by AS3798 (2007).**

5. Post-Earthworks Maintenance & Operational Considerations

5.1 Post-Filling Condition Monitoring & Maintenance

Upon completion of earthworks and issuance of this Level 1 Inspection & Testing report, the following considerations must be observed by the built form team to ensure the long-term performance of the fill platform:

1) **soft spot development:** localised softening or disturbances may occur due to:

- climatic influences
- temporary water ponding (e.g. in footings, road boxing or similar)
- construction traffic
- inadequate surface drainage.

These are not indicative of fill performance failure but are typically the result of environmental or construction operational factors. The remediation of soft spots caused by insufficient maintenance is to be managed by the site operator/owner in accordance with their geotechnical engineer's guidance.

2) **maintenance responsibility:** any softening or surface degradation observed after final proof rolling or handover is considered a maintenance requirement

- 3) **drainage management:** it is strongly advised that surface drainage be established and maintained effectively to prevent water ingress into the fill materials
- 4) **intrusive investigations:** any post-completion intrusive geotechnical investigations (e.g. trial pits or boreholes) may compromise the compaction and integrity of the fill
 - such activities must be carefully planned and documented, particularly if undertaken by third parties
 - any intrusive works within the engineered fill (e.g. trial pits, boreholes or service excavations) must include appropriate reinstatement and recompaction to maintain the integrity of the fill. Failure to do so may affect the performance of the fill platform.

5.2 As Built Survey Requirements

- 1) an as-built survey of engineered fill levels is a critical component of the handover documentation
- 2) this survey must be provided by the project contractor, as it falls outside the scope of the Level 1 Inspection & Testing report.

6. Closure

Should you have any questions related to this report please do not hesitate to contact the undersigned.

For and on behalf of C&T Consulting Engineers.

Author:



Alhasan Sumer (NER), Geotechnical Engineer

(e) alhasan@ctgeotech.com.au

(m) 0451 218 224

Technical Review:



Gee Singh (RPEng), Director

(e) gee@ctgeotech.com.au

(m) 0404 879 558

7. Statement of Limitations

This report has been prepared by C&T Consulting Engineers exclusively for the commissioning client and the project described. The scope of work was limited to the services outlined herein and does not include investigation of all possible site conditions or risks.

Findings, opinions, and recommendations are based on conditions observed during limited sampling, testing, and fieldwork at the time of investigation. Subsurface conditions may vary across the site, and changes can occur after the investigation. No warranty is given that conditions described are representative of the entire site or future conditions.

If site conditions encountered during works differ from those described, C&T Consulting Engineers must be contacted promptly for reassessment and advice. Reliance on this report without such consultation is at the user's risk.

Where information has been provided by the client or third parties, it is assumed to be correct unless otherwise stated. C&T Consulting Engineers accepts no liability for errors, omissions, or misinterpretations arising from such information.

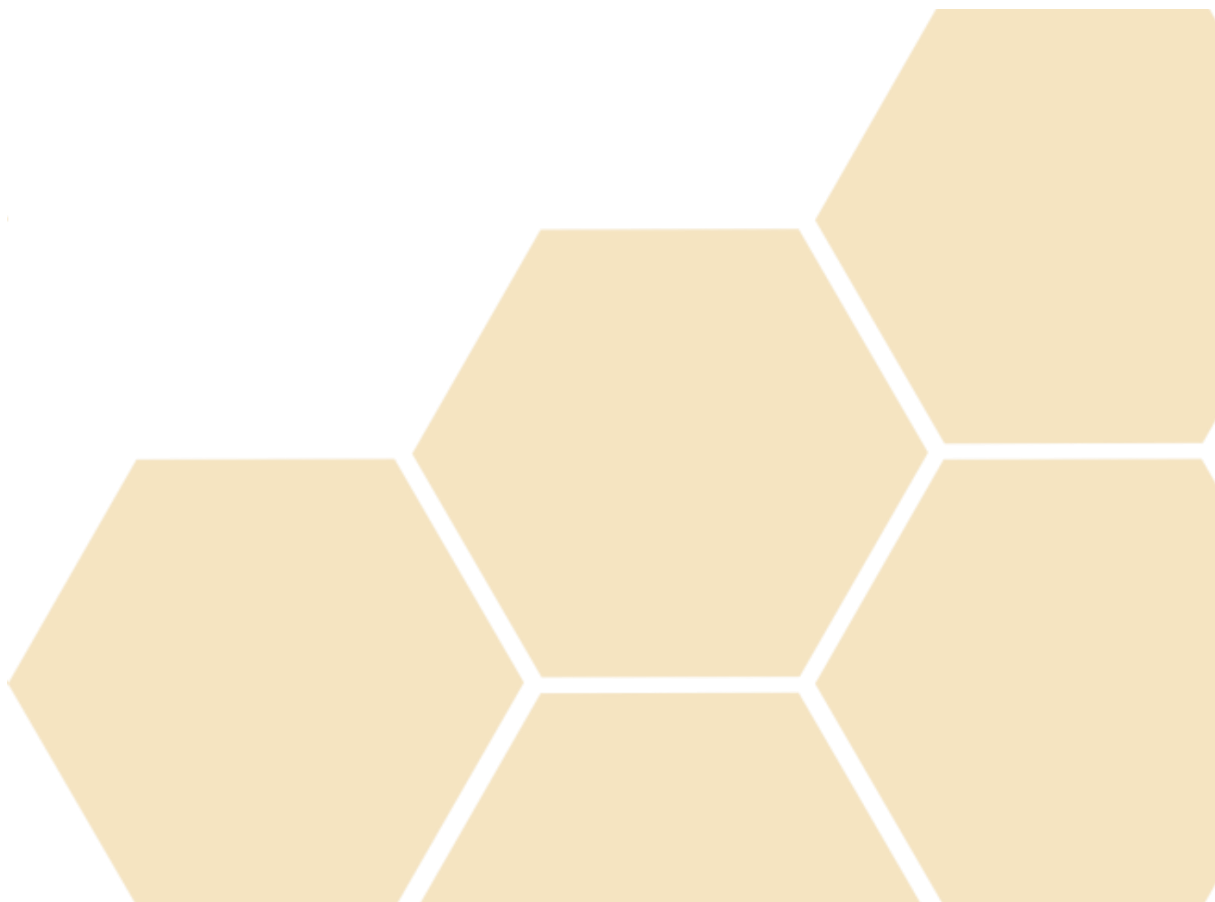
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Appendix A – Field Density Testing Summary



