

SPECIFICATION & CONDITIONS OF CONTRACT



prepared for:

**SACRED HEART COLLEGE COLLEGE on behalf of
THE MISSION COLLEGES TRUST BOARD**

TENDER ISSUE- JUNE 2016

contract:

**PROPOSED SEIMISC UPGRADE TO
BLOCK A**

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CONTRACT:	SACRED HEART COLLEGE COLLEGE
PRINCIPAL:	MISSON COLLEGES LOWER HUTT TRUST BOARD 65 Laings Road Lower Hutt CONTACT: Aneel Anthony 027 2894010
PROJECT MANAGERS	IR GROUP Ltd. Ph (04) 526-7711 CONTACT: Ian Rattray
DESIGNERS:	VALLEY Architectural td. Ph (04) 589-1682 Fax (04) 589-1685 Mob 0274-420-472 CONTACT: Kim Baldwin

SCHEDULES TO GENERAL CONDITIONS OF CONTRACT

FIRST SCHEDULE

SPECIAL CONDITIONS OF CONTRACT

(Clause numbers refer to General Conditions)

1.2

The Principal is **THE MISSION COLLEGES LOWER HUTT TRUST BOARD**

of (street address)
.....

(a) ~~There are Separable Portions as described in—~~

(b) There are no Separable Portions in this contract.
(Delete provision which does not apply).

2.1.1

This contract is a:

(a) Lump sum contract;

(b) ~~Measure and value contract;~~

(c) ~~Cost reimbursement contract;~~
(Delete provisions which do not apply)

2.5

This contract is:

(a) ~~A roading construction contract;~~

(b) ~~A roading maintenance contract;~~

(c) Neither a roading construction nor a roading maintenance contract.
(Delete provisions which do not apply)

2.7.1

....2.... sets of Contract Documents shall be supplied free of charge to the Contractor upon the acceptance of tender in addition to tender, consent, and Contract Agreement sets.

3.1.1

A Contractor's bond:

(a) Is required;

(b) ~~Is not required.~~
(Delete provision which does not apply)

3.1.2

The Contractor's bond shall be for the sum of **\$30,000.00**

3.2.1

A Principal's bond:

- (a) Is not required;
- (b) ~~Is required and the surety shall be~~
(Delete provision which does not apply).

3.2.2

~~The Principal's bond shall be for the sum of \$.....~~

5.4.1

The Contractor shall be given possession of the Site on:

- (a) ~~10 Working Days after the Date of Acceptance of Tender~~
- (b) TBA.....
(Delete provision which does not apply)

5.6.5

- (g) Risks specifically excepted are

6.1.2

The Project Managers are **IR GROUP Ltd**.....

8.1, 8.3 and 8.5

- (a) ~~The Contractor shall insure as provided in 8.1 and 8.3;~~
- (b) The Principal shall insure as provided in 8.5
(Delete provision which does not apply).

8.1.2 or 8.5.2

(To be completed irrespective of whether the Principal or the Contractor is insuring)

The amount of the insurance to be effected in respect of the Contract Works and Materials shall be for not less than the sum of the following:

- (a) The Contract Price, after the acceptance of the tender or other offer, excluding any additions or deductions which may be required to be made during the course of the contract;
- (b) For the Cost of demolition, disposal and preparation for replacement work, the sum of **\$5,000**.....
- (c) For professional fees including the Cost of clerks of works and inspectors, the sum of **\$5,000**.....
- (d) The value of items incorporated, or to be incorporated, in the Contract Works, the Cost of which is not included in the Contract Price, the sum of **\$0**.....

- (e) For increased construction Costs not already provided for in the Contract Price during the period from the acceptance of the tender or other offer until the issue of the Defects Liability Certificate for the Contract Works,5..... % of the Contract Price as described in (a) above.

The insurance shall make provision for automatic change of cover for items (a) and (e) above, to provide insurance for any additions to or deductions from the Contract Price which occur after acceptance of the tender or other offer.

8.3.1

Public liability insurance shall be effected for an amount not less than **\$2,000,000-00**

8.3.2

Motor vehicle third party liability insurance shall be effected for an amount not less than **\$1,000,000-00**

8.5

The existing structures are:

- (i).All Other school buildings on campus.....
(iii)

For the insurance policies required under the following clauses:

The insurers are:

- 8.5.2(a) **TBA**
8.5.2(b).....
8.5.2(c).....

The deductibles are:

- 8.5.2(a) **\$5000-00**
8.5.2(b).....
8.5.2(c).....

The exclusions and other limitations, if any, are:

- 8.5.2(a) **TBA**
8.5.2(b).....
8.5.2(c).....

~~Amount of liability insurance cover under clause 8.5.2(c) for any one claim or series of claims arising out of the same occurrence - \$.....~~

10.2.1

The periods to be used for calculating the Due Date for Completion are:

- (a) In respect of the Contract Works ...**SEE SPEC**..... Weeks;

- (b) ~~In respect of Separable Portions~~

—(i):.....Weeks,

— (ii) : Weeks,
— (iii) : Weeks.

10.3.1 (as amended by B3)

(Only applicable to roading construction contracts as defined in 2.5)

Allowance for inclement weather Working Days.

10.4.5

(a) A producer statement is required.

(b) ~~A producer statement is not required.~~

(Delete provision which does not apply).

10.5.1

~~Liquidated damages shall be applied as follows:~~

~~(a) In respect of the Contract Works per Week;~~

~~(b) In respect of Separable Portions~~

— (i) : \$ per Week,
— (ii) : \$ per Week,
— (iii) : \$ per Week.

~~NOTE - Where liquidated damages are provided for, the amount must be a genuine pre-estimate of the likely loss that would result from delay of completion. Where liquidated damages are provided for Separable Portions it may be necessary to provide different rates for each Separable Portion.~~

~~Where liquidated damages are not provided, the Principal can recover and the Contractor will be liable only for such actual loss as the Principal can prove has resulted from the late completion, being loss of a kind reasonably foreseeable to the parties at the time the contract was made as being likely to result.~~

10.6.1

~~A bonus shall be paid as follows:~~

~~(a) In respect of the Contract Works \$ per Week;~~

~~(b) In respect of Separable Portions~~

— (i) : \$ per Week,
— (ii) : \$ per Week,
— (iii) : \$ per Week.

(Delete if not applicable)

11.1.1

The Periods of Defects Liability shall be:

(a) In respect of the Contract Works **12** Weeks;

~~(b) In respect of Separable Portions~~

- ~~(i) Weeks,~~
~~(ii) Weeks,~~
~~(iii) Weeks.~~
~~(To be completed if period is other than three Months)~~

11.5.1

(a) The Contractor shall provide guarantees as set out below:

SEE SPECIFICATION
.....

~~(b) No guarantees are required.~~

~~(Delete provision which does not apply)~~

11.5.2

~~The form of guarantee shall be in the form annexed as the Schedule.~~

12.1.2(d)

~~(a) Advances for Temporary Works, Plant, or Materials not yet on Site shall be made to the Contractor in accordance with:~~

- ~~(i) The following conditions~~
.....
~~(ii) The conditions attached in~~

(b) Advances for Temporary Works, Plant or Materials not yet on Site shall not be made to the Contractor.

~~(Delete provisions which do not apply)~~

12.3.1

The percentage to be retained from each progress payment and the limit of the total sums retained shall be:

(b) In respect of the Contract Works:

Total retention 5 % flat

Defects liability retention 100 % of total retention

12.8.2

Cost fluctuation adjustments:

(a) Shall not be paid;

12.9.1

(a) There is no schedule of quantities and the Provisional Sums included in the contract are:

- (c) Allow the following Provisional Sums
- Fire & Security Alterations \$5,000.00
 - Data Alterations \$3,000.00
 - Labs 1 & 2 Subfloor Services disconnect & reconnect \$6,000.00

12.10.1

~~(a) Prime Cost Sums are included in the schedule of quantities.~~

(b) There is no schedule of quantities and the Prime Cost Sums included in the contract are:

- (i) : \$.....
- (ii) : \$.....
- (iii) : \$.....
- (iv) : \$.....

(c) There are no Prime Cost Sums
(Delete provisions which do not apply).

