



Clark County Building Department

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| | | | |
|------------------|----------------------------------|--------------------------------|-------------------|
| Division: | Engineering | Policy & Procedure: | TG-50-2024 |
| Subject: | Final Report Requirements | Effective Date: | 04/01/2024 |
| Code: | 22.02.525 (B) (2) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Guideline is to give general direction regarding reporting requirements during the performance of special inspection activities. A Final Report is required under section 22.02.525 (B) (2) of the Clark County Building Administrative Code.

2.0 SCOPE: The Approved Agency, a subcontracted agency, approved personnel, and Registered Design Professional shall submit specific reports and other documents to the Building Official as outlined in this guideline. These reports and other documents are required at specific stages during the construction of projects that require special inspection. The intent of these reports and other documents is to provide the results of observations, tests, and other information that confirms work requiring inspection was inspected.

3.0 ABBREVIATIONS & ACRONYMS

- BAC:** Building Administrative Code
- BDIA:** Building Inspection Agency
- CCBD:** Clark County Building Department
- IBC:** International Building Code
- ICC:** International Code Council
- NDT:** Non-destructive Testing
- SNA-IBC:** Southern Nevada Amendments to the IBC
- TG:** Technical Guideline
- TRG:** Technical Reporting Guideline

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, the IBC and the BAC of Clark County.

Certificate of Compliance: A certificate stating that materials and products meet specified standards or that work was done in compliance with approved construction documents.

Compliance: Conformity in fulfilling Building official requirements.

Final Report: A complete report with a separate section for each category of inspections and testing performed.

Inspection Completion Report: A report to the Building Official that states that all the required activities for a special inspection category are complete and acceptable.

Non-Compliance Report: A report to the Building Official and to the contractor which identifies an item not conforming to the approved construction documents.

Partial Final Report: An incomplete report with a separate section for each category of inspections performed.

Registered Design Professional: An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed.

Technical Reporting Guideline: A guideline that provides inspection and testing responsibilities and daily reporting requirements.

5.0 REFERENCES:

BAC, Clark County Building Administrative Code
IBC, International Building Code
SNA-IBC, Southern Nevada Amendments to the IBC
Technical Guidelines
Technical Reporting Guideline

6.0 RESPONSIBILITIES:

6.1 Approved Agency

- 6.1.1 It is the responsibility of the Approved Agency to submit digitally signed and sealed final report from a Nevada registered design professional per NRS statutes stating that all work requiring third party inspection was inspected, reported, and found to be in compliance with the approved construction documents, IBC, and the BAC. The Final Report shall certify that all inspection and testing requirements were completed as required or exceptions taken and documented as being acceptable to the building official or their designee.
- 6.1.2 The Approved Agency shall submit a partial final report when requested by the Building Official or their designee.
 - 6.1.2.1 The partial final report shall meet all the requirements listed under 6.1.1.
 - 6.1.2.2 The area and scope of the special inspection activities shall be defined.
 - 6.1.2.3 Outstanding noncompliance reports shall be included.
 - 6.1.2.4 The partial final report exclusions shall be defined.
- 6.1.3 Noncompliance reports and Record of Correction reports shall be included.
- 6.1.4 The Approved Agency must upload corrected documents when deficiencies are identified during CCBD review. The resubmittal must include the resolutions addressing each deficiency and any applicable document.
- 6.1.5 The Final Report shall be flattened and submitted electronically through Citizen Access Portal.
- 6.1.6 The Approved Agency shall use CCBD forms/templates and complete all fields, when applicable.
- 6.1.7 CCBD Documents/Forms shall not be materially altered.

6.2 Subcontracted Agency

- 6.2.1 It is the responsibility of the Subcontracted Agency to submit a copy of all records of inspection activities to the Approved Agency within 24-hours of completion of inspection.
- 6.2.2 The Subcontracted Agency shall respond to deficiencies noted by the building official and their designee.

6.3 Structural Observer

- 6.3.1 The structural observer shall perform structural observations per section 1704 of the IBC. Additional information and requirements are contained within TG-10.
- 6.3.2 The structural observer shall use the Structural Observation Report (Form 802).
- 6.3.3 The structural observer shall submit final structural observation report to CCBD at the completion of the project per TG-10.

6.4 CCBD – Engineering Division

- 6.4.1 It is the responsibility of the CCBD Engineering Division to review inspection documents for compliance to the Agency Inspection Agreement and the BAC. CCBD staff shall review submitted reports and documents for compliance with the content and format requirements of this Guideline.
- 6.4.2 Deficiencies requiring correction shall be sent to the Approved Agency as a disapproved inspection with comments describing the report deficiencies. Such comments will be accessible through the Citizen Access Portal under the BDIA or BD number.

6.4.3 A Partial Final Grading Report or Partial Final Report may be accepted at the discretion of the CCBD staff.

7.0 PROCEDURE: Agencies shall submit to CCBD the Inspection Final Reports and other inspection documents. IBC is the code utilized for the below listed items.

7.1 Submission of Report

7.1.1 Reports shall be submitted online through the Citizen Access Portal, by uploading report files under the assigned BDIA record number with the correct document type.

7.2 Final Report

7.2.1 Final Report Contents

- Form 843 Certificate of Compliance (IBC 1704.5) – Agencies must use the CCBD form. No additions, deletions, or other edits to this document will be accepted.
- Final and Partial Final Reports must be electronically signed and sealed by the Agency’s Nevada Registered Design Professional as required by the NRS.
- Table of Contents.
- A copy of the corresponding active building permit.
- Agency Inspection Agreement.
- Form 803 Project Startup Form.
 - Agencies are required to submit the form online through the Citizen Access Portal, as required in the BAC to the BDIA record number.
- Form 868 Subcontracting Approved Agency Services.
 - Agencies are required to submit the form online through the Citizen Access Portal, within 24 hours of first subcontracted inspection to the BDIA record number.
- Each inspection category shall have its own section, i.e., concrete, masonry, structural steel, wood, etc. Refer to the Inspection Report Designation System (IRDS) in Appendix B for daily report numbering system. Reports shall be numbered sequentially and categorized by IRDS.
- Each inspection category shall include daily reports, test data, noncompliance reports, record of correction reports, inspection completion reports, and area acceptance reports, and supporting documents when applicable.
 - Inspection items not required shall not be submitted.
- CCBD approved work plans and work plan resolutions in accordance with Appendix C, when applicable.
- Applicable items or reports as deemed necessary by CCBD staff.
- Additional informational documents may be supplied by the Approved Agency.

7.2.2 Final Report Section Requirements

7.2.2.1 General

- Daily inspection reports must comply with the applicable TRG.
- Inspection completion reports for each category must be included in each section.

7.2.2.2 Concrete Construction (IBC Chapter 19 & 1705.3, SNA-IBC 1705.3)

- CCBD approved mix designs required for all concrete which exceeds 2500 psi by design.
- Concrete compressive strength test results.
- Precast / prestressed concrete product certification (concrete products, tension cables).
- Post-tensioned equipment calibration certifications.

7.2.2.3 Cast-in-Place Deep and Helical Pile Foundations (IBC 1705.8, 1705.9, & 1810)

- Form 888B Deep Foundation Area Sign Off.
- Form 889 Deep Foundation Elements Inspection.
- Form 890 Deep Foundations Elements Tracking Log.

7.2.2.4 Driven Deep Foundations (IBC 1705.7 & 1810)

7.2.2.5 Exterior Walls, Exterior Architectural Features, Veneer, EIFS, Glass Panel, and Steel Framing of Walls Verification (IBC 1705.16, SNA-IBC 1705.16)

- Installation Cards.
- Fabricator Certificate of Compliance.
- Fabricator Inspection Agency Final Report, when applicable.

7.2.2.6 Fire-Resistant Penetration and Joint (IBC 1705.17)

- Form 873 A Fire Stop Daily Inspection Report.
- Form 869 Installer Verification Report.
- Form 874 Fire Stop Area Acceptance Report.
- Form 875 Fire Stop Item Completion Report.
 - Form 875 shall be the last report in this section.
- Approved Engineering Judgments.
- Approved Systems.

7.2.2.7 Masonry Construction (IBC Chapter 21, 1705.4, & SNA-IBC 1705.4)

- Testing or material certifications for determination of f'm.
 - CMU Block Certification
 - Grout Mix Design
 - Mortar Certification
- Clark County approved mix designs are required for grout which exceeds 2500 psi by design.

7.2.2.8 Soils (IBC Chapter 18 & 1705.6, SNA-IBC 1705.6)

- Final grading report as required by SNA-IBC Section J105.1.2.
 - Summary of Density Testing table.
- In the event that the final grading report has been previously reviewed and accepted it does not need to be included in the Final Report.
- Rough Grading permits require certification of the entire permitted area, cannot be limited to anticipated building areas.

Early and Final Grading Permits

- On sites with early grading permit, a final grading permit is required.
 - These 2 permits will have different numbers.
 - A final grading report is required for the early grading permit.
- CCBD staff will not process Pad Certifications to an early grading permit unless a final grading permit has been issued.
- When both permits are issued, CCBD staff will require that the Pad Certifications or final grading report have both permit numbers listed on the report.

Pad Certifications and Pad Recertifications

- As required by SNA-IBC Section J105.1.3 and J105.1.4.
 - Form 105 Pad Certification and Pad Recertification
- A Pad Certification report may not be accepted for a permit with a “Disapproved” inspection.

- Pad Certifications may not be accepted on subdivisions or developments after 90 percent of the pads have been certified. An approved final grading report will be required on the grading permit.

7.2.2.9 Special Cases – Anchors (IBC 1705.1.1)

- Form 851 Post Installed Mechanical Anchorage Clearance Report.
- Form 811a and Form 811b Post Installed Adhesive Anchorage Clearance Report.

7.2.2.10 Special Cases – Other (IBC 1705.1.1)

- Applicable items or reports as deemed necessary by the Building Official or their designee.

7.2.2.11 Sprayed Fire-Resistant Materials (IBC 1705.14) & Mastic and Intumescent Fire-Resistant Coatings (IBC 1705.15)

- Density test results.
- Adhesion and cohesion bond strength test results.

7.2.2.12 Steel Construction (IBC Chapter 22 & 1705.2, 1705.12.1, 1705.12.3)

- Structural steel frame and base plate grouting inspections and testing reports.
- Welding and NDT inspection reports.
 - Form 829 Welding Qualification Record.
- Bolting inspection reports to include bolt testing and equipment calibration reports (this applies to high strength and non-high strength bolting applications).
 - Pretensioned joints with bolt sizes 1-1/2” diameter and greater shall have pre-installation verification confirmed in a laboratory in lieu of field test.
- Approved Fabricator/manufacturer certificate of compliance shall be contained in the structural steel frame section, or in the applicable high strength bolting, welding, or light gauge steel section.
- Non-approved structural steel fabricators shall have their products inspected and tested as required by applicable codes and technical guideline TRG-Steel requirements.
- Welding Procedures referenced on daily reports.
- Registered design professional sealed fabricator shop inspection agency final report.

7.2.2.13 Wood Construction

- Wood Daily Inspection Reports.
- Form 838 - Wood Inspection Report.

7.3 Partial Final Report

7.3.1 General

- Form 844 Partial Certificate of Compliance (IBC 1704.5) – Agencies must use the CCBD form. No additions, deletions, or other edits to this document will be accepted other than requested information.
 - Partial Certificate of Compliance shall clearly delineate the completed areas, levels, and/or locations and the area remaining to complete the permit's scope.
 - All inspection reports, including an area acceptance report, for the areas, levels, and/or location shall be submitted.
- Partial Final Reports shall comply with the applicable requirements from 7.2 Final Report.
- When requested by the Building Official, the Inspection Agency shall submit a Partial Final Report.

8.0 RECORDS: Submitted Inspection Documents are records maintained by CCBD.

9.0 ATTACHMENTS:

Appendix A: Form 843 - Final Certificate of Compliance
Form 844 - Partial Certificate of Compliance
Form 105 – Pad Certification / Pad Recertification

Appendix B: TRG-Daily

- Form 803 - Project Start Up Form
- Form 868 - Subcontracting Approved Agency Services
- Inspection Report Designation Numbering System (IRDNS)

TRG-Deep Foundation Elements

- Form 314 – Deep Foundation Inspection
- Form 889 - Deep Foundation Elements Inspection Form
- Form 888B - Deep Foundation Elements Area Sign Off
- Form 890 - Deep Foundation Elements Tracking Log

TRG-Concrete

- Form 811a - Post Installed Adhesive Anchorage Clearance Report (1st Installation)
- Form 811b – Post Installed Adhesive Anchorage Clearance Report (2nd Installation)
- Form 851 - Post Installed Mechanical Anchorage Clearance Report

TRG-Exterior Walls

- Sealant Cards and Inspection Responsibility Delineation

TRG-Fire Penetration

- Form 869 - Fire Stop Installer Verification Form
- Form 873-A - Fire Stop Daily Inspection Report
- Form 874 - Fire Stop Area Acceptance Report
- Form 875 - Fire Stop Item Completion Report

TRG-Fireproofing

TRG-Masonry

TRG-Steel

- Form 829 - Welder Qualification Record

TRG-Wood

- Form 838a - Wood Inspection Form

Appendix C: Work Plan

Prepared By: Marc Fernandez, P.E.

Date Prepared: 01/24/2024

Revision History:

| Title | Revision/Approved Date | Effective Date |
|------------|------------------------|-------------------|
| TG-50-2024 | January 24, 2024 | April 1, 2024 |
| TG-50-2022 | April 14, 2022 | April 14, 2022 |
| TG-50-2012 | July 20, 2012 | August 3, 2012 |
| TG-50-2009 | February 1, 2010 | February 12, 2010 |
| TG-50-2008 | October 10, 2008 | October 17, 2008 |
| TG-50-2006 | February 27, 2006 | March 15, 2006 |
| TG-50-96 | November 25, 1996 | November 25, 1996 |

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Appendix A:

- Form 843 - Final Certificate of Compliance
- Form 844 - Partial Certificate of Compliance
- Form 105 - Pad Certification/Recertification

**COMPANY LETTERHEAD
ADDRESS and TELEPHONE**

CERTIFICATE OF COMPLIANCE

CLIENT INFO

DATE

Final Report

Project Name:

Project Address:

Permit No.

BDIA No.

Project No.

COMPANY NAME performed and completed the special inspection services for the **PROJECT NAME** project and is in compliance with the Clark County Building Department (CCBD) approved construction documents, technical guidelines, technical codes, and the approved agency inspection agreement. **COMPANY NAME** performed the Item(s) _____ special inspection services.

SUBCONTRACTED APPROVED AGENCY performed the Item __ special inspection service. All inspections performed by **SUBCONTRACTED APPROVED AGENCY** were reviewed and accepted by **COMPANY NAME**. (This paragraph may be deleted if there has been no subcontracting)

Only CCBD approved personnel were utilized to perform those specific inspections as required by the Approved Agency Inspection Agreement. Any items that were found to be in noncompliance with the approved construction documents were repaired or replaced and re-inspected for acceptance.

Attached for your review are the daily inspection reports, testing results, and other applicable reports.

CCBD REVIEW STAMP

REGISTERED DESIGN PROFESSIONAL'S
SEAL HERE



**COMPANY LETTERHEAD
ADDRESS and TELEPHONE**

PARTIAL CERTIFICATE OF COMPLIANCE

CLIENT INFO

DATE

Partial Final Report

Project Name:
Project Address:
Permit No.
BDIA No.
Project No.

COMPANY NAME performed and completed the special inspection services for the **PROJECT NAME** project and is in compliance with the Clark County Building Department (CCBD) approved construction documents, technical guidelines, technical codes, and the approved agency inspection agreement. **COMPANY NAME** performed the Item(s) _____ special inspection services.

SUBCONTRACTED APPROVED AGENCY performed the Item __ special inspection service. All inspections performed by **SUBCONTRACTED APPROVED AGENCY** were reviewed and accepted by **COMPANY NAME**. (This paragraph may be deleted if there has been no subcontracting)

Exclusions: _____
(To be filled by the Approved Agency)

Only CCBD approved personnel were utilized to perform those specific inspections as required by the Approved Agency Inspection Agreement. Any items that were found to be in noncompliance with the approved construction documents were repaired or replaced and re-inspected for acceptance.

Attached for your review are the daily inspection reports, testing results, and other applicable reports.

CCBD REVIEW STAMP

REGISTERED DESIGN PROFESSIONAL'S
SEAL HERE





Agency Logo
Agency Address
Agency Phone No.

Pad Certification

_____ AGENCY NAME _____ performed and completed the grading special inspection services for the subject project. This document is used as an interim document until a Final Grading report is completed.

Pad Recertification

Project Information

Client Name _____ Project No. _____ Date: _____

Project Name _____ Project Address _____ Vertical Permit No. _____

BDIA No. _____ Early Grading Permit No. _____ Final Grading Permit No. _____

Lot/Building No./Gridlines _____ Building Footprint + 5' Beyond Lot Line to Lot Line Basement Pad Other _____

Sulfate Exposure: S0 S1 S2 S3 Expansive properties: Low Moderate High Critical 12 Critical 16 Critical 20+

Name(s) of the approved special inspector(s) and technicians: _____

Pad Certification: First test date of the final lift: _____ Inspections Frequency: Continuous Periodic

Pad or structure description: _____

Pad Recertification: Site Visit Date: _____ Pad Moisture Data: _____

Condition of Pad: _____

Reworking of Pad: _____

I certify that the grading and earthwork are complete and substantially comply with the requirements of the geotechnical report of record including any approved supplements or addenda.

