[CompanyName]

[CompanyAddress]
[CompanyPhone]

Electrical Construction

Quality Assurance/Quality Control Plan

[ProjectName]
[ProjectNumber]

Management acceptance

This Construction Quality Assurance/Quality Control Plan has been reviewed and accepted.

Endorsed By: (Name / Title)	[QualityManagerName], Quality Manager		
Signature:	*[QualityManagerName]*	Date:	[Date]
Version	1.0	Notes	Initial Issue

SIGNATURE SHEET

Plan Preparer

This [CompanyName] Project Quality Assurance/Quality Control Plan was prepared in accordance with the contract specifications and requirements of the [CompanyName] quality system and approved by:

[QualityManagerName] / [Date]

[QualityManagerName], Quality Manager /Date

Approval by Company Officer

This [CompanyName] Project Quality Assurance/Quality Control Plan is approved by:

[SeniorManagerName] / [Date]

[SeniorManagerName], Senior Manager /Date

Plan Concurrence

[CompanyName] Project Quality Assurance/Quality Control Plan concurrence by:

[ProjectManagerName] / [Date]

[ProjectManagerName], Project Manager /Date

[SuperintendentName] / [Date]

[SuperintendentName], Superintendent /Date

PROJECT-SPECIFIC ELECTRICAL QUALITY PLAN

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Background Information

Customer

[CustomerName]

Project Name

[ProjectName]

Project Number

[ProjectNumber]

Project Location

[Insert Location of Project Work Here]

Overall Project Description

[Insert Overall Project Description Here]

[CompanyName] Scope of Work

[Insert Scope of Work for This Contract Here]

F. Duties, Responsibilities, and Authority of QC Personnel

QC personnel assigned to this project have the duties, responsibilities and authority defined by their job position.

Each appointment is recorded on a Letter of Appointment. The project-specific Letter of Appointment exhibits are included as exhibits in this subsection. Key project personnel have accepted their appointments and declared their ability to carry out the appointments as indicated by their signature.

Senior Manager: Quality Duties, Responsibilities, and Authority

The Senior Manager is responsible for ensuring company-wide effectiveness of the Quality System. Regardless of other duties, the Senior Manager is responsible for:

- Fully implementing all provisions of the [CompanyName] Quality System and related documents.
- Manage the operation of the [CompanyName] Quality System
- Implement and manage all phases of quality control
- Ensuring that the Quality System is established and implemented by persons doing work that impacts quality
- Ensuring that the Quality System is maintained
- Acting as [CompanyName] liaison with parties outside the company on matters relating to quality
- Review and approval of all Quality System documents

Quality Manager: Quality Duties, Responsibilities, and Authority

The Quality Manager is responsible for ensuring the overall effectiveness of the Quality System for a specific project. Regardless of other duties, the Quality Manager is responsible for:

- Planning project quality controls required by the [CompanyName] quality systems and contract requirements
- Fully implementing all provisions of the [CompanyName] Quality System and related documents on the project.
- Manage the operation of the [CompanyName] Quality System on the project.
- Implement and manage all phases of quality control
- Communicating project-specific quality requirements to all affected departments, subcontractors and suppliers, and customers
- Ensuring that the Quality System is established and implemented by persons doing work that impacts quality
- Monitoring progress of activities
- Ensuring that the Quality System is maintained
- Acting as the project quality liaison with parties outside the company on matters relating to quality
- Reporting to senior management on performance of the Quality System, including needed improvements
- Review and approval of all project Quality System records
- Review and approval of project quality-related contract submittals
- Managing all project inspection and quality control activities
- Controlling corrective actions
- Resolving quality nonconformances

The Quality Manager has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality or cover up a defect
- To direct the removal and replacement of any non-conforming work, equipment, or material by [CompanyName], any subcontractor, or any supplier.
- Suspend work and/or supply of materials by any staff member, subcontractor personnel, or supplier as deemed necessary to assure quality results.

Alternate Quality Managers acting in the role of the project Quality Manager has the same quality duties, responsibilities and authority as the project Quality Manager.

SUPERINTENDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

A Superintendent verifies that work performed by subcontractors and suppliers and [CompanyName] work crews conforms to [CompanyName] quality standards. The Senior Manager appoints one or more Superintendents for each project.