Project Summary Report

Report Date: 03/08/2026
Client: WINSLOW CONSTRUCTORS (CAMPBELLFIELD, VIC)
50 Barry Road, Campbellfield Victoria 3061
Project Number: CTG0448
Project Name: CREEKSTONE NORTH STAGE 11 (LEVEL 1)
Project Location:
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Test Methods: AS 1289 5.7.1 STD & 5.8.1 & 2.1.1



GEOTECHNICAL

C & T Geotechnical (Melbourne) Pty Ltd
47A Assembly Drive Tullamarine VIC 3043

Phone: 0410 530 191

Email: Tim@ctgeotech.com.au

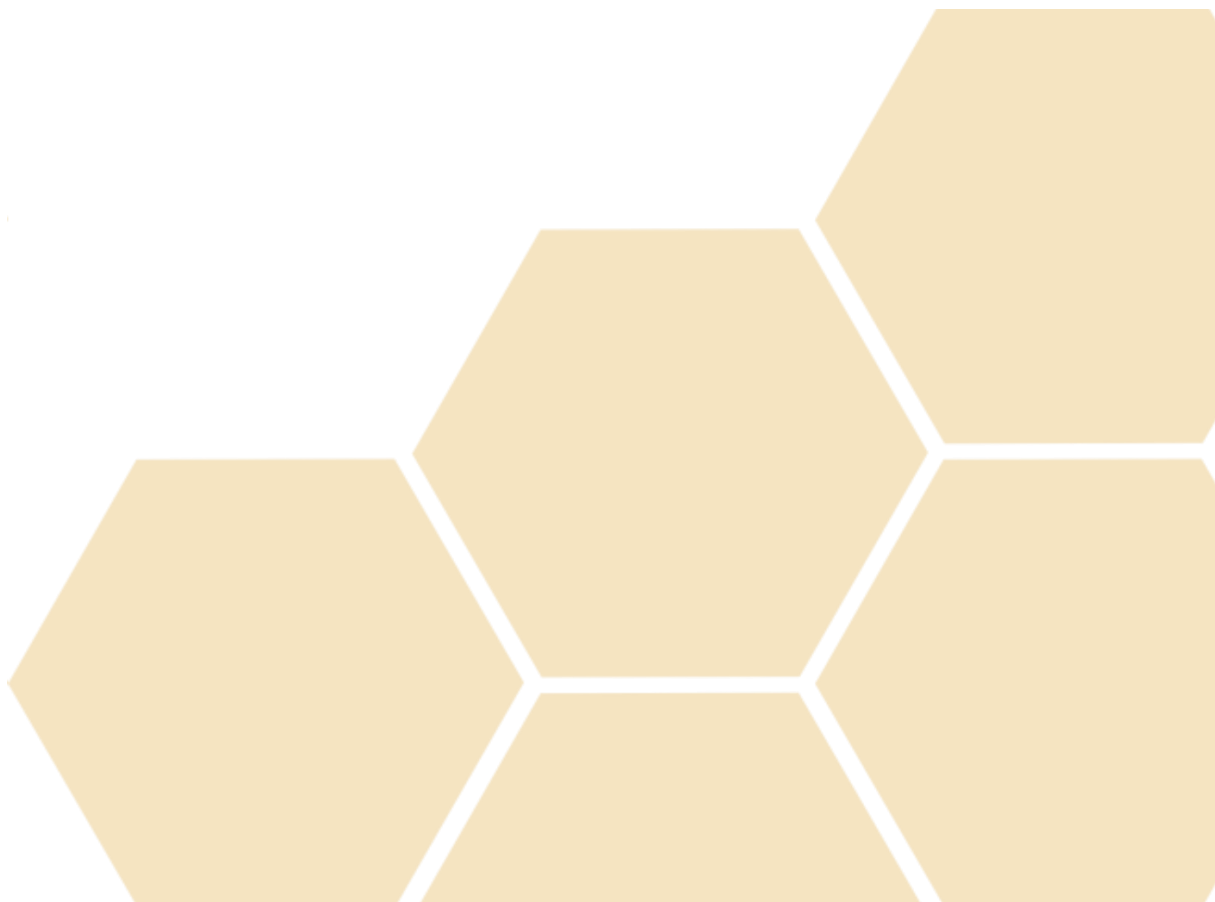
Lot #	Sample #	Date Sampled	Location	Easting	Northing	Elevation (m)	Layer	Relative Compaction (%)	Moisture Variation (%)	Moisture Content (%)	Field Wet Density (t/m3)
**	0448-S1	30/07/2026	Lot 1112	297589	5811680	**	1	95.0	-2.5	21.7	1.95
**	0448-S2	30/07/2026	Lot 1113	297597	5811679	**	1	98.5	-1.0	22.1	1.95
**	0448-S3	30/07/2026	Lot 1114	297591	5811695	**	1	98.0	-0.5	27.4	1.92
**	0448-S4	30/07/2026	Lot 1115	297599	5811697	**	FSL	99.5	-1.0	26.5	1.98
**	0448-S5	30/07/2026	Lot 1116	297595	5811717	**	FSL	98.5	-2.0	22.3	1.99
**	0448-S6	30/07/2026	Lot 1117	297602	5811716	**	FSL	98.5	-0.5	20.8	1.99