12.11.1

The contingency sum to be included in the contract is **\$40,000-00**

15.1.2

For the purpose of service of notices, the postal address of:

(a) The Principal is **Mission Colleges Lower Hutt Trust Board**

(b) The Designer is **VALLEY ARCHITECTURAL LTD**
PO BOX 38-656 WELLINGTON MAIL CENTRE
 Fax No. **589-1685**

NOTE - The General Conditions of Contract also provide in the following clauses for matters which may be dealt with by the Special Conditions of Contract:

- 2.4.1 Cost reimbursement contract details
- 2.6.2 Execution of Contract Agreement
- 2.7.3 Variation or modification of General Conditions
- 5.4.3 Access to adjoining properties
- 5.5 Separate contractors
- 5.9.1 Exceptions to Contractor's obligation to supply
- 5.9.3 Advances for Plant or Materials
- 5.10.1 Construction programme
- 7.1.2(d) Risks specifically excepted
- 9.4.2 Variations carried out on Daywork basis
- 12.1.1 Frequency of payment claims
- 12.3.3 Contractor's bond in lieu of retentions

SECOND SCHEDULE CONTRACT AGREEMENT

Contract for **SACRED HEART COLLEGE COLLEGE- SEISMIC UPGRADE BLOCK A**

THIS AGREEMENT

BETWEEN ("the Contractor")

AND

("the Principal"). THE MISSION COLLEGES LOWER HUTT TRUST BOARD

IT IS AGREED as follows:

1. **THE** Contractor shall construct, complete, deliver and remedy defects in the works and things described in the Contract Documents.
2. **THE** Principal shall pay the Contractor the sum of \$..... or such greater or less sum as shall become payable under the Contract Documents together with Goods and Services Tax at the times and in the manner provided in the Contract Documents.
3. **EACH** party shall carry out and fulfill all other obligations imposed on that party by the Contract Documents.
4. **THE** Contract Documents are this Contract Agreement and the following which form part of this agreement:
 - (a) The Conditions of Tendering;
 - (b) Notices to tenderers *(give details with dates)*;
 - (c) The Contractor's tender;
 - (d) The notification of acceptance of tender;
 - (e) The General Conditions of Contract, NZS 3910:2003;
 - (f) The Specification;
 - (g) The Drawings;
 - (h) The following additional documents: *(Identify any additional documents to be included for example agreed correspondence.)*

WITNESS to the signature
of the Contractor:

Contractor

WITNESS to the signature
of the Principal :.....Principal

SECTION 1- PRELIMINARY AND GENERAL

1.1 SCOPE

Allow to carry out all work as shown on the architectural drawings numbered A-01-8, all structural drawings provided by Ceerta Engineering Ltd , fires safety report by Holmes fire safety and all work described in this specification **and as required to achieve the final plan.**

In general, the work comprises of the following:

- The seismic upgrade of block A.
- Refit two labs affected by works
- The construction of new egress stair to west elevation.
- All new service connections.
-

at SACRED HEART COLLEGE COLLEGE, 65 Laings Road LOWER HUTT 5010, as per the following contract documents.

1.2 BUILDING CODE AND REGULATIONS

All building works are to be carried out under the requirements of the Building Act and the Regulations.

The Contractor and his sub-trades are expected to carry out all work and use only those materials that conform to the new requirements of the Act and the Regulations.

If it is found that any work carried out and/or any materials used on this contract fail to comply with the Act and the Regulations, the main contractor shall replace all non-complying work and/or materials immediately, and at no cost whatsoever to the client.

If the contractor chooses not to use the Code Acceptable Solutions then alternative solutions offered must be verified by acceptable tests and calculation methods to ensure compliance with the Code.

1.3 BUILDING CONSENT FEES

The Building Consent shall be uplifted and paid for by the employer prior to the awarding of this contract.

1.4 LIAISON WITH THE TERRITORIAL AUTHORITY DURING THE CONTRACT

It shall be the responsibility of the main contractor to liaise fully with the local Territorial Authority (TA) on all matters that require the involvement of the TA during the execution of this contract. This shall include for example, notifying and accompanying the TA when foundations are ready for inspection, when pre-lining inspections are ready to be made, when the works are completed and the Authority can carry out its final code compliance certificate check, and any other works that are required to be checked by the TA.

It is also the responsibility of the main contractor to bring to the notice of the TA, all variations issued by the project manager during the course of this contract, and to undertake and action any and all follow ups and/or documentation that may be required by the TA in conjunction with any variations issued by the project manager.

1.5 CONDITIONS OF CONTRACT

The Conditions of Contract for Building and Civil Engineering Construction NZS 3910:2003: shall apply. It shall be the successful contractor's responsibility to familiarise him/herself with these conditions prior to commencing work.

Signing of the contract documents shall be deemed to constitute acceptance by the contractor of these Conditions.

The specific requirements of this Specification are superior to and take precedence over the Conditions of Contract.

1.6 CONTRACT DOCUMENTS

The following documents shall form part of the contract:

- (a) The Specific Conditions.
- (b) The NZS 3910 2003: Conditions of Contract for Building and Civil Engineering Construction
- (c) The Form of Tender and Summary Schedule submitted with the tender.
- (d) The Specifications.
- (e) The drawings as noted in clause 1.1 above and any subsequent ones issued.
- (f) Any written Notices to Tenderers.
- (g) The letter of Acceptance of Tender.
- (g) The Contract Agreement Form.
- (h) Any correspondence, instructions, and variations, issued during the course of the contract.

1.7 INDEMNITY AND INSURANCE'S

MOE will insure the contract works and existing buildings on site. Contractors shall effect Contractors Plant and Equipment insurance, Public Liability insurance and Vehicle Liability insurance.

For standard information on insurance's refer attached conditions for Construction Projects in Excess of \$50,000.00 Being Built Under NZIA SCC1 or NZS 3910 Conditions of Contract.

For specific insurance details see Addenda Specification Specific Conditions of contract.

All contractors insurance shall be effected before work commences and shall extend through practical completion until the end of the maintenance period. Insurance Compliance Certificate, (Addendum J) shall be completed. Note: the client includes an excess of \$5000-00 on all claims. The Contractor shall be liable for this excess in the event of a claim being made.

Absolutely NO contract works shall be permitted to start until all insurance cover notes have been received by the Project Manager.

1.8 TIME FOR COMPLETION

Each tenderer shall provide with their lump sum tender; a proposed time-line programme showing the proposed contract period.

The contract start completion date shall be late *January 2017* or as agreed with the project manager, college Board of Trustees and successful contractor.

*The proposed contract period is **10 weeks**.*

NO TENDER WILL BE ACCEPTED WITHOUT A PROPOSED TIME LINE.

The successful contractor will then be required to work whatever days and weekends are necessary to fully complete the contract within contract period submitted. The project manager and the successful tenderer will agree in writing, the final starting and completion dates prior to the awarding of the contract.

1.9 CASH-FLOW PROGRAMME

Upon acceptance of their tender, the successful tenderer shall submit to the project manager, a cash flow programme for the whole of the period of the contract showing the predicted monthly progress claims. The cash flow programme shall be updated with each month's progress claim.

1.10 PHASING OF CONTRACT

The project shall proceed as a single phase.

1.11 SITE ACCESS AND COLLEGE USE OF THE SITE

The access to the site will be determined at the first site meeting. Any and all access to the site is to be coordinated with the college principal or his/her nominated representative, at times to suit all parties.

The college shall be in use during the hours of 8.30am to 3.30pm, Monday to Friday, and at other times when required by community groups.

Therefore, extreme care must be exercised by the contractor and all other trades, at all times during the contract works. The provision of full and safe access for all staff, children, and visitors, in and around the building and its associated ground and play areas, must be maintained at all times during the course of this contract.

The contractor must allow to demarcate the area in which the contract works are to be carried out and the site office and yard established, with a temporary, Allow to secure the entire site with full **plywood hoardings or secure chain mesh fencing 1.8m minimum high** as per site plan. Site area/yard shall be confirmed with college at the first site meeting.

Allow to maintain the fence in good condition throughout the duration of the contract.

1.12 SECURITY OF BUILDINGS

The building work must be phased on a daily basis to ensure that all existing buildings are secure in the evenings and weekends. Allowances must be made by all trades to achieve this.

1.13 TEMPORARY SERVICES

(a) Water

The contractor shall draw water from the existing college reticulation.

(b) Power

The Contractor shall arrange for supply and erect a builders' temporary power outlet from the intended sub-main of the adjacent block.

Power supplied during the contract will be free.

- (c) Telephone and Fax
The contractor shall allow for the installation of a site phone and fax machine and pay all costs associated with this.
- (d) Toilets
The contractor shall allow to supply and maintain a PORTALOO(s) on site and pay all costs associated with this.

1.14 APPLICATION FOR CARRYING OUT ADDITIONAL WORK

It is the responsibility of the contractor to seek clarification and a decision from the project manager on all work that the contractor believes constitutes additional work to the contract, and thus may entitle the contractor to a variation for this work.

In no circumstances shall the contractor undertake any work he may consider to be additional work to the contract without having first sought a decision from the Project Manager on whether or not this work constitutes a variation to the contract. Any such work undertaken without the authority of the project manager shall be done at the contractor's expense.

Application for a decision from the Project Manager must be in writing. Verbal requests/comments shall not be considered an application for clarification and a decision.

1.15 VARIATION PRICE REQUESTS (VPR's)

Upon request from the project manager, the contractor shall measure and price **Variation Price Requests** and/or variations, and forward a detailed and itemised copy to the Project Manager for checking and approval. No variation will be issued until a fully priced VPR has been received from the Contractor and agreed to by the Project Manager.

The contractor shall allow in his/her tender a profit margin on variations, and this margin shall be included in all VPR's.

The margin shall cover such profits that the contractor considers him/herself entitled to and shall be inclusive of any costs in co-operating with other persons and allowing them the use of scaffolding and other plant, handling, freight and fixing charges, insurance's, all preliminary items, and any other overheads, and variation processing costs.

