Department of Development Services
Building Division

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Highlighted excerpts are from the Building Administrative Code of Clark County.

SUBJECT: TG-15-2009 QUALITY SYSTEMS MANUAL

1.0 PURPOSE: **BAC 22.02.530(A) Approval by the Building Official**

To perform residential or special inspections as set forth in the technical codes, a Quality Assurance Agency must be approved by the Building Official, who shall maintain a list of approved Quality Assurance Agencies.

The Building Official shall establish rules and regulations for approval and listing as well as for the conduct of any approved agency. Rules and regulations for the approval and listing requirements shall be contained in technical guidelines.

2.0 SCOPE: This guideline provides information for the preparation of a Quality Systems Manual.

3.0 ABBREVIATIONS & ACRONYMS:

AAL:	Approved Analytical Laboratories
ASTM:	American Society for Testing and Materials
BAC:	Building Administrative Code of Clark County
CCDDS-BD:	Clark County Department of Development Services-Building Division
QA:	Quality Assurance
QAA:	Quality Assurance Agency
QC:	Quality Control
QSM:	Quality Systems Manual
SNA-IBC	Southern Nevada Amendments to the International Building Code
TG:	Technical Guideline

APPROVED DATE: APRIL 17, 2009

EFFECTIVE DATE: APRIL 24, 2009

Revised By:	Concurred By:	Approved By:
Brian Lenihan, P.E. Senior Engineer	David Durkee, P.E. Principal Engineer	Theodore L. Droessler, P.E. Manager of Engineering

4.0 DEFINITIONS: For the purposes of this technical guideline, certain terms, phrases, words and their derivatives shall be construed as specified in this section and the Building Administrative Code of Clark County.

Approved Analytical Laboratory: A quality assurance agency engaged in the chemical testing and reporting of soils intended to support buildings or other structures.

Quality Systems Manual: A quality systems manual is composed of a series of documents that contain policy statements, procedures, reporting requirements and personnel qualifications. The QSM defines the procedural responsibilities to ensure the operations are completed, reviewed and documented.

New Code Year: The effective date of adoption of the next version of the International Building Code.

5.0 REFERENCES:

ASTM E 329: Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
ASTM E 543: Standard Practice for Agencies Performing Nondestructive Testing
ASTM E 548: Standard Guide for General Criteria Used for Evaluating Laboratory Competence
Clark County Building Administrative Code
International Standards Organization (ISO)
- ISO/IEC 17020: General criteria for the operation of various types of bodies performing inspection
- ISO/IEC/EN 17025: General Requirements for the Competence of Calibration and Testing Laboratories

Southern Nevada Building Code Amendments
Technical Guideline 16 Quality Assurance Agency Obligations
Technical Guideline 17 Minimum Approval Criteria for Special Inspectors and Other Personnel
Technical Guideline 19 Approved Chemical Test Methods of Soils and Reporting Criteria
Technical Guideline 60 Smoke Control and Related Topics

6.0 RESPONSIBILITIES:

6.1 <u>Quality Assurance Agency</u>:

6.1.1 **BAC 22.02.530(A) Approval by the Building Official**

6.1.2 An agency seeking approval status shall apply for approval using forms available for that purpose. Forms are available from Clark County Department of Development Services – Building Division at 4701 W. Russell Rd., Las Vegas, NV 89118. Forms are also available @ http://www.co.clark.nv.us/development_services/index.htm. In order to grant approval, a QAA must submit to CCDDS-BD for review and approval a Quality Systems Manual (QSM), other information as required by TG-16, and the listing fees.

6.1.3 A QSM shall be prepared in accordance with Section 7.0 of this TG.

6.1.4 The QSM shall be approved in writing by a company officer, quality control manager and the engineering manager.

6.2 <u>Clark County Department of Development Services-Building Division</u>

6.2.1 CCDDS-BD personnel shall review a QSM for compliance to the Technical Guidelines and referenced standards.

7.0 PROCEDURE: An agency shall submit a QSM in accordance with Sections 7.1 through 7.14. For a project-specific approval, an agency shall submit a QSM in accordance with Section 7.16.

