





<b>CITY OF LAS VEGAS</b>	<u><b>DEPARTMENT of BUILDING and SAFETY</b></u> <b>OFFSITE INSPECTION and TESTING SECTION</b> <u><b>Materials Testing Laboratory</b></u>			Procedure No.: <u><b>107</b></u>
	Procedure: <b>Offsite Grading Report</b>			Page 1 of 12
	<b>Revision Number</b>	<b>Prepared By</b>	<b>Reviewed By</b>	<b>Approved By</b>
<b>0</b>	<b>GGJ</b>	<b>GGJ</b>	<b>BM</b>	<b>GGJ</b>
Date	1-17-96	5-12-96	9-3-96	9-3-96
<b>1</b>	<b>GGJ</b>	<b>GGJ</b>	<b>DWM</b>	<b>GGJ</b>
Date	6-7-01	9-17-01	9-17-01	9-17-01
<b>2</b>	<b>GGJ</b>	<b>GGJ</b>	<b>DWM</b>	<b>GGJ</b>
Date	3-15-02	9-18-02	10-8-02	10-12-02
<b>3</b>	<b>GGJ</b>	<b>GGJ</b>	<b>DWM</b>	<b>GGJ</b>
Date	6-19-03	6-25-03	7-1-03	7-1-03
<b>4</b>	<b>GGJ</b>	<b>GGJ</b>	<b>DWM</b>	<b>GGJ</b>
Date	8-11-04	8-24-04	8-30-04	8-30-04
<b>5</b>	<b>GGJ</b>	<b>GGJ</b>	<b>TEH</b>	<b>GGJ</b>
Date	3-10-05	5-24-05	6-6-05	6-6-05
<b>6</b>	<b>GGJ</b>	<b>GGJ</b>	<b>TEH</b>	<b>GGJ</b>
Date	8-29-05	11-29-05	11-29-05	11-29-05
<b>7</b>	<b>GGJ</b>	<b>GGJ</b>	<b>TEH</b>	<b>GGJ</b>
Date	5-17-06	3-8-07	3-8-07	3-8-07
<b>8</b>	<b>GGJ</b>	<b>GGJ</b>	<b>TEH</b>	<b>GGJ</b>
Date	7-16-08	9-24-08	10-13-08	10-13-08
<b>9</b>	<b>GGJ</b>	<b>GGJ</b>	<b>TEH</b>	<b>GGJ</b>
Date	3-8-10	6-22-10	6-28-10	6-28-10
10				
Date	6-6-11	1-15-13	1-24-13	1-24-13
Date				

**DEPARTMENT of BUILDING and SAFETY**

**OFFSITE INSPECTION and TESTING SECTION**

**Materials Testing Laboratory**

**City of Las Vegas**

**Offsite Grading Report**

**Procedure No. 107 Revision 10**

*The italicized and underlined sections of this policy note Revision 10 changes.*

**1. PURPOSE.**

- 1.1. This policy establishes the guidelines by which the City of Las Vegas (CLV) will review and approve an Offsite Grading Report for public / private offsite improvement areas. The public offsite area is defined from the back of the sidewalk to back of sidewalk. The private offsite area is defined from the back of curb to back of curb on private streets. The grading defined limit is to the top of the subgrade of sidewalk, curb / gutter, utility trenches, and street. The CLV Quality Assurance (QA) Program is limited to monitoring of grading operations to periodic density testing of finish subgrade, and confirmation density testing of Aggregate Base materials, for public off-site improvements. All required construction phase reports should have been submitted and approved prior to the submittal of the Offsite Grading Report.
- 1.2. A Final Offsite Grading Report is required to be submitted for review and approval dependent upon the project Scope of Work *for each project unless determined otherwise.*

**NOTE 1:** Quality Control (QC) subgrade density tests for public offsite areas including sidewalk and valley gutters; Bus Turn Out and Turn Lanes (not associated with new asphalt paving in the street area) are not required to be submitted in the formal "Offsite Grading Report". A copy of the "Field Density" test data sheet shall be given to the CLV Inspector for his review and approval prior to scheduling QA density tests. The requirements for the test data are the same as that for the Interim Subgrade Verification Reports.