The Contractor shall allow to price all VPR's within two working days from the time of the request being issued by the Project Manager.

Variation Price Requests do not constitute an instruction to proceed with variation work. Work pertaining to a **VPR** shall only be auctioned by the contractor when a **VARIATION** is issued by the Project Manager.

1.16 EXTENSIONS OF TIME

All extensions of time are at the absolute discretion of the Project Manager.

- (a) Grounds for extensions of time

The time for completion may be extended beyond that agreed if the completion of the works is delayed by reasons of:

- i) Delays caused by any act or default by a separate Contractor.
- ii) Failure of the Project Manager to supply within five working days, details and directions for which the Contractor has applied in writing.
- iii) Any provision stated elsewhere in the Specification.

(b) Notice of causes of delay

The Contractor shall notify the Project Manager of any cause of delay, and an estimate of such delay on the time for completion. The notice shall be given in writing within **5 working days** after any such circumstance has arisen. The Project Manager shall investigate the matters referred to and notify the Contractor of the extension, if any, of the time of completion. The granting of any such extension may be delayed by the Project Manager, at his discretion, until events subsequent to the cause of delay can be assessed conjointly.

(c) No extensions of time for inferior work

The Contractor shall not be entitled to any compensation, allowance or extension of time by reason or on account of any suspension of the works in consequence of any material or workmanship being of an inferior character or different to that described in the Specification and the Drawings.

(d) Extensions of time for variation price requests

The Project Manager shall reply to the Contractor within five working days of receipt of a priced Variation Price Request from the Contractor.

(e) Extensions of time for variations

When submitting a fully priced VPR to the Project Manager, the contractor shall include any claims for extensions of time that he/she feels they should be entitled to if a variation is subsequently issued. If no claim for an extension of time is made on the VPR submitted by the contractor, it shall be assumed that none is required.

When issuing a variation, the Project Manager shall note on that variation any extension of time that has been granted.

1.17 CONTRACTORS SITE SHED

If he deems it necessary, the main-contractor may provide a temporary site shed and office for the use of his workmen, and for the storage of materials and contract documents. The shed shall be contained within the site boundaries and removed on completion of the contract.

1.18 FOREMAN

The contractor is to allow for a competent foreman to be continuously on the works throughout the duration of the contract.

1.19 TENDERERS AND SUB-CONTRACTORS TO INSPECT

No extras will be allowed by virtue of lack of knowledge of site conditions. Each tenderer and subcontractor shall inspect all preparatory work against which their work is to be placed and shall ensure that any defects are remedied before proceeding.

1.20 DETAILS AND DISCREPANCIES

Detailed drawings take precedence over small scale drawings. Dimensions take precedence over scaled distances. No dimensions shall be scaled from the drawings.

No contract document shall take precedence over any other, but all shall be read in conjunction with each other.

Any discrepancies, ambiguities or contradictions in the drawings and/or specification, must be referred to the Project Manager before tenders close and before work is performed, to obtain clarification.

Failure by the contractor to obtain the Project Manager's decision, shall constitute acceptance by the contractor of the more costly material and/or method of work.

1.21 PROPRIETARY NAMES

Tenderers shall price on articles and materials as specified. Where a material is specified by a proprietary name and "or equal approved", prior approval for substitutes must be obtained, in writing, from the Project Manager.

1.22 NEW ZEALAND STANDARD SPECIFICATIONS

All work shall be in accordance with the N.Z. Standard Specifications appropriate to that trade, and any specific local body and national regulations.

1.23 WORKMANSHIP AND RESPONSIBILITY

Workmanship shall be consistent with good trade practice to produce sound and well finished work, and to the requirements and standards demanded by the Project Manager.

It is the sole responsibility of the main contractor to ensure that the complete contract works are executed according to the drawings, specifications, applicable N.Z. Standards, local and national regulations and acts, and to good trade practice.

All work in every trade must be complete in accordance with the whole specification and drawings, and is not limited in any way to any particular trade heading.

The contractor shall allow for the completion of the works in full accordance with the documents, notwithstanding any minor items or omissions not detailed, but as reasonably required to fully complete the works.

1.24 GUARANTEES

It is the responsibility of the main contractor to assemble all guarantees and certifications, ensuring that all are correctly filled out, and return them to:

**VALLEY ARCHITECTURAL Ltd.
PO Box 38-656,
WELLINGTON MAIL CENTRE**

No practical completion certificate shall be issued until all guarantees and certifications have been received by the Project Manager.

In addition to the warranties and guarantees required in each section of this specification, a Certificate of Compliance is required by the **Electrician and Plumber/drainlayer** and **fire/security installer and Construction Producer Statement by the main contractor.**

1.25 SITE MEETINGS

Allow for the attendance by the Contractor and any subcontractors required by the Project Manager at fortnightly site meetings of one hour duration.

1.26 NOISE

No radio or other noise not strictly necessary for the works shall be audible in any room outside the Contractors working and storage area.

1.27 BEHAVIOR ON SITE

Any behavior by workers on the site that could be considered sexist, racist, obscene or beyond the limits of normal, acceptable behavior will not be tolerated.

The Project Manager and Board of Trustees reserve the right to eject offending person/s from the college site immediately. Offending person/s will not be permitted back on to the college site unless approval from the Board of Trustees is obtained in writing.

If the contractor finds that pupils are being a nuisance within the building site area, he is to notify the Project Manager and the Principal immediately, in order that steps to remedy the situation can be taken.

Under no circumstances what-so-ever is the contractor and/or employees thereof, permitted to have physical contact with, admonish any pupils that may from time to time enter the site area and/or act in a manner that is a nuisance to the contractor and his staff. Report any such incidences to the Principal immediately.

No smoking is permitted within the college grounds unless in an area designated by the college and with the full approval of the college principal.

Absolutely not animals are permitted on the college grounds or building site at any time.

1.28 CARE OF SITE

The contractor shall regularly remove all debris, rubbish, and surplus materials, including that of the sub-contractors, as they accumulate. The site shall be as tidy as possible at all times. Upon completion of the contract works, the contractor shall take down and remove all plant, gear, temporary work, rubbish, debris and surplus materials from the site, and make good.

At the conclusion of the contract, the contractor shall leave the site in such condition, as new, and to the Project Manager's approval.

1.29 PRACTICAL COMPLETION CERTIFICATE

The contractor shall notify the Project Manager, when, in his/her opinion, the contract works are completed and ready for inspection and hand-over.

It is the responsibility of the main contractor to ascertain when the works have been adequately completed, and that all works required to be carried out in the contract have been done, and to a standard acceptable to the Project Manager.

1.30 DEFECTS LIABILITY PERIOD

The contractor shall maintain the site for the period of **12 months** from the date of issue of the practical completion certificate. Any defects arising during this period through faulty workmanship or materials shall be made good at the contractor's expense.

1.31 RETENTIONS

Retentions of the following shall be retained with each progress payment made during the course of the contract.

10% retention of the first \$200,000-00

5% retention of the next \$800,000-00

1.75% retention of the remaining contract price to a maximum of \$200,000-00

Upon the issuing of the Practical Completion certificate, 50% of the retention monies shall be released. The remaining retention monies will be retained until all outstanding work identified as requiring rectification at the end of the defects liability (maintenance) period have been successfully completed.

1.32 SUBMISSION OF FINAL ACCOUNT

The contractor has **3 months** from the date of issue of the Practical Completion certificate to submit his/her final account to the project manager, all in accordance with the Conditions of Contract. The project manager has **3 months** from receipt of the final account to check the account.

1.33 FIRE PROTECTION

Allow to provide adequate fire fighting equipment throughout the duration of this contract, able to reach any part of the building and maintain in good order as required by the Construction Regulations 1961 and amendments. As a minimum, the provision of a fully charged fire extinguisher and a mains pressure hose must be available and ready for immediate use on the building site at all times.

1.34 DETERMINATION OF CONTRACT

The ability and/or right of either the Contractor or the Employer to determine this contract shall be carried out all in accordance with the Conditions of Contract.

1.35 HEALTH AND SAFETY ACT

Under the **Health and Safety at Work Act, 2015**, the Board of Proprietors and Board of Trustees, as employer, is required to take all practicable steps to ensure the health and safety of their employees (the staff), and that employers and employees ensure that their actions do not cause harm to other persons, including students and the general public. As part of this requirement therefore, the Board of Trustees requires that the successful contractor is able to demonstrate to the Board's complete satisfaction, that their company operates and employs systems and work practices that will ensure that the above responsibilities and duty of care required to be exercised

by the Board's under the HASE Act are maintained and not compromised in any way by the actions (or inaction's) of the main contractor and any sub-contractors and/or suppliers, entering, visiting and/or working on the college site in connection with this contract.

To this end, the Board requires the company chosen as the preferred tenderer to be able to provide evidence that their company does have in place, systems and work practices that will ensure the full and un-compromised safety of the children, staff and public in and around the work area throughout the duration of this contract. Evidence will include listing personnel charged with overseeing site safety, any safety supervision tickets that overseeing staff may hold (for scaffold erection for example), safety practices that the contractors and any sub-contractors staff are required to observe, material storage procedures, and so on.