7.1 QAA Engaged in the Special Inspection of concrete construction (C); masonry construction (M); soils (G), steel construction (S); exterior insulation and finish systems (E); sprayed fire-resistant materials, mastic and intumescent coatings (F); driven deep foundation elements (P); drilled deep foundation elements (R); wood construction (W); and Laboratory Material Testing of Concrete (C-L), Soils (G-L), Masonry (M-L) and Fire-Resistant Materials (F-L).

7.1.1 The QSM shall be prepared in accordance with ASTM E 329 and ASTM E 548. Firms accredited in accordance with ISO standards 17020 and 17025 meet the intent of ASTM E 329 and ASTM E548.

7.1.2 Minimum personnel qualifications contained in the QSM shall be in accordance with ASTM E 329, the BAC and Technical Guideline 17 with the most restrictive provision taking precedence.

7.1.3 Written procedures shall be established for the inspection, testing, calibration and reporting of each material and process. All equipment utilized for testing and/or inspection shall be serialized. A summery of the equipment shall be provided with the corresponding current calibration dates and durations listed. At a minimum, procedures must contain elements listed in Appendix A attachments, as applicable.

7.1.4 Written procedures shall be established for the subcontracting of calibration and testing as allowed in ASTM E 548 and the BAC.

7.1.5 Report format and content shall comply with the applicable standard and Section 8.0 below.

7.1.6 The QSM shall provide for the internal audit functions and reporting contained in Section 7.12.2 below.

7.1.7 The QSM shall provide for an annual review as required in Section 7.15.

7.1.8 Technical Guideline 19 test methods shall be specified in the development of written procedures required by Sections 7.1.3 and 7.1.4.The QSM shall provide policies and procedures for the quality assurance agency obligations contained in Section 6 of Technical Guideline 16.

7.1.9 The QSM shall provide policies and procedures for the chemical test methods of soils contained in Technical Guideline 19.

7.1.10 The QSM shall provide policies and procedures for the earthwork provisions contained in the IBC and SNA-IBC.

7.2 QAA Engaged in Performing Nondestructive Testing

Special Inspection Category N: Radiographic (RT), Magnetic Particle (MT), Penetrant (PT) and Ultrasonic (UT).

7.2.1 The QSM shall be prepared in accordance with ASTM E 543. Where the term authority is used in the standard, the definition contained under Section 3.0 Terminology shall be interpreted to include CCDDS-BD within its context.

7.2.2 Minimum personnel qualifications contained in the QSM shall be in accordance with ASTM E 543, the BAC and Technical Guideline 17 with the most restrictive provision taking precedence.

7.2.3 Written procedures shall be established for the inspection, testing, calibration and reporting of each material and process. All equipment utilized for testing and/or inspection shall be serialized. A summery of the equipment shall be provided with the corresponding current calibration dates and durations listed. At a minimum, procedures must contain elements listed in Appendix A attachments, as applicable.

7.2.4 Written procedures shall be established for the subcontracting of calibration and testing as allowed in ASTM E 548 and the BAC.

7.2.5 Report format and content shall comply with the applicable standard and Section 8.0 below.

7.2.6 The QSM shall provide for the internal audit functions and reporting contained in

Section 7.12.2 below.

7.2.7 The QSM shall provide for an annual review as required in Section 7.15.

7.2.8 The QSM shall provide policies and procedures for the quality assurance agency obligations contained in Section 6 of Technical Guideline 16.

7.3 QAA Engaged in Smoke Control Verification of Buildings and Structures:

Special Inspection Categories: Smoke Control (K), Test & Balance (K-TAB), Carbon Monoxide Sensors (O).

7.3.1 The QSM shall be prepared in accordance with Section 7.6 through 7.14.

7.3.2 Minimum personnel qualifications contained in the QSM shall be in accordance with the BAC and Technical Guidelines 17.