**2. REFERENCE CODES AND STANDARDS:**

**2.1. Associated CLV Procedures:**

- 2.1.1. 101 - Submittal of Construction Phase Reports
- 2.1.2. 102 - Type III Pipe Zone Backfill Material Report
- 2.1.3. 103 - Utility Trench Backfill Material Report
- 2.1.4. 104 - Trench Backfill Operation Report
- 2.1.5. 105 - Pavement Section Design Verification Report
- 2.1.6. 106 - Native Soils In-Lieu of (NILO) Imported Subbase Aggregate Report



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**INSPECTIONS  
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**OFF-SITE INSPECTIONS  
702-229-6337**

**CODE ENFORCEMENT  
702-229-6615**

**LAND DEVELOPMENT  
702-229-6371**

2.2. **Clark County Uniform Standard Specification:**

2.2.1. Section 105, "Control of Work".

2.3. **Other:**

2.3.1. NRS 338.176, NAC 625.550, the most current ASTM, AASHTO, NDOT test procedures as indicated in the applicable sections of the Uniform Standard Specifications.

3. **STATEMENT OF POLICY:**

3.1. **Submittal:**

3.1.1. Submittal format shall be completed in accordance with the current CLV procedures and in compliance with the NRS 338.176 and NAC 625.550 statutes.

3.1.2. The project developer or their representative, the project Quality Control Company (QC) shall submit a transmittal letter and Subgrade Verification Report / Offsite Grading Report to the CLV for review and approval.

3.1.3. This shall be performed after the completion of the grading operations within the offsite public / private right-of-way, after all required construction phase reports (refer to Section 2.3 of this procedure) have been submitted and approved by the CLV, and prior to the placement of Type I or Type II Aggregate Base material or preparation of Native-in-lieu of ("NILO") Type I material. The "NILO" material is considered to be an Aggregate Base material.

3.2. **Types of Interim Subgrade Verification Reports:**

3.2.1. There are three (3) different types of Interim Subgrade Verification Reports. Each one is for a separate area / use. These different reports cannot be combined into one (1) report.

**NOTE 2:** The Interim Subgrade Verification Report procedure was implemented to reduce the time frame between the start of QC testing and the QA acceptance of an area for placement of Aggregate Base materials.

**NOTE 3:** There *are no* **Final Subgrade Verification Reports.** *An Interim or Final Grading Report follows the "Interim Subgrade Verification Reports" pursuant to the procedure.*

3.2.1.1. Interim Subgrade Verification Report – Curb and Gutter ***ONLY:***

3.2.1.1.1. This report may be used for the (QC) release of the curb and gutter subgrade / NILO area(s) only, prior to the placement of Type II Aggregate Base material or concrete for the curb and gutter.

3.2.1.1.2. The following conditions shall be met prior to testing the curb and gutter area and submitting this report.

1. The Type III Pipe Zone Backfill Material Report has been submitted and approved by the CLV for the area(s) in the report (if applicable).
2. The Utility Trench Backfill Material Report has been submitted and approved by the CLV for the area(s) in the report.

3. The curb and gutter are at the proper subgrade / NILO elevation.

#### 3.2.1.2. Interim Subgrade Verification Report – Street **ONLY**:

3.2.1.2.1. This report may be used for the (QC) release of the street subgrade area(s) only, prior to the placement of Type II Aggregate Base material in the street. This report shall include any test information regarding structural fill placed in the area(s) to be accepted.

3.2.1.2.2. The following conditions shall be met prior to testing the street area and submitting this report.

1. The Type III Pipe Zone Backfill Material Report has been submitted and approved by the CLV for the area(s) in the report (if applicable).
2. The Utility Trench Backfill Material Report has been submitted and approved by the CLV for the area(s) in the report.
3. The Trench Backfill *Operation* Report has been submitted and approved by the CLV for the area(s) in the report.
4. The Pavement Section Design Verification Report has been submitted to the CLV and approved for the area(s) in the report.
5. The Interim Curb and Gutter – ONLY Report has been submitted to the CLV and approved for the area(s) in the report.
6. The street Subgrade is at the proper elevation.