This evidence will only need to be provided by the preferred tenderer but must be submitted prior to the issuing of the acceptance letter. Acceptance of a contractor does not necessarily mean however, that the Board of Trustees accepts that the safety practices and procedures of the contractor are adequate and/or acceptable to the Board. Acceptance of the adequacy of practices and procedures can only be taken as being given when confirmed in writing by the Board of Trustees.

The Board of Trustees reserves the right to immediately and unconditionally terminate this contract forthwith, if it is deemed that the health and safety practices and procedures employed by the contractor are inadequate and a danger to staff, pupils, and/or the general public.

1.36 PRIVACY CLAUSE

The parties acknowledge that all of the provisions of this agreement which confer a benefit on the Board of Trustees shall also confer a benefit on the Ministry of Education and for the purposes of the Contracts (Privity) Act 1982 all such provisions shall be enforceable by the Ministry of Education against the Contractor and any third party bound by the same.

1.37 POLICE VETTING

All contractors working for more than **1 working day on site** will be required to provide their details to the Board of Trustees on the police vetting forms provided at the start of the contract. **The Board of Trustees reserves the right to immediately and unconditionally terminate their contract forthwith, should they not meet the college employment policies.**

1.38 NOMINATED SUB-CONTRACTORS

Tenderers will be required to obtain a cost and employ if successful the following sub-contractors (allow all costs associated with their full involvement in the contract):

DATA SYSTEM

TBC

SECURITY & FIRE DETECTION SYSTEM

TBC

1.40 MONETARY ALLOWANCES

Allow in the lump sum tender the following sums:

(a) **Contingency Sum**

Allow the sum of **\$40,000-00 (Forty Thousand Dollars)** as a contingency sum.

No extra will be paid to the main contractor, or any sub-contractor, for not having included in their tender, any of the above mentioned sums.

SECTION 2- EXCAVATION & DEMOLITION

2.1 PRELIMINARY

Refer to the Preliminary and General Section of this specification and to the General Conditions of Contract, all of which will apply to this section.

2.2 SCOPE

Allow to excavate as necessary to achieve all new foundations and service trenches as indicated on the drawings **and as required to achieve the final plan.**

2.3 DOCUMENTS

Comply with the following:

NZBC F5/AS1 Construction and Demolition Hazards

NZS 6803P The measurement and assessment of noise from construction, maintenance and demolition work.

Department of Labour: Approved code of practice for demolition.

2.4 OWNERSHIP

Remove all excavated materials spoil and demolished material from site.

SECTION 3- NON-STRUCTURAL METAL WORK

3.1 PRELIMINARY

Refer to the Preliminary and General section of this specification and to the General Conditions of Contract, all of which will apply to this section.

3.2 SCOPE

Allow to supply and fit all metal-work items described below or as detailed on the drawings including **bench brackets, steel stair handrails**.

3.3 WORK OF OTHER TRADES

The supply and fixing of items such as reinforcement bolts, framing, anchors, gratings and similar are specified elsewhere in the specification under the relevant section.

3.4 MATERIALS

All materials shall be of the best quality and alloys shall be as approved and suitable for the use required. Steel shall be structural mild steel conforming to NZS 3401. Structural hollow sections shall be manufactured by Steel & Tube Co. of NZ LTD. Pipe shall be galvanized m.s. tubing, Class B: pipe sizes refer to nominal inside diameters. Supply all bolts, lugs and other fastenings required with the metalwork and of similar material and finish. Bolts shall be completed with nuts and washers.

3.5 GALVANIZING AND PRIMING

All steelwork for exterior work, including bolts, shall be hot dip galvanised after fabrication. Zinc priming shall be "ZINC GALV" or equal approved zinc rich paint. Apply at not less than 300g per square metre to clean surfaces of steelwork, welds and metalwork where these are not required to be galvanised.

3.6 WORKMANSHIP

Fabricate all metalwork accurately with a good standard of finish. Make welds strongly, neatly and fully continuous on joints unless otherwise shown. Clean off welds. All welding shall be neatly done by experienced and certified welders. Abrasive blast clean all steel-work to Swedish Standard SA 21/2, after fabrication and before applying coatings.

Steel-work must be thoroughly cleaned before any priming is applied. Clean off all rust, scale, dirt and oil after fabrication. Wipe down with white spirits or turpentine as needed.

NOTE: All exterior steel-work shall be galvanised after fabrication.

3.7 STEEL HANDRAILS

Allow to fabricate and erect handrails of **38.3 x 1.6mm galvanised mild steel** as detailed to each side of the altered stairs. All corners shall be bent to neat radiuses as indicated or as appropriate to that corner. All welds shall be continuous welds ground smooth and polished undetectable. All exposed ends shall be finished with a welded spherical end cap. Mount on Drake and Wrigley 1032 SCP handrail supports at 800mm nom crs.

SECTION 4- CARPENTRY

4.1 PRELIMINARY

Refer to the Preliminary and General section of this specification and to the General Conditions of Contract, all of which will apply to this section.

4.2 SCOPE

Allow to carry out all construction items described below or as detailed on the drawings.

4.3 DOCUMENTS

Allow to comply fully with the provisions of the following documents:-

NZBC B1/AS1	Structure – general
NZBC B1/AS2	Structure – timber barriers
NZBC E2/AS1	External moisture
NZBC F4/AS1	Safety from falling
NZBC F5/AS1	Construction and demolition hazards
AS/NZS 1859	Reconstituted wood based panels
AS/NZS 2269	Plywood - Structural
AS/NZS 2908	Cellulose products
NZS 2295	Building papers (breather type)
AS 2458	Hardboard
NZS 3109	Concrete construction
NZS 3602	Specifying timber and wood-based products for use in building
NZS 3603	Timber Structure Standard
NZS 3604:2011	Light timber frame buildings not requiring specific design
NZS 3606	Manufacture of glue-laminated timber
NZS 3611	Exterior plywood
NZS 3616	Finger jointed timber
NZS 3617	Profiles of weatherboards fascia boards and flooring
NZS 3631	NZ national timber grading rules
NZMP 3640	Minimum requirements of the NZ Timber Preservation Council
NZS 4214	Methods of determining the total thermal resistance of parts of buildings
NZS 4218P	Minimum thermal insulation requirements for residential buildings
NZS 4222	Materials for the thermal insulation of buildings
NZS 7607	Plastics – Decorative laminated sheets based on thermo-setting resins

4.5 WORK OF OTHER TRADES

Cut away for, attended upon and make good for all trades. Provide all necessary blocks and fixings for securing work of all trades. Do all setting out.

4.6 WALL FRAMING

All framing used on this contract shall be No.1 Framing Grade or Finishing Grade. Build all framing straight, true, rigid and securely jointed. Wavy, uneven surfaces shall be corrected at the contractors' expense. All timber shall be of the kind and grade specified and in accordance with NZS 3631: NATIONAL TIMBER GRADING RULES.

The moisture content must be no greater than between 18% and 24% before being enclosed. Lintels shall be detailed and where not detailed shall comply with NZS 3604. Supply and fit all nail plates etc. as required and or required by **NZS 3604:2011**.

Construct as detailed on the drawings.

4.7 FLOOR FRAMING

Joists shall be of sizing and spacing detailed. Double nail joists to supports. All joists shall be in one single length. Fit full depth blocking between joists at 1800 mm centers over bearers. Supply and fit all joist hangers and nail plates etc. as required and or required by **NZS 3604:2011**. Dwang between joists with 75 mm x 50 mm on edge for edges of decking.

Fix using 65 mm hot dip galvanised screws at joints.

4.8 FINISHING TIMBERS

All finishing timbers used on this contract shall be Finishing Grade. The moisture content must be no greater than between 14% and 18% for exterior joinery and trim, and 10% to 14% for interior work. All timber shall be of the kind and grade specified and in accordance with NZS 3631: NATIONAL TIMBER GRADING RULES. Sizes as indicated on the drawings.

4.9 TIMBER TREATMENT

All treated timber must comply with the Hazard Codes **H1.2 to H6** as recommended by the Timber Preservation Council. All timbers against concrete or set in the ground shall be shall be treated with "TANALITH NCA" or equal approved.

- H1.2 All roof and internal wall framing other than roofs under 10 deg see below.**
- H3.1 All external wall framing and sub-floor framing.**
- H3.1 All roof framing shallower than 10 deg.**
- H3.2 All external posts and exposed rafters etc.**
- H5 All timbers in ground contact.**

LOSP treatment is **NOT** permitted.

4.10 TIMBER USES

Timber which is to be permanently incorporated in the building shall not be used as scaffolding, boxing or for any other temporary purpose.

4.11 SPACINGS

Timbers throughout shall be regularly spaced at centres as shown on the drawings but where no such indication is given on the drawings or in this specification, such centres shall be as stated in

The regular spacing shall be reduced where required to fit in with pre-determined intervals or convenient sizes of wall lining sheets, which shall be 1200mm sheets generally, and studs at 400mm centres.

