

CIC Guidelines

Preliminary Design

Preliminary Design

- One click:
Party(ies) required to input,
assist, and coordinate.
- Two clicks:
Deliverable required and
party(ies) responsible.

Approvals and Inputs

Client Approval: Of previous stage, design documentation, updated programme and cost plan. List matters from previous stage to be addressed in current stage.

Documentation: From previous stage that forms the basis of the ongoing design.

Deliverables	Required	Client	Project Manager	Townplanning/Traffic	Topographical Surveyor	Architect	Designer/LBP	Quantity Surveyor	Structural	Civil	Mechanical	Electrical	Plumbing and Drainage	Fire Engineering	Fire Protection	Builder	Other	N/A
Report																		
Coordinate																		

Health and Safety

Health and Safety at Work – Design (HSD): Update report to reasonably address Health and Safety issues during use, maintenance, construction, demolition or disposal. Include Subcontractor design.

Health and Safety at Work – Construction (HSW): Update report to reasonably address Health and Safety issues during construction.

Health and Safety at Work: Workshop and coordinate H&S report with team.

Existing Conditions/Materials: Report existing risks, finalise assessment and actions.

Existing Conditions/Materials: Verify and advise risks closed out.

Other: (specify)

Report																		
Report																		
Coordinate																		
Report																		
Report																		
Other: (Specify)																		

General

Comply: Proactively with H&S Plan, Project Execution Plan, BIM Execution Plan, and others as required.

Quality Assurance: Prepare/update project-specific QA plan. Undertake work in accordance with.

Attend: To correspondence and at meetings.

Resources: Align internal resources with programme requirements, prepare design programme if required

Documentation Register: Prepare and progressively update.

Value Management: Integrate VM items in design stage.

Waste Management: Incorporate preliminary cleaning, refuse and recycling provisions with Client.

Seismic Design: Consider for all elements across relevant disciplines.

Construction methodology: Confirm assumed construction methodology governing design.

Buildability: Highlight significant or unusual buildability.

Drawn/modelled documentation: Prepare and issue progressively to others as agreed/required.

Coordinate: Lead coordination with other disciplines.

integrate design: Coordinate with other disciplines.

Specifications and schedules: Prepare outline and issue progressively.

Warranties: Consider warranty requirements.

Client Report: Content and timing per PEP H&S, programme, progress, cost, risk, non-conformances, etc.

Collate: Design information from all disciplines and issue at agreed milestones.

Other: (specify)

Coordinate																		
Report																		
Minute/Note																		
Report																		
Schedule																		
Report																		
Coordinate																		
Coordinate																		
Report																		
Report																		
Draw																		
Coordinate																		
Coordinate																		
Spec																		
Report																		
Report																		
Coordinate																		
Other: (Specify)																		

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BIM: Develop and agree strategies and objectives.

	Deliverables	Required	Client	Project Manager	Townplanning/Traffic	Topographical Surveyor	Architect	Designer/LBP	Quantity Surveyor	Structural	Civil	Mechanical	Electrical	Plumbing and Drainage	Fire Engineering	Fire Protection	Builder	Other	N/A
Stakeholders: Identify and confirm handover data requirements and format.	Minute/Note																		
Stakeholders: Finalise brief.	Minute/Note																		
Deliverables: Finalise schedule of phase by phase by type (model, drawing, schedule) and LOD (level of detail).	Report																		
BIM Execution Plan (BEP): Finalise.	Report																		
CDE: Implement for information and model sharing.	Coordinate																		
BIM meetings: Chair.	Minute/Note																		
Coordination: Manage and confirm in accordance with BEP.	Coordinate																		
Coordinate/integrate: Input to models with team.	Coordinate																		
BIM outputs: Confirm alignment with selected BIM uses from BEP.	Report																		
Modelling: Model preliminary design elements and systems in accordance with BEP.	Draw																		
Other: (specify)	Other: (Specify)																		

Environmentally Sustainable Design (ESD)

ESD: Consider and incorporate into design.	Coordinate																		
Performance modelling: Undertaken, options considered and retested, reported.	Report																		
Other: (specify)	Other: (Specify)																		