A Superintendent has specific responsibilities for:

- Ensuring that work meets government regulatory and code requirements, customer requirements, contract requirements, contract technical specifications, contract drawings, approved contract submittals, and company quality standards and specifications
- Ensuring that subcontractors and suppliers begin work in accordance with [CompanyName] start-work policies
- Ensuring that subcontractors and suppliers receive a notice to work only when conditions will not adversely affect quality results
- Conducting quality inspections, tests, and recording findings
- Accurately assessing subcontractor quality and on-time performance
- Ensuring that quality standards are achieved before approving subcontractor or work crew completion of work

The Superintendent has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality
- Direct the removal or replacement of any non-conforming work, equipment, or material
- Suspend work and/or supply of materials as deemed necessary to assure quality results

Alternate Superintendent has the same quality duties, responsibilities and authority as the Superintendent. Multiple Superintendents may be assigned to the project.

PROJECT MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Project Manager is the one person responsible for management of a specific project. Regardless of other duties, the Project Manager is responsible for:

- Demonstrating commitment to the [CompanyName] Quality System and its integrity
- Ensuring achievement of project quality objectives
- Providing adequate resources for effective operation of the Quality System on the project
- Ensuring that each design employee understands his or her quality responsibilities as well as [CompanyName] quality policies
- Ensuring that each project employee understands his or her quality responsibilities as well as [CompanyName] quality policies
- Conducting management reviews of the [CompanyName] Quality System
- Ensuring the availability of necessary resources and information for effective operation of the [CompanyName] Quality System

The Project Manager has authority to:

- Stop work when continuing work adversely affects quality or covers up a defect
- Prevent the use of equipment or materials that would adversely affect quality or cover up a defect
- Suspend work and/or supply of materials by any staff member, subcontractor personnel, or supplier as deemed necessary to assure quality results.

ALL EMPLOYEES: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

All employees have quality responsibilities that include:

- Conformance to project quality requirements
- Compliance with the project quality plan
- Meeting or exceeding all applicable regulations, codes, industry standards, and manufacturer specifications as well as meeting or exceeding our customers' contract and individual requirements.
- Fully implementing and complying with all provisions of the [CompanyName] Quality Manual.

All employees have the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality

J. Electrical Project Quality Specifications

Fulfilling customer contract expectations is a primary objective of the [CompanyName] Quality System. To ensure that customer expectations will be fulfilled, [CompanyName] clearly defines the requirements for each contract before it is approved.

The Project Manager ensures that the information in customer contracts clearly defines customer expectations and that the necessary details are provided to set requirements for construction.

[CompanyName] personnel and subcontractors and suppliers are accountable for compliance to standards-based written specifications.

To achieve expectations reliably and consistently, specifications are clearly spelled out, not only for results but also for processes. Specifications apply to materials, work steps, qualified personnel and subcontractors and suppliers, safe work rules, and environmental work conditions.

Standards ensure that results are specified rather than left to discretionary practices.

All [CompanyName] construction activities comply with generally accepted good workmanship practices and industry standards.

Local construction Codes

Applicable construction codes that apply to this project are listed on the Project Building Codes form. A Project construction Codes form exhibit is included in this subsection.

Compliance with Industry Electrical Standards

Codes that may apply to this project include those listed below.

Description	Reference Standard No.	Reference Standard Title
Mounting height of wall-mounted outlet and switch boxes	ICC/ANSI A117.1	Accessible and Usable Buildings and Facilities
Grounding of systems	IEEE 142	Recommended Practice for Grounding of Industrial and Commercial Power Systems
Cable tray installation	NEMA VE 2	Cable Tray Installation Guidelines
Location of manual fire alarm stations	NFPA 101	Life Safety Code
Modification of an existing fire alarm system	NFPA 241	Standard for Safeguarding Construction, Alteration, and Demolition Operations
Splicing and general conductor installation	NFPA 70	National Electrical Code
Install Control devices and protective devices	NFPA 70	National Electrical Code
Grounding and bonding requirements	NFPA 70	National Electrical Code
Workmanship	NFPA 70	National Electrical Code