4.12 THICKNESSING

All framing timbers in walls and partitions shall be gauged and dressed in width where required to produce regular plane surfaces to walls and partitions.

4.13 NAILS

Nails, brads, screws and bolts shall be of galvanised steel except for enclosed framing. Where covered with substances which as plaster, paste, or water paints, fastening shall be of either non-corrodible metal or coated with a corrosion resistant material; screws in flooring or where exposed to the weather shall be galvanised or solid brass.

Screws used for the attachment of hardware shall be of appropriate material and pattern to match such hardware.

Nails generally shall penetrate the second or holding timber at least half their length, except that where the second timber is Pinus Radiata, the length of the nails shall be increased by 25%. Brads which shall be used generally to attach, flooring, lining and finishings shall be in length three times the thickness of the attached materials with a minimum length of 19mm.

All nails in laps, scarves, halving, etc. of framing timbers shall be not less than 25mm longer than the total thickness of timbers through which they drive and shall have the ends well clenched.

4.14 SCREWS

Unless otherwise specified, screws shall be of steel and of suitable gauge and lengths to obtain secure fastenings. All screws shall be countersunk, neatly flush or sufficiently recessed to allow for flush stopping. Screws fastening metalwork shall be of the same material and finish except where otherwise specified.

Exposed screws shall generally be M6 40mm long button head socket screws fixed at 200 crs unless shown otherwise.

4.15 BOLTING TIMBERWORK

Bolts not otherwise specified or shown shall be 12mm dia. spaced at 900mm centres with washers or metal plates. Unless detailed otherwise, washers shall be 34mm dia., 3mm thick washers. Nuts shall have full threads long enough to prevent jamming.

Bolts in concrete work shall be set 155mm into concrete and where closer than 75mm to edge shall be bent into the body of the concrete. All bolts exposed to the weather shall be galvanised. Stainless steel bolts shall be used in all cases where particularly shown or specified.

Generally bolts for fixing timberwork are **not** set into concrete work by Concreter. Bolting of all timber members throughout shall be by 'Dynabolts' trubolts or similar approved bolts in holes bored by Carpenter at centres appropriate to the circumstances. Spacings of bolts generally for the fixing of all wood framing, plates and all other ancillary timber members shall be in 1m centre to centre and all bolts shall be 12mm minimum diameter. No bored holes shall be formed where conflict with embedded reinforcing steel is possible. Plates shall be fixed to proprietary flooring system to approval of Project Manager and manufacturer's specification.

4.16 CHECKING AND CUTTING

All checking and cutting of timbers shall be avoided wherever possible and shall be limited to such dimensions as will not prejudice the purpose for which the timber members are used.

Holing or checking within 400mm of the ends of members shall be avoided. Holes for services shall be at the neutral axis and of minimum dimension through timber.

4.17 DAMP PROOF COURSE

Damp proof course shall consist of 2 ply bitumised felt fabric. Lay between all timber and concrete surfaces.

4.18 INTERNAL WALL LININGS

GIBRALTER BOARD

Gibraltar board wall lining to all walls shall be 13mm thick A grade TOUGHLINE as manufactured by Winstones Ltd **refer to the drawings**. Screw fix sheets and glue as per manufacturers instructions. The Gibraltar board shall extend behind all fittings and finish linings. Stop exposed joints and fixings to be painted with a Winstones level 4 finish.

DISPLAY BOARD

Where shown on the drawings supply and fit **FORBO BULLITEN BOARD** glued directly to the Gibraltar board substrate with the recommended adhesive in strict accordance with FORBO INDUSTRIES specification. Screw fit a 40 x 40 aluminium angle to all exposed 90 deg corners.

SUSPENDED CEILINGS

Supply and install a DONN DX two way exposed 24mm grid system.

METAL GRID

Grid connection splices shall have a minimum tension pull-out value of 0.7kN for main tee and 1.5kN for cross tees. Cross tee ends shall be "lay on"

Perimeter tee shall be a DONN MT 3600 wall angle colour pacific white.

ACOUSTIC CEILING TILES

Supply and install mineral fibre acoustical CELOTEX HYTONE CONCORDE 90 white 1200 x 600 x 16mm ceiling tiles **with appropriate tile clips**.

SERATONE WALLBOARD

Supply and fit 4.75mm seratone wall board by Laminex Industries with proprietary PVC jointers fitted in strict accordance with manufacturer's specification.

4.19 INSULATION

Fit insulation in all, exposed external walls and ceilings as specified below.

- a) Insulate ALL exterior walls with **NOVATHERM R2.2** or similar approved (90 mm thick) friction-fitted within the wall framing so that the insulation finishes flush with the interior face of the wall framing and no air gaps are left.
- b) Insulate all roofs with **NOVATHERM R3.6** or similar approved (225 mm thick) friction-fitted fitted between the ceiling joists.

4.20 CONCRETE

The requirements of the following standard specifications shall apply unless noted otherwise in this section of the specification.

NZS 3104 :1983 Concrete production.

NZS 3109 :1997 Concrete construction.

NZS 3112 :1986 Methods of test for concrete.
NZS 3113 :1979 Chemical admixtures for concrete.
NZS 3114 :1987 Concrete surface finishes.
NZS 3121 :1986 Water and aggregate for concrete.
NZS 3122 :1990 Portland cement.
NZS 3402 :1989 Steel bars for the reinforcement of concrete.
NZS 3421 :1975 Hard drawn mild steel wire for concrete reinforcement.
NZS 3422 :1975 Welded fabric of drawn steel wire for concrete reinforcement.

Unless noted otherwise all concrete work shall conform with the provisions of NZS 3109:1987 Concrete Construction. All materials shall be the best of their respective types and shall be free from all defects. The materials shall conform in every respect with the specified standards.

The reinforcement shall be fabricated and placed by experienced and competent workers who shall produce quality work in which the reinforcement conforms with the shapes and sizes shown on the drawings and is fixed within the specified tolerances.

The concrete work shall be under the control of a responsible foreman who shall be on the site whenever concrete is being mixed, transported or placed. The concrete shall be produced, placed, compacted, finished and cured by experienced and competent concrete workers who shall produce quality work that conforms with the specified standard of surface finish and which has a surface that is plumb and true and within the specified tolerances.

Cement

The cement shall be ordinary Portland Cement conforming with NZS 3122:1990 Portland Cement.

Aggregates

Aggregates shall conform with NZS 3121:1986 Water and Aggregate for Concrete and shall be clean and free from organic material, clay, and all other deleterious substances as in clause 4.2 of NZS 3121:1986.

The coarse aggregates shall be hard, strong, durable crushed stone. The grading shall conform with Table 1 of NZS 3121:1986 for the nominal size range of 19.0 to 9.50 mm.

The fine aggregates shall be hard and sharp natural sands which shall conform with NZS 3121:1986.

Water

Water used for mixing concrete, mortar or grout shall conform with NZS 3121:1986.

Admixtures

The use of admixtures will be permitted only with approval from the Engineer. Admixtures that are used shall conform with NZS 3113:1979 Chemical Admixtures for Concrete and their use shall conform with the manufacturer's instructions.

Generally, the foundation shall attain a strength of **-20 MPa crushing strength at 28 days**. All concrete shall comply fully with the requirements of NZS 3122:1990.

The project manager and the Territorial Authority must be notified at least 48 hours in advance of the anticipated date for excavations to be ready to receive concrete. No concrete or other foundation material shall be placed in excavations before they have been inspected and approved. Failure to notify may involve the Contractor in demolishing the concrete and laying new work.

REJECTION OF FAULTY CONCRETE

Concrete may be rejected for non-compliance with the specification if defects with respect to its surface finish, segregation or lack of density, are such that the defects cannot be repaired.

FIXINGS

Bolts not otherwise specified or shown shall be 12mm dia. spaced at 900mm centres with washers or metal plates. Unless detailed otherwise, washers shall be 34mm dia., 3mm thick washers. Nuts shall have full threads long enough to prevent jamming.

Bolts in concrete work shall be set 155mm into concrete and where closer than 75mm to edge shall be bent into the body of the concrete. All bolts exposed to the weather shall be galvanised. Stainless steel bolts shall be used in all cases where particularly shown or specified.

COMPLETION

On completion of the work remove from the site all plant and surplus materials and leave the site in a clean and tidy condition.

All surfaces shall be free from the visible effects of segregation, protrusion, and pitting.

4.21 WORKMANSHIP

All carpentry work shall be to best trade practice and strongly and neatly put together. All finishing work shall be of first class appearance, tightly jointed, smooth dressed and sanded and free of roughness, splits, shakes, checks, short grain or surface blemishes. Closely scribe wherever required. Allow proper clearances to all opening parts.

SECTION 5- HARDWARE AND EQUIPMENT

5.1 PRELIMINARY

Refer to the Preliminary and General section of this specification and to the General Conditions of Contract, all of which will apply to this section.

5.2 SCOPE

Supply and install all hardware and equipment shown, specified or necessary to complete the works. Provide all screws, bolts, washers, etc needed for the above and match the material and finish of such fastenings to the hardware and equipment.

