[CompanyName]

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 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 Control Plan is approved by:

[SeniorManagerName] / [Date]

[SeniorManagerName] Senior Manager /Date

Plan Concurrence

[CompanyName] Project Quality Control Plan concurrence by:

[ProjectManagerName] / [Date]

[ProjectManagerName], Project Manager /Date

[SuperintendentName] / [Date]

[SuperintendentName], Superintendent /Date

PROJECT-SPECIFIC QUALITY PLAN

TABLE OF CONTENTS

F. SUBMITTALS

SUBMITTALS

Lists of documents and records that will be submitted to the customer appear on the Submittal Schedule and Log form. The Submittal Schedule and Log Form exhibit is included in this subsection.

SHOP DRAWING SUBMITTALS

The Project Manager or Purchasing and Estimating Manager prepare shop drawing submittals that supplement contract drawings. Shop drawings are required when additional details are necessary for fabrication or installation. The following information is included, as applicable:

- Dimensions established by field measurement
- Relationships to adjoining construction
- Identification of products and materials
- Fabrication and installation drawings
- Diagrams showing locations of field-installations
- Shop fabricated manufacturing instructions
- Templates and patterns
- Design calculations
- Compliance with specified standards
- Seal and signature of professional engineer if required
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

[CompanyName] extends contract specifications to include customer approved shop drawings.

PRODUCT DATA SUBMITTALS

The Project Manager prepares product data submittals that consist of the manufacturer's product information. The information included in this submittal is:

- Manufacturer, trade name, model, or type number
- Description
- Intended use
- Size and physical characteristics including drawings when applicable
- Finish and color characteristics
- Product manufacturer's installation instructions, when applicable
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

ALLOWANCES AND UNIT PRICES SUBMITTALS

When customer contracts specify allowances and unit prices that the customer will select after the contract is awarded, the Project Manager prepares an allowance and unit price submittal for customer approval.

When a customer selects or approves allowances and unit prices, the customer indicates the allowance and unit price selection on the signed submission return.

[CompanyName] extends compliance to contract specifications to customer approved allowances and unit prices.

REQUEST FOR INFORMATION (RFI) SUBMITTALS

The Project Manager submits a request for additional information to the customer when errors are found or when required information is not contained in the contract, contract technical specifications, or contract drawings.

Should any number of contract technical specifications or contract drawings result in conflicting requirements, the Quality Manager submits a request for information to the customer to select the standard that applies.

[CompanyName] extends compliance to contract specifications to customer requests for information.

Weather-Specific Plans – Required Submittals

A detailed Hot Weather Plan and Cold Weather Plan shall be submitted as part of the preconstruction submittals in accordance with the project specification. These plans shall describe:

- Materials, equipment, and methods for preventing excessive temperature gain, evaporation, or freezing
- Control measures for aggregate temperature and moisture
- Procedures for heating, insulation, fogging, windbreaks, and temperature monitoring

Plans must demonstrate conformance with ACI 305R (hot) and ACI 306R (cold) and shall be approved by the Contracting Officer prior to commencement of applicable work. Implementation shall be logged daily in the Daily Quality Control Report.

Mix Design – Required Submittals

All concrete mix designs shall be submitted for approval no later than 60 days prior to the scheduled start of concrete placement, as required by the contract specifications. Each submittal shall include:

- A full list of materials including cement type, brand, source, and content
- Supplementary cementitious materials and admixtures
- Water-cementitious material ratio data and trial batch strength test results

In lieu of trial batches, the Contractor may submit:

- Previously approved mix designs used within the last twelve (12) months, accompanied by material test data not older than six (6) months, or
- An MnDOT mix design known to perform well under similar project conditions.
- All mix designs and supporting documentation must be submitted for review and approval by the Contracting Officer.

SUBMITTAL REVIEW AND APPROVAL

The Quality Manager prepares submittals that provide additional details of how [CompanyName] plans to carry out quality-related aspects of the customer contract, contract technical specifications, and contract drawings and reporting of quality records to the customer.

The Quality Manager lists, schedules, and approves all quality-related submittals that are required by the project including submittals prepared by subcontractors and suppliers. The Quality Manager must review all submittals for compliance with the requirements of the [CompanyName] Quality System. The Quality Manager must sign approval of each contract submittal.

[CompanyName] extends compliance to contract specifications to all customer approved submittals. All [CompanyName] activities comply with customer approved submittals.

SUBMISSION TO CUSTOMER

See Submittal Forms exhibits in this subsection for all the forms that will be used to submit submittals on this project.

CUSTOMER APPROVED SUBMITTALS

The Project Manager obtains the signature of an authorized customer representative on the submittal form.

[CompanyName] extends compliance to contract specifications to customer approved submittals.

Work in the affected area of a pending submittal requirement does not start until the customer approves the submittal.

[CompanyName]
Project Submittal Form

Submittal ID#	Project ID	Project Name	Date
	[ProjectNumber]	[ProjectName]	

To:	From: [CompanyName] Location:
Type of Submittal: ☐ Shop drawing ☐ Product data ☐ Request for information ☐ Completed form or quality record ☐ Quality system document ☐ Other:	Description of submittal:
List of attachments:	Remarks:
Submittal Prepared by: [CompanyName] Name: Title: Signature / Date:	Submittal Approved by [CompanyName] Quality Manager: Name: Title: Signature / Date:
Customer Disposition: ☐ Approved ☐ Conditionally approved, resubmission not required (see comments) ☐ Disapproved, resubmission required ☐ Other:	Customer Representative: Name: Title: Signature / Date:
Comments:	

H. Project Quality Standards and Specifications

Inspections and tests assess conformance to project quality specifications. Clearly defined specifications are essential for an effective inspection and test plan.

[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.

Contract Specifications

The Project Manager ensures that contract information clearly defines customer expectations and provides necessary details for setting construction requirements.

The Project Manager obtains contract technical specifications from the customer.

For each specific contract, The Senior Manager identifies supplemental technical specifications on the Trade-specific Quality Management Plan when they are not otherwise specified by the contract or the approved drawings. Superintendents have jobsite access to contract technical specifications for the construction activities they supervise.

All [CompanyName] activities comply with the contract technical specifications including:

- Mix Design Requirements
- Placement and Finishing
- Curing and Protection
- Testing and Inspection
- Weather-Specific Plans

Mix Design Requirements

The Quality Manager shall ensure concrete mix designs are submitted and approved in accordance with contract specifications. Each mix design shall:

- Be submitted at least 60 days before concrete placement.
- Include water-cementitious ratio, compressive strength target, and slump range not exceeding 4 inches unless otherwise approved.
- Be supported by trial batch data or historical data per ASTM C94/C94M.
- Be reviewed for compliance with exposure category F2 and durability requirements (e.g., air content 4–7%, w/cm ratio ≤ 0.45).

Placement and Finishing

Concrete placement shall follow **ACI 304R**, including control of concrete delivery timing, vibration, and segregation. The Superintendent shall document:

- Time from batching to placement.
- Vibration procedures and acceptance criteria.

Slab finishing shall comply with **ACI 117** flatness and levelness tolerances. Finishing tolerances shall be measured using approved devices as per the Finishing Plan and recorded.

Curing and Protection

Curing shall be performed according to **ACI 308.1** and shall commence immediately following placement. Acceptable methods include:

- Continuous water curing
- Moisture-retaining covers
- Curing compounds compliant with contract requirements

Daily curing logs shall be maintained and include curing method, duration, temperature records, and start/end times.

Testing and Inspection

All sampling and testing shall be performed by independent laboratories accredited under **ASTM C1077** (for concrete) and **ASTM E329** (for reinforcement testing). Testing frequency and reporting shall include:

- Slump and air content: Every 20 CY or batch
- Temperature: At each test point
- Strength: Cylinders tested at 7 and 28 days

The Quality Manager shall verify and log all test results and initiate Nonconformance Reports (NCRs) as required.

Material Specifications

The Quality Manager ensures that all types of materials and equipment that affect quality are identified and controlled.

The Quality Manager evaluates the expected use of materials and equipment and identifies types of materials and equipment that may affect project quality. For each item, the Quality Manager sets specifications for their intended use, including:

- Compliance to contract requirements
- Compliance to code and industry standards and listing requirements
- Structural integrity
- Performance
- Durability
- Appearance
- Product identification for traceability.

