SPECIAL INSPECTION
GENERAL PROGRAM

I. SPECIAL INSPECTION - AN OVERVIEW

The Uniform Building Code (U.B.C.) was unique among the model codes in its provisions for special inspectors. Commencing with the 1995 U.B.C., it set forth a number of situations in which the employment of a special inspector is mandatory. For the first time, the owner was required to provide specially qualified inspectors for continuous inspection during construction in addition to called inspections provided by the municipality and in addition to periodic site visits provided by the architect or engineer. **NOTE: The current City of Palmdale Building Code is the 2016 California Building Code.**

A special inspector is a person who has been approved by the building official to perform certain types of inspection. The use of special inspectors is reserved for complex installations requiring certain highly developed inspection skills in one or more construction crafts. These generally include:

1. Concrete - during the taking of test specimens and placing of reinforced concrete and pneumatically placed concrete.
2. Bolts Installed in Concrete - during installation of bolts and placing of concrete around such bolts.
3. Ductile Moment-resisting Concrete Frames.
4. Reinforcing Steel and Pre stressing Steel - during stressing and grouting of pre stressed concrete and placing of reinforcing steel, placing of tendons, and pre stressing steel.
5. Welding - of ductile moment-resisting steel frames, and for all structural welding.
6. High-strength Bolting - during all bolt installations and tightening operations.
7. Structural Masonry - during preparation of masonry wall prisms, sampling and placing of all masonry units, placement of reinforcement, inspection of grout spaces, and during all grouting operations.
8. Reinforced Gypsum Concrete - when cast-in-place Class B gypsum concrete is being mixed and placed.
9. Insulating Concrete Fill - during the application of insulating concrete fill when used as part of a structural system.
10. Spray-applied Fireproofing.
11. Piling, Drilled Piers and Caissons - during driving and testing of piles and construction of cast-in-place drilled piles or caissons.
12. Shotcrete - during the taking of test specimens and placing of shotcrete.
14. Smoke Control System
15. Special Cases.

An additional provision allows the building official to use discretion for the employment of a special inspector in other cases where it is deemed appropriate.

The use of special inspectors is not discretionary. Palmdale Building Code Section 1704 clearly states the conditions under which they must be utilized, but there is a provision for the building official to waive special inspection for work of a minor nature.

It is the responsibility of the building official to determine the qualifications of special inspectors. This can be done in any manner satisfactory to the building official, and often includes written examinations, oral interviews and a review of relevant education and experience. The Palmdale Building Code does not make specific requirements for the determination of an inspector’s qualifications, but that in no way lessens the importance of being selective in this crucial process.

A truly qualified special inspector usually has skills which significantly out pace the skills of regular municipal inspectors except that they are ordinarily more narrow in scope. For example, a municipal inspector is required to have a general knowledge of a great number of code requirements. This naturally limits one’s ability to specialize in knowledge of one area. Special inspectors, on the other hand, are able to devote their abilities to a limited subject and become more proficient in that subject.
II. GENERAL PROGRAM GUIDELINES

A. Purpose of Special Inspection

Special inspection is the monitoring of the materials and workmanship which are critical to the integrity of the building structure. It is the review of the work of the contractors and their employees to assure that the approved plans and specifications are being followed and that relevant codes and ordinances are being observed. The special inspection process is in addition to those conducted by the municipal building inspector and by the engineer or architect of record as part of periodic structural observations. The special inspectors furnish continuous inspection at all times that construction requires their presence.

Good communication between the special inspector and the designers, contractor and building department is essential. (Code reference: Palmdale Building Code Section 1704.1.2)

B. Duties and Responsibilities of the Project Owner

The project owner or the engineer or architect of record acting as the owner's agent is responsible for funding special inspection services. (Code reference: Palmdale Building Code Section 1704.1)

C. Duties and Responsibilities of the Engineer or Architect of Record

The engineer or architect of record has many duties and responsibilities related to special inspection activities. They include the following:

1. Identify the need for special inspection services.

   The project plans which are submitted to the building official need to clearly indicate the design parameters and material selection. The engineer or architect of record is the development team member who analyzes the critical elements of the design and determines where special inspection is necessary in accordance with the Palmdale Building Code.

2. Develop the structural tests and inspection schedule.

   The engineer or architect of record shall specify types of special inspection required by a special inspection program and shall be outlined on the approved plans for the project.