5.3 EXTERIOR / INTERIOR SIGNAGE

Refer to Provisional sum.

5.4 DOOR KICKPLATES

Fit on lower edge on push side of all new doors sheet stainless steel kickplates, full width of door between jambs x 300mm high

5.5 DOOR HARDWARE

DOOR HARDWARE

- | | | |
|----|--------------|--|
| a) | Door Hinges | Hang NEW INTERNAL doors on 100 mm stainless steel <u>broad</u> butts with fixed pins; 4 butts to each door. |
| b) | Door closers | Fit on all new doors Dorma 8300 TS door closers. Fit in accordance with manufacturer's instructions. |
| c) | Door Stops | Fix behind each internal door D & W 1404 spring loaded door stops to prevent doors or hardware striking walls. |
| d) | Furniture | All door furniture shall be Legge Pacific Alpha 500 with scp finish. |

Master key all new locks in with existing college master key system. Arrange with college locksmith over adjustments to lock barrels and supply of master key. See provisional sum.

SECTION 6- PLUMBING

6.1 PRELIMINARY

Refer to the Preliminary and General section of this specification and to the General Conditions of Contract, all of which will apply to this section.

6.2 SCOPE

Allow to supply and fit all plumbing items described below or as detailed on the drawings.

6.3 DOCUMENTS

All work shall be carried out by licensed plumbers in accordance with the drawings, this specification, best trade practice, and to the satisfaction of the project manager and the Local Authority. All plumbing shall comply with the NZ Building Code.

Comply with the following:

NZBC	G1/AS1 Personal Hygiene 2.0 Fixture construction and installation 3.0 Location of sanitary fixtures
NZBC G13/AS1	Foul water – sanitary plumbing
AS/NZS 3500 NZS 7641	National plumbing code Unplasticized PVC waste and ventilating pipe, fittings and accessories, 32mm, 40mm and 50mm
CSA B137-8	Polybutylene piping for hot and cold water distribution systems up to 25mm dia.
NZS 3501	Copper piping for hot and cold water distribution systems up to 32mm and above.

Plumbers, Gasfitters and Drainlayers Act 1976.

6.4 QUALIFICATIONS

Work covering waste disposal and plumbing fittings to be carried out by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 1976.

6.5 MATERIALS

All materials shall be of the best of their respective kinds and shall conform to the latest NZ Standard Specification applicable to the material

- (a) Copper Tubing shall be seamless drawn copper conforming to NZS 3501: 1976 and warranted free of all deleterious films in the bore.
- (b) Lead Sheet shall be the best new milled sheet lead and where not otherwise specified shall be 25 kg per square metre weight.
- (c) PVC Waste and Soil Piping shall be TERRAIN or other approved rigid PVC piping and fittings in accordance with NZS 7641: 1971 and NZS 7642: 1971 respectively.

- (d) Polybutylene piping and fittings shall be in accordance with AS/NZS 3500 and CSA B137-8.

6.6 PIPE CONNECTIONS

All pipe jointing and joints to fittings shall be air and watertight and shall be made as required in the Regulations and as follows:

- (a) Copper Water Pipe: Use approved brass welding fittings or brazed joints except that brass Crox fittings or equivalent.
- (b) PVC Piping: Solvent cement joints to manufacturer's recommendations.
- (c) PVC soil piping to earthenware: Connect with a PVC caulking bush with a rubber joint to the soil pipe.

6.7 ARRANGEMENT OF PIPE WORK

All pipework shall be neatly arranged and wherever possible concealed within wall linings except where intended otherwise. All exposed pipework shall be setout from wall and fixed clear of surface with proprietary brackets. All pipework shall be arranged in such a manner to enable the future accessibility for any necessary repairs and maintenance. Wherever a pipe passes through exterior wall they shall be weather sealed in accordance with good trade practice. Wrap any metal pipes cast into the conc. slab in Denso tape to provide adequate separation.

6.8 TESTING

All pipework shall be properly pressure treated prior to concealment and any leaks discovered remedied and the system re-tested before concealment. Furnish the project manager with a written confirmation of such tests.

6.9 COLD/HOT WATER RETICULATION

Allow to reticulate a new **20mm cold water supply from the existing classroom block adjacent** feed thru a new isolating valve to the wet area sink as per the plumbing layout provided in the drawings, with polybutylene within wall in accordance with the relevant codes.

6.10 WASTE AND VENT PIPES

Waste and vent pipes shall be as detailed or as required by the approved documents G12 and G13 of the NZ building code AS 3500. All waste pipes cast into the concrete slab shall be Denso taped. Fit approved air admittance valves on all pan, sink and basin wastes where required.

6.11 WET AREA SINK

To the wet area unit supply and fit a MERCER J7T inserts (9 number) with waste.

Fit METHVEN Sterline bench mounted or similar approved 550 configuration tap.

Fit all in strict accordance with the relevant manufacturer's specification and the NZBC.

6.13 HOT WATER SUPPLY

Reticulate existing HW to all new plumbing fittings.

Fit tempering valve set to 40 degrees centigrade.

Connect to incoming cold water supply in accordance with NZ Building Code G12 and manufacturers instructions with all necessary pressure reducing and limiting valves, non return valve, cold water expansion valve, stop cock, temperature and pressure relief valve.

6.14 ADJUSTABLE RESTRICTORS

Provide and fix BALLOFIX or other approved restrictors to all sinks and wash hand basins. Where exposed to view, valves shall be C.P. Allow to adjust these to the satisfaction of the Project manager.

6.15 COMPLIANCE CERTIFICATE

Upon completion of the contract, the plumbing sub-contractor shall supply the main contractor with a full and effective written guarantee that the whole of the work contained in their sub-contract will remain free from any defects in both materials and/or workmanship for a period of one calendar year, effective from the date of completion.

6.16 AS-BUILT DRAWINGS

Supply a 1:100 scale as-built plan of the plumbing system and fittings and all operating and maintenance manuals to the project manager on completion. Also an as built a 1:100 scale as-built plan of gas pipe runs, sizes, componentry and fittings at completion..

SECTION 7- DRAINAGE

7.1 PRELIMINARY

Refer to the Preliminary and General Section of this specification and to the General Conditions of Contract, all of which will apply to this section.

7.2 SCOPE

Allow to supply and fit all drainage items described below or as detailed on the drawings.

7.3 DOCUMENTS

All work shall be carried out by licensed drainlayers in accordance with the drawings, this specification, best trade practice, and to the satisfaction of the project manager and the Local Authority.

Comply with the following:

NZBC G13/AS1	Foul water – sanitary plumbing
NZBC B1/AS1	Structure
NZBC E1	Surface water
AS/NZS 3500	National plumbing code
NZS 7643	Unplasticized PVC waste and ventilating pipe, fittings and accessories, 32mm, 40mm and 50mm

Plumbers, Gasfitters and Drainlayers Act 1976.

7.4 MATERIALS

All materials shall be of the best of their respective kinds and shall conform to NZ Standard Specification applicable to the material

- (a) PVC Waste and Soil Piping shall be TERRAIN or other approved rigid PVC piping and fittings in accordance with NZS 7641: 1971 and NZS 7642: 1971 respectively.

7.5 CONNECTIONS

All pipe jointing and joints to fittings shall be air and watertight and shall be made as required in the Regulations and as follows:

- (a) PVC Piping: Solvent cement joints to manufacturer's recommendations.
- (c) PVC soil piping to earthenware: Connect with a PVC caulking bush with a rubber joint to the soil pipe.

7.6 BACKFILLING

Granular:	Clean gravel or crushed stone or a blend of these. Particle size from minimum 7mm to maximum 20mm.
Selected:	Fine grain soil or granular material suitable for bedding; excluding topsoil.
Ordinary:	Top soil or other excavated materials.

7.7 LAYING OF DRAINS

Lay drains in straight runs to correct gradients, to discharge into the college sewer. Set all inspection fittings on a concrete base.

Confirm the required location of all downpipes and all finished ground levels before commencing pipework. Set downpipe bends in concrete brought up to protect the top of the fitting from damage. Trowel off and fit a cast iron grating. Lay drains in straight runs to correct gradients to discharge into the college stormwater system.

7.8 INSPECTION EYES

Construct and provide all inspection eyes and chambers in positions as required by the regulations and/or by-laws.

7.9 AS-BUILT DRAWINGS

Supply a 1:100 scale as-built plan of drains and fittings to the territorial authority and to the project manager on completion. Make good to all existing ground disturbed to its original state.

SECTION 8- ELECTRICAL SECTION

8.1 PRELIMINARY

Refer to the Preliminary and General section of this specification and to the General Conditions of Contract, all of which will apply to this section.

8.2 SCOPE

Refer to the drawings and specification below.