The Quality Manager identifies controlled material and equipment that apply to the project. Only approved materials are used in the construction process.

WORK PROCESS SPECIFICATIONS

The Quality Manager ensures that work processes are controlled to ensure that the specified requirements are met. When appropriate, the Quality Manager will specify project quality standards for work processes that may include:

- References to documented procedures such as manufacturer's installation instructions
- Procedures for carrying out process steps
- Methods to monitor and control processes and characteristics
- Acceptability criteria for workmanship
- Tools, techniques, and methods to be used to achieve the specified requirements.

[COMPANYNAME] QUALITY STANDARDS

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

The Quality Manager identifies supplemental requirements for industry standards that apply to a specific project when it is not otherwise specified by the contract, contract technical specifications, or approved drawings.

[CompanyName] quality standards supplement contract requirements when they are necessary to ensure quality.

When [CompanyName] quality standards differ from industry standards or product manufacturer instructions, the Quality Manager justifies that the standard reliably achieves quality results and then documents the justification.

All [CompanyName] activities conform to the company quality standards.

COMPLIANCE WITH INDUSTRY CONCRETE STANDARDS

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

Reference Standard No.	Reference Standard Title
ACI 117	Specifications for Tolerances for Concrete Construction and Materials
ACI 121R	Guide for Concrete Construction Quality Systems in Conformance with ISO 9001
ACI 301	Specifications for Structural Concrete
ACI 302.1R	Guide for Concrete Floor and Slab Construction
ACI 304R	Guide for Measuring, Mixing, Transporting, and Placing Concrete
ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 308.1	Specification for Curing Concrete
ASTM C94/C94M	Ready-Mixed Concrete
ASTM C1077 / ASTM E329	Testing Agency Accreditation

All project quality inspection and test plans shall include acceptance criteria and testing methods conforming to these references.

APPLICATION OF MULTIPLE SOURCES OF SPECIFICATIONS

Should multiple sources of specifications apply to a work task, the higher level of specification applies. When there are equal levels of specifications that conflict, the specifications are applied in this order:

- Submittals approved by the purchaser
- Contract technical specifications
- Contract drawings
- Government regulations that exceed requirements of items below
- [CompanyName] quality specifications, including subcontract specifications
- Product installation instructions
- Industry standards
- Generally accepted practices

I. 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.

Concrete Placement Traceability

For each concrete cylinder sample the delivery ticket number and location of placement will be recoded on the sample record or otherwise marked on the sample specimen.

Concrete Waste and Materials Management

[CompanyName] implements concrete waste management practices to minimize environmental impact, support project efficiency, and ensure compliance with contract requirements.

Washout and Equipment Cleaning

- Designated truck cleanout areas will be identified prior to concrete pours and clearly marked on the site layout.
- Wash water usage will be minimized, and containment measures will prevent run-off to drainage systems or sensitive areas.
- Daily inspection of washout areas will be conducted by the Superintendent and findings recorded in the Daily QC Report.

Hardened Concrete Reuse

- Hardened and cured waste concrete generated from overages or demolished placements will be crushed and reused as fill material or base course for pavement, as permitted by the project specifications.
- Concrete destined for reuse will be stockpiled separately, labeled, and approved by the Quality Manager prior to incorporation into the project.

Recycling of Reinforcing Steel

- Scrap and cut reinforcing steel shall be collected during and after installation operations and segregated in designated recycling bins.
- Steel will be bundled or containerized for transfer to an approved recycling facility or returned to the supplier, depending on jobsite logistics.

Coordination with Suppliers

The Project Manager will coordinate with the concrete supplier to implement any available programs for return, reuse, or recycling of excess material, packaging, and containers.

Documented communications and agreements regarding returned materials will be retained as part of the Project Quality Records.

Equipment Inspections

All equipment is inspected and maintained daily or prior to use based on manufacturer's instructions. This includes all equipment whether in use or not while on the jobsite.

The Superintendent ensures that each work task that uses equipment proceeds only after the equipment has been accepted by the equipment quality inspection or test.

The equipment inspection includes a verification of the following:

- Equipment is in good working condition and that there is no need for repair
- Equipment maintenance has been performed to meet manufacturer's specifications
- Equipment is safe to use

Preservation of Product and Work-in-Progress

- Work-in-progress is clearly marked and segregated from traffic areas and incompatible processes.
- Protective barriers, warning tape, and signage are used to prevent premature access or accidental damage.

TEMPERATURE- AND MOISTURE-SENSITIVE MATERIALS

- Materials such as curing compounds, sealants, and adhesives are protected from freezing or overheating.
- Storage areas are monitored for compliance with specified ranges, especially for hot/cold weather concreting.
- Concrete curing is tracked using temperature logs and daily reports (see Section 9 and Concrete ITP).

MATERIAL AND EQUIPMENT STORAGE

The Superintendent ensures all materials and equipment will be delivered, stored, handled, and maintained in a manner that protects them from damage, moisture, dirt, and intrusion of foreign materials.

Delivery of materials and equipment will be planned according to the work progress to minimize storage on site, where there are higher possibilities of damages and deterioration of materials.

Preventive maintenance based on the manufacturer's recommendations will be performed on all stored materials and equipment if required.

If preventive maintenance is required:

- The Superintendent or qualified receiving inspector will record the item(s) on the Material and Equipment Receiving Inspection form and note that preventive maintenance is required
- Tag or label the material / equipment
- Record, on the tag or label, the type of preventive maintenance required, how often preventive maintenance is to be performed, and the date it was performed

Stored materials will be segregated to prevent cross contamination and limit losses should a delivery be rejected.

The Superintendent surveys stored materials and equipment during daily jobsite reviews to verify preventive maintenance requirements are being performed as required, and to identify if any material any material and/or equipment that have incurred damage or otherwise become defective and therefore unfit for use.

[CompanyName]
Material Inspection and Receiving Report

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:

J. Concrete Inspection and Test Plan

The Quality Manager shall develop and maintain a Concrete Inspection and Test Plan (CITP) that ensures compliance with the contract and applicable industry standards. The plan outlines all inspection points, test frequencies, responsible parties, and acceptance criteria. All testing must be performed by qualified technicians and laboratories accredited under **ASTM C1077** and **ASTM E329**.

Required Inspections and Tests

All inspections and tests shall be conducted in accordance with the following standards:

Test	ASTM Standard	Frequency	Acceptance Criteria
Slump Test	C143/C143M	Each batch or every 20 CY	≤ 4 in. (unless otherwise approved); no segregation
Air Content	C231/C231M	Each batch or every 20 CY	4% – 7% (Exposure Class F2)
Concrete Temperature	C1064/C1064M	Each test point or 20 CY	≤ 95°F at placement
Compressive Strength	C39/C39M & C31/C31M	6 cylinders/set: 7-day (2), 28-day (2), reserve (2); 1 set/100 CY, min 5 sets total	≥ 4500 psi (slabs-on-ground)
Unit Weight / Density	C138/C138M & C567/C567M	Every 20 CY	Per design specifications
Concrete Sampling	C172/C172M	Per above test frequencies	Representative samples at discharge point
Core Testing (if needed)	C42/C42M	If strength is in doubt	Average ≥ 85% of f'c per ACI 301
Alkali-Aggregate Reactivity	C1293 or C1567	Prior to mix approval if required	≤ 0.10% expansion at 16 days

Hold Points and Notifications

Work must be stopped at defined *hold points* until inspections and/or approvals are completed by the Quality Manager or Contracting Officer. Hold points include:

- Pre-pour readiness inspections
- First article placements
- Placement of mass concrete or weather-sensitive concrete
- Concrete form removal based on strength

Inspection Records and Logs

All inspections shall be recorded using the **Inspection and Test Plan and Log** form and must include:

- Inspection/Test type and location
- Date and time

- Sampling technician and lab ID
- Results and conformance status
- Any corrective action or NCR initiated

NONCONFORMANCE CRITERIA AND ACTION

A Nonconformance Report (NCR) shall be issued by the Quality Manager for any result that does not meet specified requirements, including:

- Test failure (e.g., compressive strength below required f'c)
- Excessive slump or temperature
- Missing documentation or technician certification
- Improper lab procedures

NCRs must document:

- Description and impact of the deviation
- Disposition: repair, rework, replacement, or use-as-is (if approved)
- Required customer approvals for any deviation
- Corrective and preventive actions taken

TECHNICIAN AND LABORATORY DOCUMENTATION

Before testing begins, the following must be submitted and approved:

- ACI Concrete Field-Testing Technician – Grade I certifications (or equivalent)
- Current laboratory accreditation certificates for ASTM C1077, C78, C1260, C231, C31, C39
- Equipment calibration certificates
- Sampling procedures and equipment descriptions

No testing shall be conducted by unapproved personnel or agencies.