3. Recommend and assist in the selection of special inspectors.

   The selection and qualifying of the special inspector can often be a difficult and challenging process. This procedure can be facilitated through the involvement of the engineer or architect of record in review of the following:

   a. Qualifications of the special inspector(s).
   b. The number of special inspector(s) required.
   c. Procedures for testing in the field and in the shop.
   d. Reporting procedures.
   e. Provision for supervision of the special inspector(s).
   f. Must be registered with the City of Palmdale Building and Safety Department.

4. Respond to field discrepancies.

   Material and design discrepancies which are not resolved in a timely manner or are about to be incorporated in the work must be brought to the attention of the engineer or architect of record and the building official. Uncorrected field deficiencies observed by the special inspector must be brought to their attention. The engineer or architect of record is instrumental in effecting the remedial process of deficiency correction. The engineer or architect of record is responsible for any design changes in addition to acknowledgment and approval of shop drawings which may detail structural information, and for submission of such changes to the building department for approval.

D. Duties and Responsibilities of the Special Inspector

The special inspectors are individuals with highly developed, specialized skills who observe those critical building or structural features which they are qualified to inspect. Duties of special inspectors and/or inspection agencies include the following:

1. Signify presence at job site.

   Special inspectors should notify contractor personnel of their presence and responsibilities at the job site. If required by
the building official, they shall sign in on the appropriate form posted next to the building permit. The special inspection record is shown in Appendix A.

2. Observe all work for which they are responsible.

   Special inspectors shall inspect all work for conformance with the building department approved (stamped) drawings and specifications and applicable provisions of the Palmdale Building Code.

3. Separately identify all non-conforming work.

   Special inspectors shall bring all non-conforming items to the immediate attention of the contractor. If any such item is not resolved in a timely manner or is about to be incorporated in the work, the engineer or architect of record and the building official should be notified immediately by telephone or in person and the item noted in the special inspector's written report. The discrepancy notice is shown in Appendix A. Alternate forms may be approved by the building department. The special inspector shall write a separate report to be posted at the job site regarding noted discrepancies which should contain, as a minimum, the following information about each non conforming item:
   a. Description and exact location.
   b. Reference to applicable detail of approved plans/specifications.
   c. Name and title of each individual notified and method of notification.
   d. Resolution or corrective action.

4. Provide timely reports.

   The special inspector shall complete written inspection reports for each inspection visit and provide the reports on a timely basis determined by the building official. The special inspector or inspection agency shall furnish these reports directly to the building official, engineer or architect of record and others as designated. These reports shall be organized on a daily format and may be submitted weekly at the option of the building official. The daily and weekly report forms are shown in Appendix A. Alternate forms may be approved by the building department. In these reports, special inspectors shall:
   a. Describe inspections and tests made with applicable locations.
   b. List all non-conforming items.
   c. Indicate how non-conforming items were resolved.
   d. List unresolved items, parties notified, time and method of notification.
   e. Itemize changes authorized by architect/engineer of record and approved by the building department if not included in non-conformance items.

5. Submit a final signed report.

   Special inspectors or inspection agencies shall submit a final signed report to the building department stating that all items requiring special inspection and testing were fulfilled and reported and, to the best of their knowledge, in conformance with the approved design drawings, specifications, approved change orders and the applicable provisions of the Palmdale Building Code. Items not in conformance, unresolved items or any discrepancies in inspection coverage (i.e., missed inspections, periodic inspections when continuous was required, etc.) should be specifically itemized in this report. A final report form is shown in Appendix A. Alternate forms may be approved by the building department.

E. Duties and Responsibilities of the Building Official

Of all the team members in the development process, the building official is the only member who has the legal authority to see that all of the provisions of special inspection are carried out. This is clearly identified under the administrative provision of the Palmdale Building Code which states, “The building official is hereby authorized and directed to enforce all the provisions of this code.”

The specific provisions of providing for special inspection services are mandatory and states, "All construction or work for which a permit is required shall be subject to inspection by the building official . . and certain types of construction shall have continuous inspection.

The specific duties and responsibilities of the building official relating to special inspection are identified in the Palmdale Building Code. The building official's responsibilities related to special inspection include the following:

1. Review and examine plans, specifications and contract documents for compliance with special inspection requirements.

   The building official is charged with the legal authority to review the plans and specifications for compliance with the requirements of the Palmdale Building Code.