8.3 DOCUMENTS

Documents referred to in this section are:

AS/NZS 2293	Emergency evacuation lighting for buildings
NZS 3000	New Zealand wiring rules
AS/NZS 3008	Electrical installations – Selection of cables
	3008.1.2: Typical New Zealand installation conditions
NZS 6401	PVC – insulated cables for electric power and lighting

Electricity regulations 1997

New Zealand electrical codes of practice (ECP)

8.4 COMPLIANCE

Comply with the Electricity Regulations 1997, NZS 3000, AS/NZS 3008.1.2 and the New Zealand electrical codes of practice for listed and prescribed work with the utility network operator's requirements. Apply for the service connection. Arrange for the required inspections of listed work. Pay all fees.

Supply a certificate of compliance to the owner, as required by the Electricity Regulations 1997, and in particular, clauses 16, 34 and 35. Allow the network utility operator to view before the meter installation, listed work inspection, polarity check and livening of supply.

8.5 QUALIFICATIONS

All work to be carried out by or under the direct supervision of a holder of a practicing certificate under the Electricity Regulations 1997.

8.6 MATERIALS

CABLES

Tough plastic sheathed copper conductors to NZS 6401 and in accordance with AS/NZS 3008.1.2. Minimum sizes are indicated below. Increase these as necessary due to method of installation, cable length or load.

Lighting circuits: 1.5mm² on 16 amp MCB's

Power circuits (commercial): 2.5mm² on 20amp MCB's

8.7 FITTINGS

FLUORESCENT FITTINGS –CLASSROOM

Replace ALL laboratory fittings with THORN COLLEGE PC CL 2 x 36w or similar approved with colour 84 tubes with prismatic diffusers.

EMERGENCY EXIT FITTINGS

Illuminated exit light must cover all realms of egress refer fire report.
Illuminated exits – Stanilite EE110MN

This system must have a stand alone test facility and independent test switch. Programmed maintenance is required and log book kept on site.

SWITCH/SOCKET OUTLETS

Single phase switch/socket outlets shall be flush mounting ivory polycarbonate (or equivalent) 230 volt 10 amp. rated 3 pin combination units. Approved types for general use are "PDL" 500 series. All sockets shall be double outlet type. **All fitting shall be on a RCD circuit as per Ministry of Education regulations.**

BELLS AND FIRE ALARM CALL POINTS

Wire *new block* to existing bell system adjacent with 3 core 2.93sqmm TPS cable. Fit new VIGILANT or similar approved fire alarm call points mount 1.5m AFL. Bells shall be 150mm dia 12/24 volt DC GENTS or similar approved.

8.8 WORKMANSHIP

All electrical work shall be done by registered electricians in accordance with the Electrical Wiring Regulations and best trade practice. Conceal all wiring within the structure as specified unless explicitly direction otherwise is given. Drill cable holes in timber framing on the centre line only of members. Do not notch beams, joists and the like and keep drillings towards the ends of spans. Ensure that adequate cable supports, trimmings and chases are provided where needed for electrical work. Notching & horizontal runs within walls are not permitted.

8.9 MOUNTING HEIGHTS

Light switches	1000 mm above floor level
Socket-outlets (wall mtg.)	500 mm above floor or 200 mm above benches

All measurements are to the bottom of the fitting.

8.10 DATA TERMINAL AND CONNECTIONS

All installation, cabling, switches, outlets, patch panels and associated equipment shall be in strict accordance with the **Ministry of Educations' Information Technology Infrastructure Policy and Guidelines June 2004** available on their website www.minedu.govt.nz.

At the conclusion of the contract the sub-contractor shall provide the project manager with:

- An "as built" diagram showing pathways, cable routes, enclosure/distributor locations etc.
- Cable infrastructure patching records.

- Equipment lists.
- Test reports detailing the equipment configuration and test results for cabling.
- Certificate of Compliance to AS/NZS3000 and AS/NZS 3080.
- 20yr performance warranty documentation.

SECTION 9- PAINTING

9.1 PRELIMINARY

Refer to the Preliminary and General section of this specification and to the General Conditions of Contract, all of which will apply to this section.

9.2 SCOPE

Allow to paint all areas described below or as detailed on the drawings. Paint all work actually mentioned and all other work which it is usual to paint.

9.3 DOCUMENTS

All painting work is to be carried out by skilled tradesman and in strict accordance with NZS 7703:1985 "The Painting of Buildings" and as demanded by this specification. Any painting work of a lesser standard shall be made good at the contractor's expense.

Comply with the following:

NZS 2239 Recommendations for the painting of buildings and current amendments

Health and Safety in Employment Act 1992

9.4 CONDITIONS FOR PAINTING

Paint shall NOT be applied if:

- The surface is less than 5 degrees Celsius above dew point.
- The air temperature is less than 5 degrees C, or 10 degrees in the case of water based paints.
- The relative humidity exceeds 85%.
- There is moisture on the substrate.
- Any of the above are likely to occur before the paint dries.
- Any condition stipulated by the paint manufacturer more restrictive than the above.

All paint shall be applied by brush only, Airless spraying will not be permitted.

9.5 PREPARATION

Prior to all painting ensure that all surfaces are in a suitable condition to produce a first class job. Wash of brush down all prepared surfaces before painting and remove all dust, deposits or loose material. Allow for all filling and pre-paint maintenance require to achieve a first class finish.

Putty shall be an approved proprietary line. When used in clear finish or varnished work, the putty shall be stained to match the finish colour (this stopping shall be done after application of first coat on wood).

Stop all nail holes, cracks, etc. in woodwork, do stopping after priming painted work. Any stopping required for widths over 3 mm shall be done using plastic wood; stain the plastic to match the timber where in clear finish work.

9.6 MATERIALS

All materials shall be of first quality from **RESENE** and shall conform with NZS Specifications wherever these are applicable. All paints, including primers, enamels, varnishes and similar materials shall be ready mixed and shall be brought on to the job in the manufacturer's sealed containers (4 litre or smaller)

Paint systems shall be consistent with and according to the manufacturer's recommendations unless clearly specified otherwise. Priming, undercoating and finishing costs shall be of the same brand. Conditions of preparation, application and thinning shall be as recommended by the manufacturer.

Prior to painting ensure that all surfaces are so made, smoothed, cleaned and filled that there will be no detriment to the permanency or finish of the paintwork. Sand, stop and fill wherever necessary apply sealers or neutralizers to surfaces to ensure compatibility with paint films.

PRIMERS

- a) Priming for exterior painted woodwork shall be approved GENERAL PURPOSE , lead free primer conforming to NZS 1056 applied before exterior woodwork is fixed, as specified in the "Carpentry" section of this specification.
- b) Priming for interior painted woodwork shall be lead free interior primer-undercoat of the same brand as the finishing coats and as recommended by the manufacturer of the finishing paints in use with these paints.
- c) Priming for metalwork shall be lead free single pack blended vinyl etch holding primer. Thoroughly degrease surfaces before priming. Prime exterior bare steel and welds with Zincgalv or equal zinc paint applied at the rate of 300 grams per sq. metre. Prime interior steelwork with a red oxide zinc chromate, anti-corrosive primer.

UNDERCOATS

Undercoats shall be recommended by the manufacturers of the finishing coats and shall be tinted to differ from the colour of the finishing coats. For high gloss enamel paints, the undercoat shall be formulated to suit the high gloss finish and shall be of the same brand as that of the finishing coat. Thinning shall be strictly confined to the manufacturer's recommendations.

PAINT APPLICATION

Generally all paint shall be applied by brush. Roller application is permitted for interior paintwork provided that the correct roller appropriate to finish is used and a high standard of work is achieved. Rub down with suitable wet/dry sandpaper between coats.

9.7 PAINTING SCHEDULE

The following schedule is a general one and some items may not apply to this contract. Code in brackets after paint/finish description refer to Resene one line specifications which shall apply to this work.

EXTERIOR

Cladding, and
Soffits

prime then apply 2 coats of semi gloss acrylic

Fascia and barges, corner boxes, plinth board	prime then apply 2 coats of acrylic semi-gloss
door frames & facings	prime, undercoat and finish with 1 coat of semi gloss enamel
doors	prime, apply 2 undercoats then 1 coat of semi-gloss enamel
Exposed metalwork	prime then apply 2 coats of acrylic semi-gloss

INTERIOR

gib board ceilings	seal then apply 2 coats of acrylic low sheen
Window frames, door frames, architrave's, skirting board	prime, undercoat then apply 1 coat of semi-gloss enamel
Doors	prime , 2 undercoats then 1 coat of semi-gloss enamel
gib board walls	seal then apply 2 coats of acrylic semi-gloss (19i 2.1)
sealed timber (polyurethane)	seal then apply 3 coats of FIREPRO 640.

Surface texture and abnormal surface porosity will effect either the spreading rate or the coverage achieved. Allowance for this should be made in the quotation.

This specification should be read in conjunction with the manufacturers recommendations contained in the relevant technical data sheets.

9.8 HARDWARE

Arrange the trades concerned for all hardware, electrical fittings and similar items to be removed and refixed to allow for painting adjacent surfaces.

9.9 COMPLETION

Clean up at completion, leave all paintwork complete and remove all debris and equipment. Arrange with carpenter to ease all tight joinery; make good paintwork. Remove all paint spots, stains and blemishes. Clean all glass.