Registered Design
Professional's Seal Here

CCBD Review Stamp

Only Clark County Building Department (CCBD) approved personnel were utilized to perform those specific inspections as required by the Inspection Agreement. Any items that were found to be in noncompliance with the approved geotechnical report of record including any approved supplements or addenda were brought into compliance and re-inspected for acceptance.

Appendix B:

TRG-Daily
TRG-Deep Foundations
TRG-Concrete
TRG-Exterior Walls
TRG-Fire Penetration
TRG-Fire Proofing
TRG-Masonry
TRG-Steel
TRG-Wood



Clark County Building Department

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| | | | |
|------------------|-------------------------------------|--------------------------------|------------------|
| Division: | Engineering | Policy & Procedure: | TRG-Daily |
| Subject: | Daily Reporting Requirements | Effective Date: | 04/01/2024 |
| Code: | BAC 22.02.525 (B) (1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Reporting Guideline is to specify minimum daily reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B) (1) of the Clark County Building Administrative Code (BAC) and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The Approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the visual inspections & material tests that confirm work requiring special inspection was inspected and found to be in compliance with the approved construction documents and the Clark County Building Administrative Code.

3.0 ABBREVIATIONS & ACRONYMS

- BAC:** Building Administrative Code
- CCBD:** Clark County Building Department
- IBC:** International Building Code
- NRS:** Nevada Revised Statutes
- SNA-IBC:** Southern Nevada Amendments to the International Building Code
- TG:** Technical Guideline
- TRG:** Technical Reporting Guideline

4.0 DEFINITIONS

For the purposes of this technical reporting guideline certain terms, phrases, words and their derivatives, shall be construed as specified in this section, the technical codes, and the Clark County BAC.

Approved Revisions: Changes made to the original construction documentation which have been submitted to CCBD for review and are accepted.

Area Acceptance Report: A report to the Building Official which states that all the required activities for special inspection item(s) such as concrete, masonry, wood, etc. are complete and acceptable for a portion of the permitted work.

BDIA: Permit specific approved agency special inspection record.

Construction Documents: Plans, specifications, supporting calculations and other data prepared to describe the design, materials, physical characteristics, location, orientation, and scope of a proposed project necessary to obtain a permit.

Daily Report: A report that shall include all inspections, observations, testing activity, non-compliances, area acceptance reports, etc. that took place on that day.

Inspection Completion Report: A report to the Building Official that states that all the required activities for a special inspection category are complete and acceptable.

Non-Compliance Report: A report to the Building Official and to the contractor which identifies an item not conforming to the approved construction documents.

Record of Correction: A report used to clear noncompliant work that has been documented in the Non-Compliance Report.

5.0 REFERENCES:

BAC, Clark County Building Administrative Code
IBC, International Building Code
SNA-IBC, Southern Nevada Amendments to the IBC
Technical Guidelines

6.0 RESPONSIBILITIES:

6.1 Approved Agency

- The quality manager shall ensure that the Approved Agency has provided sufficient staff to perform the required special inspections.

6.2 Approved Personnel

- Inspection as herein required of the materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with approved construction documents and referenced standards (see IBC Section 1704). Approved personnel shall only perform special inspection functions they are qualified and approved to perform. Each approved personnel shall be approved by the Building Official in the applicable inspection category prior to performing any special inspection duties.
- The approved personnel shall use the most recent CCBD approved construction documents.
- The approved personnel shall maintain copies of all inspections and laboratory reports at the job site until all special inspection and/or testing is completed.
- Inspections and laboratory report shall be placed in a project book prior to leaving the project site.
 - The project book shall be organized by inspection categories with the reports in numerical sequence.
 - Noncompliance reports shall be placed in the front of each category section.
 - A copy of the permit and approved agency agreement shall be included in the project book.
- Inspections and laboratory reports content shall not be modified after the date of the report.
 - Should material corrections and/or modifications to any report be necessary, a new revised report shall be issued. Modifications of the report body shall be done on a separate report. Nomenclature shall be the same as the corrected report with an additional assigned letter. (i.e., SW-01-a and SW-01-b).

7.0 PROCEDURE:

7.1 Daily Inspection Report (IBC Chapter 17, BAC 22.02.525 (B)(1))

7.1.1 Author

- Legal Legibly Printed Name
- Original Signature
 - Adobe or other digital software that meets the NRS requirements.
 - Original wet handwritten signature.
 - Digital signature utilizing a stylus/pen or writing pad.
 - Each issued report shall have an original signature applied; no software-saved signatures can be applied.

7.1.2 Content

- The report must be a standalone document and shall be maintained on site.
- Reports shall be numbered sequentially for each category as per the attached Inspection Report Designation System guideline.
- The report shall contain the permit number, BDIA number, project address, date, and a description of the area inspected (gridlines, alignment stations, or other method to clearly

identify the area). The daily reports shall be legible and signed by the approved personnel that performed the work.

- Document that the CCBD approved construction documents are on site and used to perform the inspection, including references to the detail and page numbers and all other applicable sources to describe what was physically inspected or taking place.
 - Document the date the construction documents were approved.
- Any non-compliant element shall be referenced on each daily report when the condition is applicable to the inspection.
- The phrase "*As per approved plans and specifications*", or similar, shall not be used as a catch-all phrase.
- All material inspection reports must include documentation of identification markings which conform to the ASTM standards specified in the approved construction documents and verify manufacturer's certified mill test reports, when required.
- The daily inspection report must state that all the work performed is in compliance with the approved construction documents, technical guidelines, and technical code, or reference the applicable noncompliant report.
- The approved personnel shall immediately notify the contractor and the Building Official or their designee in writing of non-conformance to the approved construction documents, or other violations of the technical codes within the scope of their special inspection activities. Revisions to the approved construction documents, including any sketch, shop drawing, bulletin page, RFI, detail, engineering analysis, designs, or emails with additional information or clarification, and calculations shall be signed and stamped by a Nevada registered design professional and approved by CCBD, and shall be attached to the daily report if 8 ½ x 11 or 11 x 17 and referenced if larger than 11x 17 in the daily report.

7.1.3 Frequency

- The approved personnel shall write a daily report for each day they are on the project site, for each individual category inspected.
- The approved personnel shall comply with the BAC 22.02.525 (B)(1).

7.2 Non-Compliance Report (BAC 22.02.525)

7.2.1 Author

- Legal Legibly Printed Name
- Original Signature
 - Adobe or other digital software that meets the NRS requirements.
 - Original wet handwritten signature.
 - Digital signature utilizing a stylus/pen or writing pad.
 - Each issued report shall have an original signature applied; no software-saved signatures can be applied.

7.2.2 Content

- The report must be a standalone document and shall be maintained on site.
- Non-compliance reports shall be placed in the front of the category they belong and be numbered sequentially in each individual category.
- The report shall contain the permit number, BDIA number, project address, date, and a description of the specific area or equipment inspected (gridlines or other methods to clearly identify the area or equipment).
- The report shall contain a detailed description of the deficient condition and/or reference a daily report containing all information necessary to describe the deficient condition.
- NCR must reference any and all non-approved documents that work is being performed in accordance with:
 - Attach a copy of the non-approved document(s) to the noncompliance report.

- If no documentation is provided at the time of inspection, a detailed description of the in-place condition must be noted on the NCR or referenced daily report. A statement of “no detail provided” must be noted on the report.
- Portions of work covered or concealed, and no Engineer of Record sealed documents are provided, a Non-Compliance Report shall be issued.
 - Non-Compliance Reports issued for work covered or concealed shall be uploaded under the BDIA number as documents type NCR Work Concealed.
- The report must reference all sketches, shop drawings, bulletin page, RFI, detail, engineering analysis, designs, or emails with additional information or clarification, calculations plans, sheets or letters used for the inspection with trackable notations, as sheet numbers, sketch numbers, and dates of origin or revision numbers.
 - Letters must have a trackable reference such as author and date.
 - Sheets larger than 11” X 17” may be referenced using a trackable notation.
- The non-compliance report shall reference the daily report number and shall be numbered sequentially for each category.
- A separate non-compliance report shall be written for each type of non-complying item/condition.
- A non-compliance report log shall be maintained by the inspection agency.
 - All non-compliance reports must be entered into the non-compliance report log.
 - The non-compliance report log shall be placed in the project book.
 - Approved Agency may use the TG-49 Appendix A NCR Weekly Log File.

7.2.3 Frequency

- The approved personnel shall comply with the BAC 22.02.525 and shall immediately notify the contractor of the condition.
 - This report is to be written immediately upon finding such deficiency, unless corrected prior to leaving the site.

7.3 Record of Correction (BAC 22.02.525)

7.3.1 Author

- Legal Legibly Printed Name
- Original Signature
 - Adobe or other digital software that meets the NRS requirements.
 - Original wet handwritten signature.
 - Digital signature utilizing a stylus/pen or writing pad.
 - Each issued report shall have an original signature applied; no software-saved signatures can be applied.

7.3.2 Content

- The report must be a standalone document and shall be maintained on site.
- The report must contain the permit number, BDIA number, project address, date, and a description of the area inspected (gridlines or other method to clearly identify the area).
- Record of correction reports shall be placed in front of the corresponding non-compliance. It shall be numbered to match the noncompliance number it is clearing.
- One record of correction item per report.
- The approved personnel must state the current condition of the item and re-inspection date.
- The approved personnel must state how the condition has been resolved and that the work is in compliance with CCBP approved resolution to the construction documents, including any daily reports generated by reinspection.
- Record of correction reports shall be accompanied by the approved structural revision including all sketches, shop drawings, bulletin page, RFI, detail, engineering analysis, designs, or emails with additional information or clarification, calculations, plans, sheets or letters approved by

CCBD that were needed to clear the non-compliance report. Sheets larger than 11”x17” may be referenced only.

- The report shall also identify and describe the re-inspection/testing process, results, and location, if applicable.
- In the case of work without a permit one record of correction may clear multiple noncompliance reports. The record of correction shall list the noncompliance report numbers.

7.3.3 Frequency

- A record of correction shall be written when a reported non-compliance item/condition has been addressed by the engineer of record and approved by CCBD staff or re-inspected.

7.4 Area Acceptance Report (BAC 22.02.525)

7.4.1 Author

- Legal Legibly Printed Name
- Original Signature

7.4.2 Content

- The report must contain the permit number, BDIA number, project address, and date.
- The report must be a standalone document and shall be maintained on site.
- The area acceptance report shall be included in the daily report category and be numbered sequentially per the attached Inspection Report Designation System guideline.
- The report must identify the area accepted (gridlines or other method to clearly identify the area).
- The report must reference the daily reports and state that all the work performed in the area specified is in compliance with the approved construction documents, technical guidelines, and technical codes.
- An area acceptance report for each category is to be written for each level/floor of work completed.

7.4.3 Frequency

- Area acceptance reports shall be furnished to CCBD staff, when requested, for the work performed.

7.4.4 This report shall be signed and approved by the item specific approved personnel, Quality Manager, or Engineering Manager.

7.5 Inspection Completion Report (BAC 22.02.525)

7.5.1 Author

- Legal Legibly Printed Name
- Original Signature
 - Adobe or other digital software that meets the NRS requirements.
 - Original wet handwritten signature.
 - Digital signature utilizing a stylus/pen or writing pad.
 - Each issued report shall have an original signature applied; no software-saved signatures can be applied.

7.5.2 Content

- The report must contain the permit number, BDIA number, project address, and date.
- The report must be a standalone document.
- The report must reference the daily reports, any non-compliance report and the corresponding record of correction, and state, "all work associated with the inspection item is complete and in compliance with the approved construction documents, technical guidelines, technical codes, and manufacturer's specifications."

7.5.3 Frequency

- Each category must have its own inspection completion report.
- This document must be the last report within each category to be presented in the final report.

8.0 RECORDS:

8.1 Daily inspection reports, test data, non-compliance reports, record of corrections, inspection completion report, and area acceptance reports, when applicable, shall be included in the Final Report.

9.0 ATTACHMENTS:

Form 803 - Project Start Up Form
Form 868 Subcontracting Form
Inspection Report Designation System (IRDS)

Prepared By: Marc Fernandez, P.E.

Date Prepared: 01/24/2024

Revision History:

| Title | Revision/Approved Date | Effective Date |
|-----------|------------------------|-------------------|
| TRG-Daily | January 24, 2024 | April 01, 2024 |
| TRG-Daily | April 14, 2022 | April 14, 2022 |
| TRG-Daily | July 20, 2012 | August 3, 2012 |
| TRG-Daily | February 1, 2010 | February 12, 2010 |
| TRG-Daily | October 10, 2008 | October 17, 2008 |
| TRG-Daily | July 26, 2006 | July 28, 2006 |
| TRG-Daily | February 27, 2006 | March 15, 2006 |



Clark County Building Department

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Project Start-Up Notification of Special Inspections

James Gerren, P.E., Director
Werner Hellmer, P.E., Deputy Director • Scott Telford, P.E., Deputy Director

Pursuant to the Building Administrative Code Section 22.02.525, the approved agency shall notify the Building Official within 48 hours of commencement of special inspection activities on a project. Depending on the scope of the project, multiple notifications may be required, such as first notification prior to earthwork activities and second notification prior to superstructure construction.

Agency: _____ Notification Date: _____ Commenced On: _____

Project Name/Phase: _____ Permit No.: _____

Project Address (cross streets): _____ BDIA No.: _____

REQUIRED SPECIAL INSPECTION ACTIVITIES: (Mark all that apply)

- Concrete
- Fireproofing
- Grading
- Helical Pile Foundation
- Smoke Control
- Electrical Testing
- Energy Efficiency
- Special Cases Other: _____
- Masonry
- Special Cases Anchors
- Cast-In-Place Deep Foundation
- Wood
- Garage Ventilation
- Amusement/Transportation Systems
- System Commissioning
- Steel
- Exterior Wall System
- Driven Deep Foundation
- Fire Penetration
- Test and Air Balance

Check all applicable boxes.

- There is no permit on site.
- There are no approved plans on site.
- NCR's are attached for your review.
- Unapproved fabricator.



Clark County Building Department

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Subcontracting Approved Agency Services

James Gerren, P.E., Director

Werner Hellmer, P.E., Deputy Director • Scott Telford, P.E., Deputy Director

Commencement of Subcontracted Inspections

Pursuant to the BAC, Section 22.02.510, the Approved Agency shall provide in writing a written declaration that it's in responsible charge of all subcontracted inspections. The Approved Agency is responsible for notifying the Building Official in writing of any changes in the designated subcontracted agencies.

Approved Agency: _____ Notification Date: _____

Project Name/Phase: _____ Permit No.: _____

Project Address (cross streets) _____

Approved Agency Permit No. _____

Initial Declaration

Revised Declaration

Subcontracted Agency Name 1: _____ Scope: _____

Subcontracted Agency Name 2: _____ Scope: _____

Subcontracted Agency Name 3: _____ Scope: _____

I, _____, the designated Agency Engineering Manager declare that I am in responsible charge of all special inspection activities, including the work to be performed by the subcontracted inspectors, for the above project. This form will be uploaded to Clark County Building Department within 24 hours of commencement of subcontracted inspections. (References: NRS 625.080, BAC 22.02.035, and BAC 22.02.510)

Engineering Manager Signature _____

Inspection Report Designation System (IRDS)

The following is a summary of Field Inspection Report designation system. This system is based on special inspection categories and subcategories in Technical Guideline TG-17. This system is to be used by special inspection personnel on all reports, including daily and final reports.

Column 1 - Types of construction that may require special inspection. **NOTE:** Designations used for the various field activities are for report numbering only and are not intended to correspond to approval categories.