#### 3.2.1.3. Interim Subgrade Verification Report – Curb / Gutter **and** Street.

3.2.1.3.1. This report may be used for the (QC) release of the same area / limits of curb / gutter subgrade / NILO area(s) and street subgrade area(s) prior to the placement of Type II Aggregate Base material. This report shall include any test information regarding structural fill placed in the area(s) to be accepted.

3.2.1.3.2. The following conditions shall be met prior to testing the curb/gutter and street area and submitting this report.

1. The Type III Pipe Zone Backfill Material Report has been submitted and approved by the CLV for the area(s) in the report (if applicable).
2. The Utility Trench Backfill Material Report has been submitted and approved by the CLV for the area(s) in the report.
3. The Trench Backfill *Operation* Report has been submitted and approved by the CLV for the area(s) in the report.
4. The Pavement Section Design Verification Report has been submitted to the CLV and approved for the area(s) in the report.
5. The curb and gutter are at the proper subgrade / NILO elevation.
6. The street subgrade is at the proper elevation.

3.2.2. Interim Subgrade Verification QC Testing:

- 3.2.2.1. The QC test area(s) (outline of gauge) shall be painted where the test was performed.
- 3.2.2.2. Any subsequent compaction effort / rework on the area(s) identified in the Interim Subgrade Verification Reports, after the QC tests are performed, will void the report.
- 3.2.2.3. If the test area(s) are not identified with paint or any of the required information is not included in the interim reports and attachments, the QA testing will not be performed and the report rejected.

**4.0 REPORTS:**

**4.1 General Requirements for Report Content:**

- 4.1.1 The report shall include, at a minimum, the following information:
  - 4.1.1.1 Revised reports shall include the date of the report being superseded, as well as the current revision date.
  - 4.1.1.2 Project / Permit Name *as shown on the CLV Off-Site Construction Permit Hard Card.*
  - 4.1.1.3 Project / Permit Number, *for civil permits, as shown on the CLV Off-Site Construction Permit Hard Card.*
  - 4.1.1.4 Project / Permit Plan Number *as shown on the CLV Off-Site Construction Permit Hard Card.*
  - 4.1.1.5 Submittal and approval of the required Construction Phase Reports as noted in the Scope of Work. These referenced reports shall be identified by the accepted QC report issue date and CLV acceptance letter date.
  - 4.1.1.6 The report must be prepared by, or under the direction of a Professional Engineer registered in the State of Nevada. The report shall be signed and stamped by the responsible engineer.

**NOTE 4:** The same curb / gutter and street areas must be approved at the same time in Offsite Grading Reports (except as noted in Interim Subgrade Verification Reports).

- 4.1.1.7 Use the appropriate approved project Plan and Profile sheets to determine the specific location for the area being submitted for review and acceptance **for this report**. The locations shall be noted in the text of the report in a similar format as shown below:

**Table 1**

Street Name	Area of Acceptance		Station Number	to	Station Number
	C / G	STR			

**NOTE 5:** If street names are revised after a construction phase report has been submitted to the CLV and approved by the CLV, subsequent construction phase reports shall reference the original street name as well as the revised street name.

- 4.1.1.8 A statement verifying the over excavation was performed per the Geotechnical Engineer recommendations (if over excavation was required by Geotechnical Investigation Report).

**NOTE 6:** The test data for the over excavated area shall have been included with the Pavement Section Verification Report

- 4.1.1.9 The report shall contain a statement that verifies that the grading and earthwork complies with the requirements and recommendations of the project geotechnical report, project plans, specifications, and current CLV policies and procedures

- 4.1.1.10 Sieve Analysis.

- 4.1.1.11 Plastic Index.

- 4.1.1.12 Proctor information per current AASHTO T180 procedure and include a curve for each material type

- 4.1.1.13 Plot plan with sample locations identified and areas indicated that are represented by the sample. The accepted area shall be in such a manner that the area is identifiable on "Xerox" copies.