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Compliance

	Deliverables	Required	Client	Project Manager	Townplanning/Traffic	Topographical Surveyor	Architect	Designer/LBP	Quantity Surveyor	Structural	Civil	Mechanical	Electrical	Plumbing and Drainage	Fire Engineering	Fire Protection	Builder	Other	N/A
Resource Consent: Confirm if required.	Report																		
Town Planning and associated Legislation: Include in design, liaise with Territorial and other Authorities as required.	Report																		
Heritage: Discuss and agree design with TA or Heritage NZ if any, receive formal approval.	Report																		
Urban design: Liaise with TA.	Coordinate																		
Urban design: Discuss and agree matters with Council Urban Design Team.	Minute/Note																		
Urban design Panel: Prepare and make presentation incorporating feedback as appropriate.	Draw																		
Resource Consent Application: Prepare and lodge application with Territorial Authority.	Coordinate																		
Resource Consent Processing: Answer queries arising from application, provide further information if requested. Comment on consent conditions prior to acceptance.	Coordinate																		
Resource Consent: Receive, review and distribute consent including conditions.	Report																		
Compliance: Progressively check design against resource consent including conditions.	Coordinate																		
Compliance: Develop and agree compliance strategies for the project.	Coordinate																		
Compliance: Progressively check design with NZBC and relevant standards and Codes of Practice.	Coordinate																		
Certificates of Public Use (CPU): Determine if required for existing buildings.	Report																		
Pre-Application: Establish liaison with TA and agree pathways.	Report																		
H1 Energy efficiency: Confirm compliance pathway, input into design.	Coordinate/ Report																		
Building Consent Forms including Checklist: Prepare.	Coordinate																		
Other: (specify)	Other: (Specify)																		

Management

Health and Safety: Update overall project H&S plan/register incorporating both HSD and HSAW matters.	Report																		
Brief: Monitor design for compliance with objectives, scope and constraints. Identify and mitigate scope creep.	Report																		
Legal Advice: Consult with Client's legal advisor (if required).	Coordinate																		
Project Programme: Prepare/update design, procurement and delivery and milestones. Review progress.	Report																		
Design Programme: Develop and align with the overall project programme. Include dates and scope of all deliverables.	Report																		
Project Execution Plan: Implement plan, track performance of team.	Report																		
Team: Identify further consultants required and scope, including areas of work to be undertaken by Design Build.	Coordinate																		
Pre-qualify Design Team: Seek statements and review H&S policy and QA accreditation, PI, experience, resource, capability, cost, BIM assessment.	Coordinate																		
Roles: Identify responsibility for dimensional control, coordination, design management.	Coordinate																		
Engage Design Team: Prepare and issue guidelines, agreements, insurance requirements, producer statement authorship, BIM capability, etc.	Coordinate																		
Peer Reviews: Identify need and engage.	Coordinate																		
Insurances: Review and agree required project insurances (PI, PL, construction, etc.)	Report																		

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Management (continued)

	Deliverables	Required	Client	Project Manager	Townplanning/Traffic	Topographical Surveyor	Architect	Designer/LBP	Quantity Surveyor	Structural	Civil	Mechanical	Electrical	Plumbing and Drainage	Fire Engineering	Fire Protection	Builder	Other	N/A
Consultant Payments: Review and certify claims.	Certify																		
Survey: Identify/commission – topographical, civil, geotechnical, existing building drawings, hazards, as built, hydrological, heritage, etc.	Coordinate/Draw																		
Environmentally Sustainable Design (ESD): Finalise scheme (i.e. NZBC, Homestar™, Green Star etc.) and level of compliance.	Report																		
PCG/Client Meetings: Facilitate, chair, minute, issue notes, attend.	Minute/Note																		
Design Meetings: Facilitate, chair, minute, issue notes, attend.	Minute/Note																		
Stakeholders and User Groups: Consult, facilitate, chair, minute, issue notes, attend.	Coordinate																		
Tenants: Identify channels, brief, consult, facilitate, chair, minute, issue notes, attend.	Coordinate																		
Risk: Update schedule. Apply risk/opportunities management principles.	Schedule																		
Budget / Cost Planning: Manage the cost consultant to provide estimates/reports.	Coordinate																		
Value Management: Facilitate, establish timing, chair, minute, issue notes, attend.	Minute/Note																		
Resource and Building Consents: Identify channels, commence consultation, facilitate, chair, minute, issue notes, attend.	Minute/Note																		
Checklist for Building Code Compliance: Confirm who is providing what.	Coordinate																		
Resource Consents: Assemble documents and make application.	Coordinate																		
Resource Consents: Manage responses to queries arising.	Coordinate																		
Contractor Procurement: Discuss option and confirm preferred procurement methodology and Form of Contract with Client.	Report																		
Elements not covered: In this stage.	Report																		
Approve Design: For progress to next stage, with list of matters to be addressed in next stage.	Report																		
Provide deliverables: From this stage for commencement of next stage.	Coordinate																		
Other: (specify)	Other: (Specify)																		