Column 2 - Final Report Section

Column 3 - Report Numbering System: **CONSTRUCTION TYPE+REPORT NUMBER** (examples: C-C-1, C-R-1, S-W-1, M-R-1). All reports must be sequentially numbered, i.e., 1, 2, 3, etc., within the same construction type. For example, C-C and C-R and C-SOG reports all begin with report number 1.

| Construction Type (Field Activity) | Final Report Section | Daily Report Numbering System |
|--|---------------------------------------|---|
| Concrete placement / Shotcrete (C-C) | Concrete | C-C(-1, -2, -3,... etc.) |
| Post-tensioned (PT) steel for elevated slabs & structural PT Slab-On-Gound (S.O.G.) designed with >150 psi prestress Mild reinforcing steel, Bolts and other embedded items (C-R)(C-B) | | C-R(-1, -2, -3,... etc.) C-B(-1, -2, -3...etc.) |
| Reinforcing & Post-tensioned steel for S.O.G. (C-SOG) | | C-SOG(-1, -2, -3,... etc.) |
| Fabrication of concrete cylinders, including base-plate grout samples, & verification tests (C-T) | | Chain of Custody/Test Results Sheets |
| Masonry Reinforcing steel, Bolts and other embedded items (M-R) (M-B) | | M-R(-1, -2, -3,... etc.) M-B(-1, -2,..., etc.) |
| Masonry Grouting (M-G) | Masonry | M-G(-1, -2, -3,... etc.) |
| Fabrication of prisms & grout cubes (M-T) | | Chain of Custody/Test Results Sheets |
| Structural Steel (S-S) | | Steel |
| Structural Steel & Welding (S-W) | S-W(-1, -2, -3,... etc.) | |
| Structural Steel & High Strength Bolting (S-HB) | S-HB(-1, -2, -3,... etc.) | |
| NDT using Radiography method (RT) | RT(-1, -2, -3,... etc.) | |
| NDT using Magnetic Particle method (MT) | MT(-1, -2, -3,... etc.) | |
| NDT using Liquid Penetrant method (PT) | PT(-1, -2, -3,... etc.) | |
| NDT using Ultrasonic method (UT) | UT(-1, -2, -3,... etc.) | |
| Sprayed Fire-Resistant Materials, & Mastic and Intumescent Fire-Resistant Coatings (Fireproofing) (F) | Fireproofing | F(-1, -2, -3,... etc.) |
| | | Chain of Custody/Test Results Sheets |
| Soils (G) | Grading | G(-1, -2, -3,... etc.) |
| Rock Retaining Walls (G-RW) | | G-RW(-1, -2, -3,... etc.) |
| Soils Field Density Tests (G-T) | | G-T(-1, -2, -3,... etc.) |
| Special Case Anchors | Special Cases - Anchors | SCA(-1, -2, -3,... etc.) |
| Cast-in-Place Deep Foundations | Cast-In-Place Deep Foundations | CIP(-1, -2, -3,... etc.) |
| Helical Pile Foundations | Helical Pile Foundations | H(-1, -2, -3,... etc.) |
| Driven Deep Foundations | Driven Deep Foundations | D(-1, -2, -3,... etc.) |
| Inspection of special cases construction | Special Cases - Other | SCO(-1, -2, -3,... etc.) |
| Fire Penetration and Joints | Fire Penetration | FP(-1, -2, -3,... etc.) |
| System Commissioning | System Commissioning | SC(-1, -2, -3,... etc.) |
| Test and Balance | Test and Balance | TAB(-1, -2, -3,... etc.) |
| Garage Ventilation Systems | Garage Ventilation | GV(-1, -2, -3,... etc.) |
| Amusement Rides and Transportation Systems | ATS | ATS(-1, -2, -3,... etc.) |
| Wood | Wood | W(-1, -2, -3,... etc.) |
| Exterior Wall System | Exterior Wall System | E(-1, -2, -3,... etc.) |

NOMENCLATURE EXAMPLES:

C-C-1, C-C-2 C-P-1, C-P-2, C-R-1, C-R-2 are daily reports for concrete placement (C-C), PT (C-P) and mild reinforcing (C-R)

M-1, M-2, M-R-1, M-R-2, M-R-3, M-G-1, M-G-2 are daily reports for masonry materials (M), reinforcing (M-R) and grouting (M-G)

NCR-C-R-1, NCR-C-R-2, NCR-C-C-1, NCR-C-C-2 are non-compliance reports for reinforcing steel (C-R) and concrete placement (C-C)

ROC-C-R-1 is a record-of-correction report documenting resolution of NCR-C-R-1



Clark County Building Department

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| | | | |
|------------------|-------------------------------|--------------------------------|-----------------------------|
| Division: | Engineering | Policy & Procedure: | TRG-Deep Foundations |
| Subject: | Reporting Requirements | Effective Date: | 04/01/2024 |
| Code: | BAC 22.02.525 (B) (1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Reporting Guideline is to specify minimum daily reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B) (1) of the Clark County Building Administrative Code and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The Approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the visual inspections & material tests that confirm work requiring special inspection.

- 2.1 Driven Deep Foundations (IBC Chapter 18 & 1705.7., BAC 22.02.525 (B) (1))**
- 2.2 Cast-in-place Deep Foundations (IBC Chapter 18 & 1705.8., BAC 22.02.525 (B) (1))**
- 2.3 Helical Pile Deep Foundations (IBC Chapter 18 & 1705.9 BAC 22.02.525 (B) (1))**

3.0 ACCREDITATION AGENCIES AND OTHER ABBREVIATIONS & ACRONYMS:

- ASTM:** American Society for Testing and Materials
- BAC:** Building Administrative Code
- CCBD:** Clark County Building Department
- IBC:** International Building Code
- SNA-IBC:** Southern Nevada Amendments to the International Building Code
- USCS:** Unified Soil Classification System
- TG:** Technical Guideline
- TRG:** Technical Reporting Guideline
- NDT:** Non Destructive Testing
- CLSM:** Controlled low-strength material

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

- 5.0 REFERENCES (Adopted Editions):**
 BAC, Clark County Building Administrative Code
 IBC, International Building Code
 SNA-IBC, Southern Nevada Amendments to the IBC
 TG, Technical Guidelines

6.0 RESPONSIBILITIES:

- 6.1 Contractor’s Responsibilities**
 - 6.1.1** Provide all applicable approved plans, geotechnical report, and approved revisions/addendums to perform required special inspections per the IBC.
 - 6.1.2** The contractor shall use the location plan or foundation plan submitted during plan examination for the designation and location of the deep foundation elements. A copy of the plan shall be provided to the approved agency. A location plan is required per IBC 1810.4.3

6.1.3 Deep foundation elements shall not be covered, loaded, or erected upon, such as a pile cap, grade beam, slabs, columns, mat foundations, pilasters, or other structural element, until *Form 888-B Deep Foundation Area Sign Off* is submitted, reviewed, and approved by the building official or their designee.

6.2 Approved Personnel Responsibilities

6.2.1 Deep Foundation Element Inspection

The soils-deep foundation element approved personnel shall perform inspections required in the IBC and approved construction documents. In addition, the approved personnel shall confirm the following items comply with the approved construction documents where not required by the IBC:

- Placement location and identification.
- Element diameter and depth/length.
- Borehole excavation start date/time
- Continuous soil classifications including bottom bearing strata.
- Groundwater depth
- Bottom of excavation cleanliness (Cast-in-Place Elements)
- Borehole wall stability (i.e. no sluffing, no caving, no collapsing) (Cast-in-Place Elements)

6.2.2 Backfill Inspections

Backfill of any annular space around the deep foundation element shall be placed per the approved geotechnical report recommendations. If the project is designed with presumptive values without a geotechnical report the annular space shall be backfilled using one of the methods in IBC Chapter 1807.3.3 Backfill. Special inspections will be required for the backfill including field and laboratory testing. The daily inspections and test results shall be included with the deep foundation Final Report submitted under the structural permit.

6.2.3 Concrete Inspections

The concrete-deep foundation element approved personnel shall confirm the following items comply with the approved construction documents.

- Placement within approved timeframe after excavation
- Bottom of excavation cleanliness
- Borehole wall stability (i.e. no sluffing, no caving, no collapsing)
- Pre-concrete placement inspection, concrete reinforcement, and concrete placement inspection shall be performed per TRG-Concrete.
- Hardware elements shall comply with the approved construction documents for location, placement, dimensions, and they shall come from a CCBD approved fabricator. Inspection of hardware elements which are from a non-approved fabricator must follow TRG-Steel requirements.
- Nondestructive elements shall comply with the approved construction documents for location, placement, and installation.
- Theoretical and actual concrete volume per element.
- Verify the concrete placement complies with the current version of ACI318.
- Verify the concrete was continuously placed.

6.3 CCBD Structural Inspector Responsibilities (monitored projects)

- Verify the contractor is utilizing the approved construction documents, including the location plan or foundation plan submitted during plan examination with the designation and location of all deep foundation elements.
- Issue enforcement actions if the designation and location of all deep foundation elements is not included in the approved location plan or foundation plan and/or has not been issued to the inspection agency prior to commencement of work.

7.0 PROCEDURE:

7.1 Approved Agency

7.1.1 Submit Form 314 – Deep Foundation Inspection upon commencement of excavation for cast-in-place deep foundation. This form is used to meet the ‘Condition of Approval’ for ‘Deep Foundation Inspection’. Form shall be submitted to the BDIA.

7.1.2 Submit Form 888B Deep Foundation Area Sign Off to CCBD for approval

- Form 888B shall be submitted after completion of special inspections for excavation, reinforcing and concrete placement. F’c may be submitted in the Final Report.
- Include Form 890 Deep Foundation Elements Tracking with Form 888B.
- Deep foundation elements shall not be covered, loaded, or erected upon, such as a pile cap, grade beam, slabs, columns, mat foundations, pilasters, or other structural element, until Form 888B is approved.
- Form 888B is used as an interim document until a Final Report is completed.

7.2 Approved Personnel

7.2.1 The approved personnel shall utilize the *Form 889 Deep Foundation Elements Inspection*

- Each deep foundation element shall be documented on a separate form.
- The soils and concrete approved personnel may document their inspection on the same form.

7.2.2 The soils approved personnel shall document the following:

- Element location, type or designation, and number per the layout plan
- Design diameter and length/depth
- Actual diameter and length/depth
- Angle of inclination or number of degrees out of plumb with respect to the vertical
- Date of drilling operations for the element
- Start and end times of drilling operation for the element
- Continuous USCS soil classifications including bottom bearing strata.

7.2.3 The concrete approved personnel shall document the following:

- Reinforcement Details and Sheet Numbers:
- Reinforcement grade, size, and number
- Concrete cover clearance.
- Bottom of element condition
- Hardware and NDT elements
- Concrete supplier, mix design number, strength.
- Deep foundation element theoretical and actual volume
- Start and end times of drilling operation for the element

7.2.4 The approved personnel shall utilize the *Form 890 Deep Foundation Elements Tracking Log*.

- The log shall be updated daily or when work is performed or reported.
- The log shall accompany *Form 888-B Deep Foundation Area Sign Off*, and shall be available to CCBD staff at all times

8.0 ATTACHMENTS:

Form 314 – Deep Foundation Inspection
Form 889 - Deep Foundation Elements Inspection Form
Form 888B - Deep Foundation Elements Area Sign Off
Form 890 - Deep Foundation Elements Tracking Log

| | |
|--|----------------------------------|
| Prepared By: Marc Fernandez, P.E. | Date Prepared: 01/24/2024 |
|--|----------------------------------|

Revision History:

| Title | Revision/Approved Date | Effective Date |
|----------------------|-------------------------------|-----------------------|
| TRG-Deep Foundations | January 24, 2024 | April 01, 2024 |
| TRG-Deep Foundations | April 14, 2022 | April 14, 2022 |

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James Gerren, P.E., Director/Building Official

Werner Hellmer, P.E., Deputy Director • Scott Telford, P.E., Deputy Director

DEEP FOUNDATION INSPECTION

| | | | |
|------------------|--|----------|--|
| Permit No. | | BDIA No. | |
| Project Address: | | Date: | |
| Approved Agency: | | | |

The aforementioned approved agency is performing the special inspections as required in the International Building Code, approved construction documents, technical guidelines, and the Building Administrative Code for the above listed project. The aforementioned approved agency shall submit a notification of special inspection activities per BAC 22.02.525, A, 2. The Agency is submitting the form to CCBD upon commencement of Deep Foundation Inspection Activities to meet the 'Condition of Approval' for 'Deep Foundation Inspection'.

Quality Manager / Engineering Manager / Approved Personnel



Company Letterhead

Deep Foundation Area Sign Off

Client Name: _____ Date _____
Client Address: _____ Project No. _____
Project Name: _____
Project Address: _____
Permit No. _____ BDIA No. _____

The deep foundations listed below are complete, and substantially comply with the requirements of the original geotechnical report of record including any approved supplements or addenda. COMPANY NAME performed and completed the special inspection services for the Subject Project and is in compliance with the Clark County Building Department (CCBD) approved construction documents and approved revisions, technical guidelines, technical codes, and the approved agency inspection agreement. This letter is used as an interim document until a Final Report is completed.

- Cast-in-Place Helical Pile Driven Micropile
Continuous Special Inspection Non-destructive Testing Equipment Installed
Deep Foundation Elements Inspections Form(s) attached
Deep Foundation Elements Tracking Log – Form 890

Deep Foundation Element location(s)/designation(s)

The name(s) of the approved personnel _____

Only CCBD approved personnel were utilized to perform those specific inspections as required by the Inspection Agreement. For verification and the latest version of the Deep Foundation Elements Tracking Log – Form 890 will be submitted with the final report. Any items that were found to be in non-compliance with the approved construction documents, were repaired/replaced and re-inspected for acceptance.

Name _____
Signature _____



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Agency Logo

Jerome A. Stueve, P.E., Director
Samuel D. Palmer, P.E., Assistant Director • James Gerren, P.E., Assistant Director

Deep Foundation Elements Inspections Form

Project Information

Project: _____ Permit No. _____
 Report No. _____ BDIA Permit No. _____

Elements Specific Information

Location (gridlines) _____ Hole Diameter (Designed) _____
 Element Number _____ Hole Diameter (Actual) _____
 Type / Designation (Schedule) _____ Angle of Inclination / Out of Plumb (°): _____
 Drilled Length/Depth (Designed) _____ Clark County Plan Approval Date _____
 Drilled Length (s) /Depth (s) (Actual) _____ Revision No. (If Applicable): _____

Drilling Operations Log

Inspector Name: _____
 Signature _____
 Date of Drilling: _____ Continuous? Yes No
 Start Time: _____ End Time: _____

| Depth | Time | Material Description |
|-------|------|----------------------|
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Reinforcement Inspection

Inspector Name: _____
 Signature: _____
 Plan Details and Sheet Numbers: _____
 Reinforcement/Spirals (Count, Size and Spacing): _____

 Was NDT equipment installed? Yes No
 Hardware Elements Yes No Approved Fabricator? Yes No
 Hardware Description: _____
 Centralizers / Separators Used? Yes No

Concrete Placement

Inspector Name: _____
 Signature: _____
 Date of grouting: _____
 Start Time: _____ End Time: _____
 Discharge Method: _____ Continuous? Yes No
 Supplier: _____
 Mix Design Number: _____
 Specified Strength: _____
 Theoretical Volume, ft.³ _____ Actual Volume, ft.³ _____
 Clearance: To walls _____ and bottom bearing strata _____
 Bottom Conditions Dry Moist Water Table
 Bottom Cleanliness Verification Yes No

Related NCR's, RFI's, revision number, other relevant comments:



Clark County Building Department

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|------------------|--|--------------------------------|---------------------|
| Division: | Engineering | Policy & Procedure: | TRG-Concrete |
| Subject: | Concrete Reporting Requirements | Effective Date: | 04/01/2024 |
| Code: | BAC 22.02.525 (B) (1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Reporting Guideline is to specify minimum daily reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B) (1) of the Clark County Building Administrative Code and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The Approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the visual inspections & material tests that confirm work requiring special inspection was inspected.

3.0 ABBREVIATIONS & ACRONYMS

| | |
|-----------------|---|
| ACI: | American Concrete Institute |
| ASTM: | American Society for Testing and Materials |
| BAC: | Building Administrative Code |
| CCBD: | Clark County Building Department |
| IBC: | International Building Code |
| PTM | Post Tension Manual |
| SNA-IBC: | Southern Nevada Amendments to the International Building Code |
| TG: | Technical Guideline |
| TRG: | Technical Reporting Guideline |

4.0 DEFINITIONS

For the purposes of this technical reporting guideline certain terms, phrases, words and their derivatives, shall be construed as specified in this section, the technical codes, and the Clark County BAC.

5.0 REFERENCES:

- ACI 318, Building Code Requirements of Structural Concrete
- PTM, Post-Tensioning Institute Post-Tensioning Manual
- PTM, Post-Tensioning Institute Slab on Grade Manual

6.0 RESPONSIBILITIES:

6.1 Contractor Responsibilities

- 6.1.1 Confirm the location of existing reinforcing steel and/or post-tension tendons prior to drilling for retrofit anchors.
- 6.1.2 Provide or arrange for the concrete test specimen site storage and protection in accordance to ACI 318.

6.2 Approved Personnel Responsibilities

6.2.1 Pre-Concrete Placement Inspection

- The approved personnel shall confirm that Pad Certifications, Pad Recertifications or Final

Grading Reports have been approved by the building official or their designee, when applicable.

- Confirm that the foundation elements are free from debris and loose materials.
- Confirm foundations and structural elements comply with the approved construction documents, to include but not limited to size, depth, approximate elevation, floor/ level, approximate gridline location, and cleanliness, when applicable.
- Confirm structural hardware and/or anchor bolts installed and inspected comply with the approved construction documents and applicable codes.
- Confirm reinforcing steel has been correctly installed are per the approved construction documents and applicable codes.
- Post tension cable placement inspection shall confirm the type, grade, size, length, profile, and clearance. The approved personnel shall confirm that the contractor has installed the live and dead ends to comply with the approved construction documents. The approved personnel shall verify that the materials are from an approved post tension fabricator.
- Confirm embed elements comply with the approved construction documents for placement, size, embedment and that they are fabricated by a CCBD approved fabricator or approved product. Inspection of embed elements which are from an unapproved fabricator must follow TRG-Steel requirements.
- Verification of welding of rebar, deck welding, button punching, or headed studs must be inspected by an approved steel inspector and must be reported per TRG-Steel.