7.3.3 Written procedures shall be established for the inspection, testing, calibration and reporting of each material and process. All equipment utilized for testing and/or inspection shall be serialized. A summery of the equipment shall be provided with the corresponding current calibration dates and durations listed. At a minimum, procedures must contain elements listed in Appendix A attachments, as applicable.

7.3.4 Written procedures shall be established for the subcontracting of calibration and testing as allowed in ASTM E 548 and the BAC.

7.3.5 Report format and content shall comply with the applicable standard and Section 8.0 below.

7.3.6 The QSM shall provide for the internal audit functions and reporting contained in Section 7.12.2 below.

7.3.7 The QSM shall provide for an annual review as required in Section 7.15.

7.3.8 The QSM shall provide policies and procedures for the quality assurance agency obligations contained in Section 6 of Technical Guideline 16.

7.4 QAA Engaged in the Installation and Operation of Amusement and Transportation Systems:

Special Inspection Categories: Amusement Rides (A-A) and Transportation Systems (A-T)

7.4.1 The QSM shall be prepared in accordance with Section 7.6 through 7.14.

7.4.2 Minimum personnel qualifications contained in the QSM shall be in accordance with applicable standards, the BAC, and Technical Guideline 17, with the most restrictive provision taking precedence.

7.4.3 Written procedures shall be established for the inspection, testing, calibration and reporting of each material and process. All equipment utilized for testing and/or inspection shall be serialized. A summery of the equipment shall be provided with the corresponding current calibration dates and durations listed. At a minimum, procedures must contain elements listed in Appendix A attachments, as applicable.

7.4.4 Written procedures shall be established for the subcontracting of calibration and testing as allowed in ASTM E 548 and the BAC.

7.4.5 When recognition is requested that includes services covered in Sections 7.1, 7.2 or 7.3, compliance to applicable portions of those sections is required.

7.4.6 Report format and content shall comply with the applicable standard and Section 8.0 of this TG.

7.4.7 The QSM shall provide policies and procedures for the quality assurance agency obligations contained in Section 6 of Technical Guideline 16.

7.4.8 The QSM shall provide for an annual review as required in Section 7.15.

7.5 QAA Engaged in Inspection and Testing That Are Not Included in Sections 7.1 – 7.4:

The QSM shall be prepared in accordance with Sections 7.6 through 7.14.

7.5.1 Minimum personnel qualifications contained in the QSM shall be in accordance

with applicable standards, the BAC, and Technical Guideline 17, with the most restrictive provision taking precedence.

7.5.2 Report format and content shall comply with the applicable standard and Section 8.0 of this TG.

7.5.3 The QSM shall provide policies and procedures for the quality assurance agency obligations contained in Section 6 of Technical Guideline 16.

7.5.4 AAL shall comply with the test methods listed in Technical Guideline 19.

7.5.5 Vendor audit agencies shall comply with applicable portions of Sections 7.1, 7.2, 7.3 and 7.4 as required to perform their audit service.

7.5.6 The QSM shall provide for an annual review as required in Section 7.15.

7.6 Organization of the Agency:

The following information shall be included in the Quality Systems Manual:

7.6.1 Description of the organization including complete legal name and address.

7.6.2 Names and positions of the principal owners, officers, and directors.

7.6.3 Agency's managerial structure and principal personnel.

7.6.4 All major divisions or departments, including their locations and primary functions, shall be shown and described.

7.6.5 All branch offices of the agency, and the principal officers and directors of those offices, shall be included when approval is sought for those offices.

7.6.6 External organizations, organizational components and their functions that are utilized for significant supporting technical services, shall also be included.

7.7 Organization History:

A brief history of the agency and a general description of the types of users of the organizations services shall be provided.

7.8 Organization Charts and Functions:

A functional description of the agency's organizational structure, operational departments, support departments, and services shall be included. This may be demonstrated in the form of charts that depict all divisions, departments, sections, units, and their operational activities. Organizational charts shall define which responsibilities are technical, management or both. Lines of responsibility, authority, and supervisory accountability must be clearly detailed.