COORDINATION AND OVERSIGHT

The Superintendent is responsible for ensuring work readiness before testing begins. The Quality Manager:

- Coordinates all inspection and testing activities
- Maintains and reviews inspection/test records
- Submits test results to the Contracting Officer and Concrete Supplier
- Initiates and tracks NCRs to closure

[CompanyName]
Inspection and Test Plan and Log

Project Number	Project Name	
[ProjectNumber]	[ProjectName]	**(All tests verified by Superintendent and/or QC Manager)**

Spec Section Number and Title		Applicable Standard	Inspections & Tests Description	Test and Inspection Methods	Number required	Time Schedule/ Frequency	Inspection/ Test By	Sample Reqd. Yes/No	Unique characteristics of QC Service
3.2	Subgrade Preparation	ACI 301	Inspect subgrade condition and compaction	Visual, field density test if required	Each placement area	Superintendent / QC		No	Stable, moisture-conditioned base
3.3	Formwork Installation	ACI 301 / 117	Inspect alignment, cleanliness, release agent	Visual and measurement	Each pour	Superintendent / QC		No	Form tightness and chamfers at corners
3.5	Reinforcement Placement	ACI 301 / CRSI	Inspect bar size, spacing, supports, cleanliness	Tape measure, visual	Each placement area	QC / Superintendent		No	Positioned and clean before pour
3.5.1	Embedded Waterstop Placement	COE CRD-C 572 / ASTM D412	Inspect position, splices, support of waterstop	Visual, pull test on splices	Each joint	QC		No	Centered and fully secured
3.12.3.3	Cylinder Making & Curing	ASTM C31	Prepare and cure strength test specimens	Field molding and storage	1 set/100 CY, min 5 sets	Testing Technician		Yes	Maintain curing temp 60–80°F

Spec Section Number and Title		Applicable Standard	Inspections & Tests Description	Test and Inspection Methods	Number required	Time Schedule/ Frequency	Inspection/ Test By	Sample Reqd. Yes/No	Unique characteristics of QC Service
3.12.3.3	Compressive Strength Testing	ASTM C39	Test concrete cylinders at 7 and 28 days	Lab compression test	2 @ 7 days, 2 @ 28 days	Lab Technician		Yes	f'c ≥ 4500 psi for slabs

3.12.3.8	Core Testing (if required)	ASTM C42	Extract and test cores if strength is in doubt	Core drill and lab test	As needed	Independent Lab		Yes	Average ≥ 85% of design strength

[CompanyName]
Testing & Inspection Results Log

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

Report ID /Date of Issue	Description of Inspection / Test	Report Date	Results		Type of Corrective Action
			Approved	Rejected	

K. Work Task Quality Inspections

[CompanyName] shall implement systematic quality inspections for each concrete-related work task in accordance with contract specifications and referenced industry standards. Each work task is subject to a series of inspections—before, during, and after execution—to verify compliance with:

- Contract Sections
- ACI 301, 304R, 305R, 306R
- ASTM standards including C31, C39, C143, C172, C231, and C94

Inspection results shall be documented and retained in the project quality records

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.

Inspection Type	Performed By	Purpose / Focus
Preparatory Inspection	Superintendent	Verify readiness (prior work complete, materials staged, field measurements verified)
Job-Ready Inspection	Superintendent or QC Inspector	Confirm conditions meet spec requirements; authorize work start
First Article Inspection	Superintendent or QC Inspector	Inspect the first representative portion of work (e.g., initial rebar mat, initial concrete pour)
In-Process Inspection	Superintendent	Monitor for conformance during placement, finishing, vibration
Completion Inspection	Quality Manager or QC Inspector	Verify all work has been completed to specifications prior to covering or advancing work
Post-Curing Inspection (as applicable)	Quality Manager	Verify final surface, durability, tolerance, curing logs

Inspection Tools and Methods

- Inspection checklists with heightened awareness items from pre-task meetings
- Measurement tools for tolerances (e.g., laser levels, flatness profilers)
- Cylinders for strength testing, sampled per ASTM C31/C172
- Concrete temperature gauges and air content meters

Inspections shall be logged using the standardized Work Task Inspection Form, which includes space for:

- Conformance checklists
- Inspector initials and sign-off

- Notes on nonconformances
- Quality ratings for each task

INSPECTION TRACEABILITY

All materials, forms, reinforcement, and concrete used in a work task must be traceable to:

- Delivery tickets (e.g., ASTM C94-compliant)
- Material certifications
- Lot numbers (where applicable)
- Daily Quality Control Reports

NONCONFORMANCE HANDLING

If a deficiency is discovered during any phase:

- The item shall be marked or flagged
- A Nonconformance Report (NCR) shall be initiated by the inspector
- Corrective actions must be verified by the Quality Manager before proceeding

Work may not continue in the affected area until the NCR is resolved or isolated per the Control the Continuation of Work policy.

DOCUMENTATION AND RECORDS

Each work task inspection will be recorded in:

- Work Task Inspection Forms
- Daily Quality Control Reports
- NCR Logs (if applicable)

All forms shall be maintained in the Project Field Office and available for review by the Contracting Officer.

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

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

Project Work Tasks / Contract Section	Quality Controlled work task A series of inspections will be performed for the following work tasks including: • Work-ready Inspection • First Work Installation Inspection • Work In-process Inspection • Work Task Completion Inspection	Indicate if First Work Installation is expected	Method for identification of Approved Inspection Status (i.e., Inspection Checklist, Third-party Inspection, etc.)
	Subgrade preparation for slabs and footings		
	Formwork construction and release agent application		
	Reinforcement installation (bars, wire, supports, waterstops)		
	Embedded item placement (anchors, dowels, sleeves)		
	Concrete delivery and placement		
	Vibration and consolidation		
	Finishing operations		
	Curing and protection		

[CompanyName]
Formwork and Edge Preparation
Work Task Inspection Form

Project: Id# [ProjectNumber]	Project Name: [ProjectName]	Subcontractor and Supplier Company ID/Name:
Location/Area:	Reference drawing version #:	Crew ID/Name

Checkpoints/Inspection Items	Reference	Acceptance Criteria	Pass	Fail	N/A
Formwork is aligned and braced	ACI 301 / 117	Plumb, level, within specified dimensional tolerances			
Form surfaces are clean	ACI 301	No debris, rust, or concrete residue			
Release agent applied correctly	Project Specs	Uniform coverage, no puddling, compatible with concrete finish			
Chamfer strips installed at exposed corners	Section 3.3	3/4 inch dimension, securely fastened			
Form ties and hardware installed correctly	ACI 301	Correct spacing and securely anchored			
Recesses and blockouts installed	Shop Drawings	Accurate dimensions and locations			
Openings, sleeves, and box-outs in place	Project Specs	Verified against coordinated drawings			
Formwork supports and shores are in place	ACI 301	Designed to support loads without deformation			
Access and working platforms installed	Site Safety Plan	Safe for crew and inspector movement			

Production Notes:

Reported Nonconformances:

Verification of Work Task Completion (sign and date)	
Inspector Name	Date of Inspection:
Signature	Time:

* On behalf of the contractor, I certify that this report is complete and correct and the 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.