- 4.1.1.14 If testing is provided by another laboratory, that data shall be stamped by the responsible engineer and included in the report.

#### **4.2 Additional Requirements for Interim Subgrade Verification Report:**

- 4.2.1 Interim Subgrade Verification Report Submittal:

- 4.2.1.1 The report shall be submitted to the CLV for review / approvals within two (2) workdays of the date the first tests were performed; otherwise the test data cannot be used for the Interim Subgrade Verification Report.

- 4.2.1.2 The QC Company will verify that all pertinent construction phase reports have been accepted by the CLV prior to submittal of the report (refer to section 3.2)

- 4.2.1.3 The report title shall be (*insert* one of the following):

- 4.2.1.3.1 **Interim Subgrade Verification Report – Curb and Gutter - ONLY** or

- 4.2.1.3.2 **Interim Subgrade Verification Report – Street - ONLY** or

- 4.2.1.3.3 **Interim Subgrade Verification Report – Curb / Gutter and Street**

**NOTE 7:** *There are no Final Interims Subgrade Verification Reports. An Interim or Final Grading Report follows the "Interim Subgrade Verification Reports" pursuant to the procedure.*

**4.2.1.4** The specific location of the area(s) being accepted along with the minimum information as shown on Attachment No. 1 shall be included in the text of the report in a similar format as shown in **Attachment No. 1**

**4.2.1.5** A statement verifying the over excavation was performed per the Geotechnical Engineer recommendations (if over excavation was required by Geotechnical Investigation Report). See attachment No. 1

**NOTE 8:** The test data for the over excavated area shall have been included with the Pavement Section Verification Report

**4.2.1.6** Copies of the hand written "Field Test Data" sheets will contain the following minimum information:

1. Test number.
2. Test date
3. Test location (per project grading plan)
4. Test station number (per project grading plan)
5. Type of test (i.e. curb/gutter subgrade/NILO etc)
6. Test elevation (per project plan)
7. Depth of fill
8. Dry Density
9. Moisture Content
10. Gauge Serial Number
11. Gauge density / moisture count for each test
12. Direct transmission depth of test (i.e. 6", 8", or 10" etc)
13. Maximum Dry Density (MDD)
14. Optimum Moisture for MDD
15. Test result
16. Test requirement
17. Pass / Fail

### **4.3 Additional Requirements for Interim Offsite Grading Reports:**

**4.3.1** Interim (partial area release) reports for specific areas of work (i.e., interior/exterior curb / gutter and/or street areas and / or portion of those areas) are acceptable; however they shall be referenced in the Final Offsite Grading Report.

**4.3.2** The report title shall be **Interim Offsite Grading Report**.

**4.3.3** Referenced CLV approved reports.

**4.3.3.1** Interim / Final Trench Backfill Report

**4.3.3.2** Interim / Final Pavement Section Design Verification Report

**4.3.3.3** Interim Subgrade Verification Report – Curb / Gutter ONLY

**4.3.3.4** Interim Subgrade Verification Report – Street ONLY

**4.3.3.5** Interim Subgrade Verification Report – Curb / Gutter and Street

4.3.4 The subgrade density tests shall have been performed within sixty (60) calendar days of the report submittal to the City of Las Vegas for review and approval.

4.3.5 Test data shall be typed and contain the following minimum information:

1. Test number.
2. Test date
3. Test location (per project grading plan)
4. Test station number (per project grading plan)
5. Type of test (i.e. curb/gutter subgrade/NILO etc)
6. Test elevation (per project plan)
7. Depth of fill
8. Dry Density
9. Moisture Content
10. Gauge Serial Number
11. Gauge density / moisture count for each test
12. Direct transmission depth of test (i.e. 6", 8", or 10" etc)
13. Maximum Dry Density (MDD)
14. Optimum Moisture for MDD
15. Test result
16. Test requirement
17. Pass / Fail

4.3.6 Laboratory test results (i.e., swell, solubility tests, and gradation tests) qualifying the use of the soils / aggregates in accordance with the Clark County Uniform Standard Specifications, project Geotechnical Investigation recommendations, and project specifications

4.3.7 Previously submitted report information / test data included with approved reports, per section 4.1.1.5, shall not be included with the Final Report.