7.9 Technical Services:

A list of all proposed special inspection, engineering, and testing services that the agency may wish to provide shall be included in the manual. Each inspection and/or testing service must be related to specific testing and sampling procedures and/or inspection criteria. Procedures and criteria shall be specifically listed in the Quality Systems Manual Plans submitted for initial review and approval.

7.10 Human Resources of The Agency:

7.10.1 Lists of inspection services shall also show the names of those inspectors that the organization plans to use in providing those services. All lists shall be accompanied by resumes showing dates of inspector experience and testing technician qualifications, accreditations, registrations, etc. Detailed approval requirements are contained in Technical Guideline 17.

7.10.2 In addition to inspector, testing technician and engineer information previously described, the following information shall be submitted as an attachment to the agency quality systems manual and QA Plan:

7.10.2.1 Written resumes are required for all management and supervisory personnel. Resumes shall detail qualification and work experience pertinent to the services proposed.

7.10.2.2 The Quality Systems Manual shall include a section on minimum position qualifications. Qualifications shall include, but not be limited to, necessary education, training or experience required for each position.

7.10.2.3 The QSM shall include methods of maintaining personnel records to document employee qualifications, work experience, and training history.

7.10.2.4 The QSM shall include methods for ensuring the continued competence of its personnel, including the maintenance of records.

7.11 Material Resources of the Agency:

An inventory of its relevant material resources shall be made available by the agency including:

7.11.1 Laboratory test and inspection equipment, facilities, and calibration standards where applicable. A calibration schedule shall be established and identified as being performed in-house or through a vendor.

7.11.2 A library listing of standards shall be maintained for the storage and conditioning of specimens and samples. The listing shall include the publication date and edition.

7.11.3 Copies of the current building codes and standards are required to be in the library.

7.12 Quality Systems of the Agency:

The following information concerning procedural methods that directly affect the quality of proposed services shall be outlined in detail in the quality systems manual.

7.12.1 Written Quality Systems Plans shall include calibration programs, standardization of test methods measurement and determination, traceability or credibility, data recording, processing, and reporting.

7.12.2 The quality manager shall perform an audit of all approved special inspectors and when applicable laboratory staff on a quarterly basis. The quality manager shall keep a current yearly summery of the audits and provide all audit records with in 24 hours upon request. The summary report shall list the date, inspector name, auditor name, project name, jurisdiction, daily report number, permit number, results, and resolutions to findings. Records of these audits must be available for review by the Building Official. Example audit forms must be submitted with each Quality System Manual.

7.12.3 All permits that require special inspection shall be audited by the engineering manager and/or quality manager at least once during the project. Records of these audits must be available for review by the Building Official. Example audit forms must be submitted with each Quality System Manual.

7.13 The QSM shall provide a policy and procedure for acceptance by the QAA to provide services listed on the QAA Special Inspection Agreement and notification of commencement of special inspection activities. This acceptance and notification shall be accomplished through the completion and filing with CCDDS-BD of a Project Startup and Subcontracted Inspection Notification form.

7.14 Quality Assurance Plans:

7.14.1 Agencies seeking approval must provide within their Quality System Manuals a typical Quality Assurance Plan.

7.14.2 QA plans shall detail engineering, inspection and testing procedures, including forms to be used, and acceptance/rejection criteria.

7.14.3 Each record or plan must identify project name, location, owner, and contractor.

7.14.4 A project start-up form must be referenced and an example of a completed form

included in the plan.

7.14.5 All quality plans must include the four basic elements below:

7.14.5.1 The plan must show how inspection, engineering and testing activities will be performed such that code requirements of the project can be met.

7.14.5.2 There must be a system of feedback information to be used for the assessment of project compliance.

7.14.5.3 A documented method for corrective action shall exist such that, non-conforming work or materials are brought to a point of acceptability.

7.14.5.4 Plans shall be ongoing in the sense that improvements can be made to the plan as the work proceeds or changes to the scope of work occur.