2. Communicate special inspection requirements to the development team.
Once special inspection requirements are identified in the plan approval process and the structural tests and inspection schedule is completed and approved, the building official shall require these requirements to be incorporated into the approved plans.

The building official may also require a pre-construction conference to review the conditions of special inspection.

3. Approve the special inspector.

Since special inspectors observe specialized work, they must possess very specialized skills. Therefore, special inspectors must be competent individuals, qualified in the areas they are to inspect, and approved by the building official to observe the work assigned. Suggested qualifications for special inspectors are listed in Part IV.

4. Monitor the special inspection activities.

The building official should monitor the job site to see that special inspection is continuous where required and that an adequate number of special inspection staff is present depending upon extent and complexity of the project.

5. Review inspection reports.

The building official receives, reviews and makes the inspection reports part of the inspection records.

6. Receive the final report.

The Certificate of Occupancy shall not be issued until the final report has been received and accepted by the building official.

F. Duties and Responsibilities of the Contractor

The contractor's duties include the following:

1. Notify the special inspector.

The contractor is responsible for notifying the special inspector or agency regarding individual inspections required by the building department. Adequate notice shall be provided so that the special inspector has time to become familiar with the project.

2. Provide access to approved plans.

The contractor is also responsible for providing the special inspector with access to approved plans at the job site.

3. Retain special inspection records.

The contractor is also responsible for retaining at the job site all special inspection records submitted by the special inspector, and providing these records for review by the building department's inspector upon request.

III. RECOMMENDED PROCEDURES FOR SPECIAL INSPECTORS

A. Employment

1. The special inspector/agency shall not be in the employ of the contractor, subcontractor or material supplier.

2. The owner or the engineer or architect of record acting as the owner's agent shall employ the special inspector/agency.

3. In the case of an owner/contractor, the special inspector/agency shall be employed as specified by the building official.

B. Called Inspections

The employment of a special inspector or inspection agency shall not be deemed to relieve the building department of responsibility for progress or called inspections as required by the code. Building department called inspections cannot be delegated to the special inspector; however, building department inspections should not be signed off without the concurrence of the special inspector.
C. Notification

1. The Building and Safety Department shall be notified prior to the commencement of any special inspection activities. The notification shall be filed at least one working day before such inspection is desired. Such notification may be in writing or by telephone to the inspector handling the project or a Senior Inspector.

2. Such notification should include the following:
   a. Name of the special inspector;
   b. Project name and address;
   c. Building permit number;
   d. Category(Categories) of work to be inspected; and the
e. Time and date of inspection.

D. Performance

1. The special inspector shall remain on the job at all times when work requiring inspection is in progress.

2. The building official will verify the work of the special inspector. Job site verification should be done, at a minimum, in conjunction with called inspections routinely performed by the building official or municipal inspection staff. All questions relative to code requirements, interpretations of or modifications/changes to the approved plans should be referred to the building official.

E. Nonconformance Procedure

When special inspectors observe a nonconformance occurring (or about to occur) they must take the following steps:

1. Notify the contractor or his or her representative of the nature of the discrepancy and what the code or approved plans require.

2. If the contractor then chooses to proceed with the discrepancy, the special inspector must do the following:
   a. Immediately notify the building official by telephone or other means of the nature of the discrepancy.
   b. Notify the engineer or architect of record directly or through his or her employer.
   c. Prepare a discrepancy notice and post this at the job site next to the building permit (a sample notice is shown in Appendix A, alternate forms may be approved by the building department).

F. Written Reports

The special inspector or inspection agency shall promptly submit required written reports to the building official, the engineer or architect of record, and any other persons designated by the building official. Reports shall be as outlined in the general guidelines. Reports are shown in Appendix A. Alternate forms may be approved by the building department.

IV. RECOMMENDED SPECIAL INSPECTOR QUALIFICATIONS

A. Competency Standards

The building official has the responsibility to ascertain that special inspectors are qualified for the type of inspection required. Qualifications should be measured against the standards listed below:

1. Qualification should include current ICC certification as a special inspector for the discipline(s) for which he or she is requesting approval.

2. The building official may also require a written or oral examination to verify the applicant’s knowledge of jurisdictional procedures and requirements.