System electrical installation	NFPA 70	National Electrical Code
Cables not installed in conduit or wireways	NFPA 70	National Electrical Code
Installation of signal and control circuits	NFPA 70	National Electrical Code
Conduit installation	NFPA 70	National Electrical Code
Warning Sign placement	NFPA 70E	Standard for Electrical Safety in the Workplace
Installation of fire alarm and signaling systems	NFPA 72	National Fire Alarm and Signaling Code
Lightning Protection installation	NFPA 780	Standard for the Installation of Lightning Protection Systems
Telecommunications pathways	TIA J-STD-607	Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
Telecommunication system grounding and bonding	TIA J-STD-607	Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
Preparation of record drawings including documentation on cables and termination hardware	TIA/EIA-606	Administration Standard for the Telecommunications Infrastructure
Telecommunication system labeling	TIA/EIA-606	Administration Standard for the Telecommunications Infrastructure
Installation of telecommunications cabling and pathway systems	TIA-568-C.1	Commercial Building Telecommunications Cabling Standard
Termination of UTP cables	TIA-568-C.1	Commercial Building Telecommunications Cabling Standard
Telecommunications grounding	TIA-569	Commercial Building Standard for Telecommunications Pathways and Spaces
Installation of equipment support frames	TIA-569	Commercial Building Standard for Telecommunications Pathways and Spaces
Underground fiber optic cabling installation	TIA-590	Standard for Physical Location and Protection of Below Ground Fiber Optic Cable Plant
Installation of control panel	UL 864	Standard for Control Units and Accessories for Fire Alarm Systems

[CompanyName]
Project Regulatory Building Codes

Project ID	Project Name	Preparer	Date
[ProjectNumber]	[ProjectName]		

Regulation	Reference Code or Regulation	Version Date or Number	Notes
Applicable Federal regulations			
Applicable State regulations			
Applicable building codes			
Local addenda to building codes			
Applicable Fire Code			
Other applicable codes or regulations			

K. Material Inspection Traceability and Quality Controls

Products and materials are controlled to assure the use of only correct and acceptable items. Controls include identification of the inspection status. Materials that require lot control traceability and the method of traceability are listed on the Controlled Materials form included as an exhibit in this subsection.

Identification of Lot Controlled Materials

The Quality Manager determines types of project materials that require quality controls.

For each type of quality-controlled material, the Quality Manager determines lot control traceability requirements, if any, and specifies the means of lot identification. Identification methods may include physical labels, tags, markings and/or attached certification documents.

When lot-controlled materials are received, the Superintendent verifies that materials have the specified lot identifications.

The Superintendent maintains lot identification at all production phases from receipt, through production, installation, or assembly, to final completion. Acceptable methods for preserving lot identification include physically preserving observable lot identifications, recording the lot identification on a work task quality inspection form or other work record, or collecting the physical lot identifier as a record along with supplemented with location.

If lot-controlled materials are without lot identification, the Superintendent deems the materials as nonconforming and segregates them and/or clearly marks them to prevent inadvertent use. The Superintendent treats the material according to the company policy for nonconformances. Only the Quality Manager can re-identify or re-certify the materials.

Material Receiving and Inspection

When lot-controlled materials are received, the Operations Manager inspects the materials and verifies that materials have the specified lot identifications. Received materials are listed on the Material Receiving and Inspection Report form or Metals Materials Receiving, and Inspection form included as an exhibit in this subsection.

Material quality inspections and tests ensure that purchased materials meet purchase contract quantity and quality requirements. The Superintendent inspects or ensures that a qualified inspector inspects materials prior to use for conformance to project quality requirements.

The Superintendent ensures that each work task that uses the source inspected materials proceed only after the material has been accepted by the material quality inspection or test.

[CompanyName]
Controlled Materials Form

Version 1.0/ [Date]

Contract ID	Contract Name	Preparer	Date	
[ProjectNumber]	[ProjectName]			

Contract Section/ Activity ID	Material	Intended Use (If description is necessary)	Lot Traceability Requirements	Method for identification of Approved Inspection Status

[CompanyName]
Metals Material Receiving Inspection Report

Version 1.0/ [Date]

Project ID	Project Name	P.O.#	Supplier	Receipt Date
[ProjectNumber]	[ProjectName]			

Type of Material (i.e., steel plate)	Material Description (Nominal dimensions)	Heat Number/ Serial Number/Markings	Condition / Damage	Color Code Marking

Receiving Inspector Approval Signature / Date	Government Representative Name/Approval Date	
		❑ Material Receiving Inspection Passed

[CompanyName]
Material Inspection and Receiving Report

Version 1.0/ [Date]