7.15 Annual Review Required:

The engineering manager shall review their manual on a yearly basis. A revised complete manual shall be submitted at the time of the annual renewal when a new code year is adopted. Revisions to the quality systems manual due to revised technical guidelines shall be incorporated into the existing manual and submitted when a new code year is adopted or at the request of CCDDS-BD. The agency shall submit a revised manual within 2 weeks from the time of the request. Revised forms must be submitted to CCDDS-BD for review and approval prior to use.

7.16 QAA Project-Specific Approval:

7.16.1 Written procedures shall be established for the inspection, testing, and reporting of each material and process. At a minimum, procedures must contain elements listed in Appendix A and Attachments of Appendix A, as applicable.

7.16.2 The QSM shall provide policies and procedures for the quality assurance agency obligations contained in Section 6 of Technical Guideline 16.

7.16.3 Applicable portions of Sections 7.11, 7.12 and 8.0.

7.17 Approval Review:

An acceptance review of those agencies requesting listing as Quality Assurance Agencies for special inspection elements may be conducted as follows:

7.17.1 All elements of inspection and/or testing that the agency has the willingness and ability to perform shall be so designated individually in the manual.

7.17.2 The agency shall be capable of certifying to the Building Official that components of off-site, or on-site constructed and/or fabricated/manufactured products meet the approved construction documents and the technical codes.

7.17.3 Each Special Inspector shall have proven experience and appropriate certification(s). Clark County will evaluate each individual inspector's qualifications in accordance with Technical Guideline 17. Inspection personnel that are new to an agency must be evaluated, approved and listed by Clark County before being assigned to any project.

7.17.4 Equipment used by inspection and/or testing personnel must meet approved national standards.

8.0 RECORDS:

8.1 All report forms that are planned for use in performing Quality Assurance Inspection, Engineering and/or Testing shall be submitted with the Quality Systems Manual for review and approval. Minimum acceptable guidelines for format shall be as follows:

8.1.1 Allow as much lined space on the form as possible.

8.1.2 Preprinted titles should be kept to a minimum, e.g., project name, project address, job number, date, report number, and inspector's name.

8.1.3 Limit preprinted headline material that presumes compliance with the approved construction documents.

8.1.4 Use the same daily report form format throughout each project.
8.1.5 A single report shall be used to document special inspection or testing activities for each day or each site visit.

8.2 Report forms shall be submitted with the QSM for field inspection, laboratory testing, and verification of quality systems. At a minimum, the following reports forms shall be submitted for review and approval prior to being utilized by the agency:
8.2.1 Daily inspection
8.2.2 Daily field material testing
8.2.3 Non-compliance items
8.2.4 Resolution of non-compliance items
8.2.5 Log of non-compliance reports
8.2.6 Internal office audit
8.2.7 Project audit
8.2.8 Special inspector audit
8.2.9 In-house training
8.2.10 Laboratory material testing
8.2.11 Other report forms issued by CCDDS-BD

9.0 ATTACHMENTS:

Appendix A (Mandatory Information): Special Inspection Procedures Guidelines
Appendix B (Mandatory Information): In-house Training Records
Appendix C (Mandatory Information): Internal "Office" Audit Results
Appendix D (Mandatory Information): Special Inspection Audit Results

10.0 REVISION HISTORY:

Title	Revision/Approved Date	Effective Date
TG-15-2009	April 17, 2009	April 24, 2009
TG –15-2007	August 31, 2007	September 14, 2007
TG –15-2004	November 16, 2004	November 18, 2004
TG -15-2000	December 26, 2000	January 31, 2001

APPENDIX A

(TG-15-2009)

SPECIAL INSPECTION PROCEDURES GUIDELINES

1.0 PURPOSE:

The purpose of this appendix is to provide minimum elements that must be included in special inspection procedures.

2.0 SCOPE:

This appendix provides information for the preparation of special inspection procedures, tests and other related activities.