6.2.2 Concrete Placement Inspection

- Confirm the pre-concrete placement inspection has been approved.
- Confirm placement area is clean and free of all debris, trash, soils, etc.
- Confirm mix design for the concrete or shotcrete to be used is approved and for the intended use.
- Confirm each concrete load meets the approved mix design; for slump tolerances, aggregate size, admixtures requirements, and air entrainment when applicable.
 - Perform the required material testing per the applicable ACI & ASTM standards, IBC, and the approved construction documents. At a minimum, two 6x12 cylinders or three 4x8 cylinders are required for verification f'_c per ACI 318. Confirm the curing operations are per ACI 318 specifications.
- On-site mixed cementitious materials will be observed by the approved personnel on a continuous basis.
- Provide or arrange for proper specimen identification and transportation to the testing laboratory.
- Confirm the shotcrete nozzleman certification for the shotcrete placement.
- Monitor the ambient weather conditions during the placement of concrete.
 - Confirm that the contractor performed their duties per ACI 318 section 26.5.4 and 26.5.5, cold and hot weather requirements.
- Confirm that the contractor has properly consolidated the concrete per approved construction documents.
- Confirm that the method of conveying and depositing concrete will avoid contamination and segregation of the mix.

6.2.3 Post Tension Stressing Inspection

- Confirm concrete placement is free of rock pockets or voids.
- Confirm calibration of tendon stressing equipment.
- Confirm minimum required concrete compressive strength has been achieved before stressing.

- Monitor the stressing crew to confirm that they perform the operations in accordance with the PTM Chapter 6, and the approved construction documents. Confirm that the method used to grout the ducts complies with the PTM Chapter 6, and the approved construction documents.

6.2.4 Post-Installed Adhesive or Mechanical Rebar/Dowel/Embed/Anchor Inspection

- Confirm embed elements comply with the approved construction documents for placement, size, embedment and that they are (fabricated by a CCBD approved fabricator). Inspection of embed elements which are from an unapproved fabricator must follow TRG-Steel requirements.
- Confirm the expiration date of the adhesive being used.
- Confirm adhesive used complies with the approved construction documents.
- Confirm depth, diameter, and cleanliness of the drilled hole.
- Confirm installation of the rebar/dowel, embed element, or anchor complies with the approved construction documents.
- Confirm the adhesive and/or mechanical installation procedures are performed per the manufacturer's printed installation instructions.

6.2.5 Deep Foundation Elements

- Verify excavation depth, width, and cleanliness.
- Verify the excavation timeline is in compliance with the geotechnical report.
- Verify the reinforcing steel, spacers, hardware, and any testing equipment per the approved construction documents.
- Confirm mix design for the concrete to be used is approved and for the intended use.
- Theoretical and actual concrete volume per element.
- Verify the concrete placement complies with the current version of ACI318.
- Verify the concrete was continuously placed.

7.0 PROCEDURE:

7.1 Concrete Daily Inspection Reporting (IBC Chapter 19 & 1704.4, BAC 22.02.525 (B) (1)

7.1.1 Pre-Concrete Placement Inspection

- Document reinforcing steel, note the sheet & detail numbers, state the gridlines or location, and use (i.e., footing, column, cast-in-place deck, slab-on-metal deck, etc.) of the reinforcing steel inspected.
- Document that the grade, lap splice, clearances, and cleanliness is per the approved construction documents.
- Document pre-stressing and/or post tension tendons placed and inspected.
- Document the sheet & detail numbers and state the gridlines or location of the post tension tendons.
- Document structural hardware, to include any rebar couplers, anchor bolts, etc., is installed per the approved construction documents. Document the sheet & detail numbers and state the gridlines or location of the hardware installed. Document any embed elements installed. Document source for all fabricated or manufactured items, when applicable.
- Reinforcing steel reports for elevated slab on metal decks shall reference the Area Acceptance Report(s) issued for the structural steel, welding, and high strength bolting to be covered and/or loaded.

7.1.2 Concrete Placement

- Document structural concrete and/or shotcrete placed and inspected. Document the approved mix design(s) used at the project. Document volume and/or ratios of onsite mixed cementitious

materials. All concrete test results must be filed on site with the daily reports. The concrete/shotcrete test data sheets shall state the name of the person who performed the test.

- When ACI technicians are performing testing services in conjunction with the approved personnel, the ACI testing technician's certification number must be included within the daily reports.
- Document the amount of concrete placed, method of placement, slump, temperature, area(s) of placement, sample locations, ambient weather conditions, and any required protection implemented for the temperature ranges specified in ACI 318.
- State the method used to convey and deposit concrete.
- Document the amount of shotcrete placed, slump, temperature, area(s) of placement, and sample locations.
- Reference the report for the supporting structure to verify it has been inspected and is acceptable when placing concrete on elevated metal decks.
- Reference the reinforcing steel inspection report.

For elevated slab on metal decks reference the Area Acceptance Report(s) issued for the structural steel, welding, and high strength bolting to be covered and/or loaded.

7.1.3 Post Tension Elements

- Document stressing operations which must include: the required elongation length, measured elongation, elongation deviation, gauge pressure attained, and any other information about the individual tendon.
- Document the concrete compressive strength and the sample identification.
- Document the calibration of tendon stressing equipment.
- Document the method used to grout the ducts.
- Collect the post tension material test report.

7.1.4 Post-Installed Adhesive or Mechanical Rebar/Dowel/Embed/Anchor Inspection

- Document post-installed rebar/dowel/anchorage inspection for residential projects on Form 811a/811b/851a. For commercial projects the approved personnel may use either a company daily inspector report or Form 811a/811b/851a. The approved personnel must provide the same information required on Form 811a/811b/851a onto the daily report.
- Document when overhead post-installed of rebar/dowels/anchors are installed, reference the installation procedures, and any required equipment.
- Document embed elements comply with the approved construction documents for placement, size, embedment and that they are (fabricated by a CCBD approved fabricator). Inspection of embed elements which are from an unapproved fabricator must follow TRG-Steel requirements.
- Document the expiration date of the adhesive being used.
- Document adhesive used complies with the approved construction documents.
- Document installation of the rebar/dowel, embed element, or anchor complies with the approved construction documents.
- Document the adhesive and/or mechanical installation procedures are performed per the Manufacturer's Printed Installation Instructions (MPII).

7.1.5 Deep Foundation Elements

The approved personnel shall document the below items on Form 889. Form 889 shall be filed in the Deep Foundation Elements section of the field book.

- Document the date of grouting and the start and end time of grouting.
- Document the excavation depth, width, and cleanliness.
- Document the excavation timeline is in compliance with the geotechnical report.

- Document the reinforcing steel, spacers, hardware, and any testing equipment per the approved construction documents.
- Document the theoretical and actual concrete volume per element, and state that the concrete was continuously placed.

8.0 RECORDS:

8.1 Daily inspection reports, test data, non-compliance reports, record of corrections, inspection completion report, and area acceptance reports, when applicable, shall be included in the Final Report.

9.0 ATTACHMENTS:

- Form 811a Adhesive Anchorage Clearance Report (1st Installation Inspection)
- Form 811b Adhesive Anchorage Clearance Report (2nd Installation Inspection)
- Form 851a Post-Installed Mechanical Anchorage Clearance Report

Prepared By: Marc Fernandez, P.E.

Date Prepared: 01/24/2024

Revision History:

| Title | Revision/Approved Date | Effective Date |
|--------------|------------------------|-------------------|
| TRG-Concrete | January 24, 2024 | April 01, 2024 |
| TRG-Concrete | April 14, 2022 | April 14, 2022 |
| TRG-C | July 20, 2012 | August 3, 2012 |
| TRG-C | February 1, 2010 | February 12, 2010 |
| TRG-C | October 10, 2008 | October 17, 2008 |
| TRG-C | February 27, 2006 | March 15, 2006 |



Clark County Building Department

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(702) 455-3000
James Gerren, P.E. Director/Building Official
Werner K. Hellmer, P.E. Deputy Director
Scott Telford, P.E. Deputy Director

| | |
|-----------------|----|
| Report No. | |
| Page | of |
| Inspection Date | |
| Permit No. | |
| BDIA No. | |

POST-INSTALLED ADHESIVE ANCHORAGE CLEARANCE REPORT

| | | | |
|-------------------|--|---------------------|--|
| Project Address: | | Lot #: | |
| Development Name: | | | |
| Approved Agency: | | Builder/Contractor: | |

1ST INSTALLATION INSPECTION SUMMARY

Holes are cleaned per manufacturers installation instruction. Yes No

| Approval Date | Rev. No. | Sheets/Details/Notes |
|---------------|----------|----------------------|
| | | |
| | | |

| Adhesive | | | | ESR | | Concrete | | | |
|--------------|------|------|-----------|--------|------|----------------|----------|--------|-------|
| Product Name | Exp. | Time | Till cure | Number | Exp. | Type/Condition | Strength | Thick. | Temp. |
| | | | | | | | | | |

| Qty. | Installation Location (Wall/Item Type/Spacing) | Hole | | Anchor | | | |
|------|--|------|-------|--------|--------|-----------------|---------------|
| | | Dia | Depth | Dia | Length | Embedment Depth | Edge Distance |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

- I hereby acknowledge that I have reviewed the approved plans, manufacturers installation instructions and applicable evaluation service report, ensuring installation followed all required inspection documents.
- The above inspection is not in compliance with the approved construction documents. NCR-_____

| | |
|--|---------------------|
| Approved Personnel (Printed and Signed) | ENGINEER STAMP HERE |
| | |

Use of this form serves as an Approved Agency Inspection Agreement between Building Official, Owner and Approved Agency for the purposes of special inspection per Section 22.02.515 of the Building Administrative Code of Clark County.

POST-INSTALLED ADHESIVE ANCHOR CLEARANCE PROCEDURE

SPECIAL CASES - ANCHORS: SCA(-1,-2,-3,... ETC.)

1. The report shall be used for post-installed adhesive anchorage systems as identified in the approved construction documents and used as an alternate to the specified cast-in-place anchor.
 - a. The approved personnel must be present at the time the bolt is torqued.
 - b. If there is insufficient space for all inspected anchor bolt data an additional report may be attached, numbered the same, and listed as the appropriate page __ of __.
 - c. One Product/ESR per page.
 - d. Adhesive
 - i. Exp. – The expiration date of the adhesive used.
 - ii. Time – The time at which the anchor is placed.
 - iii. Till cure – The number of hours required for curing based on concrete temperature.
 - e. ESR
 - i. Exp. – The expiration date of the ESR.
 - f. Concrete
 - i. Type/Condition – Lightweight, Normal, Prestressed, Precast, etc. / Cracked or Uncracked
 - ii. Thick. – The concrete slab thickness.
 - iii. Temp. – The temperature of the concrete slab in degrees Fahrenheit.
2. The approved personnel shall complete the report for the work performed and leave a copy with the general contractor or permit holder. (At this point an agency engineer from the approved agency will not have sealed the report.)
3. The engineer sealed report shall be submitted to the Clark County Building Department (CCBD) with any related NCR and ROC's in the same document as assurance that adhesive anchorage system installations have been inspected and accepted by the Agency, prior to or at shear wall inspection.
4. The report will be reviewed and resulted to remove the condition of approval.
5. The engineer sealed report form shall be sent to CCBD records by the CCBD staff.



Clark County Building Department

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James Gerren, P.E. Director/Building Official
Werner K. Hellmer, P.E. Deputy Director
Scott Telford, P.E. Deputy Director

| | |
|-----------------|----|
| Report No. | |
| Page | of |
| Inspection Date | |
| Permit No. | |
| BDIA No. | |

POST-INSTALLED ADHESIVE ANCHORAGE CLEARANCE REPORT

| | | | |
|-------------------|--|---------------------|--|
| Project Address: | | Lot #: | |
| Development Name: | | | |
| Approved Agency: | | Builder/Contractor: | |

2nd INSTALLATION INSPECTION SUMMARY

| Approval Date | Rev. No. | Sheets/Details/Notes | | | |
|---------------|--|----------------------|--------|---------------------|--------|
| | | | | | |
| | | | | | |
| Adhesive | | ESR | | Torque Wrench | |
| Product Name | Required Cure Time | Number | Exp. | Date of Calibration | Serial |
| | | | | | |
| Qty. | Installation Location (Wall/Item Type/Spacing) | Torque | | Cure Time Elapsed | |
| | | Time | Amount | | |
| | | | | | |
| | | | | | |
| | | | | | |

- I hereby acknowledge that I have reviewed the approved plans, manufacturers installation instructions and applicable evaluation service report, ensuring installation followed all required inspection documents.
- The above inspection is not in compliance with the approved plans. NCR-_____

| | |
|--|---------------------|
| Approved Personnel (Printed and Signed) | ENGINEER STAMP HERE |
| | |

Use of this form serves as an Approved Agency Inspection Agreement between Building Official, Owner and Approved Agency for the purposes of special inspection per Section 22.02.515 of the Building Administrative Code of Clark County.

POST-INSTALLED ADHESIVE ANCHOR CLEARANCE PROCEDURE

SPECIAL CASES - ANCHORS: SCA(-1,-2,-3,... ETC.)

1. The report shall be used for post-installed adhesive anchorage systems as identified in the approved construction documents and used as an alternate to the specified cast-in-place anchor.
 - a. The approved personnel must be present at the time the bolt is torqued.
 - b. If there is insufficient space for all inspected anchor bolt data an additional report may be attached, numbered the same, and listed as the appropriate page __ of __.
 - c. One Product/ESR per page.
 - d. ESR
 - i. Exp. – The expiration date of the ESR
 - e. Torque
 - i. Time – The time at which the 2nd installation was performed.
 - ii. Amount –Tightening torque (ft-lbs.) applied
2. The approved personnel shall complete the report for the work performed and leave a copy with the general contractor or permit holder. (At this point an agency engineer from the approved agency will not have sealed the report.)
3. The engineer sealed report shall be submitted to the Clark County Building Department (CCBD) with any related NCR and ROC's in the same document as assurance that adhesive anchorage system installations have been inspected and accepted by the Agency, prior to or at shear wall inspection.
4. The report will be reviewed and resulted to remove the condition of approval.
5. The engineer sealed report form shall be sent to CCBD Records by the CCBD staff.



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| Permit No. | |
| BDIA No. | |

POST-INSTALLED MECHANICAL ANCHORAGE CLEARANCE REPORT

| | | | |
|-------------------|--|---------------------|--|
| Project Address: | | Lot #: | |
| Development Name: | | | |
| Approved Agency: | | Builder/Contractor: | |

INSTALLATION INSPECTION SUMMARY

Holes are cleaned per manufacturers installation instruction. Yes No

| Approval Date | Rev. No. | Sheets/Details/Notes |
|---------------|----------|----------------------|
| | | |
| | | |

| Mechanical Product Name | ESR Number | ESR Exp. Date | Concrete Type | Concrete Strength | Concrete Thickness | Impact Max Torque | Max Anchor Torque |
|-------------------------|------------|---------------|---------------|-------------------|--------------------|-------------------|-------------------|
| | | | | | | | |

| Qty. | Installation Location (Wall/Item Type/Spacing) | Hole | | Anchor | | | |
|------|--|------|-------|--------|--------|-----------------|---------------|
| | | Dia | Depth | Dia | Length | Embedment Depth | Edge Distance |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

I hereby acknowledge that I have reviewed the approved plans, manufacturers installation instructions and applicable evaluation service report, ensuring installation followed all required inspection documents.

The above inspection is not in compliance with the approved plans. NCR-_____

| | |
|--|---------------------|
| Approved Personnel (Printed and Signed) | ENGINEER STAMP HERE |
| | |

POST-INSTALLED MECHANICAL ANCHOR CLEARANCE PROCEDURE

SPECIAL CASES - ANCHORS: SCA (-1,-2,-3,... ETC.)

1. The clearance report shall be used for post-installed mechanical anchorage systems as identified in the approved plans and used as an alternate to the specified cast-in-place anchor.
 - a. The approved personnel must be present at the time the bolt is torqued.
 - b. Concrete Types: Lightweight, Normal, Prestressed, Precast, etc.
 - c. If there is insufficient space for all inspected anchor bolt data an additional report may be attached, numbered the same, and listed as the appropriate page __ of __.
 - d. One Product/ESR per page.
2. The approved personnel shall complete the report for the work performed and leave a copy with the general contractor or permit holder. (At this point an agency engineer from the approved agency will not have sealed the report.)
3. The agency engineer sealed report shall be submitted to the Clark County Building Department (CCBD) with any related NCR and ROC's in the same document as assurance that mechanical anchorage system installations have been inspected and accepted by the Agency, prior to or at shear wall inspection.
4. The report will be reviewed and resulted to remove the condition of approval.
5. The engineer sealed report form shall be sent to CCBD records by the CCBD staff.



Clark County Building Department

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| | | | |
|------------------|-------------------------------|--------------------------------|---------------------------|
| Division: | Engineering | Policy & Procedure: | TRG-Exterior Walls |
| Subject: | Reporting Requirements | Effective Date: | 04/01/2024 |
| Code: | BAC 22.02.525 (B)(1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Reporting Guideline is to specify minimum daily reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B)(1) of the Clark County Building Administrative Code and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The Approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the visual inspections & material tests that confirm work requiring special inspection was inspected.