#### **4.4 Additional Requirements for Final Offsite Grading Report:**

4.4.1 This is the **last report**, for project, if Interim Reports were issued. It is the **only report** if Interim Reports were not issued.

4.4.2 The report title shall be "**Final Offsite Grading Report**".

4.4.2.1 The Final Offsite Grading Report will not require any additional test data / information if the **complete project curb/gutter and street subgrade areas** have been previously reviewed and approved by the CLV with the submittal of various Interim Subgrade Verification Reports and the pertinent information has been included with these reports.

NOTE 9: This means the last submitted and CLV approved Interim Subgrade Verification Report could have been submitted as the Final Offsite Grading Report instead of an Interim Subgrade Verification Report.

4.4.3 Referenced CLV approved reports.

4.4.3.1 Final Trench Backfill Report

4.4.3.2 Final Pavement Section Design Verification Report



4.4.3.3 Interim Subgrade Verification Report – Curb / Gutter ONLY

4.4.3.4 Interim Subgrade Verification Report – Street ONLY

4.4.3.5 Interim Subgrade Verification Report – Curb / Gutter and Street

4.4.3.6 Interim Offsite Grading Report

4.4.3.7 *Previously submitted* report information / test data included with approved reports, per section 4.1.1.5, shall not be included with the Final Report

4.4.4 The subgrade density tests shall have been performed within sixty (60) calendar days of these report submittals to the City of Las Vegas.

4.4.4.1 *If it has been 60 plus calendar days and the Final Grading Report has been issued and then approved by the City of Las Vegas, however, Type 2 Aggregate Base Materials have not been placed on the street subgrade.*

4.4.4.1.1 *Current density tests are required to be performed by the QC company and the Final Grading Report revised to include the current test information and resubmitted to the City of Las Vegas for approval.*

4.4.4.2 *It has been 60 plus calendar days and the Final Grading Report has been issued and approved by the City of Las Vegas and the Type 2 Aggregate Base Materials has been placed on the street subgrade, however, not paved.*

4.4.4.2.1 *Current QA density tests performed by the City of Las Vegas are required prior to the placement of asphalt for the street.*

4.4.5 Test data shall be typed and contain the following minimum information:

1. Test number.
2. Test date
3. Test location (per project grading plan)
4. Test station number (per project grading plan)
5. Type of test (i.e. curb/gutter subgrade/NILO etc)
6. Test elevation (per project plan)
7. Depth of fill
8. Dry Density
9. Moisture Content
10. Gauge Serial Number
11. Gauge density / moisture count for each test
12. Direct transmission depth of test (i.e. 6", 8", or 10" etc)
13. Maximum Dry Density (MDD)
14. Optimum Moisture for MDD
15. Test result
16. Test requirement
17. Pass / Fail

- 4.4.6 Laboratory test results (i.e., swell, solubility tests, and gradation tests) qualifying the use of the soils / aggregates in accordance with the Clark County Uniform Standard Specifications, project Geotechnical Investigation recommendations, and project specifications

## 5.0 QUALITY CONTROL TESTING:

### 5.1 Density Testing:

- 5.1.1 The testing shall be performed by Quality Control Company AASHTO Accredited in the procedures being reported. The most current ASTM, AASHTO, NDOT test procedures shall be used. Testing requirements shall be from the applicable sections of the Uniform Standard Specifications and current CLV policies and procedures.

**NOTE 10:** The requirement for the AASHTO Accreditation is mandatory for all laboratories performing work submitted to the City of Las Vegas, Offsite Inspection and Testing, effective March 1, 2008. Laboratories that are not accredited in the test procedures being submitted shall contact the City of Las Vegas, Offsite Inspection and Testing, *Material Testing Laboratory* prior to submitting the test information.