3. Suggested additional qualifications (where available):
   a. Reinforced concrete special inspector:
      ACI certification as a concrete field testing technician-Grade I. For further information, contact the American Concrete Institute, Box 19150, Detroit, Michigan 48219, (313) 532-2600
   b. Structural steel and welding special inspectors, (when engaged in nondestructive test methods): Qualification in
B. Experience Standards

The building official may require that special inspector applicants provide evidence of experience through the following and/or other means:

1. Written references verifying related work experience; and/or

2. Personal interview to evaluate the applicant's work experience and suitability to be a special inspector.

C. Performance Standards

The building official requires the special inspection follow the job tasks which shall be performed for each of the disciplines included in Appendix B.

These job tasks are comprehensive of tasks which may be performed by special inspectors on large and complex jobs. Actual tasks required on specific jobs will typically be fewer.
CITY OF PALMDALE
BUILDING AND SAFETY

REQUIRED REPORTING FORMS
FOR SPECIAL INSPECTION
APPENDIX A

DAILY REPORT

JOB SITE SPECIAL INSPECTION SUMMARY

FINAL REPORT

DISCREPANCY REPORT

STRUCTURAL OBSERVATION REPORT
CITY OF PALMDALE
**SPECIAL INSPECTOR DAILY REPORT**

**PROJECT NAME:**

**ADDRESS:**

**INSPECTION TYPE(S)/COVERAGE:**

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**DESCRIBE INSPECTIONS MADE, INCLUDING LOCATIONS:**

________________________________________________________________________

________________________________________________________________________

List Tests Made:

________________________________________________________________________

________________________________________________________________________

List Items Requiring Correction, Corrections of Previously Listed Items, and Previously Listed Items:

________________________________________________________________________

________________________________________________________________________

List Changes to Approved Plans Authorized by Architect/Engineer:

________________________________________________________________________

________________________________________________________________________

**COMMENTS:**

________________________________________________________________________

________________________________________________________________________

To the best of my knowledge, the work inspected was in accordance with the Building Department approved design drawings, specifications and applicable workmanship provisions of the P.B.C except as noted above.

Signed:__________ Date:__________

Print Full Name:__________ I.D. Number:__________

cc: Building and Safety Department

Architect/Engineer

(This form to be posted daily on the job site for Building and Safety Department inspection use.)
TO WHOM IT MAY CONCERN:

This is to certify that I performed special inspection on the following portions of the work at the above address which required continuous inspection, and which I was employed to inspect:

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

Based upon my personal observation and written reports of this work, it is my judgment that the inspected work was performed, to the best of my knowledge, in accordance with the approved plans, specifications, and the applicable workmanship provisions of the Palmdale Building Code.

Sincerely,

Special Inspector’s Signature  Date

Print Full Name  ID Number

cc: Client/Owner
    Architect/Engineer
CITY OF PALMDALE

STRUCTURAL OBSERVATION

DATE: ____________________________________________________________

ADDRESS: ______________________________________________________

CITY: ___________________________________ STATE: _______________ ZIP CODE: __________________

ATTENTION: ____________________________________________________

RE: PROJECT REPORT STRUCTURAL OBSERVATION

PROJECT NAME: __________________________________________________

ADDRESS: ______________________________________________________

TO WHOM IT MAY CONCERN:

This is to certify that I performed structural observation of the following portions of the work at the above address which I was employed to observe:

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

Based upon my personal observation and written reports of this work, it is my judgment that the inspected work was performed, to the best of my knowledge, in accordance with the approved plans, specifications, and the applicable workmanship provisions of the Palmdale Building Code.

Sincerely,

_________________________________________________________________

Special Inspector’s Signature                                      Date

_________________________________________________________________

Print Full Name                                                    ID Number

cc: Client/Owner
    Architect/Engineer
JOB SITE SPECIAL INSPECTION SUMMARY

CITY OF PALMDALE

BUILDING AND SAFETY

SPECIAL INSPECTION RECORD

NOTE: This form shall be posted and is required when special inspection exceeds two week duration or more than one special inspector is employed for a project.

When attached to the job inspection record card, this card becomes a part of the inspection record.

