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## LEVEL 2 CERTIFICATION:

**4 Lots at McIntosh Creek Road, McIntosh Creek**

**Lot 2 SP284458**

**Lot 3 SP284458**

**Lot 4 SP284458**

**Lot 5 SP284458**

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18th May 2018

File No 1803

To: Roberts Bros. Pty Ltd  
(by email)

## LEVEL 2 CERTIFICATION

### 4 Lots at McIntosh Creek Road, McIntosh Creek

**Lot 2 SP284458**

**Lot 3 SP284458**

**Lot 4 SP284458**

**Lot 5 SP284458**

This letter provides Level 2 certification to AS3798-2007 'Guidelines on earthworks for commercial and residential developments' and includes the results of testing conducted during filling earthworks on existing Lots 2 to 5 SP284458.

These lots were previously subdivided by others and are located at 444, 448, 452, and 458 McIntosh Creek Road, McIntosh Creek. Lot 2 SP284458 has an existing dam as indicated on Plan 1803-T1 Revision A. Haynes Consulting Engineers were not involved with any previous earthworks on these lots and as such takes no responsibility for any previous work, refer to report limitations for further information. Our Client Roberts Brothers Pty Ltd purchased these lots and completed cut to fill house pads which is the basis of this report.

Roberts Brothers Pty Ltd personnel and sub-contractors undertook the cut to fill and compaction using existing site material to create house sites.

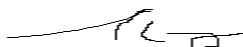
Inspections of surface stripping (to remove organic topsoil), removal of unsuitable materials and subgrade proof rolling prior to filling were completed.

Determination of field density of compacted fill in accordance with AS1289 was completed by Geotech SC Pty Ltd as attached, Report No G18041 – 1/1 dated 16-4-2018 and Report No G18041-2/1 dated 8-5-2018. The compaction tests show that results were above the required 95% Standard Compaction. Test locations are shown on the attached plan 1803-T1 Revision A.

This certification only provides an assurance of the density of the fill tested, and suitability of the stripped surface for placement of that fill. This certification does not address any other issues that may be relevant to foundation and building construction.

Please refer to report limitations attached, the Client in this instance is Roberts Brothers Pty Ltd.

Regards,



A Haynes BE Civil (Hons) RPEQ MIEAust CPEng

## LIMITATIONS

This report is provided for the sole use by the Client and its professional advisers. No responsibility whatsoever for the contents of this report will be accepted to any person other than the Client. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, is the responsibility of such third parties. Haynes Consulting Engineers accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