Contract ID	Contract Name	Purchase Order No.	Supplier	Bill of Lading No.	Date
[ProjectNumber]	[ProjectName]				

Item No.	Stock/Part No.	Description	Quantity Received	Condition	Marking	Accept	Conditional Use	Reject
						☐	☐	☐
						☐	☐	☐
						☐	☐	☐
						☐	☐	☐
						☐	☐	☐
						☐	☐	☐

Receiving Quality Control

ACCEPTANCE

Listed items have been accepted by me or under my supervision

☐ Conform to contract specifications EXCEPT as noted herein or on supporting documents.
☐ Received in apparent good condition EXCEPT as noted

Signature of authorized person and date: _____

EXCEPTIONS:

L. ELECTRICAL INSPECTION AND TEST PLAN

The Quality Inspection and Test Plan form lists inspections and tests (other than work task inspections) that will be performed on this project.

Results of inspections and tests will be recorded on the Inspection and Test Form.

Form exhibits are included as an exhibit in this subsection.

INSPECTION AND TESTING ELECTRICAL STANDARDS

Inspection and testing standards that may apply to this project include those listed below.

Description	Reference Standard No.	Reference Standard Title
Direct-current high-potential test for conductors	IEEE 400.2	Guide for Field Testing of Shielded Power Cable Systems Using Very Low Frequency (VLF)
Visual and mechanical inspections and electrical tests	NETA ATS	Standard for Acceptance Testing Specifications for Electrical Power Equipment and Systems
Ground rod resistance to ground	IEEE 81	Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
Telecommunications cabling inspection, verification, and performance tests	TIA-568-C.1	Commercial Building Telecommunications Cabling Standard
Optical fiber end-to-end attenuation tests	TIA-568-C.3	Optical Fiber Cabling Components Standard
Fiber optic cables power budget and bandwidth	TIA-455-78-B	FOTP-78 Optical Fibres - Part 1-40: Measurement Methods and Test Procedures – Attenuation
Intercommunication system intelligibility test	ASA S3.2	Method for Measuring the Intelligibility of Speech Over Communication Systems
Optical time domain reflectometer tests	TIA-455-78-B	FOTP-78 Optical Fibres - Part 1-40: Measurement Methods and Test Procedures - Attenuation
Ground resistance testing	IEEE 81	Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
Preliminary and acceptance testing	NFPA 72	National Fire Alarm and Signaling Code
Carbon monoxide detector testing	UL 2034	Single and Multiple Station Carbon Monoxide Alarms
Testing of duct smoke detectors	NFPA 72	National Fire Alarm and Signaling Code
Combustible gas detector preliminary and acceptance testing	ANSI/ISA 12.13.01	Performance Requirements for Combustible Gas Detectors

CALIBRATION OF INSPECTION, MEASURING, AND TEST EQUIPMENT

The Quality Manager determines inspection, measuring, and test equipment that will be controlled, calibrated, and maintained.

Records of calibrations will be maintained including calibration certificates documenting of traceability to national standards.

A list of controlled and calibrated test equipment is listed on the Test Equipment Calibration Plan and Log included as an exhibit in this subsection.

The Quality Manager evaluates the project requirements and determines if there are measuring devices that require controls to assure quality results.

For each type of device, the Quality Manager identifies:

- Restrictions for selection
- Limitations on use.
- Calibration requirements including the frequency of calibration. All calibrations must be traceable to national measurement standards.

When a measurement device is found not to conform to operating tolerances, the Quality Manager validates the accuracy of previous measurements.

[CompanyName]
Inspection and Test Plan and Log

Version 1.0/ [Date]

Project Number	Project Name	
[ProjectNumber]	[Project Name]	

Item	Spec #	Specifications Section	Subsection	Inspections & Tests Required	Frequency	Inspection-Test By (All tests verified by Superintendent and/or QC Manager)	Date Completed	Date Forwarded to Client.	Remarks
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									

[CompanyName]
Test Equipment Calibration Plan and Log

Version 1.0/ [Date]

Project ID	Project Name	Preparer	Date	
[ProjectNumber]	[ProjectName]			

Type of measuring device	Calibration Type and Frequency	Measuring Device ID	Calibrated By/ Calibration Date	Calibration certificate #	Next Calibration Due Date
					Project Start

M. Work Task Quality Inspections

[CompanyName] identifies a list of work tasks which will be quality controlled. Each work task is subject to a series of inspections; before, during, and after completion.