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**CITY OF PALMDALE**  
BUILDING AND SAFETY DEPARTMENT  
REGISTERED SPECIAL BUILDING INSPECTION  

**DISCREPANCY NOTICE**

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| Notice Delivered To:  
Contractor  
Engineer  
Building Department  
Engineer/Architect |  
DATE  
TIME |

MAKE THE FOLLOWING CORRECTIONS AND SECURE INSPECTION APPROVAL PRIOR TO PROCEEDING WITH THIS PHASE OF THE WORK.

|  |
|  |
|  |
|  |
|  |
|  |

SIGNED:  
REGISTERED SPECIAL BUILDING INSPECTOR

DO NOT REMOVE THIS NOTICE  
POST ADJACENT TO BUILDING PERMIT INSPECTION CARD.
CITY OF PALMDALE
BUILDING AND SAFETY

REQUIRED
SPECIAL INSPECTION PRACTICES

APPENDIX B

REINFORCED CONCRETE SPECIAL INSPECTORS
PRESTRESSED CONCRETE SPECIAL INSPECTORS
STRUCTURAL MASONRY SPECIAL INSPECTORS
STRUCTURAL STEEL AND WELDING SPECIAL INSPECTORS
I. GENERAL INSPECTION PRACTICE

1. Responsibilities and Authority - Apply special inspector responsibilities and authority, and comply with requirements of enforcing jurisdiction.

2. Notification - Notify the local jurisdiction of the job inspection and specify the type of inspection for which the special inspector has been engaged, in accordance with the Building and Safety Department.

3. Presence at Job - Be present for continuous inspection during execution of all work for which the special inspector has been engaged.

4. Acceptable Conditions - Verify that the local jurisdiction inspector has approved the conditions at the site.

5. Progress Report - Submit periodic written and verbal progress reports to the local jurisdiction as required.

6. Correct Discrepancies - Notify contractor to correct discrepancies.

7. Uncorrected Discrepancies - Notify the Building Official and designer when discrepancies are not corrected.

8. Plan Changes - Verify that structural plan changes are properly documented and approved by the Building and Safety Department.

9. Record Keeping - Maintain records of work inspected, including discrepancies and actions taken.

10. Compliance Report - Submit final report of compliance prior to occupancy of the building(s).

II. CONCRETE MIX VERIFICATION

11. Mix Design - Verify concrete is batched based on water/cement ratio or laboratory mix design, that cement type is as specified, that aggregate type, weight and size are as specified and that admixtures are correct.

12. Trip Ticket - Determine that mixer truck trip ticket specifies mix in truck is mix required.

13. Mixing Water - Verify that total water added to mix does not exceed that allowed by concrete mix design and is of acceptable quality.

14. Adequate Equipment - Verify that concrete mixing and placing equipment at site is adequate for the intended use.

15. Quality of Concrete - Verify that the quality of the concrete is indicative of adequate mixing time, consistency and relevant time limits.

III. CONCRETE REINFORCEMENT AND PRE STRESSING STEEL

16. Rebar Grade - Verify grade and visual conformity with acceptable quality standards.

17. Pre stressing Steel Grade - Verify pre stressing steel, size and grade in conformance with acceptable quality standards.
18. **Rebar Condition** - Verify that rebar is free of oil, dirt, excessive rust and from damage in shipment to job site.

19. **Pre stressing Steel Condition** - Verify that pre stressing steel is free of rust and from damage and is properly wrapped as required.

20. **Rebar Tying and Bracing** - Verify that rebar is adequately tied, chaired and supported to prevent displacement during concrete placement.

21. **Pre stressing Steel Ties and Supports** - Verify that pre stressing steel tendons and post-tensioning ducts are adequately tied, chaired and supported to prevent displacement during concrete placement, and are adequate for intended stresses.

22. **Rebar Clearance** - Verify minimum and maximum clear distances between bars and minimum structural distance to outside of concrete.

23. **Pre stressing Steel Clearance** - Verify minimum and maximum clear distances between pre stressing steel and minimum structural distance to outside of concrete.

24. **Concrete Cover over Rebar** - Verify minimum concrete cover is maintained between rebar and the surface of concrete.

25. **Concrete Cover over Pre stressing Steel** - Verify minimum concrete cover is maintained between pre stressing steel and the surface of concrete.


27. **Pre stressing Steel Placement** - Verify placement of pre stressing steel and ducts as detailed in plans and specification.

28. **Rebar Laps and Bends** - Verify bar laps for proper length and stagger, and bar bends for minimum diameter, slope and length.

29. **Rebar Welding** - Verify that welding of rebar is approved and properly inspected.

30. **Pre stressing Steel Anchorage** - Verify location, size and placement of pre stressing steel anchorage as detailed in plans and specifications.

### IV. CONCRETE FORM WORK AND EMBEDDED ITEMS

31. **Concrete Construction Joints** - Verify proper preparation of construction joint surfaces prior to placing.