[CompanyName]
Reinforcement and Embedded Items
Work Task Inspection Form

Project: Id# [ProjectNumber]	Project Name: [ProjectName]	Subcontractor and Supplier Company ID/Name:
Location/Area:	Reference drawing version #:	Crew ID/Name

Checkpoints/Inspection Items	Reference	Acceptance Criteria	Pass	Fail	N/A
Rebar size and spacing per drawings	ACI 301 / Shop Drawings	Correct bar size, spacing matches plan			
Rebar tied securely with appropriate ties	ACI 301 / CRSI	All intersections tied, no loose bars			
Rebar supported on appropriate chairs or blocks	ACI 301 / CRSI RB4.1	Correct height, spacing, and material			
Clear cover distances maintained	Project Specs / ACI 117	Minimum cover per structural detail			
Bars free of mud, oil, heavy rust	ACI 301	No contaminants that reduce bond			
Lap splices installed correctly	ACI 318 / Shop Drawings	Correct length, position, and orientation			
Mechanical splices and couplers properly installed	ACI 301 / Manufacturer Specs	Tightened and torqued per specification			
Embedded anchors, sleeves, and box-outs in place	Project Specs	Correct locations, securely fixed			
Reinforcement modifications approved (if any)	Project RFI / NCR	Change documented and approved before pour			

Production Notes:
Reported Nonconformances:

Verification of Work Task Completion (sign and date)	
Inspector Name	Date of Inspection:
Signature	Time:

* On behalf of the contractor, I certify that this report is complete and correct and the 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.

[CompanyName]
Concrete Delivery and Fresh Property Testing
Work Task Inspection Form

Project: Id# [ProjectNumber]	Project Name: [ProjectName]	Subcontractor and Supplier Company ID/Name:
Location/Area:	Reference drawing version #:	Crew ID/Name

Checkpoints/Inspection Items	Reference	Acceptance Criteria	Pass	Fail	N/A
Delivery ticket matches approved mix	ASTM C94 / SOP 01	Correct mix ID, slump, air content, and admixtures listed			
Time from batching is within limit	ASTM C94	Placed within 90 min or per approved plan			
Slump test performed	ASTM C143 / SOP 03	Measured, recorded, and within specified range			
Air content test performed	ASTM C231 / SOP 03	Measured, recorded, 4–7% for Exposure F2			
Concrete temperature measured	ASTM C1064	Within 50–95°F range at delivery			
Unit weight (density) tested (if required)	ASTM C138 / C567	Test performed if specified by spec or ITP			
Cylinders molded and labeled	ASTM C31	Set of 6, marked with location, mix, date, and ID			
Cylinders stored in curing box	ASTM C31	Curing temp maintained 60–80°F for 24±8 hours			
Field test results documented	SOP 03 / Field Log	Slump, air, temp, time, location recorded in log			
Field technician certified	ACI Grade I / ASTM C1077	ACI Grade I or equivalent certification on file			

Production Notes:

Reported Nonconformances:

Verification of Work Task Completion (sign and date)	
Inspector Name	Date of Inspection:
Signature	Time:

* On behalf of the contractor, I certify that this report is complete and correct and the 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.

[CompanyName]
Concrete Placement and Vibration
Work Task Inspection Form

Project: Id# [ProjectNumber]	Project Name: [ProjectName]	Subcontractor and Supplier Company ID/Name:
Location/Area:	Reference drawing version #:	Crew ID/Name

Checkpoints/Inspection Items	Reference	Acceptance Criteria	Pass	Fail	N/A
Concrete placement begins within allowed time	ASTM C94 / ACI 301	Placed within 90 minutes of batching unless otherwise approved			
Forms inspected immediately before placement	ACI 301	Forms clean, tight, and braced			
Concrete placed in lifts of appropriate height	ACI 304R	Prevent cold joints and form blowouts			
No segregation observed during placement	Visual	Consistent texture, no paste separation			
Backup vibrator available and functional	SOP 05	Operable and ready on site			
Cold joint prevented or treated	SOP 05 / Spec §3.10	Surface roughened and grouted if delay occurred			
Placement monitored and recorded	Daily QC Log	Time, mix ID, location documented			

Production Notes:
Reported Nonconformances:

Verification of Work Task Completion (sign and date)	
Inspector Name	Date of Inspection:
Signature	Time:
* On behalf of the contractor, I certify that this report is complete and correct and the 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.	

[CompanyName]
Surface Finishing and Tolerance Verification
Work Task Inspection Form

Project: Id# [ProjectNumber]	Project Name: [ProjectName]	Subcontractor and Supplier Company ID/Name:
Location/Area:	Reference drawing version #:	Crew ID/Name

Checkpoints/Inspection Items	Reference	Acceptance Criteria	Pass	Fail	N/A
Concrete surface finish type confirmed	ACI 301 / Spec §3.9	Matches specified finish (e.g., broom, trowel, float)			
Bleed water removed before finishing	ACI 302.1R	No finishing over standing bleed water			
Float and trowel performed after initial set	ACI 302.1R	Surface supports finisher and tools			
No dry cement used for water absorption	ACI 302.1R	Dry shake or powder not used to remove water			
Recesses and edge finishes checked	Shop Drawings / ACI 301	Edge chamfers, joints, and cutouts per detail			
Surface protection in place post-finish	Project Specs	No walking on slab before curing starts			
Finish documented with measurements	Daily QC Log	Flatness and elevation readings recorded			

Production Notes:
Reported Nonconformances:

Verification of Work Task Completion (sign and date)	
Inspector Name	Date of Inspection:
Signature	Time:
* On behalf of the contractor, I certify that this report is complete and correct and the 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.	

[CompanyName]
Curing and Protection
Work Task Inspection Form

Project: Id# [ProjectNumber]	Project Name: [ProjectName]	Subcontractor and Supplier Company ID/Name:
Location/Area:	Reference drawing version #:	Crew ID/Name

Checkpoints/Inspection Items	Reference	Acceptance Criteria	Pass	Fail	N/A
Curing method matches approved plan	ACI 308.1 / SOP 06	Matches submitted curing plan: water, compound, or covers			
Curing started immediately after finishing	ACI 301 / Spec §3.11	Started as soon as surface could support method			

Curing temperature maintained	ACI 301 / Spec §3.11.3	55°F minimum for cold, <80°F/hr change for hot			
Daily curing log maintained	SOP 06 / QC Report	Time, method, material, temp readings documented			
No damage or premature drying during curing	Visual	No surface drying, crusting, or discoloration			
Curing protection remains until required duration met	ACI 308.1	3–7 days or as per mix/exposure requirements			

Production Notes:
Reported Nonconformances:

Verification of Work Task Completion (sign and date)	
Inspector Name	Date of Inspection:
Signature	Time:
* On behalf of the contractor, I certify that this report is complete and correct and the 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.	

M. Concrete Crack Repair Procedures

Crack Repair Protocol

[CompanyName] will inspect, document, and repair all concrete cracks in accordance with the requirements of the contract specification and ACI guidelines. All cracks greater than 0.02 inches in width will be addressed prior to final acceptance of the structure.

Crack Inspection and Documentation

- All concrete surfaces will be visually inspected after curing and again before final acceptance.
- Cracks will be measured using crack gauges or feeler gauges calibrated to 0.01-inch increments.
- A Crack Log will be maintained that includes:
  - Crack ID and location (drawing or photo reference)
  - Measured width and length
  - Time and environmental conditions observed
  - Preliminary assessment of crack type (plastic shrinkage, drying shrinkage, structural, settlement, etc.)
- Crack logs will be included in the project quality records and submitted with the final Quality Control Report.

Repair Method Selection

Repair method will depend on:

- Crack width and depth
- Whether movement is anticipated (temperature, loading, shrinkage)
- Structural impact

Repair methods may include:

- Routing and sealing (non-moving cracks ≥ 0.02")

- The proposed method must be submitted to the Contracting Officer for approval prior to implementation.

Material and Method Requirements

- All crack repair materials (epoxies, sealants, patching materials) must be approved prior to use and be suitable for exposure conditions (e.g., freeze-thaw, chemical exposure).
- Crack repair materials must meet ASTM C881 for epoxy and C920 for sealants as applicable.
- Sealant joints will include proper backer rod placement and depth-to-width ratios as recommended by manufacturer.
- Surface prep for all repairs will follow ICRI Guidelines for surface roughness and cleanliness.