Each inspection verifies compliance with full scope of the relevant specifications; not limited to inspection form checkpoints.

The initial work task-ready inspection occurs when work is ready to start and ensures that work begins only when it does not adversely impact quality results.

Incoming material inspections verify that materials are as specified and meet all requirements necessary to assure quality results.

Work-in-process inspections continuously verify that work conforms to project specifications and quality expectations. Work continues only when it does not adversely impact quality results.

At completion of the work task an inspection verifies that work has been completed in accordance with project quality requirements.

Inspection results are recorded and maintained as part of the project files.

The Quality Manager identifies each Task that is a phase of construction that requires separate quality controls to assure and control quality results. Each Task triggers as set of requirements for quality control inspections before, during and after work tasks.

Independent quality audits are conducted to verify that the task quality controls are operating effectively.

Construction projects may execute a work task multiple times in a project, in which case a series of quality inspections are required for each work task.

Independent quality control audits are conducted to verify that the task quality controls are operating effectively.

Identification of Quality Inspected Work Tasks

A listing of project work tasks is included on the Quality Control work task List and included as an exhibit in this subsection.

Required Inspections For Each Work Task

Each work task is subject to a series of inspections before, during, and at completion as described below. Results of inspections are recorded.

Preparatory Site Inspection

The Superintendent performs a quality inspection of the work area and:

- Assesses completion of required prior work
- Verifies field measurements
- Assures availability and receiving quality inspection status of required materials
- Identifies any nonconformances to the requirements for the task to begin
- Identifies potential problems

Task-ready Inspections

For each work task, the Superintendent or a qualified inspector performs job-ready quality inspections to ensure that work activities begin only when they should begin. Job-ready quality inspections verify that conditions conform to the project quality requirements.

Work in process quality inspections

For each work task, the Superintendent or a qualified inspector performs an initial work in process inspection when the first representative portion of a work activity is completed.

The Superintendent or a qualified inspector performs ongoing work in process quality inspections to ensure that work activities continue to conform to project quality requirements.

Work Task completion quality inspections

For each work task, the Quality Manager or a qualified inspector inspects the completion of each work task to verify that work conforms to project quality requirements.

Completion quality inspections are performed for each work task. Completion quality inspections are conducted before starting other work activities that may interfere with an inspection.

Any outstanding punch items remaining after the work task completion inspection is deemed a nonconformance.

Daily Quality Control Report

The Superintendent records a summary of daily work activities. The report will include:

- Schedule Activities Completed
- General description of work activities in progress.
- Problems encountered, actions taken, problems, and delays
- Meetings held, participants, and decisions made
- Subcontractor and Supplier and Company Crews on site
- Visitors and purpose
- General Remarks
- Improvement Ideas
- Weather conditions

[CompanyName]
Quality-controlled Work Task List

Version 1.0/ [Date]

Project ID	Project Name	Preparer	Date
[ProjectNumber]	[ProjectName]		

Project Work Tasks / Contract Section	Quality-controlled work task	Method for identification of Approved Inspection Status

[CompanyName]
Daily Production Report

Version 1.0/ [Date]

Project ID	Project Name	Preparer*/Date
[ProjectNumber]	[ProjectName]	

* On behalf of the contractor, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.

	Description
Job-ready and WIP Inspections (Active work tasks)	
Work Tasks Completion Inspections	
Sampling/Tests Performed	
Nonconformance Reports	
Problems encountered, actions taken, problems, and delays	
On Site Subcontractors and Suppliers, Company Crews, and Visitors	
Meetings held and decisions made	
General Remarks and improvement ideas	
Weather conditions	Temperature: Low: _____ F High:_____F Precipitation: ❑ No ❑ Yes, type and amount: _____

N. Control of Corrections and Nonconformances

Should a problem occur in the quality of work, we systematically contain the issue and quickly make corrections. Our first action is to clearly mark the item by tape, tag, or other easily observable signal to prevent inadvertent cover-up.

Then we expedite a corrective action that brings the workmanship or material issue into conformance by repair, replacement, or rework. Previously completed work is reinspected for similar nonconformances. If we cannot correct the item to meet contract specifications, the customer will be notified, and customer approval of corrective actions is required before proceeding.