32. **Form Work Construction** - Verify that the form work is tight to prevent leakage and will result in a final structure with correct shape and member size.

33. **Embedded Items** - Verify that embedded items are properly sized and placed.

34. **Post-tensioning Ducts** - Verify that post-tensioning ducts are correctly sized, are mortar tight and non reactive with concrete, tendons and filler materials.

### V. CONCRETE PREPARATION AND PLACEMENT
35. Concrete Base Preparation - Verify acceptable general condition of the concrete base prior to placement.

36. Pre pour Base Moisture - Verify that the concrete base is properly wetted and standing water is removed before concrete is placed.

37. Concrete Placement - Verify that concrete conveyance and depositing avoids segregation due to rehandling or flowing, and proper joint construction.

38. Concrete Consolidation - Verify that concrete is properly consolidated.

VI. SAMPLES AND TESTS

39. Test Type - Determine the type and number of concrete, grout and reinforcing/pre stressing steel tests required.

40. Test Samples - Take proper test samples of fresh concrete, grout and reinforcing/pre stressing steel.

41. Slump tests - Perform consistency (slump) tests.

42. Specimens Preparation - Prepare test specimens (cylinders, flex beams or shrinkage bars).

43. Hardened Concrete Test Samples - Witness removal of test samples and perform other test procedures on hardened concrete.

44. Air Tests - Perform air content tests.

45. Specimen Handling/Protection - Properly handle and place specimens in protected area after preparation and arrange for transportation of specimens to test facility.

46. Document Tests - Report tests performed and forward test results when necessary.

VII. CONCRETE PROTECTION

47. Protection - Verify that appropriate hot and cold weather measures are taken for protection of the concrete and grout.

VIII. GROUTING AND PRE STRESSING

48. Grout Mix Design and Placement - Verify grout mix design based on water/cement ratio or laboratory mix design and correct placement of grout into post-tensioning ducts for bonded pre stressing tendons.

49. Calibration of Stressing Ram - Check for proper calibration of steel stressing ram.

50. Steel Stressing - Verify that steel is pre stressed at the proper time using proper techniques, including stressing location, sequence, and with proper records of stressing and steel elongation.

51. Steel Tension - Verify final pre stressing steel tension immediately after anchorage, as specified.

IX. PLAN READING ABILITY
52. **General Project Requirements** - Review general notes and/or specifications and typical details for general project requirements for concrete strengths, reinforcing steel clearances, pre stressed concrete requirements and special inspection requirements.

53. **Foundations and Below grade Walls** - Review approved plans for reinforced and pre stressed concrete construction requirements for beams, girders and joists.

54. **Beams, Girders and Joists** - Review approved plans for reinforced and pre stressed concrete construction requirements for beams, girders and joists.

55. **Columns** - Review approved plans for reinforced concrete column construction requirements.

56. **Slabs** - Review approved plans for reinforced and pre stressed concrete slab construction requirements.

57. **Miscellaneous Details** - Review approved plans for reinforced and pre stressed concrete construction requirements for stairs, above grade walls and other special details.

**STRUCTURAL MASONRY SPECIAL INSPECTORS**

**I. GENERAL INSPECTION**

1. **Responsibilities and Authority** - Apply special inspector responsibilities and authority, and comply with requirements of Palmdale Building and Safety.

2. **Notify at Start** - Notify the local jurisdiction of inspection of the job and specify the type of inspection for which the special inspector has been engaged, in accordance with Palmdale Building Department.

3. **Presence at Job** - Be present for continuous inspection during execution of all work for which the special inspector has been engaged.

4. **Acceptable Conditions** - Verify that the local jurisdiction inspector has approved the conditions at the site.

5. **Progress Report** - Submit periodic written and verbal progress reports to local jurisdiction as required.

6. **Correct Discrepancies** - Notify contractor when discrepancies occur.

7. **Uncorrected Discrepancies** - Notify building official and designer when discrepancies are not corrected.

8. **Plans** - Verify that original structural plans and plan changes are documented and approved by the Palmdale Building and Safety Department.

9. **Record Keeping** - Maintain records of work inspected, including discrepancies and actions taken.


**II. MASONRY MATERIALS - STORAGE CERTIFICATIONS**
11. **Masonry Material Certifications** - Verify masonry material certifications, bills of materials, or other documentation of masonry units, cement, lime and additives for compliance with plans and specifications. Verify materials are in acceptable condition.

