ChecklistGuro

Formwork Design and Stability Checklist

General Information & Project Details

Basic project information and formwork scope verification.

Project Name

Write something...

Project Number

Write something...

Date of Formwork Design Review

Enter date...

Formwork Design Revision Number

Enter a number...

Brief Description of Formwork Scope (e.g., walls, slabs, foundations)

Write something...

Formwork Type (e.g., Concrete, Steel, Composite)

- [ ] Concrete
- [ ] Steel
- [ ] Composite
- [ ] Other

Attach Relevant Project Documents (e.g., Architectural Drawings, Site Plans)

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Designer's Name

Write something...

Designer's Signature

Design Loads & Calculations

Verification of load calculations accounting for all applicable forces.

Concrete Density (kg/m³)

Enter a number...

Fresh Concrete Unit Weight (kN/m³)

Enter a number...

Design Loads (kPa)

Enter a number...

Self-Weight Factor

Enter a number...

Description of Load Combinations Used

Write something...

Load Combination Standard Used

- [ ] Eurocode
- [ ] ACI
- [ ] AS/NZS
- [ ] Other

Load Calculation Spreadsheet

Upload File

Wind Pressure (kPa)

Enter a number...

Formwork Material Selection & Properties

Ensuring appropriate materials are selected and their properties are correctly applied.

Formwork Material Type

- [ ] Timber
- [ ] Plywood
- [ ] Steel
- [ ] Composite
- [ ] Other

Material Grade (e.g., Timber Strength)

Enter a number...

Sheathing Thickness (mm)

Enter a number...

Material Properties Summary

Write something...

Material Certificates

Upload File

Timber Treatment (if applicable)

- [ ] Untreated
- [ ] Pressure Treated
- [ ] Borate Treated
- [ ] Other

Specific Material Considerations

Write something...

Formwork Geometry & Layout

Checks related to the physical dimensions and arrangement of the formwork.

Formwork Height (m)

Enter a number...

Formwork Width (m)

Enter a number...

Formwork Length (m)

Enter a number...

Formwork Type

- [ ] Vertical
- [ ] Horizontal
- [ ] Circular
- [ ] Complex

Description of Complex Geometry (if applicable)

Write something...

Formwork Layout Drawing

Upload File

Sheathing Panel Size (Length, m)

Enter a number...

Sheathing Panel Size (Width, m)

Enter a number...

Support System Design

Assessment of supports, including spacing, capacity, and stability.

Maximum Support Spacing (mm)

Enter a number...

Support Reaction Capacity (kN)

Enter a number...

Support Type (e.g., Jack, Raking Prop, Soldier Pile)

- [ ] Jack
- [ ] Raking Prop
- [ ] Soldier Pile
- [ ] Other

Justification for Support Spacing (referencing calculations)

Write something...

Support System Calculations

Upload File

Minimum Ground Bearing Pressure (kPa)

Enter a number...

Ground Condition Assessment Method

- [ ] Visual Inspection
- [ ] Soil Testing
- [ ] Cone Penetration Test (CPT)
- [ ] Other

Sheathing & Face Stability

Verification of sheathing thickness, spacing, and face stability to prevent deformation and blow-out.

Sheathing Thickness (mm)

Enter a number...

Sheathing Spacing (mm) - Center to Center

Enter a number...

Face Pressure (kPa) - Calculated Maximum

Enter a number...

Sheathing Material Type

- [ ] Plywood
- [ ] OSB
- [ ] Metal
- [ ] Other (Specify in Long Text)

If 'Other' Sheathing Material, Please Specify:

Write something...

Sheathing Fixation Method

- [ ] Nails
- [ ] Screws
- [ ] Clips
- [ ] Other (Specify in Long Text)

If 'Other' Fixation Method, Please Specify:

Write something...

Fixation Spacing (mm) - Center to Center

Enter a number...

Attach Calculation Showing Face Stability Verification

Upload File

Tie Rod/Tie Bar Design & Placement

Checking the adequacy and positioning of tie rods/bars to resist lateral pressure.

Tie Rod/Bar Diameter (mm)

Enter a number...

Tie Rod/Bar Spacing (mm)

Enter a number...

Tie Rod/Bar Tensile Capacity (kN)

Enter a number...

Lateral Pressure on Formwork (kN/m)

Enter a number...