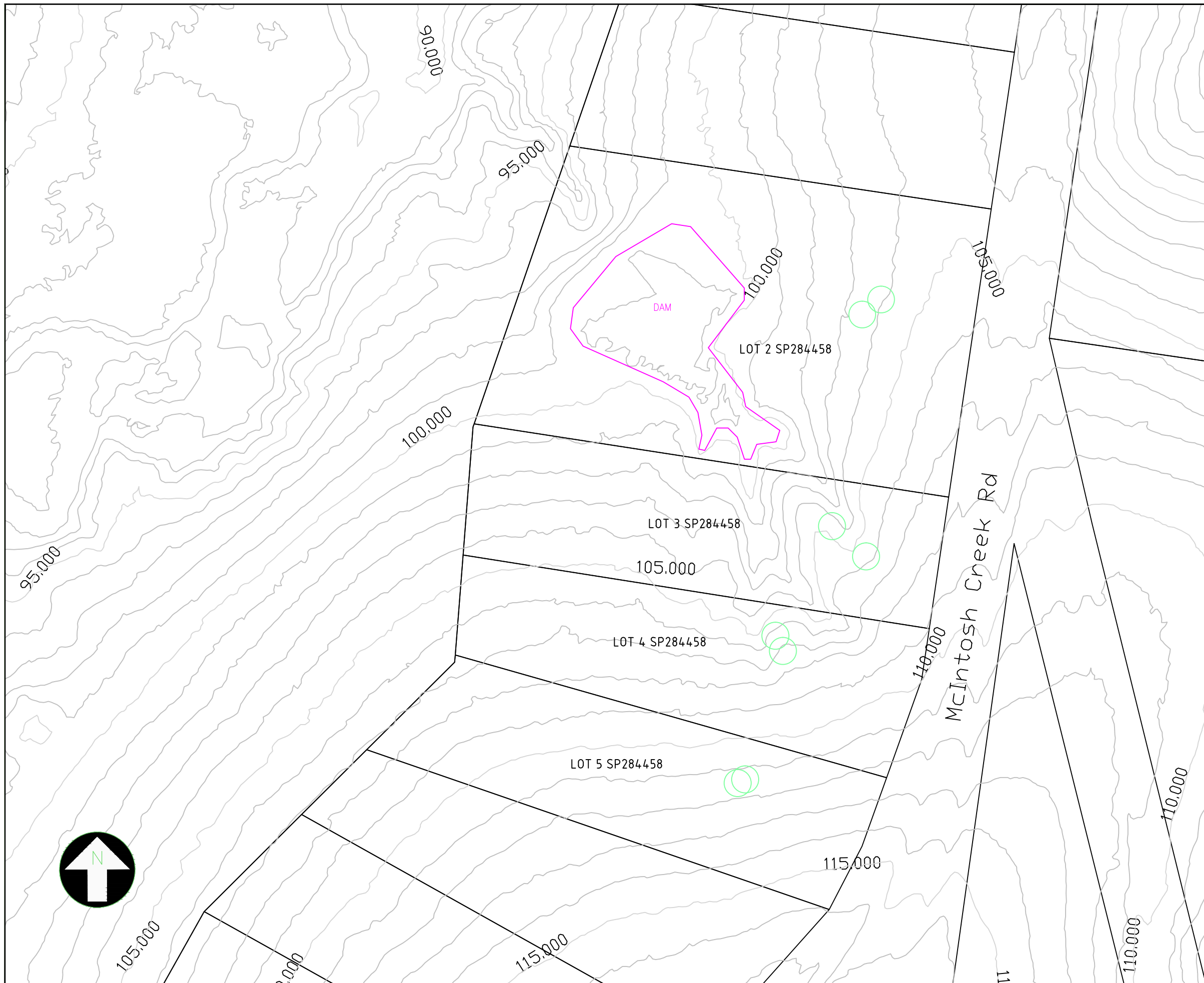
Haynes Consulting Engineers did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the report. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Haynes Consulting Engineers in regards to it.

Conditions may exist which were undetectable given that economic and time constraints limit the practical extent of investigation. Variations in conditions may occur between investigation locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the report.




Where variations exist on site, additional studies and actions may be required. Haynes Consulting Engineers's opinions are based upon information that existed at the time that the works were performed. The passage of time, man-made or natural events, may alter the site conditions. It is understood that the Services undertaken allowed Haynes Consulting Engineers to form an opinion of the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.

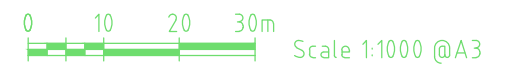
Any assessments made in this report are based on the conditions indicated from published sources and the findings of the investigation described. Actual subsurface conditions may differ from those indicated in the report (e.g. between boreholes or test pits). No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this report.

Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Haynes Consulting Engineers for incomplete or inaccurate data supplied by others.



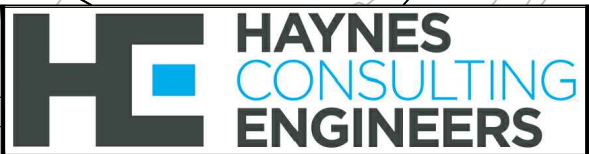
**LEGEND:**

-  APPROXIMATE TEST LOCATION
-  APPROXIMATE EXISTING DAM LOCATION (FROM AERIAL PHOTO)
-  APPROXIMATE ORIGINAL CONTOURS (FROM AERIAL MAPPING)



<b>A3</b>	A	22-5-18	PLAN FOR LEVEL 2 CERTIFICATION	ATH
	Rv	DATE	REVISIONS	APPR.