3.0 ABBREVIATIONS & ACRONYMS

| | |
|-----------------|---|
| ASTM: | American Society for Testing and Materials |
| BAC: | Building Administrative Code |
| CCBD: | Clark County Building Department |
| EIFS: | Exterior Insulation and Finish Systems |
| IBC: | International Building Code |
| NDT: | Non-Destructive Testing |
| SNA-IBC: | Southern Nevada Amendments to the International Building Code |
| TG: | Technical Guideline |
| TRG: | Technical Reporting Guideline |

4.0 DEFINITIONS

For the purposes of this technical reporting guideline certain terms, phrases, words and their derivatives, shall be construed as specified in this section, the technical codes, and the Clark County BAC.

Exterior Architectural Features: Aspects of the construction defined on approved drawings which are attached to or through the plane of the EIFS or the curtain wall panel.

5.0 REFERENCES:

- BAC, Clark County Building Administrative Code
- IBC, International Building Code
- Technical Guidelines

6.0 RESPONSIBILITIES:

6.1 Approved Personnel Responsibilities

- Maintain copies of all inspections and laboratory reports at the job site until all special inspection and/or testing is completed.
 - The approved personnel shall confirm that all the components of the exterior wall system are in compliance with the applicable ICC ES report, manufacturer's specification, and approved construction documents.

- The approved personnel must issue a daily inspection report prior to the placement of the next material/finish.
- 6.1.2 EIFS
- Confirm assembly of the EIFS materials that the system meets the approved construction documents.
 - Confirm application of base coat, finish coats, and all meets the approved construction documents.
 - Continuous special inspection is required for hand mixed materials.
 - Periodic special inspection is allowed when the batching equipment has measured control of materials and calibration can be achieved.
 - Confirm attachment of the EIFS assembly to the structure is in compliance with the approved construction documents.
 - Confirm frame construction and the attachment of the frame to the structure. Welding must be inspected and reported per TRG-Steel.
- 6.1.3 Exterior Architectural Features
- Anchor system and hold downs must be inspected for type, diameter, length, embedment, location and spacing per approved construction documents.
 - Confirm the construction materials meet the requirements of the approved construction documents.
- 6.1.4 Veneer
- Confirm that stone veneer is installed per the manufacturer's specification and the approved construction documents.
 - Confirm that wood, masonry, terra cotta, metal, and glass veneer is installed per the manufacturer's specification and the approved construction documents.
- 6.1.5 Confirm Curtain Walls, Exterior Cladding, and Glazing Components
- Anchorage
 - Anchor system must be inspected for type, diameter, length, embedment, location and spacing per construction documents.
 - Confirm the connection of curtain walls, exterior cladding and glazing components to the structure complies with the approved construction documents.
 - Frame
 - Confirm the construction materials meet the requirements of the approved construction documents.
 - Confirm the frame was constructed per the approved construction documents. Confirm the dimensions of the frame.
 - Confirm the placement of studs, trimmers, headers, panels, fasteners, hardware, and all other framing elements per the approved construction documents.
 - Confirm that the framing elements are within tolerances of applicable code.
 - Confirm the sill track and its installation is per the approved construction documents.
 - Perform NDT and/or torque testing for the panel to connection hardware and the connection hardware to the building.
 - Confirm the EIFS panel inserts are attached and sealed per the approved construction documents.

7.0 PROCEDURE:

7.1 Exterior Wall System, Exterior Architectural Features, Stone Veneer, EIFS, Glass Panel and Steel Framing of Walls Daily Inspection Reporting (IBC 1407.6, IBC 1705.16, BAC 22.02.525(B)(1))

- 7.1.1 The approved personnel shall document that all of the components of the exterior wall system are in compliance with applicable ICC ES report, manufactures specification, and approved construction documents.

7.1.2 EIFS

- Document the EIFS ICC ES Report number.
- Document that the EIFS assembly complies with the ICC ES Report.
- Document each EIFS assembly type separately within the body of the daily inspection report. Identify and document the EIFS assembly installed location (floor, gridlines, etc.).
- Document the EIFS assembly installation for compliance with the ICC ES Report and approved construction documents.
- Collect the completed installation cards. The installation cards shall be included in the final inspection report.
- Document all penetrations.
- Provide an Area Acceptance Report when all trades have completed their work.

7.1.3 Exterior Architectural Features

- Document the anchor system for type, diameter, length, embedment, location and spacing.
- Document the construction materials for compliance with the approved construction documents.

7.1.4 Veneer

- Document the stone veneer installation.
 - Document the type, dimensions, location, mortar, and fastening/anchorage system.
 - Document flashing, sealants, and/or expansion joints.
- Document the wood, masonry, terra cotta, metal, and glass veneer installation.
 - Document the type, dimensions, location, and fastening/anchorage system.
 - Document flashing, sealants, and/or expansion joints.

7.1.5 Curtain Walls, Exterior Cladding, and Glazing Components

- Document framing and construction materials for grade, thickness, dimensions, type, location, fastening pattern and fastening system.
- Document that the materials installed comply with the approved construction documents.
- Document that the installation of the curtain walls, exterior cladding, frame construction, and glazing components to the structure complies with the approved construction documents.
- Document that the sill track and its installation is per the approved construction documents.
- Document the performance of the NDT and/or torque testing for the panel to connection hardware and the connection hardware to the building.
- Document that the EIFS panel inserts are attached and sealed per the approved construction documents.
- The connection of the panel to the structural element shall be performed by the Masonry, Concrete, and/or Steel inspector as applicable.

7.1.6 Anchors

- Document the anchor system for type, diameter, length, embedment, location and spacing.

7.1.7 Frame

- Document the fabrication inspection.

7.2 Approved fabricator verification is required for:

- Light gauge pre-engineered components
- When an unapproved fabricator is used on a project the fabricator shall obtain special inspection from an approved agency.
 - In accordance with TG-1, TG-2, and TG-4, an approved agency performing in facility inspections for a non-approved fabricator shall obtain a Fabricator Shop Inspection Agency authorization letter before performing required inspections.
 - All daily reports and testing data generated under the issued authorization letter shall be compiled into a final report, stamped by the registered design professional, and submitted with the projects approved agency final report.

- Connection hardware
 - In the event that the fabricator is not CCBD approved, the approved personnel is required to generate an NCR.
 - The curtain wall design engineer is to provide a work plan such that verification of the fabricated materials and assembled panels can be performed by the assigned approved personnel.

8.0 RECORDS:

8.1 Daily inspection reports, test data, non-compliance reports, record of corrections, inspection completion reports, area acceptance reports and ES reports, when applicable, shall be included in the Final Report.

9.0 ATTACHMENTS:

Sealant Cards and Inspection Responsibility Delineation

- Sealant Installer Installation Card
- EIFS Contractor Installation Card
- Water-Resistive Coating Installation Card
- Responsibility Drawing

10.0 RECORDS:

The submitted Inspection Final and Partial Final Report is a record maintained by CCBD.

Prepared By: Marc Fernandez, P.E.

Date Prepared: 01/24/2024

Revision History:

| Title | Revision/Approved Date | Effective Date |
|--------------------|------------------------|--------------------|
| TRG Exterior Walls | January 24, 2024 | April 01, 2024 |
| TRG Exterior Walls | April 14, 2022 | April 14, 2022 |
| TRG-E | July 20, 2012 | August 3, 2012 |
| TRG-E | February 1, 2010 | February 12, 2010 |
| TRG-E | October 10, 2008 | October 17, 2008 |
| TRG-E | September 12, 2008 | September 19, 2008 |

Sealant Installer Installation Card

| | |
|---|--------------------------|
| [SEALANT INSTALLER NAME] | |
| Completion Date: _____ | |
| THE SEALANT INSTALLED IN CONJUNCTION WITH AN EXTERIOR INSULATION AND FINISH SYSTEM (EIFS) INSTALLED ON THE STRUCTURE LOCATED AT THE ADDRESS INDICATED BELOW: | |
| CONFORMS _____ | |
| TO [EIFS MANUFACTURER NAME] AND [SEALANT MANUFACTURER'S NAME] RECOMMENDED INSTALLATION PRACTICES AND SECTION(S) _____ OF ICC-ES, INC., EVALUATION REPORT ESR-_____ | |
| Address of Structure: | Product Component Names: |
| _____ | Primer(s) _____ |
| _____ | Sealers _____ |
| _____ | Bond Breakers _____ |
| _____ | Sealant Materials _____ |
| INSTALLATION | CONFORMS |
| A. Designer's requirements, details and instructions | _____ |
| B. Sealant manufacturer's details and requirements | _____ |
| C. Exterior insulation manufacturer's requirements | _____ |
| D. The information entered above is offered in testimony that the Sealant installation conforms with the sealant manufacturer's installation methods and procedures, and the EIFS manufacturer's evaluation report. | |
| Sealant Installer Company Name and Address: | |
| _____ | |
| _____ | |
| _____ | |
| Signature of Responsible Officer: _____ | |
| Typed Name and Title of Officer: _____ | |
| Telephone Number: (____) _____ | |
| cc: Original: Building Department (Must be submitted with EIFS contractor declaration.) | |
| Copies: EIFS Manufacturer | |
| EIFS Contractor | |
| Sealant Manufacturer | |

EIFS Contractor Installation Card

| | |
|--|--------------------------|
| [EIFS CONTRACTOR NAME] | |
| Completion Date: _____ | |
| THE EXTERIOR INSULATION AND FINISH SYSTEM (EIFS) INSTALLED ON THE STRUCTURE LOCATED AT THE ADDRESS INDICATED BELOW: | |
| _____ CONFORMS | |
| TO [EIFS MANUFACTURER NAME] RECOMMENDED INSTALLATION PRACTICES AND SECTION (S) _____ OF ICC-ES, INC., EVALUATION REPORT ESR-_____ | |
| Address of Structure: | Product Component Names: |
| _____ | Adhesive(s) _____ |
| _____ | Fasteners (mech) _____ |
| _____ | Base Coat _____ |
| _____ | Reinforcing Mesh _____ |
| _____ | Finish Coat(s) _____ |
| INSTALLATION | CONFORMS |
| A. Substrate Type and Tolerance | _____ |
| B. Weather-resistive Barrier | _____ |
| C. EIFS | |
| 1. Adhesive and/or Fasteners | _____ |
| 2. Insulation | _____ |
| 3. Reinforcing Mesh | _____ |
| 4. Base Coat | _____ |
| 5. Finish | _____ |
| D. The information entered above is offered in testimony that the EIFS installation conforms with the EIFS manufacturer's installation methods and procedures, and the EIFS manufacturer's ES report. | |
| NOTE: An installation card must be received from the Sealant Installer indicating that the sealant installation conforms with the EIFS evaluation report and sealant manufacturer's installation methods and procedures must accompany this declaration. | |
| EIFS Contractor Company Name and Address: | |
| _____ | |
| _____ | |
| _____ | |
| Signature of Responsible Officer: _____ | |
| Typed Name and Title of Officer: _____ | |
| Telephone Number: (____) _____ | |
| cc: Original: Building Department (Must be submitted with sealant Manufacturer installer declaration.) | |
| Copy: EIFS | |

Water-Resistive Coating Installation Card

[WATER-RESISTIVE COATING CONTRACTOR NAME]

Completion Date: _____

THE WATER-RESISTIVE COATING INSTALLED ON THE STRUCTURE LOCATED AT THE ADDRESS INDICATED BELOW:
 _____ CONFORMS

TO [WATER-RESISTIVE COATING MANUFACTURER NAME] RECOMMENDED INSTALLATION PRACTICES AND SECTION(S) _____ OF EVALUATION REPORT ESR-_____

Address of Structure: _____

Product Component Names:
 Reinforcing Fabric: _____
 Coating: _____

INSTALLATION _____ CONFORMS

A. Substrate Type and Tolerance _____

B. Water-resistive Coating _____

C. The information entered above is offered in testimony that the water-resistive coating application conforms with the manufacturer's installation methods and procedures, and the water-resistive manufacturer's evaluation report.

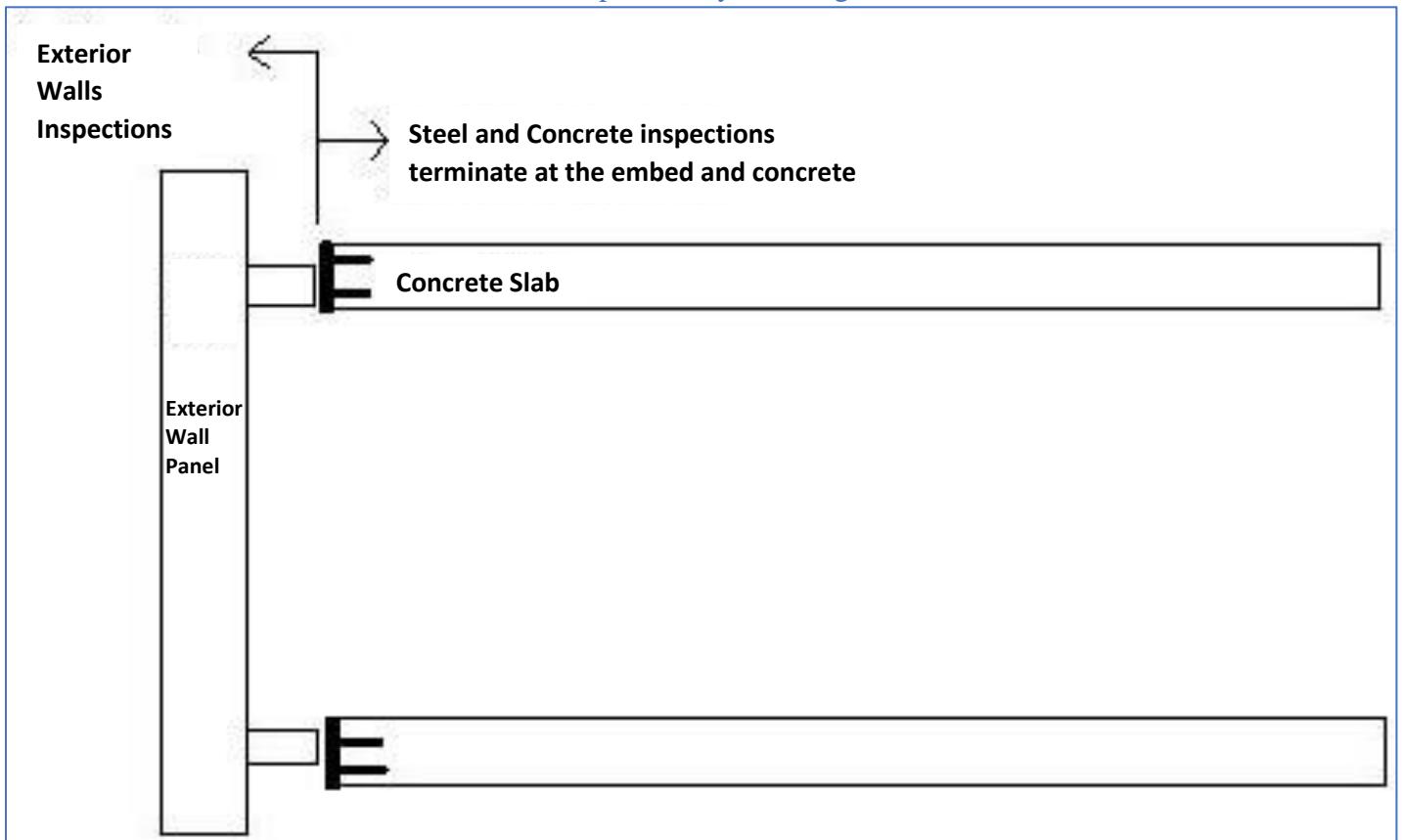
NOTE: An installation card must be received from the water-resistive coating installer indicating that the water-resistive coating application conforms with the water-resistive coating evaluation report and water-resistive coating manufacturer's installation methods and procedures must accompany this declaration.

Water-resistive Coating Contractor Company Name and Address:

Signature of Responsible Officer: _____
 Typed Name and Title of Officer: _____
 Telephone Number: (____) _____

cc: Original: Building Department
 Copy: Water-resistive Coating Manufacturer

Responsibility Drawing





Clark County Building Department

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| | | | |
|------------------|-------------------------------|------------------------|-----------------------------|
| Division: | Engineering | Policy: | TRG-Fire Penetration |
| Subject: | Reporting Requirements | Effective Date: | 04/01/2024 |
| Code: | BAC 22.02.525 (B) (1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: This Technical Reporting Guideline specifies reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B) (1) of the Clark County Building Administrative Code and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the inspections & material tests that confirm work requiring special inspection was inspected.

3.0 ABBREVIATIONS & ACRONYMS

| | |
|--------------|----------------------------------|
| BAC: | Building Administrative Code |
| CCBD: | Clark County Building Department |
| TG: | Technical Guideline |
| TRG: | Technical Reporting Guideline |

4.0 DEFINITIONS

For the purposes of this technical reporting guideline certain terms, phrases, words, and their derivatives, shall be construed as specified in this section, the technical codes, and the Clark County BAC.

Engineering Judgments: A report issued by a design professional used to justify a change in a design or system by referencing previously collected data or publicly available information.

Installer: Individual installing fire-stop penetrations or fire-resistive joint systems.

