

CIC Guidelines

Detailed Design

Detailed 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.

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)

General

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

Quality Assurance: Update project-specific QA plan. Undertake work in accordance with.

Attend: To correspondence and at meetings.

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

Documentation Register: Prepare and progressively update.

Value Management: Integrate VM items in design stage.

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

Seismic Design: Document requirements for all elements across relevant disciplines.

Construction methodology: Confirm assumed construction methodology governing design.

Buildability: Highlight significant or unusual buildability.

Builders Work: Coordinate with design team and incorporate.

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

Coordinate: Lead Coordination with other disciplines.

Integrate design: Coordinate with other disciplines.

Specifications and schedules: Finalise Full Trade, including Provisional and General, Warranties, etc.

Contractor/subcontractor design: Prepare performance specifications required.

Warranties: Finalise schedule.

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)

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																		
Report																		
Report																		
Coordinate																		
Report																		
Report																		
Other: (Specify)																		
Coordinate																		
Report																		
Minute/Note																		
Report																		
Schedule																		
Report																		
Coordinate																		
Coordinate/ Draw																		
Report																		
Report																		
Coordinate																		
Draw																		
Coordinate																		
Coordinate																		
Spec																		
Spec/Report																		
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
BIM Execution Plan (BEP): Prepare for construction phase in consultation with sub trades.	Report																		
BIM meetings: Chair.	Minute/Note																		
Coordination: Manage and confirm in accordance with BEP.	Coordinate																		
Coordinate/integrate: Input to models with team.	Coordinate																		
Contractor BIM: Finalise and document requirements to meet Client BIM outcomes.	Report																		
BIM outputs: Confirm alignment with selected BIM uses from BEP, including procurement documents.	Report																		
Modelling: Model detailed design systems and elements, in accordance with BEP.	Draw																		
Other: (specify)	Other: (Specify)																		

Environmentally Sustainable Design (ESD)

ESD: Incorporate into design.	Coordinate																		
Performance modelling: Update, if required, based on development design outputs.	Report																		
Other: (specify)	Other: (Specify)																		

Compliance

Heritage: Document agreed design and receive approvals.	Report																		
Resource Consent Processing: Answer queries arising from application, provide further information if requested.	Coordinate																		
Resource Consent: Receive, review and distribute consent including conditions.	Report																		
Compliance: Integrate and progressively check design against resource consent including conditions.	Coordinate																		
Compliance: Integrate and progressively check design with NZBC and relevant standards and Codes of Practice.	Coordinate																		
Pre-Application: Arrange/attend pre-application meeting.	Report																		
Producer statements etc.: Agree requirements. Obtain pre-construction producer statements.	Report																		
Inspection of specific design: Specify inspection requirements.	Report																		
H1 Energy efficiency: Demonstrate/calculate compliance pathway for design.	Coordinate/ Report																		
Building Consent Application: Prepare and lodge with Territorial Authority.	Coordinate																		
Building Consent Forms including Checklist: Prepare.	Coordinate																		
Materials/Products: Collate technical statements for all.	Coordinate																		
Materials: Collate evidence for alternative solutions.	Coordinate																		
QA process: Agree inspection and reporting QA process for large/complex/reclad projects.	Coordinate																		
Coordination statements: Arrange between various designers and design reviewers.	Coordinate																		
Building Consent Processing: Answer queries arising from application, provide further information if requested.	Coordinate																		
Other: (specify)	Other: (Specify)																		