Design

Brief: Analyse against constraints.	Report																		
Site Inspection: Visit site, prepare site analysis diagrams, environmental and context studies.	Draw																		
Site Encumbrances: Identify potential impact on the project, review with the Client. Resolve to a concept level. Liaise with specialists (if required).	Report																		
Site Information: Additional information obtained (if required).	Coordinate																		
Design: Prepare preliminary design plans, sections, elevations to scale. Preliminary grids, levels.	Draw																		
Schedules: Preliminary fittings, fixtures, hardware selections, internal and external finishes.	Schedule																		
Structure: Consider/develop and incorporate preliminary options and include in design.	Coordinate																		
Building Services: Consider/develop and incorporate concept options and include in design.	Coordinate																		
Vertical Transportation: Select preferred option for number, size and speed, include in design.	Draw																		
Facade: Consider and evaluate options for façade, consider compliance with Code requirements, coordinate with relevant consultants.	Draw																		
Thermal Envelope: Consider and evaluate options for thermal envelope, consider compliance with Code requirements, select preferred.	Coordinate																		

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Design (continued)

	Deliverables	Required	Client	Project Manager	Townplanning/Traffic	Topographical Surveyor	Architect	Designer/LBP	Quantity Surveyor	Structural	Civil	Mechanical	Electrical	Plumbing and Drainage	Fire Engineering	Fire Protection	Builder	Other	N/A
Fire: Evaluate concepts and accommodate preferred/recommended fire protection and egress requirements. Integrate requirements of NZ Fire Service.	Coordinate																		
Fire and Egress: Incorporate requirements from acceptable solution or specific design.	Draw																		
Accessibility and facilities for people with disabilities: Consider and incorporate requirements.	Report																		
Building Maintenance: Consider options, receive Client approval, integrate in design.	Coordinate																		
Floor Areas/Schedule of accommodation: Schedule/update based on current drawings/model.	Schedule																		
Materials: Prepare preliminary/finishes schedule(s), consider durability and ESD matters.	Schedule																		
Fixtures and Fittings: Make initial selections, discuss with Client and revise, prepare schedule.	Schedule																		
Presentation: Prepare materials/samples board(s).	Draw																		
Presentation: Prepare graphics to standard agreed.	Draw																		
Presentation: Prepare model(s).	Draw																		
Marketing Material: Review/finalise design with Client's marketing/real estate advisors, including plan for presentation materials.	Draw																		
Other: (specify)	Other: (Specify)																		

Cost

Due Diligence: Identify any previous history or work documented to date. Oversee initial appraisal, market analysis etc.	Report																		
Feasibility: Update the project feasibility/viability business case.	Report																		
Cost estimate: Prepare preliminary estimate of cost.	Report																		
Cost Plan: Prepare cost plan. Review against budget. Identify provisional items, contingency and exclusions.	Report																		
Coordinate: Cost matters, including alternatives, with other disciplines.	Coordinate																		
Other: (specify)	Other: (Specify)																		

Structural/Geotechnical

Brief: Review/recommend and incorporate importance levels, seismic requirements, geotechnical issues, special loads, etc.	Report																		
Existing Structure: Survey, assess and report including seismic and geotechnical matters consider remedial options.	Report																		
Geotechnical: Complete investigations, and issue draft factual and interpretive reports, confirm geotechnical hazards, design criteria, consider foundation, retaining wall, basement, site remediation and drainage options.	Coordinate																		
Geotechnical: Based on reports, consider and input into basement drainage options.	Report																		
Structural Design: Preliminary sizing of all primary and typical secondary members.	Draw																		
Serviceability Criteria: Provide preliminary building movements/deflections, vibration.	Report																		
Loads: Preliminary floor loads, high/special load areas, design loads for proprietary design elements.	Report																		
Proprietary Design: Consider elements of non-specific code and/or proprietary design.	Report																		
Drawings: Plans of primary structural systems, including preliminary sizing.	Draw																		

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Structural/Geotechnical (continued)