5.0 REFERENCES:

- BAC, Clark County Building Administrative Code
- IBC, International Building Code
- SNA-IBC, Southern Nevada Amendments to the IBC
- Technical Guidelines

6.0 RESPONSIBILITIES:

6.1 Approved Personnel Responsibilities

- An initial evaluation shall be performed for each individual installer of fire stopping penetration systems and fire resistive joint systems. This initial inspection is to establish that installers are installing the systems in a manner consistent with the approved details and the manufacture’s specifications. Use Form 869 - Fire Stop Installer Verification Form
- Identify the areas that require fire-stop penetration and fire-resistive joint system inspections.
 - Fire-stop through-penetrations and membrane-penetrations are penetrations through fire rated walls, ceilings, floors, and assemblies.
 - Fire-resistive joint systems are the top, bottom, and joints in fire rated walls and assemblies. Joint systems also include perimeter fire-resistive barrier systems for edge of slab conditions.
- Confirm that the proposed materials are as specified, properly stored, and have been approved and sealed by the registered design professional.
- Confirm that the applied listed systems meet the rating requirements per IBC Chapter 7 and approved construction documents.

- Confirm that the application processes meet the approved construction documents and the manufacturer’s specifications through the listing documentation.
 - The periodic visual inspections and destructive testing requirements are for each contractor and not for the project as a whole.
- Confirm that the expiration dates of the materials to be used have not been reached.
- Perform inspections per ASTM E2174 and/or E2393.
- 6.1.1 Inspections per ASTM E2174
 - Approved Personnel shall use section 10.12.1 (periodic inspection method) in the performance of their duties.
 - Inspections that result in non-conformances will result in additional periodic inspections to ensure compliance with the approved construction documents and the manufacturer’s specifications.
- 6.1.2 Inspections per ASTM E2393
 - Approved Personnel shall use section 10.12.1 (periodic inspection method) in the performance of their duties.
 - Inspections that result in non-conformances will result in additional periodic inspections to ensure compliance with the approved construction documents and the manufacturer’s specifications.
- 6.1.3 Destructive testing per ASTM E2174 and E2393
 - Destructive testing in accordance to ASTM E2174 and E2393 shall not be used as the exclusive means of inspection for a project or for any given entire system application.
 - When a condition arises solely requiring destructive testing as the inspection method, a work plan shall be submitted and approved by plans check prior to proceeding with approved inspections.
 - Work plans are for work that was installed without inspections and shall comply with TG-50 Appendix C.
 - The work plan shall include the total number of penetrations or joints and types for the project.
 - When more than one contractor has installed fire-stop penetrations or fire-resistive joint systems without inspections, a work plan shall be submitted for each contractor.
 - The work plan shall include a plan sheet with the locations of the proposed destructive testing.
 - When the work plan involves more than one contractor, a separate plan sheet shall be submitted for each contractor.
 - A failed destructive test will require the approved personnel to perform additional destructive testing within the area until an acceptable destructive test is confirmed in each direction.

7.0 PROCEDURE:

7.1 Fire-resistant Penetration and Joint Daily Inspection Reporting (IBC Chapter 17, BAC 22.02.525 (B) (1)) daily reporting shall include and be in accordance to the following:

- 7.1.1 Installer Verification Reports
 - Document the installers on Form 869 Fire Stop Installer Verification.
 - Form 873-A Fire Stop Daily Inspection Report, shall be used for daily inspection reporting.
 - Daily inspection reports shall be sequentially numbered.
 - Document the manufacturer system number and the number of installations.
 - Document the applicable rating of each firestop through-penetration and/or joint system.
 - Document the expiration date of materials used.
 - Document the systems are sealed by the registered design professional of record.
 - Daily reports shall document the total number and percentage of each system installed.
- 7.1.2 Area Acceptance Reports
 - Form 874 Fire Stop Area Acceptance Report shall be used for area acceptance reporting.
 - Area acceptance reports shall be sequentially numbered when partial acceptance reports are completed.
 - For partial reports, the area being reported, previously reported reports, and pending areas to be completed shall be described clearly.
 - The approved personnel shall clearly delineate the scope of inspection work completed, per contractor.

7.1.3 Inspection Completion Report

- The approved personnel shall state the total number and percentage of fire-stop through-penetration and/or joint system inspected for each contractor.

8.0 RECORDS:

8.1 Daily inspection reports, test data, manufacture’s specifications, noncompliance reports, record of corrections, work plans, inspection completion report, and area acceptance reports, when applicable, shall be included in the Final Report.

9.0 ATTACHMENTS:

- Form 869 Fire Stop Installer Verification
- Form 873-A Fire Stop Daily Inspection Report
- Form 874 Fire Stop Area Acceptance Report
- Form 875 Fire Stop Item Completion Report

Prepared By: Marc Fernandez, P.E.

Date Prepared: 01/24/2024

Revision History:

| Title | Revision/Approved Date | Effective Date |
|----------------------|------------------------|-----------------|
| TRG-Fire Penetration | 01/24/2024 | 04/01/2024 |
| TRG-Fire Penetration | April 14, 2022 | April 14, 2022 |
| TRG-Y | April 27, 2016 | May 11, 2016 |
| TRG-Y | July 28, 2014 | August 28, 2014 |
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Clark County Building Department

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James Gerren, P.E., Director
Werner Hellmer, P.E., Deputy Director • Scott Telford, P.E., Deputy Director

**FIRE-STOP PENETRATION/FIRE-RESISTIVE JOINT/PERIMETER
INSTALLER VERIFICATION FORM**

| | | | |
|---------------------|--|------------------------|--|
| Agency: | | Permit Number: | |
| Project Name: | | BDIA Number: | |
| Project Address: | | General Contractor: | |

Area for This Report

Installers

| Installer Name: | Installing Contractor: | Manufacturer System # Verified: | Date Verified: |
|-----------------|------------------------|---------------------------------|----------------|
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The approved personnel has performed an initial inspection with each individual listed above that will be installing fire-stop penetrations or fire-resistive joint/perimeter systems to establish they are installing the system in a manner consistent with the approved details and the manufacturer’s specifications.

Approved Personnel Name _____ Signature _____ Date _____

Note: This form shall be included in the Agency partial-final and final reports.



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FIRE-STOP PENETRATION/FIRE-RESISTIVE JOINT/PERIMETER DAILY INSPECTION REPORT

| REPORT #: | | INSPECTION DATE: | | PAGE: | _____ of _____ | | |
|---|---------------------------------|--------------------------------------|--------------------------------|---------------------|---------------------------|-------------------|--------------------------------|
| Agency: | | | | Permit Number: | | | |
| Project Name: | | | | BDIA Number: | | | |
| Project Address: | | | | Contractor: | | | |
| CCBD Approved Sheet & Detail: | | | | Approval Date: | | | |
| Location of Inspections for This Report | | | | | | | |
| Description of Area and Inspection Scope for this Report: | | | | | | | |
| Fire-Stop Penetration Type Systems | | | | | | | |
| Manufacturer # | Circle Applicable Ratings | # of Penetrations | # of Randomly Witnessed | Manufacturer # | Circle Applicable Ratings | # of Penetrations | # of Randomly Witnessed |
| | F T L W | | | | F T L W | | |
| | F T L W | | | | F T L W | | |
| | F T L W | | | | F T L W | | |
| | F T L W | | | | F T L W | | |
| Fire-Resistive Joint/Perimeter Type Systems | | | | | | | |
| Manufacturer # | Circle Applicable Ratings | Lineal Feet | Lineal Feet Randomly Witnessed | Manufacturer # | Circle Applicable Ratings | Lineal Feet | Lineal Feet Randomly Witnessed |
| | F T L W | | | | F T L W | | |
| | F T L W | | | | F T L W | | |
| Results | | | | | | | |
| Results: | <input type="checkbox"/> Comply | <input type="checkbox"/> Disapproved | NCR #: | _____, Dated: _____ | | | |
| Comments: | | | | | | | |
| Approved Personnel Signature | | | | | | | |

Approved Personnel: _____ Signature: _____



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FIRE-STOP PENETRATION/FIRE-RESISTIVE JOINT/PERIMETER AREA ACCEPTANCE REPORT

| | | | | | | | | | |
|---|----------------------------------|--------------------------|---------------------------------------|---|-----------------------|----------------------------------|--------------------------|---------------------------------------|---|
| REPORT #: | | DATE: | | PAGE: | | _____ of _____ | | | |
| Agency: | | | | Permit Number: | | | | | |
| Project Name: | | | | BDIA Number: | | | | | |
| Project Address: | | | | Contractor: | | | | | |
| Area for This Report | | | | | | | | | |
| Description of Area for this Report: (gridlines/ elevations) | | | | | | | | | |
| Fire-Stop Penetration Type Systems | | | | | | | | | |
| Manufacturer # | Circle Applicable Ratings | # of Penetrations | # of Randomly Witnessed | Percentage of Randomly Witnessed | Manufacturer # | Circle Applicable Ratings | # of Penetrations | # of Randomly Witnessed | Percentage of Randomly Witnessed |
| | F T L W | | | | | F T L W | | | |
| | F T L W | | | | | F T L W | | | |
| | F T L W | | | | | F T L W | | | |
| | F T L W | | | | | F T L W | | | |
| Fire-Resistive Joint/Perimeter Type Systems | | | | | | | | | |
| Manufacturer # | Circle Applicable Ratings | Lineal Feet | Lineal Feet Randomly Witnessed | Percentage of Randomly Witnessed | Manufacturer # | Circle Applicable Ratings | Lineal Feet | Lineal Feet Randomly Witnessed | Percentage of Randomly Witnessed |
| | F T L W | | | | | F T L W | | | |
| | F T L W | | | | | F T L W | | | |
| Daily Reports | | | | | | | | | |
| NCR #'s: | | | | | | | | | |
| Daily Reports numbers: | | | | | | | | | |
| Approved Personnel Signature | | | | | | | | | |

Approved Personnel Name: _____ Signature: _____



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FIRE-STOP PENETRATION/FIRE-RESISTIVE JOINT/PERIMETER ITEM COMPLETION REPORT

| | | | |
|-------------------------|--|--------------|-----------------------|
| DATE: | | PAGE: | _____ of _____ |
| Agency: | | | Permit Number: |
| Project Name: | | | BDIA Number: |
| Project Address: | | | Contractor: |

Description of Permit Scope

| | |
|-------------------------------------|--|
| Description of Permit Scope: | |
|-------------------------------------|--|

Total Quantities of Inspections for Fire-Stop Penetration Type Systems

| Manufacturer #: | Total # of Penetrations: | Total # of Randomly Witnessed: | Final % of Randomly Witnessed: | Manufacturer #: | Total # of Penetrations: | Total # of Randomly Witnessed: | Final % of Randomly Witnessed: |
|-----------------|--------------------------|--------------------------------|--------------------------------|-----------------|--------------------------|--------------------------------|--------------------------------|
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Total Quantities of Inspections for Fire-Resistive Joint/Perimeter Type Systems

| Manufacturer #: | Total Lineal feet of Joint/Perimeter: | Total Lineal Feet Randomly Witnessed: | % of Randomly Witnessed: | Manufacturer #: | Total Lineal feet of Joint/Perimeter: | Total Lineal Feet Randomly Witnessed: | % of Randomly Witnessed: |
|-----------------|---------------------------------------|---------------------------------------|--------------------------|-----------------|---------------------------------------|---------------------------------------|--------------------------|
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Approved Personnel Signature

All the work performed by the above listed contractor for the permit, for the special inspections of this item, are in compliance with the approved construction documents, technical guidelines, technical codes, and manufacturer's specifications.

Approved Personnel: _____ Signature: _____



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|------------------|---|--------------------------------|--------------------------|
| Division: | Engineering | Policy & Procedure: | TRG-Fire Proofing |
| Subject: | Fire Proofing Reporting Requirements | Effective Date: | 04/01/2024 |
| Code: | BAC 22.02.525 (B) (1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Reporting Guideline is to specify minimum daily reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B) (1) of the Clark County Building Administrative Code and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The Approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the visual inspections & material tests that confirm work requiring special inspection was inspected.

3.0 ABBREVIATIONS & ACRONYMS

| | |
|-----------------|---|
| ASTM: | American Society for Testing and Materials |
| AWCI: | Association of the Wall and Ceiling Industry |
| BAC: | Building Administrative Code |
| CCBD: | Clark County Building Department |
| IBC: | International Building Code |
| SNA-IBC: | Southern Nevada Amendments to the International Building Code |
| TG: | Technical Guideline |
| TRG: | Technical Reporting Guideline |
| UL: | Underwriters Laboratories Inc. ® |

4.0 DEFINITIONS

For the purposes of this technical reporting guideline certain terms, phrases, words and their derivatives, shall be construed as specified in this section, the technical codes, and the Clark County BAC.

5.0 REFERENCES:

- BAC, Clark County Building Administrative Code
- IBC, International Building Code
- Southern Nevada Amendments to the IBC (SNBC)
- Technical Guidelines
- ASTM Specifications E605, E736, E759, E760, and E761
- AWCI Technical Manual 12-A – Standard Practice for the Testing and Inspection of Field Applied Sprayed Fire-Resistive Materials (SFRM); an Annotated Guide
- AWCI Technical Manual 12-B – Standard Practice for the Testing and Inspection of Field Applied Thin-Film Intumescent Fire-Resistive Materials (TFIFRM); an Annotated Guide

6.0 RESPONSIBILITIES:

6.1 Approved Personnel Responsibilities

- Use the most recent approved construction documents.
- Maintain copies of all inspections and laboratory reports at the job site until all special inspection

and/or testing is completed.

- Confirm the site conditions (i.e., beam sizes, type of material, fire rating, etc.) are per the CCBD approved construction documents.
- Confirm the structural steel assemblies, for the areas to be fireproofed, have been inspected, area acceptance reports issued, and building official or their designee approval obtained prior to proceeding.
- Confirm type of material and application process meets the approved construction documents and the manufacturer's specifications.
- Identify the members to be fireproofed and the minimum required coverage and thickness.
- Confirm that the proposed materials are of the type specified, are properly stored and have been approved by the registered design professional in charge and the building official.
- Confirm that the substrate has been properly prepared and free of conditions (e.g. oil, dirt, scale, loose paint or primer and other materials) which may prevent adequate adhesion.
- Confirm the substrate condition meets the ASTM requirements prior to application, to include substrate temperature. The substrate inspection is valid for a 24-hour period; reinspection is required after the 24-hour period expires.
- Determine the required type and frequency of tests to be performed.
- Observe the sampling, field testing and fabrication of test specimens.
- Confirm the condition of the finished application (i.e., minimum required coverage and thickness of the fireproofing).
- Confirm the thickness of the coatings comply with the approved construction documents and/or the published fire-resistance design from an acceptable testing agency (e.g., UL Fire Resistance Directory).
- Confirm the expiration date of material to be used has not been reached.
- Special inspections shall be performed after the rough installation of electrical, automatic sprinkler, mechanical and plumbing systems, and suspension systems for ceilings to confirm fireproofing has not been damaged or removed, where applicable.

6.1.1 Sprayed Fire-Resistant Materials Special Inspection Responsibilities

- All measurements shall be made in accordance with the applicable codes, technical guidelines, and ASTM specifications.
- Sampling shall be taken from in-place materials only and not an alternate source which is not a part of the actual structure.
- Confirm the coating use (internal or external) complies with the manufacturer's specifications and the approved construction documents.
- A minimum ambient and substrate temperature of 40°F shall be maintained during and for a minimum of 24 hours after application of the Sprayed Fire-Resistant Materials, unless otherwise recommended by the Sprayed Fire-Resistant Materials manufacturer.

6.1.2 Mastic and Intumescent Fire-Resistant Coatings Special Inspection Responsibilities

- Confirm the application method complies with the manufacturer's specifications.
- Confirm the coating use (internal or external) complies with the manufacturer's specifications and the approved construction documents.
- Confirm primer complies with the manufacturer's specifications when required.
- Confirm fire coating and final color coating complies with the manufacturer's specifications.
- A minimum temperature of 50°F shall be maintained during and for a minimum of 72 hours after application of the product, unless otherwise recommended by the product manufacturer.

7.0 PROCEDURE:

7.1 Fireproofing Daily Inspection Reporting (IBC Chapter 22, BAC 22.02.525 (B) (1))

- Document that the site conditions (i.e., beam sizes, type of material, fire rating, etc.) are per the CCBD approved construction documents.

- Document that the substrate condition meets the ASTM criteria prior to application, to include substrate temperature.
 - Document the ambient temperature prior to the application of material.
 - Document that the application method complies with the manufacturer’s specifications.
 - Reference the substrate inspection report.
 - Record the thickness measurements as per ASTM requirements, test samples taken and bond strength, noting all grid line locations, as well as vertical location, where work is taking place. (All measurements to be in US units)
 - Document the type of material and application process meets the approved construction documents.
 - Document the expiration date of material used.
- 7.1.1 Sprayed Fire-Resistant Materials Special Inspection Responsibilities
- Maintain copies of all inspections and laboratory reports at the job site until all special inspection and/or testing is completed.
 - Document all areas have been properly repaired where samples were taken.
- 7.1.2 Mastic and Intumescent Fire-Resistant Coatings Special Inspection Responsibilities
- Document the coating use (internal or external).
 - Document the coating UL identification.
 - Document the thickness of the coatings and state the hourly rating per the UL Fire Resistance Directory.
 - Document that the primer layer (when applied), fire coating, and final color coating complies with the manufacturer’s specifications and the CCBD approved construction documents.