Crack Repair Documentation

Each repair will be recorded and include:

- Crack ID and repair type

- Product(s) used and batch number
- Ambient conditions during repair
- Photos before, during, and after repair
- Signature of responsible QC personnel and date of repair

Repaired areas will be re-inspected after 7 days and again at 28 days to confirm performance and verify no propagation or movement has occurred.

[CompanyName]
Crack Log

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

Crack ID And Location (Drawing or Photo Reference)	**Measured Width and Length**	**Time and Environmental Conditions Observed**	**Preliminary Assessment** (Plastic Shrinkage, Drying Shrinkage, Structural, Settlement, Etc.)

[CompanyName]
Crack Repair Record

Crack ID and repair type	Project ID	Project Name
	[ProjectNumber]	[ProjectName]

Signature of Responsible QC Personnel	Date of Repair

Product(s) used and batch number	Product(s) used and batch number	Ambient conditions during repair

Photos Before, During, and After Repair	

[CompanyName]

Quality Management System (QMS) Manual

Operating Policies of the [CompanyName] Quality System

Management acceptance

This QMS Manual has been reviewed and accepted

Endorsed By: (Name / Title)	[PresidentName], President		
Signature:	*[PresidentName]*	Effective Date:	[Date]
Version:	1	Revision:	0

Revision History

DATE	DOCUMENT#	REVISION	COMMENTS	APPROVED BY
[Date]	Quality Manual	0	Original Issue	[PresidentName]

QUALITY MANUAL TABLE OF CONTENTS

CROSS REFERENCES

The [CompanyName] Quality System complies with ACI 121r: Quality Management Systems – Requirements

ACI 121R Section	[CompanyName] Quality Management System Manual Section
Section 4: Quality Management System	Sections 1, 13
Section 5: Management Responsibility	Section 2.3, Section 10–12
Section 6: Resource Management	Section 2.4, Section 3.4–3.5
Section 7: Product Realization	Sections 3–9, SOP 5.3, 7.2, 6.8
Section 8: Measurement, Analysis, and Improvement	Sections 10–12, 2.5–2.7

The [CompanyName] Quality System complies with ANSI/ISO/ASQ Q9001-2015: Quality Management Systems – Requirements

ISO 9001:2015	[CompanyName] Quality Management System Manual Section
4 Context of the organization	
4.1 Understanding the organization and its context	2 Quality System Management and Responsibilities
4.2 Understanding the needs and expectations of interested parties	4 Contract Specifications 4.4 Needs and expectations of interested parties
4.3 Determining the scope of the quality management system	1 [CompanyName] Quality Management System 1.1 Scope
4.4 Quality management system and its processes	1 [CompanyName] Quality Management System 13.2 Quality System Documents
5 Leadership	
5.1 Leadership and commitment	2.3.1 President: Quality Duties, Responsibilities, and Authority 2.3.2. Senior Manager: Quality Duties, Responsibilities, and Authority 2.2 [CompanyName] Quality Policy Responsibilities Responsibility
5.2 Policy	1.2. [CompanyName] Quality Policy
5.3 Organizational roles, responsibilities, and authorities	2.3 Quality Duties, Responsibilities, and Authority
6 Planning	
6.1 Actions to address risks and opportunities	3 Project Quality Assurance/Quality Control Plan 3.2 Project Quality Risk Assessment 4 Contract Specifications 4.4 Needs and expectations of interested parties 4.5 Contract Risk Assessment
6.2 Quality objectives and planning to achieve them	2 Quality System Management and Responsibilities 1.2. [CompanyName] Quality Policy

	2.5 Quality System Performance Measures 2.6 Customer Satisfaction Performance Measures 2.7 On-time Delivery Performance Measures 12 Quality System Audits
6.3 Planning of changes	2.3.1 President: Quality Duties, Responsibilities, and Authority 2.3.2. Senior Manager: Quality Duties, Responsibilities, and Authority 12 Quality System Audits 13.2.2 Quality System Policy and Procedures 15. Standard Operating Procedures
7 Support	
7.1 Resources	3 Project Quality Assurance/Quality Control Plan 3.9.1 [CompanyName] Body of Knowledge 3.9.2 Quality Training 7.2 Prequalification of Subcontractors and Outside Organizations 8 Process Controls 11 Preventive Actions 12 Quality System Audits
7.1.6 Organizational knowledge	3.9.1 [CompanyName] Body of Knowledge
7.2 Competence	3.4.3 Personnel Qualifications
7.3 Awareness	1.2 [CompanyName] Quality Policy 2.3.1 President: Quality Duties, Responsibilities, and Authority 2.3.2. Senior Manager: Quality Duties, Responsibilities, and Authority 2.3.3 Quality Manager: Quality Duties, Responsibilities, and Authority
7.4 Communication	3.8 Project Quality Communications Plan 3.9 Project Quality Training Plan 4.6 Contract Submittals
7.5 Documented information	13 Record and Document Controls
8 Operation	
8.1 Operational planning and control	4 Contract Specifications 3 Project Quality Assurance/Quality Control Plan 8.5 Process Control Standards 9.2 Required Work Task Quality Inspections and Tests
8.2 Requirements for products and services	2.2 [CompanyName] Quality Policy 4 Contract Specifications 6 Project-Specific Quality Standards 3.8 Project Quality Communications Plan
8.3 Design and development of products and services	5 Design Review and Control 5.5.1 Design Risk Analysis
8.4 Control of externally provided processes, products, and services	3.10 Project Subcontractor and Suppliers 7 Project Purchasing 7.2 Prequalification of Subcontractors and Outside Organizations 7.3 Quality Responsibilities of Key Subcontractor and Supplier Personnel 7.6 Purchase Order Requirements 7.7 Project Purchase Order Approvals
8.5 Production and service provision	4 Contract Specifications 4.8 Contract Warranty

	3 Project Quality Assurance/Quality Control Plan 8 Process Controls
8.6 Release of products and services	9.2 Required Work Task Quality Inspections and Tests 9.5 Work Task Completion Inspections 9.8 Commissioning Functional Acceptance Tests 9.15 Project Completion and Closeout Inspection
8.7 Control of nonconforming outputs	10.2 Nonconformances 10.2.1 Marking of Nonconformances and Observations 10.2.2 Control the Continuation of Work 10.2.4 Correction of Nonconformances
9 Performance evaluation	
9.1 Monitoring, measurement, analysis and evaluation	2.5 Quality System Performance Measures 2.6 Customer Satisfaction Performance Measures 2.7. On-time Delivery Performance Measures 9.14 Inspection and Test Records 12 Quality System Audits
9.2 Internal Audit	12 Quality System Audits
9.3 Management review	2.3.1 President: Quality Duties, Responsibilities, and Authority 2.3.2. Senior Manager: Quality Duties, Responsibilities, and Authority 12.3 Annual Company Quality System Audit
10 Improvement	
10.1 General	12.3 Company-wide Quality System Audit 11 Preventive Actions
10.2 Nonconformity and corrective action	10.2 Nonconformances 10.3 Corrective Actions
10.3 Continual improvement	11 Preventive Actions 2.3.1 President: Quality Duties, Responsibilities, and Authority 2.3.2. Senior Manager: Quality Duties, Responsibilities, and Authority 2.3.3 Quality Manager: Quality Duties, Responsibilities, and Authority

4. CONTRACT SPECIFICATIONS

4.1. OVERVIEW

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.