Fixing problems found is not sufficient. [CompanyName] systematically prevents recurrences to improve quality. First enhanced controls and management monitoring are put into place to assure work proceeds without incident. Then using a structured problem-solving process, [CompanyName] identifies root causes and initiates solutions. Solutions may involve a combination of enhanced process controls, training, upgrading of personnel qualifications, improved processes, and/or the use of higher-grade materials. Follow-up ensures that a problem is completely resolved. If problems remain, the process is repeated.

Nonconformances and their resolution are recorded on a Nonconformance Report form. A Nonconformance Report form exhibit is included in this subsection.

Marking of Nonconformances and Observations

When the Quality Manager, Superintendent, inspector, or customer identifies a nonconformance or an observation, the item is quickly and clearly marked by tape, tag, or other easily observable signal to prevent inadvertent cover-up.

Control the Continuation of Work

After the item is marked, the Superintendent determines if work can continue in the affected area:

CONTINUE WORK: When continuing work does not adversely affect quality or hide the defect, work may continue in the affected area while the disposition of the item is resolved. The Superintendent may place limitations on the continuation of work.

STOP WORK ORDER: When continuing work can adversely affect quality or hide the defect, work must stop in the affected area until the disposition of the item resolved. The Superintendent identifies the limits of the affected area. The Superintendent quickly and clearly identifies the boundaries of the stop work area.

Recording of Nonconformances

If nonconformances or observed items exist by the work task completion inspection, the Superintendent or inspector records the nonconformances on a nonconformance report.

The Superintendent sends the nonconformance report to the Quality Manager.

Quality Manager Disposition of Nonconformance Reports

When the Quality Manager receives a Nonconformance Report, he or she assesses the affect the reported nonconformance has on form, fit, and function. The Quality Manager may assign a disposition of either:

REPLACE: The nonconformance can be brought into conformance with the original specification requirements by replacing the nonconforming item with a conforming item.

REPAIR: The nonconformance can be brought into conformance with the original requirements through completion of required repair operations.

REWORK: The nonconformance can be made acceptable for its intended use, even though it is not restored to a condition that meets all specification requirements. The Quality Manager may specify standards that apply to the completion of rework. Rework nonconformances must be approved by the customer.

USE AS-IS: When the nonconforming item is satisfactory for its intended use. Any use as-is items that do not meet all specification requirements must be approved by the customer.

Corrective Actions

The Superintendent verifies that corrective actions eliminate the nonconformance to the requirements of the original specifications or as instructed by the disposition of the nonconformance report, and then removes, obliterates, or covers the nonconformance marker.

Furthermore, the Superintendent ensures that previously completed work is reinspected for similar nonconformances and corrective actions are taken to avert future occurrences.

Control of Corrective Actions

When a nonconformance is found, the Superintendent ensures that:

- Previously completed work is reinspected for similar nonconformances
- Corrective actions are taken to avert future occurrences

The Quality Manager identifies requirements for corrective actions with respect to frequency, severity, and detectability of quality nonconformances items found during and after completion of work activities.

When a solution requires changes to [CompanyName] quality standards, the Quality Manager makes modifications as necessary by making changes to:

- Material specifications
- Personnel qualifications
- Subcontractor and Supplier qualifications
- Company standards
- Inspection processes

Corrective Action Training

The Superintendent initiates corrective action training to address quality nonconformances. Personnel and subcontractors and suppliers performing or inspecting work participate in the training.

Heightened awareness during quality inspections verifies and documents compliance with the corrective action improvement items. A qualified Superintendent inspects corrective actions during regular quality inspections and records observations on the quality inspection form.

The Superintendent notifies affected subcontractors and suppliers of selected preventive action training requirements.

The Superintendent evaluates the effectiveness of the improvements. The Quality Manager reviews improvement results recorded on quality inspection records and monthly field reviews. When the Quality Manager determines that the improvement actions are effective, the item is no longer treated as a preventive action.

NONCONFORMANCE PREVENTIVE ACTIONS

Fixing problems found during quality inspections is not sufficient. Systematic prevention of recurrences is essential for improving quality.

[CompanyName] makes changes to solve the problem. Solutions may involve a combination of enhanced process controls, training, upgrade personnel qualifications, improved processes, or use of higher-grade materials.

Follow-up ensures that a problem is completely resolved. If problems remain, the process is repeated.