Tie Rod/Bar Material Grade

- [ ] Grade 20
- [ ] Grade 40
- [ ] Grade 50
- [ ] Other (Specify in LONG_TEXT)

If 'Other' Material Grade selected above, please specify:

Write something...

Tie Rod/Bar Connection Method

- [ ] Welded
- [ ] Bolted
- [ ] Other (Specify in LONG_TEXT)

If 'Other' Connection Method selected above, please specify:

Write something...

Tie Rod/Bar Connection Details Drawing

Upload File

Resin/Mortar Joint Considerations

Assessment of joint design and material properties related to resin or mortar usage.

Resin/Mortar Type Specified?

- [ ] Yes
- [ ] No
- [ ] Not Applicable

Description of Resin/Mortar Requirements (e.g., compressive strength, workability)

Write something...

Specified Compressive Strength (MPa)

Enter a number...

Curing Method Specified?

- [ ] Yes
- [ ] No
- [ ] Not Applicable

Notes on potential impact of environmental conditions (temp, humidity) on resin/mortar performance

Write something...

Resin/Mortar Data Sheets

Upload File

Joint Filling Procedure Documented?

- [ ] Yes
- [ ] No

Interface with Reinforcement & Embedded Items

Verification of proper spacing and clearance for reinforcement and embedded components.

Minimum Clearance from Formwork to Reinforcement

Enter a number...

Maximum Reinforcement Spacing within Formwork

Enter a number...

Formwork Penetration Method for Reinforcement (e.g., drilled, cut)

- [ ] Drilled
- [ ] Cut
- [ ] Other (Specify)

Notes/Details Regarding Reinforcement Positioning and Formwork Interaction

Write something...

Supporting Documentation (e.g., reinforcement schedules, formwork details)

Upload File

Was a clash detection performed for reinforcement and formwork?

- [ ] Yes
- [ ] No

If clash detection was performed, describe any clashes resolved and actions taken.

Write something...

Constructability & Site Conditions

Considering practical construction aspects and potential site-specific challenges.

Describe site access constraints (e.g., limited crane radius, overhead obstructions).

Write something...

Potential site hazards to consider (select all that apply):

- [ ] Unstable Ground
- [ ] Proximity to Existing Structures
- [ ] Heavy Traffic
- [ ] Adverse Weather Conditions
- [ ] Presence of Utilities
- [ ] Other (Specify in LONG_TEXT field)

Maximum allowable formwork overhang beyond supports (meters).

Enter a number...

Describe any specific surface preparation requirements for the concrete pour.

Write something...

Method for handling and placing formwork components (e.g., manual, crane assisted).

- [ ] Manual Handling
- [ ] Crane Assisted
- [ ] Other (Specify in LONG_TEXT field)

Planned date for formwork erection.

Enter date...

Describe any specific bracing requirements based on site conditions (wind, vibration).

Write something...

Temporary Works Drawings & Documentation

Review of all relevant drawings, calculations, and specifications.

Formwork Design Calculations

Upload File

Temporary Works Drawings (Formwork Layout, Elevations, Sections)

Upload File

Design Software Used

- [ ] AutoCAD
- [ ] Tekla Structures
- [ ] SAFE
- [ ] Other (Specify in LONG_TEXT)

If 'Other' Design Software Used, Please Specify:

Write something...

Drawing Revision Number

Enter a number...

Date of Last Drawing Revision

Enter date...

Document Review Status

- [ ] Not Reviewed
- [ ] Reviewed - Initial
- [ ] Reviewed - Final
- [ ] Approved

Reviewer Signature

Regulatory Compliance & Standards

Confirmation of adherence to applicable codes and standards.

Applicable Building Code Version

- [ ] IBC 2018
- [ ] IBC 2021
- [ ] Eurocode 2
- [ ] Local Code

Relevant Standards Applied (Select all that apply)

- [ ] ACI 301-10: Specification for Concrete Construction
- [ ] ACI 118-14: Report on Factors Affecting Concrete Strength
- [ ] EN 12810: Prefabricated concrete elements - Moulds
- [ ] Local Authority Guidelines

Permit Status

- [ ] Approved
- [ ] Pending Approval
- [ ] Not Required

Record of Deviations/Exceptions to Standard Practice

Write something...

Permit Documentation

Upload File

Revision Number of Design Standards

Enter a number...

Date of Last Standard Review

Enter date...