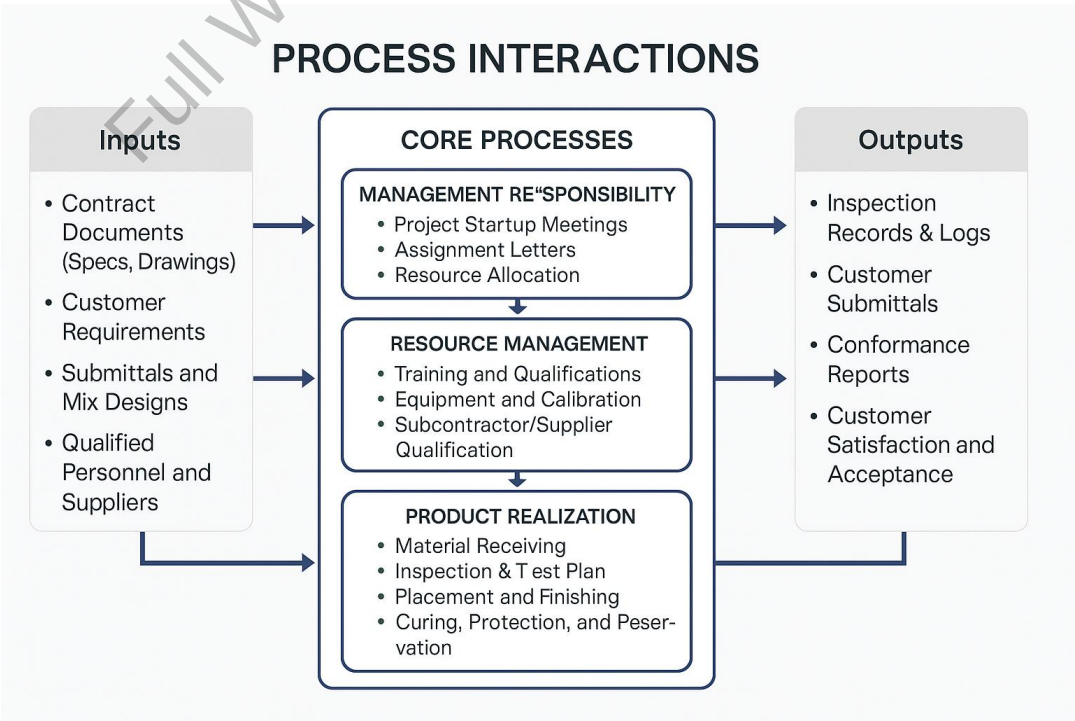
The Project Manager ensures that the information in customer contracts clearly defines customer expectations and that the necessary details are provided to set requirements for construction.

4.1.1. PROCESS INTERACTION AND QUALITY SYSTEM OVERVIEW

To support a process-based approach to quality management, the [CompanyName] Quality Management System (QMS) defines and controls a set of interrelated processes necessary to consistently deliver products that meet customer and regulatory requirements. These processes are grouped into four major categories:

- Management Responsibility
- Resource Management
- Product Realization
- Measurement, Analysis, and Improvement

The diagram below illustrates the interaction of these core processes, showing how customer requirements drive organizational activity, and how customer satisfaction is evaluated and fed back into continual improvement.



Key aspects of the interaction include:

- Customer requirements initiate management activities (e.g., planning, review, and communication).
- Management processes direct resources and define performance expectations.
- Product realization transforms inputs (labor, materials, plans) into the final product.
- Measurement processes evaluate both product conformity and customer satisfaction, and these results inform corrective or preventive actions.

Each process is supported by specific standard operating procedures (SOPs), which define responsibilities, required records, and methods for control. Interactions between these processes are monitored during internal audits, management reviews, and ongoing project-level quality inspections.

Together, these interconnected activities form the operational foundation of the QMS in accordance with the ACI 121R-08 and ISO 9001:2015 frameworks.

4.2. Contract Technical Specifications

The Project Manager obtains contract technical specifications from the customer.

For each specific contract, The Senior Manager identifies supplemental technical specifications on the Project Quality Assurance/Quality Control Plan when they are not otherwise specified by

All [CompanyName] activities comply with the drawing details and specifications cited in the drawings.

4.3.1.1. As-built Red-line Drawings

As the project progresses, the Superintendent will mark the original design drawings to indicate as-built conditions including changes to specified materials, dimensions, locations, or other features.

4.4. Needs and expectations of interested parties

The Quality Manager identifies interested parties, their expectations, quality requirements including governmental regulators, special interest organizations, and the public.

4.5. Contract Risk and Opportunities Assessment

The Project Manager or Senior Manager performs a general assessment and identifies contract risks and opportunities prior to bidding on a contract. Quality risks include the ability to satisfy customer expectations for quality or on-time delivery as well as company risks related to time and cost related to possible quality issues.

4.6. CONTRACT SUBMITTALS

The Quality Manager prepares submittals that provide additional details of how [CompanyName] plans to carry out quality-related aspects of the customer contract, contract technical specifications, and contract drawings and reporting of quality records to the customer.

The Quality Manager lists, schedules, and approves all quality-related submittals that are required by the project including submittals prepared by subcontractors and suppliers. The Quality Manager must review all submittals for compliance with the requirements of the [CompanyName] Quality System. The Quality Manager must sign approval of each contract submittal.

[CompanyName] extends compliance to contract specifications to all customer approved submittals. All [CompanyName] activities comply with customer approved submittals.

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- Relationships to adjoining work
- Identification of products and materials
- Fabrication and installation drawings
- Diagrams showing locations of field-installations
- Shop fabricated manufacturing instructions
- Templates and patterns
- Design calculations
- Compliance with specified standards
- Seal and signature of professional engineer if required
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

[CompanyName] extends contract specifications to include customer approved shop drawings.

4.6.3. PRODUCT DATA SUBMITTALS

The Project Manager prepares product data submittals that consist of the manufacturer's product information. The information included in this submittal is:

- Manufacturer, trade name, model, or type number
- Description
- Intended use
- Size and physical characteristics including drawings when applicable
- Finish and color characteristics
- Product manufacturer's installation instructions, when applicable
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

4.6.4. ALLOWANCES AND UNIT PRICES SUBMITTALS

When customer contracts specify allowances and unit prices that the customer will select after the contract is awarded, the Project Manager prepares an allowance and unit price submittal for customer approval.

When a customer selects or approves allowances and unit prices, the customer indicates the allowance and unit price selection on the signed submission return.

[CompanyName] extends compliance to contract specifications to customer approved allowances and unit prices.

4.6.5. REQUEST FOR INFORMATION (RFI) SUBMITTALS

The Project Manager submits a request for additional information to the customer when errors are found or when required information is not contained in the contract, contract technical specifications, or contract drawings.

Should any number of contract technical specifications or contract drawings result in conflicting requirements, the Quality Manager submits a request for information to the customer to select the standard that applies.

[CompanyName] extends compliance to contract specifications to customer requests for information.

4.6.6. CHANGE ORDER SUBMITTALS

Contract requirements or contract technical specifications may require a change after the contract is awarded. The Project Manager submits the change order to the customer for approval, including any contract price adjustments.

When a customer approves a change order, the customer signs the submission return.

[CompanyName] extends contract specifications to include customer approved change orders.

[CompanyName] extends compliance to contract specifications to customer approved submittals.

Work in the affected area of a pending submittal requirement does not start until the customer approves the submittal.

4.8. CONTRACT WARRANTY

The Quality Manager determines warranty services that are required by regulatory requirements, customer requirements, and customer expectations.

The Project Manager ensures that customer contracts clearly specify warranty coverage including:

- Scope
- Starting date
- Duration

The Project Manager ensures that customer contracts also clearly specify owner responsibility for:

- Restrictions of use

8. PROCESS CONTROLS

HOW WORK IS CARRIED OUT

8.1. OVERVIEW

The construction process plan defines how project work is to be done and approved for the overall project. The construction process plan is communicated to all key personnel, subcontractors, and suppliers in a startup meeting. As the project proceeds, work task plans provide additional details of how each individual work task is carried out. Work tasks planning meetings are used to communicate expectations of the work task plan to key personnel responsible for carrying out the work task.

8.2. PROJECT STARTUP AND QUALITY CONTROL COORDINATION MEETING

Prior to the commencement of work, the Project Manager holds a meeting to discuss and coordinate how project work will be performed and controlled. Key personnel from [CompanyName], subcontractors and suppliers meet to review expectations for project quality results as well as quality assurance and quality control policies and procedures including:

- Key requirements of the project
- The Project Quality Assurance/Quality Control Plan
- Required quality inspections and tests
- The project submittal schedule
- Quality policies and heightened awareness of critical quality requirements

Procedures section of this QMS Manual.