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Management

	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
Health and Safety: Monitor 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																		
Project Programme: Update high level 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 scope of work to be undertaken by Design Build.	Coordinate																		
Novation: Manage novation of consultants, prepare agreements.	Coordinate																		
Review Design Build Team/subcontractors: Review scope, insurance requirements, producer statement authorship, BIM capability, etc.	Coordinate																		
Peer Reviews and Producer Statements: Track inputs and align with programme.	Coordinate																		
Commissioning: Identify and report all commissioning requirements and activities including need for independent commissioning.	Coordinate																		
Commissioning: Consider and prepare schedule of items.	Coordinate																		
Insurances: Review and agree required project insurances (PI, PL, construction, etc.)	Report																		
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): Monitor the inclusion of ESD items into the design.	Report																		
ESD Application: Assemble all information and prepare application. Duplicate of ESD section of document.	Coordinate																		
ESD Certification: Receive (design) Certification and distribute.	Coordinate																		
PCG/Client Meetings: Facilitate, chair, minute, note, attend.	Minute/Note																		
Design Meetings: Facilitate, chair, minute, note, attend.	Minute/Note																		
Stakeholders and User Groups: Coordinate design changes arising and mitigate effects on programme and scope.	Coordinate																		
Tenants: Coordinate final design with base build. Consider sectional completion for early handover.	Coordinate																		
Tenant furniture and equipment: Integrate including interfaces with base build. Coordinate design changes arising and mitigate effects on programmer and scope.	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, issue notes, minute, attend.	Minute/Note																		
Building Consents: Consult, facilitate, chair, issue notes, minute, attend.	Minute/Note																		
Checklist for Building Code Compliance: Record who is providing what.	Coordinate																		
Building Consent Pre-Application: Meeting to finalise consenting requirements and processes, issue notes, minute.	Minute/Note																		
Resource and Building Consents: Assemble documents and make application.	Coordinate																		
Resource and Building Consents: Manage responses to queries arising.	Coordinate																		
Contractor Procurement: Prepare procurement documentation.	Report																		
Form of construction contract: Consider and discuss forms of contract.	Report																		
Special Conditions of Contract: Discuss and agree with Client, incorporate into procurement documentation.	Report																		
Insurances, Bonds, Liquidated Damages: Discuss and agree with client, incorporate into procurement documentation.	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
Nominated/ subcontractors and suppliers: Review and agree required with Client.	Report																		
Elements not covered: In this stage. Recommend provisional and prime cost sums, Client supply items, contingency to capture. Receive Client approval. Include in tender.	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

Site Information: Additional information obtained (if required).	Coordinate																		
Design: Finalise set out plans, floor and RCP plans, sections, elevations, fittings and fixtures locations, enlarged plans and sections, construction types and systems, drawn schedules.	Draw																		
Schedules: Document fittings, fixtures, hardware selections, internal and external finishes.	Schedule																		
Design Details: Typical and critical construction details, to scale.	Draw																		
Structure: Integrate in design.	Coordinate																		
Building Services: Integrate in design	Coordinate																		
Vertical Transportation: Document in design.	Draw																		
Facade: Detail façade type in consultation with specialist (if required); select glazing and cladding, confirm against requirements of authorities.	Draw																		
Thermal Envelope: Detail thermal envelope, consider compliance with Code requirements.	Coordinate																		
Fire: Integrate in design fire protection and egress requirements, and requirements of NZ Fire Service.	Draw																		
Fire and Egress: Integrate from acceptable solution or specific design.	Coordinate																		
Accessibility and facilities for people with disabilities: Detail design of requirements, resolve compliance matters, demonstrate.	Report																		
Building Maintenance: Detail in design, Coordinate with structure.	Coordinate																		
Floor Areas/Schedule of accommodation: Schedule/update based on current drawings/model.	Schedule																		
Materials: Detail finishes schedule(s), incorporate supplier details.	Schedule																		
Fixtures and Fittings: Document final selections, schedule.	Schedule																		
Presentation: Finalise materials/samples board(s).	Draw																		
Presentation: Prepare graphics to standard agreed.	Draw																		
Presentation: Prepare model(s).	Draw																		
Other: (specify)	Other: (Specify)																		

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Cost

	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
Feasibility: Update the project feasibility/viability business case.	Report																		
Cost Plan: Update cost plan. Review against budget. Finalise provisional items, contingency and exclusions.	Report																		
Cost estimate: Prepare firm estimate of cost.	Report																		
Elements not covered: List and recommend inclusion as provisional or prime cost sums. Recommend contingency. Finalise and incorporate. Confirm Client supply items.	Report																		
Coordinate: Cost matters, including alternatives, with other disciplines.	Coordinate																		
Other: (specify)	Other: (Specify)																		