- 5.1.2 Testing determinations shall be made in lots, each lot represents the subgrade area ready for testing for each direction of travel (i.e., south bound and north bound areas) for full street construction. A lot shall be divided into sublots and tested to a frequency indicated in Table 2, and one (1) test minimum shall be made for each subplot. The Quality Control Company Engineer may require additional density tests, beyond the minimum number required, if they determine there is a need for additional testing. In this case, the additional tests are not required to be located by random number.

**NOTE 11:** Half street construction only requires lot / subplot determination for one direction of travel applied to the complete half street width.

- 5.1.3 The location of the field density tests shall be chosen on a random number basis. If requested by CLV, a summary of the information used to determine lot/ subplot descriptions shall be completed and shall be included with the submitted report.
- 5.1.4 Minimum density test probe depth shall be 8" on 12" compacted fill. The minimum probe depth shall be per the project Geotechnical Report on "cut" areas requiring scarification unless not specified; then the minimum probe depth for the density test shall be 8".

**Table 2**

Area	Test	Procedure	Frequency
Street	Field Density Test	AASHTO T310	1 / 5000 ft <sup>2</sup> / lift <sup>1,2,3</sup>
Curb / Gutter	Field Density Test	AASHTO T310	1 / 250 Linear Feet / lift <sup>1</sup>
Sidewalk	Field Density Test	AASHTO T310	1 / 250 Linear Feet/ lift <sup>1</sup>

Lift <sup>1</sup> = 12" Compacted Fill

Lift <sup>2</sup> = lot / subplot is not to exceed 250 linear feet in length for half street construction

Lift <sup>3</sup> = Minimum one test per street

**6.0 EFFECTIVE DATE AND APPROVALS:**

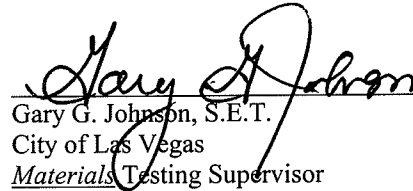
EFFECTIVE DATE: February 1, 2013



Thomas Hayes, P.E.  
City of Las Vegas  
Inspections Manager

1-24-13

Date



Gary G. Johnson, S.E.T.  
City of Las Vegas  
Materials Testing Supervisor

1-24-13

Date

**QC Company Letterhead / Name**

**Interim Subgrade Verification Report – Curb and Gutter ONLY or  
Street ONLY or  
Curb/Gutter and Street  
(Use only one)**

PROJECT NAME: \_\_\_\_\_

REPORT DATE: \_\_\_\_\_ REVISION DATE: (if applicable)

PROJECT LOCATION: \_\_\_\_\_

CLV PROJECT / PERMIT NO. \_\_\_\_\_ CLV INSPECTOR: \_\_\_\_\_

CLV PROJECT PLAN NO. \_\_\_\_\_

DEVELOPER NAME: \_\_\_\_\_

QC COMPANY NAME: \_\_\_\_\_ QC PROJECT NO. \_\_\_\_\_

This report represents the following area(s):

Area(s) of Acceptance								
Street Name	Curb / Gutter			Street Subgrade		Station	to	Station
	"NILO"	Subgrade	Side	Half Street	Full Street			
			N,S,E,W					

**NOTE 13:** If street names are revised after a construction phase report has been submitted to the CLV and approved by the CLV, subsequent construction phase reports shall reference the original street name as well the revised street name

Attached to this form are copies of associated Field Density tests representing the identified curb and gutter / street (specify applicable area), NILO / subgrade (specify one) area(s).

Minimum density compaction requirement for the curb / gutter NILO / subgrade (specify one) is XX% and /or minimum density compaction requirement for street subgrade is XX%.

The Construction Phase reports required prior to this report submittal have been reviewed and accepted by the CLV.

Over excavation and structural fill placement of the offsite area has been completed in accordance with the Geotechnical Evaluation Report of record (if applicable).

The above noted area(s), the curb and gutter / street area(s) (specify applicable area), NILO Type 1 or subgrade area(s) (specify one) have been prepared in general accordance with the Geotechnical Evaluation Report of record, project plans and specifications, current CLV policies and procedures.

\_\_\_\_\_  
Prepared By

\_\_\_\_\_  
Affix Seal, Sign and Date