8.3. PREPARATORY PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN PLANNING

8.3.1. WORK TASK REQUIREMENTS REVIEW

In preparation for the start of an upcoming work task, the Superintendent reviews an integrated and coordinated set of documents that collectively define quality requirements for the work task including:

- Objectives and acceptance criteria of the work task
- Quality standards that apply to the work task
- Work instructions, process steps, and product installation instructions that apply to the work task
- Shop drawings
- Submittals

- Tools and equipment necessary to perform the work
- License, certification, or other qualification requirements of personnel assigned to work
- Required records of the process and resulting product

8.3.2. Preparatory Site Inspection

The Superintendent also 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 work task to begin
- Identifies potential problems

8.3.3. Work Task Preparatory Quality Planning Meetings

Prior to the start of a work task, the Superintendent conducts a meeting with key company, subcontractor personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

During the meeting, the Superintendent communicates the work task quality requirements and reinforces heightened awareness for critical requirements. Topics for a work task quality plan meeting include:

- Conflicts that need resolution
- Required quality documents and a verification of availability to personnel carrying out, supervising, or inspecting the work task
- Record keeping requirements and the availability of necessary forms

8.4. Weekly Quality Planning and Coordination Meetings

The Superintendent conducts a meeting with key company, subcontractor, and supplier personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

The meeting is held on a nominal weekly schedule. During the meeting, the Superintendent facilitates coordination among the participants, communication among the participants, and reinforces heightened awareness for critical requirements.

The Superintendent maintains a record of the meeting event in the Daily Quality Control Report.

8.5. Process Control Standards

8.5.1. Control of Customer Property

Care will be exercised for customer property used by or under [CompanyName] control. [CompanyName] will identify, inspect, verify, control, and protect customer property with the procedures that apply to company purchased materials. If any customer property is lost, damaged, or otherwise found to be unsuitable for use [CompanyName] will report this to the customer.

8.5.3. Work in Process Standards

Work is conducted only when conditions do not adversely impact quality; comply with government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental work in process requirements that apply to a specific project when they are necessary to assure quality results.

8.6. Preservation of Product and Work-in-Progress

[CompanyName] preserves the conformity of construction materials, components, and completed work throughout all stages — from delivery and storage to installation and customer acceptance. Preservation applies to raw materials, assemblies, finished work, inspection samples, and any work product that is not yet formally turned over to the client.

8.6.1. General Preservation Measures

To ensure protection of quality-critical items:

- All stored materials are protected from contamination, moisture, and mechanical damage using tarpaulins, racks, pallets, or enclosures as applicable.
- Weather-sensitive materials (e.g., cement, admixtures, steel) are stored in compliance with manufacturer instructions and environmental tolerances.

- Work-in-progress is clearly marked and segregated from traffic areas and incompatible processes.
- Protective barriers, warning tape, and signage are used to prevent premature access or accidental damage.

8.6.2. MATERIAL STORAGE

The Superintendent ensures all materials will be delivered, stored, and handled in a manner that protects them from damage, moisture, dirt, and intrusion of foreign materials.

Delivery of materials will be planned according to the work progress to minimize storage on site, where there are higher possibilities of damages and deterioration of materials.

Stored materials will be segregated to prevent cross contamination and limit losses should a delivery be rejected.

The Superintendent surveys stored materials during daily jobsite reviews and identifies any material that has incurred damage or otherwise become defective and therefore unfit for use.

8.6.2.1. TEMPERATURE- AND MOISTURE-SENSITIVE MATERIALS

Materials such as curing compounds, sealants, and adhesives are protected from freezing or overheating.

Storage areas are monitored for compliance with specified ranges, especially for hot/cold weather concreting.

Concrete curing is tracked using temperature logs and daily reports (see Section 9 and Concrete ITP).

8.6.3. PROTECTION OF COMPLETED WORK

Completed work is protected using coverings, enclosures, or physical isolation until final acceptance.

Equipment is protected from corrosion or environmental damage prior to startup.

Installation verification and punch lists include review of preservation measures.

8.7. CONTROLLED USE OF MATERIALS

The Project Manager ensures that contracts and purchase orders are awarded only to outside organizations qualified to perform the work task and/or supply materials as required for the specific project.

When subcontractor–supplied materials are damaged or otherwise found unsuitable for use, the Superintendent reports such findings to the subcontractor.

The Superintendent ensures that construction uses only materials specified in the contract technical specifications, contract drawings, and approved submittals. Substitutions are made only by agreement of the customer and documented by a change order (see section 2.1.3.6).

8.7.1. Controlled Product Use and Installation

[CompanyName] construction activities conform to manufacturers' product use and installation instructions that apply to the construction process.

When installing a product, the Superintendent has access to all applicable product installation instructions.

8.9. Monthly Quality Control Report

When a monthly quality control report is required by the Project Quality Plan, the Superintendent records a monthly status report. The report includes:

- A summary of work completed and work in progress
- Outstanding issues
- Issues resolved during the reporting period
- Outstanding potential change orders

- Project status with current project costs and estimated completion date
- A cost analysis summarizing actual costs to date and estimated future costs used to determine cost and schedule impact of quality issues
- Project pictures as appropriate

The Project Manager analyzes the monthly quality control reports and makes improvement recommendations if applicable. The Monthly Quality Control Report is prepared in accordance with SOP 8.7 Monthly Quality Control Report in the Standard Operating Procedures section of this QMS Manual.

8.10. SUPPLEMENTAL PROCEDURES

- SOP 6.5.2 Equipment Preventive Maintenance
- SOP 6.7 Controlled Material Identification and Traceability
- SOP 8.2. Project Startup and Quality Control Coordination Meeting
- SOP 8.3.1. Work Task Requirements Review
- SOP 8.3.2. Preparatory Site Inspection
- SOP 8.3.3 Work Task Preparatory Quality Planning Meeting
- SOP 8.6. Daily Quality Control Report
- SOP 8.7. Monthly Quality Control Report

10. NONCONFORMANCES AND CORRECTIVE ACTIONS

10.1. OVERVIEW

Should a nonconformance be identified by an inspection there is a systematic method to control the item, correct it, and ensure that project quality is not adversely impacted by the event.

A nonconformance is any item that does not meet project specifications or [CompanyName] Quality System requirements.

10.2. NONCONFORMANCES

10.2.1. 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.

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.

10.2.3. NONCONFORMANCE REPORT

10.2.3.1. 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.

10.2.3.2. QUALITY MANAGER DISPOSITION OF NONCONFORMANCE REPORTS

When the Quality Manager receives a Nonconformance Report, he or she assesses the effect 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.

10.2.4. Correction of Nonconformances

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 (see section 10.3 Corrective Actions).

10.3. Corrective Actions

10.3.1. 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 does a root cause(s) analysis and identifies requirements for corrective actions with respect to frequency, severity, and detectability of quality nonconformances items found during and after completion of work activities.

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10.3.2. 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.

10.4. SUPPLEMENTAL PROCEDURES

- SOP 10.2.3.1. Recording of Nonconformances

[CompanyName]

Quality System
Standard Operating Procedures

STANDARD OPERATING PROCEDURES

TABLE OF CONTENTS

SOP 3.4.1: Project Organization Chart

Version: 1.0
Effective Date: [Insert Date]
Approved By: [Insert Approver]

1. Purpose

To clearly define the reporting relationships among key project personnel and to record the result.

2. Scope

All construction contracts.

3. Definitions

None.

4. Responsible Person(s)

Project Manager has overall responsibility.