Structural/Geotechnical

Brief: Document importance levels, seismic requirements, special loads, geotechnical issues, etc.	Report																		
Existing Structure: Finalise including seismic and remedial action. Integrate into design.	Report																		
Geotechnical: Review foundation, retaining wall, drainage design.	Coordinate																		
Geotechnical: Finalise basement drainage design.	Report																		
Structural Design: Complete for all structural elements, including connection details.	Draw																		
Serviceability Criteria: Define building movements/deflections, vibration.	Report																		
Loads: Document floor loads, high/special load areas, design loads for proprietary design elements.	Report																		
Proprietary Design: Finalise elements of non-specific code and/or proprietary design.	Report																		
Drawings: Document layout and size all primary and secondary members in plan section and elevation, cross referenced. Connections detail for all elements, or reference standard industry details (e.g. HERA details) or specifying forces for proprietary systems.	Draw																		
Report: Design features explaining structural systems, load paths, design standards, key design parameters and assumptions.	Report																		
Erection/construction: Finalise methodology governing design (where appropriate), build-ability of primary structure, unusual temporary stability or sequencing.	Draw/Spec																		
Specification: Trades including performance specification for proprietary design elements, method statements for critical processes, loads for proprietary non-structural elements, deliverables from Contractor (e.g. producer statements, shop drawings, and testing requirements), durability/coating requirements where not addressed other disciplines, tolerances where different from industry standards.	Spec																		
Other: (specify)	Other: (Specify)																		

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Building Services

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

	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
Functional services brief: Document performance targets against design criteria.	Report																		
Load: Finalise calculations and develop elemental assessments.	Report																		
Interface matrix: Document finalised interface matrix.	Schedule																		
Interface requirements: Document interface with existing buildings and equipment.	Report																		
Zones: Finalise zoning plans for all services.	Draw																		
Design: Completed layout drawings defining requirements for services, including plans, elevations, and sections, Coordinated reflected ceiling plans.	Draw																		
Diagrams: Finalised single line and schematic diagrams showing connections to all equipment (ducts, pipes, cables, breakers sized).	Draw																		
Utilities/Connections: Document utility connections/installations and liaise with local authorities.	Report/Draw																		
Equipment: Finalise sizing generic selection and schedules.	Schedule																		
Materials and Equipment: Prepare final schedule(s).	Schedule																		
Distribution: Detail sizes for services distribution and containment networks (ducts, cables, pipes, cable trays) including mounting access and maintenance.	Draw, Schedule																		
Intake/discharge: Detail with respect to location of system and equipment.	Coordinate																		
Standby power: Finalise and document.	Report/Draw																		
Emergency lighting: Finalise.	Draw/Spec																		
Earthing and surge protection: Document specific lightning protection requirements.	Draw/Spec																		
Incorporate requirements: Of the fire, acoustic, or other relevant report.	Coordinate																		
Other: (specify)	Other: (Specify)																		

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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
Fire Report: Prepare, develop fire engineering design report.	Report																		
Interface requirements: With existing buildings and equipment, and with other disciplines.	Draw/Spec																		
Calculations: Develop design modelling to test agreed concept, including radiation at boundaries, structural behaviour, smoke generation, escape times, etc., to demonstrate compliance.	Report																		
Smoke and Extract: Document extract strategy and Coordinate with mechanical.	Rep																		
Building Services: Coordinate with the final services design.	Report																		
Drawings: Defining and justifying fire engineering requirements including calculations, plans and sections.	Draw																		
Design Details: Input into initial typical and critical construction details.	Coordinate																		
Coordinate documentation: Mark up other disciplines' drawings showing fire ratings, egress routes and widths, special items, major plant and connections.	Draw																		
Detailed check: Of other discipline documentation to confirm that fire engineering features have been correctly and fully incorporated.	Coordinate																		
Structural behaviour in fire: Finalise applied fire proofing of structure in conjunction with architect and structural engineer.	Coordinate																		
New Zealand Fire Service: Verify safety provisions under the NZBC clause C3.3.9 included in design team documentation.	Minute/ Notate/Report																		
New Zealand Fire Service: Finalise evacuation scheme. Liaise and verify with design team as to requirements.	Minute/ Notate/Report																		
Other: (specify)	Other: (Specify)																		