SECTION 10- TIMBER JOINERY

10.1 PRELIMINARY

Refer to the Preliminary and General section of this specification and to the General Conditions of Contract, all of which will apply to this section.

10.2 SCOPE

Allow to supply and all joinery items and accessories described below or as detailed on the drawings.

10.3 DOCUMENTS

Allow to fully comply with the provisions of the following documents:-

BS 1142	Fibre building board
AS/NZS 1859	Reconstituted wool based panels
	1859.1 Particle board
	1859.2 Medium density fibreboard (MDF)
AS 2688	Timber doors
AS 2689	Timber door sets
NZS 3604	Light timber frame buildings not requiring specific design
NZS 3608	Resin bonded, wood chipboard
NZS 3610	Profiles of mouldings and joinery
NZS 3616	Finger jointed timber
NZS 3619	Timber windows
NZS 3631	NZ national timber grading rules
AS/NZS 3661	Slip resistance of pedestrian surfaces
	3661.2 Guide to the reduction of slip hazards
NZS 4211	Performance of windows
NZS 4303	Ventilation for acceptable indoor air quality

Joinery Manufacturers Federation: Technical Manual

10.4 GENERAL

This section refers to the manufacture of items customarily carried out in the shop. The fixing of such items and the carrying out of work customarily done on the job is specified under 'Carpentry'.

All joinery shall be made in accordance with best trade practice in suitably fitted up workshops by competent craftsmen using tools, machines and equipment appropriate for the job, following the details, drawings and instructions to the approval of the Project Manager or his representative to whom all reasonable facilities of access to the workshop shall be granted during normal working hours. Provision shall be made for re-assembly on the job if items too large to be delivered in one piece.

All joinery shall be constructed in accordance with the detailed drawings.

10.5 WORKMANSHIP

All joinery shall be made in accordance with best trade practice by a subcontractor of sound repute in suitable fitted up workshops using tools, machines and equipment appropriate for the job, following the details, drawings and instructions to the approval of the Project Manager

Assemble doors, frames and fittings by joints appropriate to the job, mortice and tenon, housing and doweling shall be used whenever practicable and in preference to nailing. Fix glue blocks wherever required. Joints shall be accurately cut and fitted and well glued to develop the full strength – see Clause 27 of NZS 468.

Work when assembled shall have all joints as close as practicable and methods shall be adopted to allow for shrinkage and to prevent undue working and twisting. All joinery timbers shall be machine dressed on four faces, and all exposed faces shall be sandpapered or hand finished to a fine finish.

Hammer bruises and other dents, chips shall be raised or filled by suitable methods, holes stopped and all lumps smoothed off. Stopping shall be coloured where not obscured by paint.

Joinery work shall be assembled with concealed nails and screws, mortised and tenoned joints, doweled and glued with waterproof glue throughout. All scribing, mitering, scarfing and joining shall be accurately done and close fitting.

No joinery shall be fitted until walls and floors are thoroughly dried out.

10.6 TIMBER GENERALLY

The moisture content of joinery timber shall in no case exceed 16% relative to oven dry weight and joinery must be protected and maintained in this condition until protective coatings specified are applied.

10.7 SCHEDULE OF TIMBER CLASSES AND GRADE

All timber shall comply with the following schedule unless otherwise approved by the Architect. PINE means Radiata, or other exotic pine species as may be approved by the Architect. All timber for clear finish shall be of a consistent type throughout the works. All timbers shall conform to the standard grading requirements for strength, classification, tolerances, cutting and mill dressing as specified in the relevant SANZ standards and NZS 3631:1971 (National Grading Rules).

10.8 TIMBER SCHEDULE

<i>Use</i>	<i>Treatment</i>	<i>Species</i>
Interior door frames	H3.2	finger jointed pine clears

All relevant clauses in Carpenter section shall apply to this section of the specification.

All timber dimensions stated are finished dressed sizes. Timber shall be of Dressing A Pine or such other timber specifically called for on the drawings or in the specification and shall be kiln dried to a moisture content of between 12% and 15%.

10.9 FASTENINGS

The use of nails and brads shall be reduced to a minimum and the latter shall be used in preference to the former. Nails, brads, screws and bolts shall be of steel, except that: That where necessarily exposed they shall be of a design and material to harmonise with fittings or attached hardware. Lengths and gauges shall be in accordance with sound trade practice.

10.10 FINISH

All joinery timbers for special fittings and all surfaces exposed to view, shall be machine dressed on four faces and the exposed surfaces cleanly sandpapered. All arrises shall be barely rubbed off.

Joinery shall generally be of selected Melteca with selected contrasting colour PVC clashings.

10.11 INTERNAL DOORS

Brand/type: 42mm solid core flush paint quality
Face material: Hardboard
Clashings: Timber two edges
Glazing: 6.38mm laminated set into aluminium angle frame.
Finish: Paint
Hardware: See HARDWARE and EQUIPMENT SECTION
Jambs: Ex 50mm thick timber.

Allow to finish all door edges whether exposed to view or not.

10.12 JOINERY UNITS

Allow to supply to site. Units to be fixed on site by Carpenter.

Supply and install all hardware and equipment shown, specified or necessary to complete the works. Provide all screws, bolts, washers, etc needed for the above and match the material and finish of such fastenings to the hardware and equipment.

10.13 MEASURE ON THE JOB

Before manufacture of joinery, measure on the job or verify all dimensions and ensure that all joinery will correctly fit the spaces made for it. No extra will be paid in respect of work arising through failure to measure or verify dimensions. The joiner shall ensure that any necessary adjustments are made to provide for any dimensional variations occurring in the buildings.

10.14 GLUES

Glues used for exterior joinery shall be "phenolic" or "resorcinol" or equal synthetic resin waterproof glues. Glues for interior woodwork shall be "urea formaldehyde" or PVA glue.

SECTION 11- FLOOR FINISHES

11.1 PRELIMINARY

Refer to the Preliminary and General section of this specification and to the General Conditions of Contract, all of which will apply to this section.

11.2 SCOPE

Allow to supply and fit all flooring items described below or as detailed on the drawings.

11.3 DOCUMENTS

Comply with the following:

AS/NZS 2455	Textile Floor Coverings(Pt1. Installation Practice)
NZS 2016	Unbacked flexible PVC backed Flooring
NZS 5841	Reduction of slip hazards
NZS/AS 1884	Floor coverings-resilient sheet and tiles-laying and maintenance practices
AS/NZS 3661	Slip resistance of pedestrian surfaces

11.4 MATERIALS

Allow to supply and fit the following:

- (a) Allow to supply and lay **AUTEX AVONDALE direct stuck** carpet to the areas indicated on the drawings. *NOTE: CHECK INTERNAL ELEVATIONS FOR SPACES WHERE CARPET IS REQUIRED FROM FLOOR TO CHAIR RAIL.*

Lay in strict accordance with the manufacturer's specification. Supply and fit naplock bars to all edges required.

- (b) Allow to supply and lay '**GRANIT**' by **TARKETT** vinyl to the areas indicated on the drawings. Lay in strict accordance with the manufacturer's specification. Allow to cove up where required to all these areas including wet area unit. Seam weld all joints with hot air gun and matching welding rod. On completion clean down, machine scour, spray with light water/detergent mixture then buff to a high polish.

- (c) Allow to supply and lay **AUTEX DECORD** carpet to the areas indicated on the drawings. Lay in strict accordance with the manufacturer's specification. Supply and fit naplock bars to all edges required.

The adhesives shall be only those as recommended by the flooring manufacturers. Provide a pencil cove for all Vinyl flooring.

Carpet may be cut and a separate piece used for the wall upstand. Finish junctions with other flooring with Naplock pinless binder bars. Thoroughly vacuum carpet after laying is completed.

Carpet in a room must be from the same batch and roll. Lay carpet with pile in continuous direction following arrows printed on underside of carpet. Overlay each seam by 40mm and cut through both layers of carpet to ensure perfect seaming. Roll with a hand roller to ensure bonding of adhesive. Glue fix carpet direct to wall lining to form skirting where shown.

11.5 PREPARATION

Before laying, all floor and or background surfaces shall be dry, clean and free from contamination and swept clean of dust and debris. Do all associated sanding, stopping and filling as further specified. Machine sand floors to a smooth even surface.

11.6 COMPLETION

Clean up all floor surfaces on completion of the contract. Remove all adhesive marks of adjacent surfaces such as walls, skirtings, fittings etc, clean down all walls, fittings etc and leave the floors in a first class condition.

Protect the finished floors against damage due to any of the building operations of the contract (including all trades) and protect against traffic over the floors. Any damage to the finished floor surfaces shall be made good to the Project Managers satisfaction at the contractor's expense.

All work shall be free of bulges, lifting edges, staining, damage or other defects.

The contractor shall furnish to the Board of Trustees a written guarantee, covering the floor materials and workmanship. The materials guarantees shall be for a minimum of five (5) years from the date of practical completion of the project. The workmanship guarantees shall be for a minimum period of three (3) years from the date of practical completion of the project.