3.0 Authorization:

Pursuant to the Building Administrative Code (BAC), Section 22.02.525(A), Technical Guideline TG-15 requires that agencies engaged in special inspection activities comply with ASTM International Standards E 329, E 548, E 543, and other referenced standards. ASTM E 329 requires that the agency have documented instructions for performing inspections and tests of materials used in construction.

4.0 REFERENCES:

The reference codes and standards are to comply with the editions of the respective standards specified in the adopted edition of the building code:

Clark County Building Administrative Code (BAC)

Technical Guidelines (TG)

ASTM International Standards: E 329, E 548, 543, D 3740, C 1077, C 1093 and other applicable standards referenced in the Technical Guidelines and the International Building Code

International Building Code (IBC)

Southern Nevada Amendments to the International Building Code (SNA-IBC)

5.0 Special Inspection Procedures:

Required special inspection activities are specified in Chapter 17 of the IBC, the BAC and the SNA-IBC. Special inspection procedures submitted in the agency's QSM serves as a training document for personnel who perform special inspection and testing activities. This section presents an outline of required elements in a special inspection procedure. Procedures for proposed special inspection activities submitted by an agency, within a controlled Quality Systems Manual, must comply with elements in the attachments of this appendix, as applicable.

5.1 **Name, purpose, scope and inspection/testing category**

- Name of proposed special inspection activity
- Purpose of proposed special inspection activity
- Scope of proposed special inspection activity
- Correct designation of proposed special inspection category

5.2 **Reference documents**

- Codes
- Standards

Note: Reference documents must include specific codes, Code Chapters, etc.

5.3 **General breakdown of inspection or testing procedure, or flowchart depicting tasks associated with inspection or testing procedures**

5.4 **Inspection and testing personnel minimum qualifications**

- Special Inspector, Field Technician and Field Supervisor
- Laboratory Technician and Laboratory Supervisor

Note: In lieu of stating minimum personnel criteria, special inspection procedures may reference TG-17 criteria for approval for both laboratory and field personnel.

5.5 **Documentation of inspection or testing activities**

- Complying items
- Non-complying items
- Resolution of non-complying items
- Daily inspection report form
- Non-compliance item form
- Resolution of non-compliance item form
- Log of non-compliance items form

Note: Must comply with minimum requirements stated in the BAC and the Technical Guidelines, including Technical Reporting Guidelines (TRGs).

5.6 **Required equipment to be used during the course of inspection and testing**

- Laboratory Equipment
  - Name of equipment
  - Calibration records
  - Frequency of calibration
  - In-house calibration procedures, forms and records.
  - Third-party calibration records
- Field Equipment
  - Name of equipment
  - Calibration records
  - Frequency of calibration
  - In-house calibration procedures, forms and records.
  - Third-party calibration records

APPENDIX B
(TG-15-2009)

In-house Training Records

In-house Training Records

Agency Name: _____

Annual Renewal Period (C-2009, A-2010, etc.): _____

In-house Training Number (One through Four): _____

In-house Training Date: _____

In-house Training Performed by: _____

In-house Training Topics: _____

_____

_____

This in-house was performed pursuant to the Building Administrative Code of Clark County, Technical Guidelines TG-15, TG-16, TG-17, TG-20, TG-50, and ASTM E 329.

I, _____, the approved Quality Manager, has supervised and documented this in-house training.

Signature of the designated Quality Manager_____.

I, _____, the approved Engineering Manager, has directed and reviewed this in-house training. Content of this training complies with referenced documents.

Signature of the designated Engineering Manager_____.

Instructions: In-house training topics shall include administrative provisions related to special inspection activities contained in the agency's QSM, the Technical Guidelines, and the Building Administrative Code; and technical provisions contained in the technical codes. In-house training must be conducted on a quarterly basis, i.e., a minimum of four in-house training sessions must be performed.