5. References

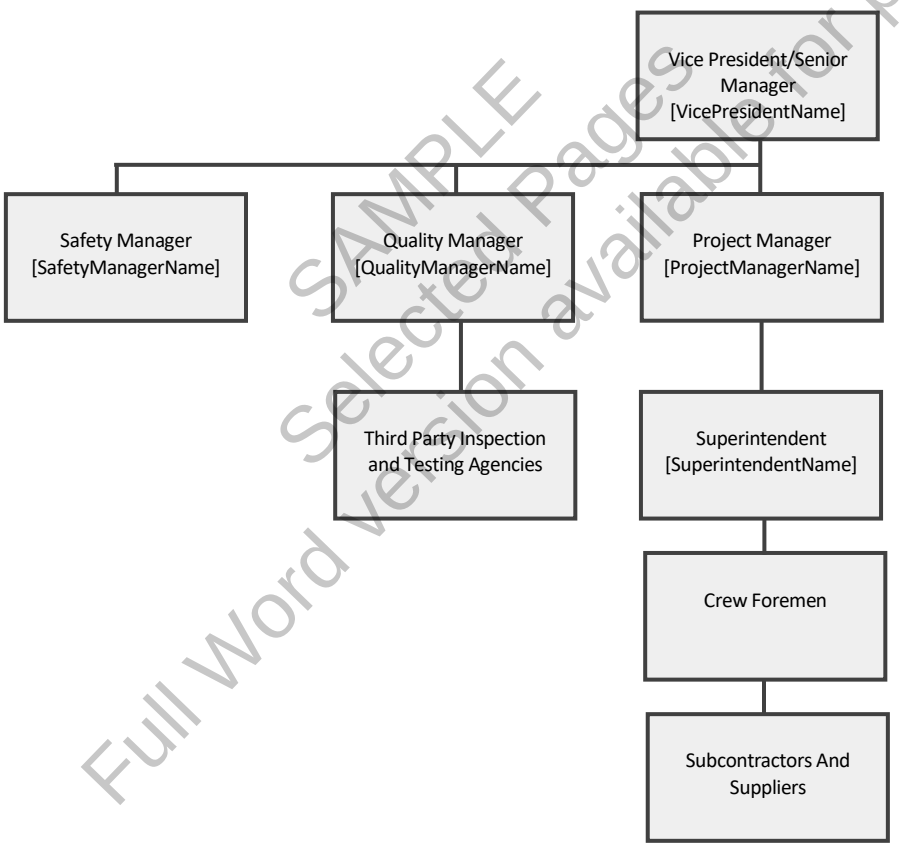
Quality Manual Section 3.4.1 Project Organization Chart
Quality Manual Section 13.4.2 Project Records Control

6. Procedure

1. Use the Project Organization Chart Form contained in this procedure unless the customer contract or Project Quality Assurance/Quality Control Plan specifies the use of a modified or customer supplied form.
2. In that case, the specified form replaces the standard form for that contract.
3. The Responsible Person prepares a Project Organization Chart as required by the Quality Manual Section 3.4.1.
4. The Responsible Person stores the organization chart in the field office as required by Quality Manual Section 13.4.2.

[CompanyName]
Project Organization Chart

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



SOP 09 – Concrete Surface Finishing and Tolerance Verification

Version: 1.0

Effective Date: [Insert Date]

Approved By: [Insert Approver]

1. Purpose

To define standard procedures for applying surface finishes to concrete slabs, walls, and formed elements, and to verify surface tolerances using approved methods and equipment. This SOP ensures that concrete finish quality aligns with specifications for function, appearance, and long-term performance.

2. Scope

Applies to all concrete surfaces requiring finishing and dimensional conformance verification, including:

- Slabs-on-grade
- Exposed vertical elements
- Formed concrete surfaces
- Architectural and structural finishes

3. References

- Contract Section 03 30 00 – Paragraphs 3.9 and 3.3.4
- ACI 117 – Tolerances for Concrete Construction
- ACI 301 – Specifications for Structural Concrete
- ACI 302.1R – Guide for Concrete Floor and Slab Construction

4. Responsibilities

Role	Responsibilities
Finishing Foreman	Ensures required finish is achieved using proper tools and sequences
Superintendent	Coordinates sequencing, manpower, and access
Quality Manager	Verifies compliance with surface finish type and tolerance
QC Inspector	Records flatness/levelness measurements and visual compliance

5. Surface Finishing Requirements

A. Slabs-on-Ground and Exterior Pavement

- Screed to proper elevation using vibrating screed or straightedge
- Float surface after bleed water evaporates
- Use hand tools or power trowel for final finish as required:

- **Broom Finish**: Exterior slabs and walkways
- **Steel Trowel Finish**: Interior flatwork (unless otherwise specified)

Do not:

- Sprinkle dry cement to absorb bleed water
- Use "jitterbugs" or grate tampers

B. Formed Surfaces

- Leave as-cast or rubbed finish per project drawings
- Chamfer exposed vertical corners per Section 3.3
- Clean and repair honeycombing or voids immediately after stripping

6. Surface Tolerance Verification

A. Tolerances – ACI 117 Categories

Element	Tolerance	Verification Method
Slab elevation	± 3/8 inch	Laser level or stringline
Slab thickness	−¼ inch / +½ inch	Core sample or depth probe
Slab flatness (FF)	As specified	Dipstick or F-meter
Slab levelness (FL)	As specified	Floor profiler
Form alignment	± ¼ inch	Tape measure and plumb rule
Edge/Joint locations	± ½ inch	Tape and control drawing

B. Verification Process

- Perform FF/FL measurements within 24 hours of final set
- Record tolerance checks on **Surface Tolerance Log**
- Attach printout or screenshot of profiler/dipstick data

7. Surface Repairs

If surface is:

- Overly rough, low, or damaged: Grind or patch per ACI 301
- Too smooth where non-slip is required: Apply broom finish or surface roughener
- Cracked or delaminated: Issue NCR and conduct core testing or remove/replace

8. Records and Documentation

- Surface Finish and Tolerance Log
- FF/FL reports (machine printout or scan)
- Photos of representative finish areas
- Any NCRs related to slab appearance or dimensional deviation

SOP 10 – Quality Records Management and Submittal Tracking

1. Purpose

To define how quality-related records are created, maintained, reviewed, and stored, and to outline procedures for tracking submittals related to concrete materials, plans, and testing. This SOP ensures that all documents are accessible, traceable, and audit-ready throughout the project lifecycle.

2. Scope

Covers all concrete-related documentation and records including:

- Preconstruction submittals
- Mix designs and approvals
- Inspection and test reports
- Daily QC logs
- Nonconformance reports (NCRs)
- Curing and placement documentation
- Final closeout records

3. References

- Section 03 30 00 – Paragraphs 1.3, 1.6, and 3.13
- ACI 121R – Quality Systems Conformance (ISO 9001-based)
- ACI 301 – Structural Concrete
- ASTM C94/C1077/E329 – Testing and lab documentation

4. Responsibilities

Role	Responsibilities
Quality Manager	Approves and audits records; maintains master log
Project Manager	Tracks submittals and approvals; ensures timely delivery
QC Inspector	Completes daily records and test forms
Testing Agency	Submits validated reports with lab and technician credentials

5. Record Types and Control

Document Type	Examples	Control Method
Preconstruction Submittals	Mix designs, Curing Plans, Hot/Cold Weather Plans	Tracked using Submittal Log
Testing Records	Slump, air, temperature, strength, core tests	Filed with daily reports and linked to pour ID

Document Type	Examples	Control Method
Inspection Logs	Pre-pour checklists, surface tolerance forms	Indexed by pour or task number
NCRs and CAPs	Nonconformance Reports, Corrective Action Plans	Filed in NCR Log and scanned digitally
Curing Logs	Method, duration, temperature records	Stored in Daily QC Reports
Final Acceptance	Punch list, final testing, approvals	Compiled in Closeout Package

6. Submittal Tracking Procedure

A. Preconstruction Phase

- Create Submittal Register using spec section breakdown
- Assign submittal numbers and due dates
- Track using spreadsheet or document control software

B. Review and Approval Workflow

- PM submits documents for internal QC review
- QM verifies content, format, and conformance
- Submit to Contracting Officer as required with cover sheet
- Log status: Pending / Approved / Revise & Resubmit

C. Distribution

Once approved:

- Distribute to Superintendent, QC staff, lab, and concrete supplier
- Ensure current version is at point of use

7. Recordkeeping and Filing

A. Daily Filing

- QC Inspector files daily reports, test results, curing logs
- Each pour has a **Pour File**: includes test data, pre-pour checklist, delivery tickets, photos

B. Digital Backups

- Scan all hard copy reports weekly
- Store on secured project drive with access controls

C. Retention

- All records retained for **minimum 5 years**
- Archive at project closeout per company or contract policy

8. Audit and Review

- Quality Manager conducts **monthly audit** of:
  - Submittal status
  - Missing or late records
  - Incomplete test reports
- Results entered in the Quality Records Audit Log

9. Closeout Package

At project completion, assemble:

- Final mix design approvals
- Field and lab test reports
- NCRs and corrective action verification
- Photos, curing logs, pour maps
- Contracting Officer approvals

Deliver as digital PDF binder or hard copy set as required.