D5010 – ELECTRICAL SYSTEMS

1. General

The University of Alberta Design and Construction Standards and Guidelines (Guidelines) are intended to provide assistance during the planning, design, construction, renovation, maintenance and operation of University facilities.

The Guidelines presented are to emphasize performance wherever possible to avoid restricting creative thinking. It is intended that the information provided will help facilitate the development of facilities that represent best value for expenditure while creating the most appropriate possible environment for learning, research, administration and community services, taking into account the University’s long term stewardship and facilities management responsibilities. Operation and Maintenance costs are significant matters to consider in the Design of University Facilities.

The Guidelines are intended to establish standards/guidelines for Consultants, Facility Managers and users who provide services for the University.

The Guidelines do not diminish or reduce the standard of care owed by a Consultant to the University or relieve in any manner whatsoever a Consultant from any professional responsibility, duty or due diligence required towards the work.

2. Purpose and Scope

The purpose of this document is to provide standards and guideline material that is appropriate to and consistent for University facilities.

It is intended to provide a framework for new facilities, for renovation projects and for ongoing maintenance.

The standards and guidelines presented relate to the design and use of facilities and need to be used in conjunction with professional judgment to ensure they are followed to the extent that they are appropriate. It is intended that University and their Consultants retain control and ultimate responsibility for the design and construction. Where changes to the requirements indicated in the University of Alberta posted Design Guidelines and Construction Standards are contemplated a written variance shall be applied for. This variance application will initiate the formal process to document University acceptance or rejection of the proposed deviation / variance for the project record. The variance acceptance is mandatory prior to incorporating a contemplated deviation into the project design.
The intent of this document is to:

1. Describe the requirements for various building components, assemblies and systems that have an impact on function, use, serviceability and anticipated life cycle of the facility.
2. Alert consultants to design and construction aspects that are perceived to be problematic.
3. Identify the functional use and requirements and design criteria for University facilities.
4. Provide possible solutions and/or problem avoidance techniques that have in the past proven to be practical and effective.
5. Provide a vehicle for communicating common University facility issues throughout the design industry in an effective and expedient manner.
6. Encourage the creativity in solutions to design and construction aspects within the context of the Guiding Principles.

The Guidelines are written as a performance document. Prescriptive requirements, where included, identify specific University requirements that must be followed. The words “must” or “shall” indicate a mandatory requirement. Guidelines using the word “should” put the onus on the Consultant to provide a reason in writing, in the form of a variance report, as to why a certain requirement in the Guidelines is intended NOT to be followed. (ie: Identifying a better way of achieving the same end or to show an improvement over the stated Guideline or Standard intention.) These will need to be reviewed by the U of A and a decision, in writing, made to agree with or modify the proposed Guidelines departure(s) by the University, prior to the Design Consultant incorporating the stated digressions from the Guidelines into the design, to accept the requested variance(s). Failure to comply with the University’s Guidelines, (Not adhering to the mandated Guidelines / Variance Processes will leave the Consultant liable to revise the design and for construction costs associated with undocumented deviations from the U of A’s stated requirements, a cost to the design firm responsible).

It is not intended that this document address every conceivable condition. Rather, it attempts to apply common sense to provide solutions where experience has indicated that problems commonly arise. These guidelines must be applied to new facilities and to existing facilities undergoing change in order to address the design and construction issues identified within this document.

Where issues arise that are not addressed within this document, or where it is determined that the specific item is not appropriate for the project, it is anticipated that the decision-makers will apply due diligence in determining appropriate measures.

Although the University is a self accredited corporation under the Safety Code Act, all designs and construction work is required to comply with all applicable
codes and regulations. The Guidelines are intended to be read in conjunction with the Alberta Building Code (ABC), and in no way are to be construed as a replacement for the ABC. The ABC (and other codes and standards) represent the minimum acceptable standard, and are a foundation upon which these Guidelines are constructed. Where the technical design requirements contained in the U of A Design and Construction Standards and Guidelines differ from the building codes and other applicable codes and standards, apply the more stringent requirements.

END OF SECTION