List of Attendees

NAME	SIGNATURE

APPENDIX C
(TG-15-2009)

Internal "Office" Audit Results

Internal "Office" Audit Results

Agency Name: _____

Annual Renewal Period (C-2010, A-2009, etc.): _____

Audit Date: _____

Audit Performed by: _____

This Audit was performed to verify compliance with the Building Administrative Code of Clark County, Technical Guidelines TG-15, TG-16, TG-17, TG-20, TG-50, and ASTM E 329.

I, _____, the approved Quality Manager, has supervised and documented this audit.

Signature of the designated Quality Manager_____.

I, _____, the approved Engineering Manager, has directed and reviewed this audit. All corrective actions were undertaken.

Signature of the designated Engineering Manager_____.

Instructions: The auditor(s) shall document audit findings. The agency's Quality Manager, Engineering Manager, and agency's management shall recommend appropriate corrective actions. The Engineering Manager shall assure that the agency implement recommended corrective actions. This audit is required on an annual basis and must be performed during the last quarter of the agency's annual renewal period.

1.0 Quality Systems Manual

1.1 Version of Quality Systems Manual (QSM) being used by this agency is approved by CCDDS-BD. Current QSM in use by the agency:

Revision Number_____ Date_____

1.2 Approved QSM has been reviewed for this annual renewal period and found to be current and suitable for the type and scope of the agency's approved services.

1.3 Required QSM revisions were submitted to CCDDS-BD. QSM revisions may be triggered by organizational changes, changes in the facility and equipment used during the performance of special inspection activities, new code cycle, etc.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

2.0 Approval by CCDDS-BD

2.1 Agency only performs special inspection services for which it is approved.

2.2 Agency staffs project with Clark County approved inspectors and testing technicians.

2.3 Agency has submitted required annual renewal fees.

2.4 Agency has submitted required annual renewal Information.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

3.0 Quality Management and Responsibilities

3.1 The agency has employed a Quality Manager (QM) on a continuous basis.

3.2 The agency has notified CCDDS-BD of any changes in the designated QM.

3.3 In-house training of special inspectors and testing technicians has been undertaken.

3.4 In-house training included administrative provisions related to special inspection activities in the agency's QSM, the Technical Guidelines, and the Building Administrative Code; and technical provisions in the technical codes.

3.5 Additional in-house training was undertaken based on internal audit results, enforcement actions issued by CCDDS-BD staff, mandatory meeting results documented by CCDDS-BD, and/or outcome of an administrative hearing

3.6 The Quality Manager has undertaken performance review of special inspection activities prior to it being covered or incorporated into the work.

3.7 The Quality Manager has undertaken a review process of reports generated by the special inspection process in accordance with the QAA QSM, the BAC, project requirements, and technical codes.

3.8 Copies of the latest CCDDS-BD Technical Guidelines have been distributed to agency's special inspection staff.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

4.0 Engineering Management and Responsibilities (Prime Agency Only)

4.1 The agency has employed and Engineering Manager (EM) on a continuous basis.

4.2 The agency has notified CCDDS-BD of any changes in the designated EM.

4.3 The Engineering Manager has supervised and performed a review that:

4.3.1 The agency has complied with policies and procedures in the agency's QSM.

4.3.2 Work within the scope of the permit

4.3.3 Assignment of QAA personnel approved by CCDDS-BD

4.3.4 Payment of fees as detailed in the Building Administrative Code of Clark County.

4.3.5 The special inspection process is accredited through participation in AMRL, CCRL, A2LA, LAB, NAVLAP, ISO, or IAS.

4.4 The Engineering Manager has supervised the submittal of all required reports:

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

5.0 Subcontracted Inspection (Prime Agency Only)

5.1 The agency has coordinated the work of the subcontractor agency.

5.2 The agency has issued the final report.

5.3 The agency performed at least half of the required special inspection activities through its own personnel.

5.4 The agency notified the Building Official for each instance of subcontracting special inspection activities.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

6.0 Subcontracted Inspection (Subcontractor Agency Only)

6.1 The agency performed no more than one special inspection category.

6.2 The agency has not subcontract any item of the designated special inspection category to other agencies.

6.3 The agency notified the Building for each instance of being subcontracted to perform special inspection activities.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