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Appendix B – Field Density Test Reports



Material Test Report

Report Number: CTG0448-1
Issue Number: 1
Date Issued: 03/08/2026
Client: WINSLOW CONSTRUCTORS (CAMPBELLFIELD, VIC)
50 Barry Road, Campbellfield Victoria 3061
Project Number: CTG0448
Project Name: CREEKSTONE NORTH STAGE 11 (LEVEL 1)
Work Request: 2264
Date Sampled: 29/07/2026 8:00
Dates Tested: 30/07/2026 - 03/08/2026
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard Compaction & +/- 3% Moisture Variation
Location: Tarneit
Material: gravelly CLAY, med-high plasticity, brown
Material Source: Onsite



GEOTECHNICAL

C & T Geotechnical (Melbourne) Pty Ltd
47A Assembly Drive Tullamarine VIC 3043

Phone: 0410 530 191

Email: Tim@ctgeotech.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Tim Senserrick

Managing Director

Laboratory Number: 21552

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	0448-S1	0448-S2	0448-S3	0448-S4	0448-S5	0448-S6
Date Tested	30/07/2026	30/07/2026	30/07/2026	30/07/2026	30/07/2026	30/07/2026
Time Tested	14:06	14:00	13:53	13:47	13:39	13:27
Test Request #/Location	Lot 1112	Lot 1113	Lot 1114	Lot 1115	Lot 1116	Lot 1117
Easting	297589	297597	297591	297599	297595	297602
Northing	5811680	5811679	5811695	5811697	5811717	5811716
Layer / Reduced Level	1	1	1	FSL	FSL	FSL
Thickness of Layer (mm)	150	150	150	150	150	150
Soil Description	gravelly CLAY, med-high plasticity, brown	gravelly CLAY, med-high plasticity, brown	gravelly CLAY, med-high plasticity, brown	gravelly CLAY, med-high plasticity, brown	gravelly CLAY, med-high plasticity, brown	gravelly CLAY, med-high plasticity, brown
Test Depth (mm)	125	125	125	125	125	125
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	5	5	6	7	5	11
Field Wet Density (FWD) (t/m ³)	1.95	1.95	1.92	1.98	1.99	1.99
Field Moisture Content (%)	21.7	22.1	27.4	26.5	22.3	20.8
Field Dry Density (FDD) (t/m ³)	1.60	1.60	1.51	1.57	1.63	1.65
Peak Converted Wet Density (t/m ³)	**	**	**	**	**	**
Adjusted Peak Converted Wet Density (t/m ³)	2.05	1.98	1.96	1.99	2.02	2.02
Moisture Variation (Wv) (%)	**	**	**	**	**	**
Adjusted Moisture Variation (%)	-2.5	-1.0	-0.5	-1.0	-2.0	-0.5
Hilf Density Ratio (%)	95.0	98.5	98.0	99.5	98.5	98.5
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Remarks	**	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

x - approximate test location