8.0 RECORDS:

8.1 Daily inspection reports, test data, non-compliance reports, record of corrections, inspection completion reports, area acceptance reports and ES reports, when applicable, shall be included in the Final Report.

Prepared By: Marc Fernandez, P.E.

Date Prepared: 01/24/2024

Revision History:

| Title | Revision/Approved Date | Effective Date |
|-------------------|------------------------|-------------------|
| TRG-Fire Proofing | January 24, 2024 | April 1, 2024 |
| TRG-Fire Proofing | April 14, 2022 | April 14, 2022 |
| TRG-F | July 20, 2012 | August 3, 2012 |
| TRG-F | February 1, 2010 | February 12, 2010 |
| TRG-F | October 10, 2008 | October 17, 2008 |
| TRG-F | February 27, 2006 | March 15, 2006 |



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|------------------|-------------------------------|--------------------------------|--------------------|
| Division: | Engineering | Policy & Procedure: | TRG-Masonry |
| Subject: | Reporting Requirements | Effective Date: | 004/01/2024 |
| Code: | BAC 22.02.525 (B) (1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Reporting Guideline is to specify minimum daily reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B) (1) of the Clark County Building Administrative Code and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The Approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the visual inspections & material tests that confirm work requiring special inspection was inspected.

3.0 ABBREVIATIONS & ACRONYMS

- ASTM:** American Society for Testing and Materials
- BAC:** Building Administrative Code
- CCBD:** Clark County Building Department
- IBC:** International Building Code
- SNA-IBC:** Southern Nevada Amendments to the International Building Code
- TG:** Technical Guideline
- TMS:** The Masonry Society
- TRG:** Technical Reporting Guideline

4.0 DEFINITIONS

For the purposes of this technical reporting guideline certain terms, phrases, words, and their derivatives, shall be construed as specified in this section, the technical codes, and the Clark County BAC.

5.0 REFERENCES:

- BAC, Clark County Building Administrative Code
- IBC, International Building Code
- TMS 402/602, Building Code Requirements and Specifications for Masonry Structures
- Technical Guidelines

6.0 RESPONSIBILITIES:

6.1 Contractor

- Provide or arrange for site storage and protection of test specimens prior to the transportation to the testing laboratory.
- Provide certifications and material testing for material masonry components.

6.2 Approved Agency

- The engineering manager shall confirm the level of quality assurance and inspection needed for the type of structure: occupancy category of the structure, see IBC Table 1604.5, IBC Section 1705.4, and TMS 402/602 Table 3.1 for additional information.

6.3 Approved Personnel

- Perform the required level of inspection per the IBC, and applicable codes.

- Confirm that the materials are per the approved construction documents.
 - Verification of the materials per TMS 602-16 Section 1.6.
- Confirm the reinforcing steel has been correctly installed for the amount, size, length, lap lengths, spacing, position, type, grade, any reinforcing steel couplers, ties, required bends, support and securing of reinforcing steel against displacement is per the approved construction documents.
- Confirm the embed elements comply with the approved construction documents for placement, size, embedment length, and that they are fabricated by a CCBD approved fabricator. Inspection of embed elements which are from an unapproved fabricator must follow TRG-Steel requirements.
- Confirm grout is a CCBD approved Mix Design when the grout specified design strength exceeds 2500 psi.
- Confirm that grout spaces are free of obstruction and that cleanouts are provided as required. Confirm grout has been properly consolidated and reconsolidated per the approved construction documents.
- Confirm that the method of conveying and depositing grout is used to avoid contamination and segregation of the mix.
- Confirm that the approximate location and preparation of construction joints are per the approved construction documents.
- Observe sampling, field testing and fabrication of test specimens.
- On-site mixed cementitious materials will be observed by the approved personnel on a continuous basis (excluding mortar).
- Provide or arrange for proper specimen identification and transportation to the testing laboratory.

7.0 PROCEDURE:

7.1 Masonry Daily Inspection Reporting (IBC Chapter 21 & 1704.5, BAC 22.02.525 (B) (1))

- State the level of quality assurance and special inspection performed on the first masonry inspection daily report.
- Document the CMU placement, size, and condition.
 - Document the location of the inspection activities including gridlines, elevation or lift, and height of lift.
- Document the reinforcing steel, note the sheet & detail numbers, and gridlines or location of the reinforcing steel inspected.
 - Document grade, lap splice, ties, clearances, and cleanliness as per the approved construction documents.
- Document structural hardware, to include any rebar couplers, embed plates, etc., was installed per the approved construction documents.
 - Document the sheet & detail numbers and state the gridlines or location of the embed elements installed.
 - Document source for all fabricated or manufactured items, when applicable.
- Document the masonry grout placed and inspected.
 - Document the CCBD approved mix design(s) used at the project when applicable.
 - Document the amount of grout placed, flowability, area(s) of placement, temperature when sampled.
 - Document volume and/or ratios of onsite mixed cementitious materials.
 - Document that the grout has been properly consolidated as per the approved construction documents.
 - Document pour height and lift or elevation at which the grout was placed at.
 - Document where clean-outs are required and used. Document the cleanout dimensions and spacing. All material test results must be filed on site with the daily reports. Reference the reinforcing steel reports and structural hardware inspection.
- Document the Area Acceptance Report(s) issued for the structural masonry directly supporting an elevated concrete slabs.

- Document ambient weather conditions and any required protection implemented for the temperature ranges specified in TMS 402/602-16.

8.0 RECORDS:

8.1 Daily inspection reports, test data, non-compliance reports, record of corrections, inspection completion reports, area acceptance reports and ES reports, when applicable, shall be included in the Final Report.

Prepared By: Marc Fernandez, P.E.

Date Prepared:01/24/2024

Revision History:

| Title | Revision/Approved Date | Effective Date |
|-------------|------------------------|-------------------|
| TRG-Masonry | January 24, 2024 | April 1, 2024 |
| TRG-Masonry | April 14, 2022 | April 14, 2022 |
| TRG-M | July 20, 2012 | August 3, 2012 |
| TRG-M | February 1, 2010 | February 12, 2010 |
| TRG-M | October 10, 2008 | October 17, 2008 |
| TRG-M | February 27, 2006 | March 15, 2006 |



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|------------------|-------------------------------------|--------------------------------|-------------------|
| Division: | Engineering | Policy & Procedure: | TRG-Steel |
| Subject: | Steel Reporting Requirements | Effective Date: | 04/01/2024 |
| Code: | BAC 22.02.525 (B) (1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Reporting Guideline is to specify minimum daily reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B) (1) of the Clark County Building Administrative Code and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The Approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the visual inspections & material tests that confirm work requiring special inspection was inspected.

3.0 ABBREVIATIONS & ACRONYMS

- AISC:** American Institute of Steel Construction
- ASTM:** American Society for Testing and Materials
- AWS:** American Welding Society
- BAC:** Building Administrative Code
- CCBD:** Clark County Building Department
- CWI:** Certified Welding Inspector
- IBC:** International Building Code
- NDT:** Non-destructive Testing
- RCSC:** Research Council on Structural Connections
- TG:** Technical Guideline
- TRG:** Technical Reporting Guideline
- WPS:** Welding Procedure Specification
- WQR:** Welder Qualification Record

4.0 DEFINITIONS

For the purposes of this technical reporting guideline certain terms, phrases, words, and their derivatives, shall be construed as specified in this section, the technical codes, and the Clark County BAC.

Approved Fabricator: A fabricator/manufacturer approved by the Building Official to perform special inspections/testing on their own premises as outlined in the company’s quality systems manual.

Certificate of Compliance: A certificate stating that materials and products meet specified standards, and that work was done in compliance with approved construction documents.

Mill Test Report/Material Test Report: A testing report record from the original steel producer/manufacturer that indicates the following information for a given heat number:

1. Product Type
2. Product Size
3. Chemical Properties
4. Physical Properties
5. Specification Designation and Grade

Non-Approved Fabricator: A fabricator/manufacturer that does not meet the requirements of the Clark County BAC, Section 22.02.535.

Welder Update Letter: The document which shows that a field welder has not had a lapse in welding, greater than six months for the welding process qualified.

Welder Qualification Record: The document used to identify a welder's ability to produce sound welds.

5.0 REFERENCES:

BAC, Clark County Building Administrative Code

IBC, International Building Code

Technical Guidelines

D1.1 AWS, American Welding Society Structural Steel Welding Code

D1.3 AWS, American Welding Society Structural Sheet Steel Welding Code

D1.4 AWS, American Welding Society Structural Reinforcing Steel Welding Code

AISC 341, American Institute of Steel Construction Code of Standard Practice

AISC 360, American Institute of Steel Construction Code of Standard Practice

6.0 RESPONSIBILITIES:

6.1 Contractor

6.1.1 Contractors shall provide the approved agency with the following:

- Fabricator approval letters issued by CCBD.
 - Project Specific Approval Letter (PSA)
 - Fabricator Shop Inspection Authorization Letter (FSIA)
 - Approved Fabricator Listing
- Registered design professional of record sealed Fabrication Shop Final Inspection Report, when applicable for FSIA. The contractor is responsible for uploading the sealed report for review to CCBD.
- Mill test report(s)
- NDT records
- Welding Procedure Specifications
- Welder Qualification Records
- Fabricator Certification of Compliance
- All other applicable testing and material data, as requested.

6.2 Approved Agency

- It is the responsibility of the Approved Agency to perform fabrication/erection verification/inspection to ensure that the structural member and connections are in compliance with the governing building codes, approved construction documents, and to impose the limits of the code of standard practice of AISC, when specified within the approved construction documents.
- Use testing equipment that has current calibration records, as evidenced by a valid calibration sticker and a copy of the current calibration record with the equipment.
- An approved agency performing in-facility inspections for a non-approved fabricator shall obtain a FSIA letter before performing required inspections.
- All daily reports and testing data generated under the FSIA shall be compiled into a FAB Shop Inspection report, sealed by the registered design professional of record.

6.3 Approved Personnel

6.3.1 Structural Steel Erection

- Confirm that the steel fabricator is either a CCBD approved fabricator, has been granted a CCBD PSA, or FSIA letter. For non-approved fabricators a work plan is required per section 6.3.5.
- Perform a visual audit of a minimum of 5% of all shop fabricated structural members and components including those fabricated under PSA and FSIA approvals.
 - The 5% should include specific members and approximate locations within structure.

- The approved personnel shall also inspect 20% of all weld access holes and beam copes to verify compliance with AWS and AISC.
- Full penetration welds on structural members 5/16" or greater require a review of 5% of the fabrication NDT records.
- If there are noticeable defects in the welds or steel members, the approved personnel shall write an NCR.
- If the fab shop final report(s) and test data have not been provided, the approved personnel shall write a NCR.
- When requested by the approved personnel, the fabricator shall, within 48 hours of the request, provide all requested fabrication inspection and/or test reports that pertain to the supplied fabricated structural members.
 - Confirm member size, location, details are per the approved construction documents.
 - Structural steel shall be physically identified as required in IBC.

6.3.1.1 Column Base Plates & Bearing Plates

- The steel approved personnel shall confirm the height of the high strength grouting under the base and/or bearing plates is per the approved construction documents.
- Confirm placement area is clean and free of all debris, trash, soils, etc.
- Grouting shall be in accordance with the approved construction documents.
- Continuous observation inspection and material testing is required during material mixing and sample preparation at time of placement under base plates.
- Material testing to be performed in accordance with the applicable ASTM standards.
 - approved personnel shall perform the observation and material testing.
- The steel approved personnel must confirm the post placement of the high strength grouting under the base and/or bearing plates.

6.3.2 Structural Welding

- Confirm the welders name and review their WQR and applicable welder update letter to ensure they are currently qualified for the welding to be performed.
- Confirm and provide a copy of the welding electrode manufacturers Certificate of Conformance.
 - Also confirm welding electrodes are properly stored per the applicable welding code requirement.
- Confirm that the joint fit-up and welding is in compliance with WPS requirements for the welding Process.
- Confirm the weld filler material complies with the WPS.
- Confirm steel materials comply with the WPS.
- Confirm the joint type, size, length, and location of the welds conform to the requirements of AWS and to the approved construction documents.
 - The size and contour of welds shall be measured with a suitable gauge.
- Inspection of all welding of structural steel shall comply with the minimum requirements of the applicable AWS and AISC codes.
- Observe performance of each welder to ensure compliance to the applicable WPS requirements.
- Provide continuous inspection of all full and partial penetration groove welds, single pass fillet welds greater than 5/16" and multi-pass fillet welds.
- Perform ultrasonic/radiographic NDT inspection on all full penetration groove welds (excluding single flare & flare v joints), of primary structural members with a material thickness equal to or greater than 5/16", to confirm proper weld penetration and weld soundness.

- Perform ultrasonic/radiographic NDT inspection on all partial joint penetration welds to confirm weld penetration (depth) requirements when the partial joint penetration weld depth cannot be verified by a dimensional measurement.
- Confirm the ambient weather conditions comply applicable AWS code requirement.
- For seismic applications h inspections shall be performed as outlined in AISC 341

6.3.2.1 Button Punching, Shot Pins

- Button punching shall conform to the approved construction documents.
- Shot pins shall conform to the approved construction documents and the manufacturer's requirements.

6.3.2.2 Welded Headed or Threaded Stud Anchors

- Confirm the anchor welding through decking or onto supporting structural members, the procedure, the studs, and the quality control requirements shall conform to applicable provisions of AWS D1.1 code.
- If manual welding is used, confirm compliance to the WPS and AWS D1.1 requirements for manual welding and stud end preparation.

6.3.3 High Strength Bolting

- Review and provide a copy of the high strength bolt material certificate of compliance to ensure conformance to the approved construction documents.
- Confirm size, lot number, and type of fastener assembly.
- Confirm bolt tension indicating device calibration is up to date.
- Confirm proper connection and surface condition is per the approved construction documents and RCSC.
- If Calibrated Wrench pre-tensioning is used, Confirm type of tensioning wrench and current calibration for each day/shift of operation.
- Confirm that the contractor has performed the proper installation and tensioning method. The tensioning performed meets the minimum requirements of RCSC.

6.3.4 Bolting other than those recognized in the RCSC

- Confirm the type of fastener assembly including the grade, location, size, and quantities of the bolts comply with the approved construction documents.
- Confirm Non-High Strength Bolting installation and tensioning operations are in accordance with the applicable building codes, approved construction documents and manufacturers recommendations.

6.3.4.1 Bolting Procedure

- Prior to initial start-up of bolting operations, the approved personnel shall observe any required testing to confirm compliance to the applicable building codes, approved construction documents, and bolt manufactures recommendations. During bolting operations, the approved personnel shall observe the bolt installation and tightening method to confirm compliance to the applicable building codes, approved construction documents, and Bolt manufactures recommendations.

6.3.5 Fabricated items delivered to the job site by non-approved Fabricators.

- Obtain a Work Plan for the work performed without special inspection. Refer to Appendix C for guidance on Work Plan.

7.0 PROCEDURE:

7.1 Steel Daily Inspection Reporting (IBC Chapter 22, Chapter 17, BAC 22.02.525 (B)(1) and (2))

7.1.1 Structural Steel Erection

- Daily Inspection reports shall clearly describe the inspection process, testing, and acceptance of structural members and assemblies. This report shall also identify; fabricator, fabricated structural items supplied, location of the areas that are acceptable, approved plans date, drawing sheet and detail, and shall note that the structural steel has been erected visually plumb and level. Where required above, structural elements must be documented and show comparison to approved construction documents and meets the applicable AISC provisions.
- The approved personnel shall document the height of the high strength grouting under the base and/or bearing plates and shall indicate if grouting is in compliance with the approved construction documents.
- Document the fabricators' CCBD approved fabricator status.
- Document structural steel framing grid location, elevation, detail, and page number as shown on the approved construction documents used to perform the special inspection activities.
- The report shall be kept in a designated area for review by CCBD staff.
- The approved personnel shall document the 5% audit in a separate daily report, including a full description of members observed and approximate locations within the structure.
- The approved personnel shall document 20% of all weld access holes and beam copes.
- The approved personnel shall issue an Area Acceptance Report for all structural steel prior to covering or loading.

7.1.1.1 Column Base Plates and Bearing Plates Grouting

- Document that the placement area is clean and free of all debris, trash, soils, etc.
- Document daily inspection and testing of the base and/or bearing plate grouting. The approved personnel shall reference the specific location of the areas inspected.
- The steel approved personnel shall write an area acceptance report, as required, stating that the base and/or bearing plates have been grouted per the approved construction documents.
- The report shall be kept in a designated area for review by CCBD staff.

7.1.2 Structural Steel Welding

- Document that the WQR has been reviewed and recorded on Form 829 Welder Qualification Record
- Document the welder's name who performed welding that day.
 - For Periodic inspections, identify the welder's name who was observed during each periodic inspection visit.
- Document that the WPS's have been reviewed and identify the WPS identification number on the daily report.
- Document the joined materials ASTM designation.
- Document the welding process used the joint type and weld filler metal used.
- Document welded connections comply with the applicable AWS or AISC code, approved construction documents and applicable building codes.
- Document any Nondestructive Testing methods that were performed and identify the testing results.
- For Sheet Steel, document that the seam welding, arc spot puddle welds, button punching and/or shot pins conforms to the approved construction documents and the manufacturer's requirements.
- For threaded or Headed Studs, document if the anchors were manually or auto welded.
 - If manually welded, document that the WQR has been reviewed and recorded on Form 829 Welder Qualification Record
 - Document the welding process used, the WPS identification number, the welder's name who performed the welding and that the studs were prepared and the attachment weld conforms to AWS D1.1 requirements.