7.0 Reporting

7.1 Daily reports are generated as required by special inspectors

7.2 Non-compliance Reports are generated as required by special inspectors

7.3 CCDDS-BD is notified of the issuance of non-compliance reports as required

7.4 Daily reports are provided to CCDDS-BD when requested

7.5 The agency has submitted required reports to CCDDS-BD as required in the Technical Guidelines.

7.6 The agency has submitted required reports after all non-compliances have been cleared. Noncompliance issues that are unresolved at completion of construction were submitted ahead of the final report for disposition by CCDDS-BD.

7.7 Final reports and other required reports receive approval from CCDDS-BD after the first two review cycles.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

8.0 Assignment of Special Inspectors

8.1 Inspectors assigned on Clark County projects were approved by CCDDS-BD at the time of assignment.

8.2 Inspectors assigned on Clark County projects are trained and experienced in the performance of required special inspection activities

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

9.0 Review of Enforcement actions issued by CCDDS-BD

9.1 A summary of enforcement actions is attached. The summary must include notice number, date of notice, and code violation.

9.2 The Engineering Manager and Quality Manager reviewed enforcement actions.

9.3 The agency has complied with requirements stated in enforcement actions.

9.4 The agency has submitted required written responses.

9.5 The agency has submitted assessed administrative fees.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

APPENDIX D
(TG-15-2009)

Special Inspector Audit Results

Special Inspection Audit Results

Agency Name: _____

Annual Renewal Period (C-2009, A-2010, etc.): _____

Audit Number (One through Four): _____

Inspector Audited: _____

Permit Number: _____

Daily Report: _____

Audit Date: _____

Audit Performed by: _____

This Audit was performed to verify compliance with the Building Administrative Code of Clark County, Technical Guidelines TG-15, TG-16, TG-17, TG-20, TG-50, and ASTM E 329.

I, _____, the approved Quality Manager, has supervised and documented this audit.

Signature of the designated Quality Manager_____.

I, _____, the approved Engineering Manager, has directed and reviewed this audit. All corrective actions were undertaken.

Signature of the designated Engineering Manager_____.

Instructions: The auditor(s) shall document audit findings. The agency's Quality Manager, Engineering Manager, and agency's management shall recommend appropriate corrective actions. The Engineering Manager shall ensure that the agency implement recommended corrective actions. This audit must be performed on a quarterly basis, i.e., a minimum of four audits must be performed.

1.0 The inspector is approved for the special inspection category being performed at the time of the audit.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

2.0 The inspector has notified CCDDS-BD of commencement of inspection of a job through filing a project start up form.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

3.0 The inspector has verified that the permit covers the work in progress.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

4.0 The inspector has notified CCDDS-BD within one business day when the work does not have a permit or exceeds the scope of an active permit.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

5.0 Unless otherwise approved by the Building official or provided in the technical codes, the inspector is providing inspection on a continuous basis.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

6.0 The inspector is inspecting the work for conformance with approved construction documents, plan revisions, and supporting documents.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

7.0 The inspector is not utilizing construction documents that do not carry the CCDDS-BD approval mark except as an aid to inspection.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

8.0 The special inspector is generating and signing a daily inspection report for any time spent at the project site.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

9.0 Daily reports are legible and signed by the inspector performing the work.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

10.0 The inspector is maintaining inspection reports, testing results and other project documents in the project field file.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

11.0 Daily reports in the project file are not co-signed by another person.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

12.0 The inspector has generated area acceptance reports for each major phase or logical segment of the work.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

13.0 The daily reports comply with the technical guidelines and the technical codes.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

14.0 Nonconforming items not resolved the same day, or about to be incorporated in the work, were recorded in a non-compliance report.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	

15.0 The inspector is maintaining a log of non-compliance reports and corrections in the project field file.

Comments	
Deficiencies Noted	
Recommended Corrective Actions	
Corrective Actions Undertaken	