PSM No	-
(AHD) RL	-
SURVEYED	-



HAYNES CONSULTING ENGINEERS  
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**ALLOTMENT FILL LOTS 2- SP284458**  
 No. 444, 448, 452, and 458 McIntosh Creek Road, McIntosh Creek  
**FILL TEST LOCATIONS**

1803	Sheet No. - Revision No.
T1	A

## Dry Density Ratio Report



Client : <b>Roberts Bros.</b>	Report Number: <b>G18041 - 1/1</b>
Address: <b>123 Maple St Cooroy Qld 4563</b>	Report Date : <b>16/04/2018</b>
Job Number : <b>G18041</b>	Order Number:
Project : <b>Field &amp; Laboratory Testing</b>	Test Method: <b>AS1289.5.4.1</b>
Location : <b>Grange Estate , McIntosh Creek Road, McIntosh Creek</b>	

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Lab No :	111727	111728	111729	111730
ID No :	-	-	-	-
Lot No :	-	-	-	-
Item No :	-	-	-	-
Date Sampled :	<b>12/4/2018</b>	<b>12/4/2018</b>	<b>12/4/2018</b>	<b>12/4/2018</b>
Date/Time Tested :	<b>12/4/2018 / 12.00</b>	<b>12/4/2018 / 12.10</b>	<b>12/4/2018 / 12.20</b>	<b>12/4/2018 / 12.30</b>
Material Source :	<b>Site</b>	<b>Site</b>	<b>Site</b>	<b>Site</b>
For Use As :	<b>Fill</b>	<b>Fill</b>	<b>Fill</b>	<b>Fill</b>
Sample Location :	Lot 4 E 0464416 N 7096089 Approx 0.5m < Final Lvl	Lot 4 E 0464418 N 7096085 Final Fill Lvl	Lot 5 E 0464406 N 7096050 Approx 0.5m < Final Lvl	Lot 5 E 0464408 N 7096051 Final Fill Lvl
Test/Layer Depth (mm)	<b>150 /</b>	<b>150 /</b>	<b>150 /</b>	<b>150 /</b>
Max Size (mm) :	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>
Oversize Wet (%) :	-	<b>6</b>	<b>5</b>	<b>2</b>
Oversize Dry (%) :	-	<b>7</b>	<b>5</b>	<b>3</b>
Field Moisture (%) :	<b>19.8</b>	<b>19.6</b>	<b>17.5</b>	<b>21.4</b>
MDR No :	<b>111727</b>	<b>111728</b>	<b>111729</b>	<b>111730</b>
Assigned MDR :	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
Field Dry Density (t/m <sup>3</sup> )	<b>1.61</b>	<b>1.60</b>	<b>1.61</b>	<b>1.53</b>
MDD (t/m <sup>3</sup> ) :	<b>1.69</b>	<b>1.63*</b>	<b>1.66*</b>	<b>1.57*</b>
OMC (%) :	<b>17.0</b>	<b>17.0</b>	<b>14.0</b>	<b>18.5</b>
Variation from OMC	<b>3% wet of omc</b>	<b>3% wet of omc</b>	<b>3.5% wet of omc</b>	<b>3% wet of omc</b>
Field Density Method :	<b>AS1289.5.8.1</b>	<b>AS1289.5.8.1</b>	<b>AS1289.5.8.1</b>	<b>AS1289.5.8.1</b>
MC Method :	<b>AS 1289.2.1.1</b>	<b>AS 1289.2.1.1</b>	<b>AS 1289.2.1.1</b>	<b>AS 1289.2.1.1</b>
Compactive Effort :	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Moisture Ratio / Spec(%) :	<b>116.5 / -</b>	<b>116.5 / -</b>	<b>125 / -</b>	<b>115 / -</b>
Dry Density Ratio (%) :	<b>95.5</b>	<b>99.0</b>	<b>97.5</b>	<b>98.0</b>
Min Dry Dens Ratio (%)	<b>95</b>	<b>95</b>	<b>95</b>	<b>95</b>