- The inspection report must identify the specific locations inspected and any drawing details and page numbers used to confirm compliance to the approved construction documents.
- The report shall be kept in a designated area for review by CCBD staff.
- Document ambient weather conditions.
- The approved personnel shall issue an Area Acceptance Report for all structural welding prior to covering or loading.

7.1.3 High Strength Bolting

- Document all High Strength Bolting inspections and testing operations that are conducted on the project each day.
 - Document the fastener assembly type and confirm the surface condition of the connection has been inspected and complies with RCSC requirements.
- Document the verification of fastener assembly tension testing.
 - Identify the type of fastener assembly and the lot number note the calibration date of the tension calibration test device used.
 - Provide a copy of the certificate of compliance for the fastener assembly used and the Direct Tension Indicators (if applicable) to confirm compliance to the approved construction documents.
- Document the ASTM specifications of the fastener assembly and the connection type (i.e. X, N, or SC). Also document that the connection inspection results are in compliance with RCSC and the approved construction documents.
- Document tensioning method that was used and that the work performed complies with RCSC requirements.
- Document the daily calibration of installation wrenches (if applicable). The report shall be kept in a designated area for review by CCBD staff.
- The approved personnel shall issue an Area Acceptance Report for all high strength bolting prior to covering or loading.

7.1.4 Bolting other than those recognized in the RCSC

- Document the bolts installed and the tensioning method complies with the approved construction documents.
- Document surface condition of the fastener assembly has been inspected and complies with AISC requirements.
- The report shall be kept in a designated area for review by CCBD staff.

7.1.5 AISC 341 seismic code requirements

- Seismic steel inspections shall be documented on separate daily reports.
- Document the structural steel members that are designed under the AISC 341 seismic requirements.
- Document the locations and inspection results for demand critical welds, NDT (MT, PT, UT, VT), K-Area NDT, reduced beam section, protected zone, weld tab removal, copes & access holes, and any other type of steel construction performed per the AISC 341 code.
- Document the visual inspection results of all reinforcing and supplemental fillet welds.

8.0 RECORDS:

8.1 Daily inspection reports, test data, non-compliance reports, record of corrections, inspection completion report, area acceptance reports, fabricator certification of compliance, and Form 829 - Welder Qualification Record, when applicable, shall be included in the Final Report.

8.2 A legible copy of the welders' qualification record, front and back of card when applicable, shall be placed in a binder in alphabetical order by individual by company and kept on the jobsite at all times. At the conclusion of the project the Approved Agency firm shall retain the welders' qualification

records, for a two-year period after the final report has been accepted by CCBD.

8.3 A legible copy of the welding procedure specification shall be placed in a binder in order by company and kept on the jobsite at all times. At the conclusion of the project the Approved Agency firm shall retain the welding procedure specification, for a two-year period after the final report has been accepted by CCBD.

9.0 ATTACHMENTS:

Appendix A: Form 829 - Welder Qualification Record

Prepared By: Marc Fernandez, P.E.

Date Prepared: 01/24/2024

Revision History:

| Title | Revision/Approved Date | Effective Date |
|--------------|-------------------------------|-----------------------|
| TRG-Steel | January 24, 2024 | April 1, 2024 |
| TRG-Steel | April 14, 2022 | April 14, 2022 |
| TRG-S | July 20, 2012 | August 3, 2012 |
| TRG-S | February 1, 2010 | February 12, 2010 |
| TRG-S | October 10, 2008 | October 17, 2008 |
| TRG-S | July 26, 2006 | July 28, 2006 |
| TRG-S | February 27, 2006 | March , 2006 |



Clark County Building Department

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(702) 455-3000

James Gerren, P.E., Director/Building Official
Werner K. Hellmer, P.E., Deputy Director • Scott Telford, P.E., Deputy Director

WELDER QUALIFICATION RECORD (WQR) VERIFICATION

Approved Agency _____ Project Name _____

Project Address _____ Permit Number _____

Approved Agency Permit Number _____

Company performing the welding _____

| Welder Name | Qualified Welding Process | Qualified Thickness & Position | Original Qualification Date | Update Letter Date |
|-------------|---------------------------|--------------------------------|-----------------------------|--------------------|
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The approved personnel shall review all Welder Qualification Records (WQR) to verify that the welder is qualified to weld using the welding process qualified, the joint types, materials and material thicknesses specified in the approved project plans. The approved personnel shall also review welder documentation to verify that the welder's qualification is current and is in accordance with the applicable AWS welding code. The approved personnel certifies, by signing and dating this form, that he or she has reviewed and verified the WQR information is complete and in compliance with Clark County codes and the applicable AWS welding code.

Approved Personnel Name _____ Signature _____ Date _____

Note: This form shall be included in the final report. WQR documents are not required to be included in the final report but are required to be maintained in the agency project files for future reference.



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| | | | |
|------------------|-------------------------------|--------------------------------|-------------------|
| Division: | Engineering | Policy & Procedure: | TRG-Wood |
| Subject: | Reporting Requirements | Effective Date: | 04/01/2024 |
| Code: | BAC 22.02.525 (B)(1) | Revised Date: | 01/24/2024 |

1.0 PURPOSE: The purpose of this Technical Reporting Guideline is to specify minimum daily reporting requirements during the performance of special inspection activities. A Daily Report is required under section 22.02.525 (B) (1) of the Clark County Building Administrative Code and shall be presented in the Final Report per Technical Guideline 50.

2.0 SCOPE: The Approved agency and approved personnel shall prepare specific reports and other documents for submission to the Building Official as outlined in this guideline. These reports are required at specific stages during the construction of projects that require special inspection. The intent of these reports is to provide the results of the visual inspections & material tests that confirm work requiring special inspection was inspected.

3.0 ABBREVIATIONS & ACRONYMS

- BAC:** Building Administrative Code
- CCBD:** Clark County Building Department
- IBC:** International Building Code
- TG:** Technical Guideline
- TRG:** Technical Reporting Guideline
- ICC-ESR:** International Council Code – Evaluation Service Report

4.0 DEFINITIONS

For the purposes of this technical reporting guideline certain terms, phrases, words, and their derivatives, shall be construed as specified in this section, the technical codes, and the Clark County BAC.

Load Path: The path taken by vertical or lateral force acting on a building. Loads are transferred by the elements in the building and by the connections between those elements into the foundations.

5.0 REFERENCES:

- BAC, Clark County Building Administrative Code
- IBC, International Building Code

6.0 RESPONSIBILITIES:

6.1 Approved Personnel

6.1.1 Wood special inspection is required per IBC sections 1705.5, 1705.10, 1705.11, the approved personnel and Approved agency shall comply with Clark County code interpretations.

6.1.2 Lateral Load Wood framing inspection

- Identify continuous lateral resistant load path from the roof down to the foundation.
- Anchor bolts and holdowns must be inspected for diameter, length, embedment, location and spacing (anchor bolt embedment performed by a CCBD approved personnel per TRG-C).
- Obtain applicable ICC-ESR and manufacturer installation instructions and confirm the construction materials meet the requirements of the approved construction documents; those materials may be sheathing materials, framing wood members, nails, metal straps, holdowns, and all other hardware. The approved personnel shall inspect the wood members for grade, size, species, and placement within the structure.

- Inspect the placement of studs, trimmers, headers, drag struts, trusses, diaphragms, panels, nails, hardware, and all other framing elements per the approved construction documents.
- Confirm hole size and notch size in wood framing elements are within tolerances specified in the adopted code or as detailed on the approved construction documents.

6.1.3 Material verification includes products that are required to have special inspection during manufacture or fabrication in accordance with IBC code sections 1704.2.4.

- Approved fabricators are the exception to special inspection and are maintained on a listing published by the Building Division.
- The approved personnel shall issue a notice of non-compliance for all items from unapproved fabricators.
 - A registered design professional shall provide a CCBD approved work plan to the approved personnel.
 - The approved personnel shall perform their inspections per the work plan and include it with the final report.

6.1.4 Inspection of the diaphragm shall consist of the sheathing type and orientation relative to framing, connections (fasteners, fastener patterns), sub-diaphragm anchorage to concrete or masonry walls, diaphragm attachment to collectors, and collector attachment to shear wall lines.

6.1.5 Inspection of shear walls shall consist of the sheathing type and orientation relative to framing, connections (fasteners, fastener patterns), and anchorage to floor/foundation.

- The approved personnel shall verify the sheathing orientation layout is listed and complies with approved construction documents.

6.1.6 The approved personnel shall review and perform inspection activities based on the following:

- Approved construction documents
- Truss layout plan(s) and trusses
- Individual truss manufacturing specification sheet
- ICC-ESR
- Manufacturer installation instructions
- Applicable codes
- Product Standard

6.1.7 The approved personnel shall confirm that the following products are from an approved fabricator, either ICC or Clark County:

- Light gauge pre-engineered metal trusses and walls
- Collector and drag strut hardware
- Floor and foundation tie hardware
- Metal plate connected wood trusses
- Manufactured shear walls

In the event that the fabricator is not CCBD or ICC approved, the approved personnel is required to generate an NCR and contact CCBD & the structural engineer to provide a CCBD approved work plan.

6.2 CCBD Inspector

6.2.1 For all permits the CCBD inspector will inspect the gravity load to include but not limited to the following:

- Wood framing
- Truss layout and installation
- Floor joists

7.0 PROCEDURE:

7.1 Wood Inspection Form 838a

7.1.1 The approved personnel shall submit Wood Inspection Form 838a before the first wood inspection.

7.2 Wood Daily Inspection Reporting (IBC Chapter 23, Chapter 17, BAC 22.02.525 (B)(2))

7.2.1 Document each component of the load path from the roof to the foundation and provide a statement that the load path is continuous for areas inspected.

7.2.2 Wood framing inspection

- Document framing and sheathing materials for grade, thickness, dimensions, species, location, and nailing pattern.
- Document hardware installed.

7.2.3 Document each diaphragm type separately within the body of the daily inspection report. Documentation

of the collectors and drag struts must be included as a section in the diaphragm report. The approved personnel shall document the sheathing type and orientation relative to framing, connections (fasteners, fastener patterns), sub-diaphragm anchorage to concrete or masonry walls, diaphragm attachment to collectors and collector attachment to shear wall lines.

7.2.4 Document each shear wall type separately within the body of the daily inspection report. The approved personnel shall document the sheathing type and orientation relative to framing, connections (fasteners, fastener patterns), anchorage to foundations (*tie-down*) and floor ties.

7.2.5 The inspector shall write an area acceptance report for each floor when completed. Document the products that are fabricated and installed. State the ICC-ESR report number or the fabricators name when applicable. Reference the NCR number if the products are not approved.

8.0 RECORDS:

8.1 Daily inspection reports, test data, non-compliance reports, record of corrections, inspection completion report, and area acceptance reports, when applicable, shall be included in the Final Report.

9.0 ATTACHMENTS:

Wood Inspection (Form 838a)
 Special Inspection for Residential Construction (BD-CI-213)

| | |
|--|----------------------------------|
| Prepared By: Marc Fernandez, P.E. | Date Prepared: 01/24/2024 |
|--|----------------------------------|

Revision History:

| Title | Revision/Approved Date | Effective Date |
|----------|------------------------|-------------------|
| TRG-Wood | January 24, 2024 | April 1, 2024 |
| TRG-Wood | April 14, 2022 | April 14, 2022 |
| TRG-W | July 20, 2012 | August 3, 2012 |
| TRG-W | February 1, 2010 | February 12, 2010 |
| TRG-W | October 10, 2008 | October 17, 2008 |
| TRG-W | July 26, 2006 | July 28, 2006 |
| TRG-W | February 27, 2006 | March 15, 2006 |



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Werner Hellmer, P.E., Deputy Director • Scott Telford, P.E., Deputy Director

WOOD INSPECTION FORM

| | | | | | |
|-------------------|--|------------------|--|--------|--|
| Project Address: | | Lot: | | Block: | |
| Development Name: | | Owner/Agent: | | | |
| Approved Agency: | | Inspection Date: | | | |
| Permit No. | | BDIA No. | | | |

The aforementioned approved agency shall perform Wood Special Inspection services for the above-listed project. Only CCBD approved personnel shall be utilized to perform those specific inspections as required by the Approved Agency Agreement. The approved agency shall submit this notification of special inspection activities per BAC 22.02.525, A 2. The daily inspection and other applicable reports shall be included with the Final Report to be issued when all the special inspection services are completed.

Quality Manager / Engineering Manager / Approved Personnel

Appendix C: Work Plan

Appendix C

Work Plan

A work plan is an in detail outlined sequence of materials testing procedures, special inspections, expected materials testing range values, and other information required to build a retrofit program of compliance verification when special inspections by approved inspection personnel did not take place during construction, and/or when materials testing was not performed during fabrication/placement. A *Work Plan* can only be prepared, wet seal and issued by a register design professional.

Work Plan Types

Pursuant to the Building Administrative Code, Section 22.02.085, a work plan is required for any of the following:

General Work Plan

- Work identified on the Inspection Agreement that was inspected and/or tested by unapproved personnel.
- Permit holder or owner failed to engage the designated Approved Agency to perform special inspection activities identified on the Inspection Agreement.
- Permit holder or owner failed to obtain approval prior to change the designated Inspection Agency or scope work, which requires special inspections, and has commenced or continue construction.
- Work that is in nonconformance to the approved construction documents or the governing codes and requires additional verification or remedial action.
- Work that was erected on, covered, or loaded without special inspections and/or testing.
- When prefabricated structural elements arrive on a project site from a Non- Approved Fabricator.
- When a new racking system is provided by a Non-Approved Fabricator.
- When racking systems are re-used from another building.

General Work Plan

1. Engineering Work Plan

1.1 Responsibilities

1.1.1 Clark County Building Department (CCBD)

- Generate a disapproved inspection, a deficiency letter or *Notice of Violation* requiring the work in affected areas to be stopped, where applicable.
- Review the work plan submitted by the Registered Design Professional or the Approved Agency.
- Review the *Repair Plan* submitted by the engineer of record. (If applicable)
- Release approved *Work Plan* to contractor.
- Release approved *Repair Plan* to the contractor. (If applicable)
- Receive, review, and result a *Work Plan Resolution Report*, after *Work Plan* has been followed and completed.

1.1.2 Permit holder/owner/owner representative

- Cease all work in the non-compliance areas.
- Provide the register design professional *Work Plan*, *Work Plan Resolution Report*, and *Repair Plan* to CCBD for review.

1.1.3 Approved Agency

- Issues a *Non-Compliance Report* when the permit holder/owner/owner representative does not engage the designated Approved Agency to perform special inspection activities identified on the Inspection Agreement.
- Generates a *Work Plan* when requested and submit it to the Registered Design Professional for review and approval.
- Document Non-compliance to the approved *Work Plan* as a requirement for a *Repair Plan*, if any defects are found by visual or testing means.
- Proceeds with verification activities after the *Work Plan* is reviewed & accepted by CCBD.
- Proceeds with verification activities after the *Repair Plan* is reviewed & accepted by CCBD. (If applicable)
- Submits the *Work Plan Resolution Report* to CCBD for review and acceptance.
- Approved Agency must submit the approved *Work Plan Resolution Report*, *Repair Plan* (if applicable) and register design professional approval as part of the *Quality Assurance Report*.

1.2 Work Plan and Work Plan Resolution Report Requirements

1.2.1 *Work Plan* must be prepared, reviewed, and sealed by the designated Approved Agency or the register design professional as appropriate. When sealed by other than the register design professional of record, it must review stamp. A *Work Plan* shall contain the following elements:

- Specify the scope work that requires verification, by identifying the lateral and vertical extent of each area of work.
- The work area must be identified on a copy of the approved plans.
- Identify the critical structural members or connections of the work to be inspected and/or tested.
- Specify the verification method(s) for the work, including applicable code sections and applicable material testing standards.
- Indicate that if any defects or negative testing results are found by Visual or Testing means, a *Repair Plan* will be developed, prior to any repairs being conducted,
- Provide the date the verification activities are going to commence.
- Acceptance criteria for resolution.

- Additional project specific approvals may be required for the approved agency personnel as deemed applicable by CCBD staff.
- Other information may be required as determined by CCBD.

1.2.2 *Work Plan Resolution Report* must be reviewed and sealed by the designated Approved Agency or the register design professional as appropriate. Other information may be required as determined by CCBD staff. A *Work Plan Resolution Report* shall contain the following elements:

- All inspection daily reports and test results for the verification performed.
- A description of the verification process and the results.
- If any defects or negative testing results were found by Visual or Testing means, a developed *Repair Plan* with corresponding *Non-Compliance Report* and *Record of Correction* shall be included.
- A statement that all work is in compliance with the approved construction documents and the applicable codes/standards.
- The work plan resolution shall be included in the final report.