[CompanyName]
Nonconformance Report

Version 1.0/ [Date]

Nonconformance Report Control ID	Project ID	Project Name
	[ProjectNumber]	[ProjectName]

Preparer Signature/ Submit Date	Quality Manager Signature / Disposition Date

Description of the requirement or specification	
Description of the nonconformance, location, affected area, and marking	
Disposition	☐Replace ☐ Repair ☐ Rework ☐ Use As-is Approval of disposition required by customer representative? Yes ☐ No ☐ Customer approval signature /date:_____
Corrective Actions	☐Corrective actions completed Name/Date:_____ Customer acceptance of corrective actions required? Yes ☐ No ☐ Name/Date:_____
Preventive Actions	☐Preventive actions completed Name/Date:_____

ELECTRICAL INSPECTION CHECKLIST

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Electronic Safety and Security - Mass Notification Systems 28.39.00
Electronic Safety and Security - Pathways for Electronic Safety and Security 28.05.28

Electrical - Conduit for Electrical Systems 26.05.33.13

Project:	Phase:	Contract#:	Subcontractor:	Crew:

Compliance Verification

- ☐ Compliance with initial job-ready requirements
- ☐ Compliance with material inspection and tests
- ☐ Compliance with work in process first article inspection requirements
- ☐ Compliance with work in process inspection requirements
- ☐ Compliance with Task completion inspection requirements
- ☐ Compliance with inspection and test plan
- ☐ Compliance with safety policies and procedures

Reported Nonconformances and incomplete items:

YES	NO	***Heightened Awareness Checkpoints***
☐	☐	Cuts for Conduits in structural members approved by ENGINEER
☐	☐	Firestops installed at penetrations through fire partitions// fire walls// smoke partitions// or floors
☐	☐	Penetrations through floor// exterior wall and roof sealed and made watertight
☐	☐	Excess wiring// insulation// ties// etc. removed from Conduits
☐	☐	Conduits secured to prevent movement and chafe
☐	☐	Remaining snake lines labeled at both ends
☐	☐	Conduit bends do not exceed minimum for size of Conduit used and are even
☐	☐	Metal Conduits bonded and grounded
☐	☐	Conduits are mechanically continuous
☐	☐	Flexible connections to equipment subject to vibrations

FTQ Scores and Completion Sign-off

Field Mgmt.-91.45.01

Quality **5 4 3 2 1** *Notes:*

On-Time **5 4 3 2 1** *Notes:*

Safety **5 4 3 2 1** *Notes:*

Sign and date*: Cell # / ID #: _____ Signed: _____ Date: _____

Task has been verified complete and in compliance with contract drawings and specifications except for non-conformances and incomplete items reported above.

Quality Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2 = 6+ or major problems*	*1 = Excessive problems*
On-Time Score	*5 = On Time*	*4 = Late*	*3 = Late by 1 day*	*2 = Late by 2 days*	*1 = Late more than 2 days*
Safety Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2= 4+ or major problem*	*1= Injury*

Electrical - Electrical and Cathodic Protection 26.40.00

Project:	Phase:	Contract#:	Subcontractor:	Crew:

Compliance Verification

- ☐ Compliance with initial job-ready requirements
- ☐ Compliance with material inspection and tests
- ☐ Compliance with work in process first article inspection requirements
- ☐ Compliance with work in process inspection requirements
- ☐ Compliance with Task completion inspection requirements
- ☐ Compliance with inspection and test plan
- ☐ Compliance with safety policies and procedures

Reported Nonconformances and incomplete items:

YES	NO	*Heightened Awareness Checkpoints*
☐	☐	Anti-oxidant paste applied to connections of dissimilar metals
☐	☐	Connections tight and free of corrosion// paint// and other non-conductive materials
☐	☐	Ground rods / plates not located in rock or stone fill
☐	☐	Conductors secured to prevent movement and chafe
☐	☐	Multi-strand wire or strap connectors utilized on movable connections
☐	☐	System tested for continuity
☐	☐	Grounding conductors routed in most direct path possible
☐	☐	No sharp bends or turns in conductors
☐	☐	Underground and submerged splices made waterproof
☐	☐	Anodes not supported by lead wiring
☐	☐	Anodes not located in rock or stone fill

FTQ Scores and Completion Sign-off

Field Mgmt.-91.45.01

Quality **5 4 3 2 1** *Notes:*

On-Time **5 4 3 2 1** *Notes:*

Safety **5 4 3 2 1** *Notes:*

Sign and date*: Cell # / ID #: _____ Signed: _____ Date: _____

Task has been verified complete and in compliance with contract drawings and specifications except for non-conformances and incomplete items reported above.