Remarks :

\* - Denotes corrected for oversize

 Accredited for compliance with ISO/IEC 17025-Testing	APPROVED SIGNATORY  Mel Burnett NATA Accred No:1551	FORM NUMBER <b>REP ANUC-1-3</b>
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## Dry Density Ratio Report



Client : <b>Roberts Bros.</b>	Report Number: <b>G18041 - 2/1</b>
Address: <b>123 Maple St Cooroy Qld 4563</b>	Report Date : <b>8/05/2018</b>
Job Number : <b>G18041</b>	Order Number:
Project : <b>Field &amp; Laboratory Testing</b>	Test Method: <b>AS1289.5.4.1</b>
Location : <b>Grange Estate , McIntosh Creek Road, McIntosh Creek</b>	

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Lab No :	111909	111910	111911	111912
ID No :	-	-	-	-
Lot No :	-	-	-	-
Item No :	-	-	-	-
Date Sampled :	<b>30/4/2018</b>	<b>30/4/2018</b>	<b>30/4/2018</b>	<b>30/4/2018</b>
Date/Time Tested :	<b>30/4/2018 / 11.30</b>	<b>30/4/2018 / 11.40</b>	<b>30/4/2018 / 11.50</b>	<b>30/4/2018 / 12.00</b>
Material Source :	<b>Site</b>	<b>Site</b>	<b>Site</b>	<b>Site</b>
For Use As :	<b>Fill</b>	<b>Fill</b>	<b>Fill</b>	<b>Fill</b>
Sample Location :	Lot 2 E 0464439 N 7096174 Approx 0.5m < Final Lvl	Lot 2 E 0464444 N 7096178 Final Fill Lvl	Lot 3 E 0464431 N 7096118 Approx 0.5m < Final Lvl	Lot 3 E 0464440 N 7096110 Final Fill Lvl
Test/Layer Depth (mm)	<b>150 /</b>	<b>150 /</b>	<b>150 /</b>	<b>150 /</b>
Max Size (mm) :	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>
Oversize Wet (%) :	<b>6</b>	<b>7</b>	-	<b>4</b>
Oversize Dry (%) :	<b>7</b>	<b>8</b>	-	<b>5</b>
Field Moisture (%) :	<b>19.3</b>	<b>12.8</b>	<b>17.7</b>	<b>17.2</b>
MDR No :	<b>111909</b>	<b>111910</b>	<b>111911</b>	<b>111912</b>
Assigned MDR :	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
Field Dry Density (t/m <sup>3</sup> )	<b>1.60</b>	<b>1.87</b>	<b>1.61</b>	<b>1.76</b>
MDD (t/m <sup>3</sup> ) :	<b>1.68*</b>	<b>1.88*</b>	<b>1.63</b>	<b>1.75*</b>
OMC (%) :	<b>18.5</b>	<b>12.0</b>	<b>16.5</b>	<b>17.5</b>
Variation from OMC	<b>1% wet of omc</b>	<b>0.5% wet of omc</b>	<b>1% wet of omc</b>	<b>0.5% dry of omc</b>
Field Density Method :	<b>AS1289.5.8.1</b>	<b>AS1289.5.8.1</b>	<b>AS1289.5.8.1</b>	<b>AS1289.5.8.1</b>
MC Method :	<b>AS 1289.2.1.1</b>	<b>AS 1289.2.1.1</b>	<b>AS 1289.2.1.1</b>	<b>AS 1289.2.1.1</b>
Compactive Effort :	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Moisture Ratio / Spec(%) :	<b>105 / -</b>	<b>105 / -</b>	<b>106.5 / -</b>	<b>97 / -</b>
Dry Density Ratio (%) :	<b>96.0</b>	<b>100.0</b>	<b>99.0</b>	<b>101.0</b>
Min Dry Dens Ratio (%)	<b>95</b>	<b>95</b>	<b>95</b>	<b>95</b>

Remarks :

\* - Denotes corrected for oversize

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