	Deliverables	Required	Client	Project Manager	Townplanning/Traffic	Topographical Surveyor	Architect	Designer/LBP	Quantity Surveyor	Structural	Civil	Mechanical	Electrical	Plumbing and Drainage	Fire Engineering	Fire Protection	Builder	Other	N/A
Report: Update including structural design brief, key risks and assumptions, key issues and options recommended.	Report																		
Erection/construction: Consider methodology governing design (where appropriate), build-ability of primary structure, unusual temporary stability or sequencing.	Draw/Spec																		
Specification: Outline preliminary materials, durability/coatings and serviceability, coordinate surface finishes.	Spec																		
Other: (specify)	Other: (Specify)																		

Building Services

Note: Activities in this section may apply to all services disciplines

Brief: Review/recommend and confirm Client requirements regarding efficiency, ESD, operational descriptions.	Report																		
Functional services brief: Develop approved design criteria and develop, including systems concepts, reliability and redundancy options and recommendations, hazardous area classifications (as appropriate), and special requirements.	Report																		
Load: Preliminary assessments on area by area basis.	Report																		
Energy efficiency: Review/recommend and confirm Client requirements regarding efficiency, ESD, operational descriptions. Prepare preliminary analysis, consider in design.	Report																		
Interface matrix: Prepare preliminary matrix outlining demarcation between services.	Schedule																		
Interface requirements: Identify interfaces with existing buildings and equipment – develop.	Report																		
Zones: Prepare preliminary zoning for all services.	Draw																		
Design: Drawings outlining services concepts, including plant rooms, (including maintenance and access requirements), risers, and primary services routes, typical area equipment layouts.	Draw																		
Diagrams: Single line diagrams and schematics showing connections to major equipment (equipment, cables, pipes, ducts, circuit breakers unsized).	Draw																		
Utilities/Connections: Assess supply utility requirements. Prepare connection/installation strategy.	Report/Draw																		
Equipment: Advise preliminary sizing and generic selection, draft schedules.	Schedule																		
Distribution: Advise preliminary sizes for services distribution and containment networks (ducts, cables, pipes, cable trays) including access and maintenance.	Draw, Schedule																		
Intake/discharge: Assess approximate size locations and separations with respect to location of system and equipment.	Coordinate																		
Standby power: Consider requirements.	Report/Draw																		
Emergency lighting: Concept.	Draw																		
Earthing and surge protection: Consider specific lightning protection requirements.	Draw/Spec																		
Incorporate requirements: Of the fire, acoustic, or other relevant disciplines.	Coordinate																		
Other: (specify)	Other: (Specify)																		

Preliminary Design

Fire

	Deliverables	Required	Client	Project Manager	Townplanning/Traffic	Topographical Surveyor	Architect	Designer/LBP	Quantity Surveyor	Structural	Civil	Mechanical	Electrical	Plumbing and Drainage	Fire Engineering	Fire Protection	Builder	Other	N/A
Design criteria: Confirm for fire engineering design, i.e. either acceptable solution or alternative solution.	Report																		
Fire Engineering Brief: Confirm including definition of fire safety precautions, fire resistance ratings, egress principles, and property protection.	Report																		
Fire Report: Prepare develop fire engineering design report, coordinate.	Report																		
Interface: Prepare concept requirements with existing buildings and equipment.	Draw/Spec																		
Calculations: Undertake design modelling to test concepts including radiation at boundaries, structural behaviour, smoke generation, escape times, etc.	Report																		
Egress: Analyse including required egress time and available egress time (if applicable). Confirm escape route requirements and dimensions.	Report																		
Smoke Extract: Prepare extract strategy and coordinate with mechanical.	Rep																		
Building Services: Input into and expand the services concepts.	Report																		
Drawings: Locate fire cells, fire ratings and escape routes, evacuation zones (if applicable).	Draw																		
Coordinate documentation: Mark up other disciplines' drawings showing fire ratings, egress routes and widths, special items, major plant and connections.	Draw																		
Structural behaviour in fire: Analyse and identify/coordinate methodology for applied fire proofing of structure in conjunction with architect and structural engineer.	Report																		
Radiation to boundary: Preliminary guidance.	Report																		
Smoke production/extract: Preliminary calculations.	Report																		
New Zealand Fire Service: Meet and discuss preliminary fire safety provisions under the NZBC clause C3.3.9. Liaise with design team as to requirements.	Minute/ Notate/Report																		
New Zealand Fire Service: Meet and discuss with evacuation scheme provider preliminary evacuation scheme.	Minute/ Notate/Report																		
Other: (specify)	Other: (Specify)																		