Quality Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2 = 6+ or major problems*	*1 = Excessive problems*
On-Time Score	*5 = On Time*	*4 = Late*	*3 = Late by 1 day*	*2 = Late by 2 days*	*1 = Late more than 2 days*
Safety Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2= 4+ or major problem*	*1= Injury*

Electrical - Enclosed Bus Assemblies 26.25.00

Project:	Phase:	Contract#:	Subcontractor:	Crew:

Compliance Verification

- ☐ Compliance with initial job-ready requirements
- ☐ Compliance with material inspection and tests
- ☐ Compliance with work in process first article inspection requirements
- ☐ Compliance with work in process inspection requirements
- ☐ Compliance with Task completion inspection requirements
- ☐ Compliance with inspection and test plan
- ☐ Compliance with safety policies and procedures

Reported Nonconformances and incomplete items:

YES	NO	*Heightened Awareness Checkpoints*
☐	☐	All sections of metal Busway grounded and bonded
☐	☐	Busway expansion joints installed where building expansion joints are traversed
☐	☐	Firestops installed at penetrations through fire partitions// fire walls// smoke partitions// or floors
☐	☐	Penetrations through exterior wall and roof sealed and made watertight
☐	☐	Busway run level and plumb
☐	☐	Busway mounted securely to structural members and free of sway / rotation
☐	☐	Busway sections// joint covers// bends// transitions// plug-ins// end caps// etc. securely connected
☐	☐	All joints accessible (not within wall or floor penetrations)
☐	☐	Minimum clearances observed
☐	☐	Busway megger tested prior to energizing

FTQ Scores and Completion Sign-off

Field Mgmt.-91.45.01

Quality **5 4 3 2 1** *Notes:*

On-Time **5 4 3 2 1** *Notes:*

Safety **5 4 3 2 1** *Notes:*

Sign and date*: Cell # / ID #: _____ Signed: _____ Date: _____

Task has been verified complete and in compliance with contract drawings and specifications except for non-conformances and incomplete items reported above.

Quality Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2 = 6+ or major problems*	*1 = Excessive problems*
On-Time Score	*5 = On Time*	*4 = Late*	*3 = Late by 1 day*	*2 = Late by 2 days*	*1 = Late more than 2 days*
Safety Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2= 4+ or major problem*	*1= Injury*

Electrical - Identification for Electrical Systems 26.05.53

Project:	Phase:	Contract#:	Subcontractor:	Crew:

Compliance Verification

- ☐ Compliance with initial job-ready requirements
- ☐ Compliance with material inspection and tests
- ☐ Compliance with work in process first article inspection requirements
- ☐ Compliance with work in process inspection requirements
- ☐ Compliance with Task completion inspection requirements
- ☐ Compliance with inspection and test plan
- ☐ Compliance with safety policies and procedures

Reported Nonconformances and incomplete items:

YES	NO	*Heightened Awareness Checkpoints*
☐	☐	Labels and markers are permanent
☐	☐	Labels are securely mounted or attached
☐	☐	Cabling and wiring labeled on both ends
☐	☐	Label material compatible with operational environment
☐	☐	Names of rooms approved by OWNER before labels are purchased or mounted
☐	☐	Instruction and warning signs are clearly located
☐	☐	Panel circuit schedules complete and accurate
☐	☐	Wiring schematics supplied to the OWNER

FTQ Scores and Completion Sign-off

Field Mgmt.-91.45.01

Quality **5 4 3 2 1** *Notes:*

On-Time **5 4 3 2 1** *Notes:*

Safety **5 4 3 2 1** *Notes:*

Sign and date*: Cell # / ID #: _____ Signed: _____ Date: _____

Task has been verified complete and in compliance with contract drawings and specifications except for non-conformances and incomplete items reported above.

Quality Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2 = 6+ or major problems*	*1 = Excessive problems*
On-Time Score	*5 = On Time*	*4 = Late*	*3 = Late by 1 day*	*2 = Late by 2 days*	*1 = Late more than 2 days*
Safety Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2= 4+ or major problem*	*1= Injury*

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