12. **Storage of Materials** - Verify that cement, lime, block and brick are supported on pallets and covered to protect from exposure to excessive moisture or drying. Verify aggregates are stored free from contamination and to minimize segregation.

13. **Masonry Reinforcing Material Certifications** - Verify masonry reinforcing materials certifications, or other documentation of masonry reinforcement, for compliance with codes, plans and specifications. Verify reinforcing materials are in acceptable condition.

**III. MORTAR MIX**

14. **Mortar Aggregates** - Verify that sand and aggregates are clean and have acceptable gradation.

15. **Mortar Cement** - Inspect mortar cement for dryness, type and conformance to specified requirements.

16. **Mortar Water** - Verify that clean water and only approved additives and admixtures are used.

17. **Job mix Mortar Proportioning and Mixing** - Verify job mix mortar proportioning of cement, aggregates and admixtures for consistency, workability and mixing time.

18. **Ready mix Mortar** - Inspect ready mixed mortar for type and conformance to specified requirements.

19. **Mortar Use** - Verify mortar elapsed time since mixed. Verify that mortar is not retempered after set.

**IV. MASONRY PREPARATION AND PLACEMENT**

20. **Dowels/Anchors** - Inspect alignment of dowels and anchors extending out of the footings for masonry walls.

21. **Base Conditions** - Verify that masonry footing surfaces are clean.

22. **Condition of Units** - Verify that masonry units are clean and sound.

23. **Placement** - Inspect the laying of masonry units, checking temperature, dimensions and alignment of finished work, laying of masonry units, for stack or running bond or variations as per plans. Verify that there is no deep furrowing of bed joints. Inspect mortar joints for proper thickness and tooling.


**V. MASONRY REINFORCEMENT**

25. **Vertical Reinforcement** - Inspect the placement and alignment bars and dowels for size, grade and spacing. Inspect length of lap splices, clearances between bars, clearances to masonry units and outside face of walls, and positioning of steel.
26. **Horizontal Reinforcement** - Inspect horizontal joint reinforcement (HJR) steel and masonry reinforcement bars for size, length of lap splices, dowels, clearances between bars, clearances to masonry units and outside face of walls, and alignment.

27. **Ties** - Inspect ties in masonry for straightness, embedment, spacing, and size.

28. **Anchor Connections** - Inspect the installation of masonry anchor bolts, joist anchors, inserts and straps.

**VI. GROUT MIX**

29. **Grout Aggregates** - Verify that sand and aggregates are clean and have acceptable gradation.

30. **Grout Cement** - Inspect grout cement for dryness, type and conformance to specified requirements.

31. **Grout Water** - Verify that clean water and only approved additives and admixtures are used.

32. **Job mix Grout Proportioning and Mixing** - Inspect job mix grout proportioning of cement, aggregates and admixtures for consistency, workability and mixing time.

33. **Ready mix Grout** - Verify ready mixed grout for conformance with mix design, consistency and workability.

34. **Grout Use** - Verify grout elapsed time since mixed. Verify that grout is not retempered after set.

**VII. MASONRY GROUTING AND CAPping**

35. **Grout Spaces** - Verify that grout spaces are correctly sized and clean, cleanouts are closed after inspection and grout barriers are in place before grouting.

36. **Dry Packing** - Verify proper application of dry packing.

37. **Grouting** - Verify proper grouting technique including consolidation to approved height of grout space, reconsolidation and vibration.

38. **Capping** - Verify construction of wall cap for weather tightness.

**VIII. SAMPLES AND TESTS**

39. **Test Prisms** - Inspect the construction of test prisms including those required prior to beginning construction. Verify that test prisms contain the same masonry units, moisture content, mortar and workmanship as used in the building.

40. **Tests and Specimens** - Observe test specimens and field tests as required.

41. **Specimen Handling/Protection** - Verify protection of test specimens and arrangements for pickup or delivery of specimens to appropriate persons.

42. **Masonry Samples** - Witness removal of test specimens from completed masonry.

**IX. MASONRY PROTECTION**
43. Special Protection - Verify that masonry protection is in conformance with code, plans and specifications.

X. PLAN READING

44. General Project Requirements - Review specifications, general notes and typical details for general project requirements for masonry type, reinforcing steel grades, clearances, and special inspection and testing requirements.

45. Foundation and Below grade Walls - Review approved plans for reinforced masonry construction requirements for foundations and below grade walls.

46. Above grade Walls - Review approved plans for reinforced masonry construction requirements for above grade walls.

47. Beams and Lintels - Review approved plans for reinforced masonry construction requirements for beams and lintels.

48. Columns - Review approved plans for reinforced masonry column construction requirements.

49. Miscellaneous Details - Review approved plans for special reinforced masonry construction requirements.

STRUCTURAL STEEL AND WELDING SPECIAL INSPECTORS

I. GENERAL INSPECTION PRACTICE

1. Responsibilities and Authority - Apply special inspector responsibilities and authority, and comply with requirements of Building and Safety Department.

2. Notification - Notify the local jurisdiction of the job inspection and specify the type of inspection for which the special inspector has been engaged, in accordance with Palmdale Building and Safety Department.

3. Presence at Job - Be present for continuous inspection during execution of all work for which the special inspector has been engaged.

4. Acceptable Conditions - Verify that the local jurisdiction inspector has approved the conditions at the site.

5. Progress Report - Submit periodic written and verbal progress reports to local jurisdiction as required.

6. Correct Discrepancies - Notify contractor when discrepancies occur.

7. Uncorrected Discrepancies - Notify Building Official and designer when discrepancies are not corrected.

8. Plan Changes - Verify that structural plan changes are properly documented and approved by the enforcing jurisdiction.

9. Record Keeping - Maintain records of work inspected, including discrepancies and action taken.

II. STEEL AND WELDING MATERIALS

11. Structural Steel Materials - Verify mill test reports, steel identification markings, or other documentation of structural steel for compliance with plans and specifications. Visually inspect bolts, nuts and washers for conformance.

12. Welding Materials - Verify mill test reports, container identification markings, or other documentation of welding materials for compliance with plans and specifications. Verify that rod containers are undamaged or electrodes or otherwise dried when required.

III. WELDING

13. Qualification of Welders - Verify qualifications of welders, welding operators and tackers for conformance with AWS specifications.

14. Drying Ovens - Verify that appropriate drying ovens are utilized when required.

15. Welding and Joint Preparation - Verify that base metal to be welded is smooth, uniform, free from fins, tears and cracks, and that cut edges are acceptable.

16. Welding Procedures - Visually verify that welding is done in conformance with AWS requirements for process, materials, workmanship, number of passes, preheat and interpass temperatures, cleaning between passes, weld lengths, welding technique and welding sequence.

17. Welding Process - Verify that the welding process is in conformance with approved procedures.

18. Weld Repairs and Heat Straightening - Verify that weld repairs and heat straightening of structural members is done in accordance with approved procedures.

19. Fabrication and Materials Tolerances - Verify that fabrication and material are within permissible tolerances.

20. Rebar Welding - Verify that welding of reinforcing steel is done in conformance with approved procedures.

21. Production Tests - Verify that preproduction welding tests are correctly performed.

IV. STEEL ERECTION

22. Base Plates and Anchor Bolts - Verify correct size, location and setting of base plates, and size of anchor bolts and base plate holes.

23. Welding Sequence - Verify that welding sequence is followed where specified.

24. Faying Surfaces - Verify faying surfaces on connections utilizing high strength bolts for compliance to applicable standards.

25. Bolts - Verify correct type, location and size of bolts, size of bolt holes in connections and tightness of high strength bolts to applicable standards.

V. SAMPLES AND NON DESTRUCTIVE TESTS
26. **Bolt and Not Sampling** - Sample bolts, nuts and washers for testing, if required.

27. **Steel Sampling** - Mark steel members for sampling, record sample numbers and locations, observe specimen cutting and arrange for transportation of specimens to test facility.

28. **Non destructive Testing** - Arrange for and/or verify non destructive testing in accordance with approved procedures.

**VI. PLAN READING**

29. **General Project Requirements** - Review general notes and/or specifications and typical details for general project requirements for steel strengths, fabrication tolerances and special inspection requirements.

30. **Orientation and Frame Member Sizes** - Review approved plans for structural steel orientation and frame elevation member sizes.

31. **Decking** - Review approved plans for structural steel decking requirements.

32. **Columns and Base Plates** - Review approved plans for column and base plate member sizes.

33. **Joints** - Review approved plans for all steel-to-steel connections.

34. **Other Details** - Review approved plan details for structural steel and welding requirements for stairs, elevator shafts, concrete to steel connections and other structural steel requirements.