

PLANNING & CONSTRUCTION PROJECT GUIDELINES

The University of Texas El Paso Facility Services
Planning and Construction Department

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INTRODUCTION

This handbook, *Design and Construction Guidelines*, is prepared to assist Architects, Interior Designers and Engineers in the design and construction of facilities for The University of Texas El Paso. The information presented in this manual is based upon design practices, construction methods, equipment and materials which are intended to provide the consulting team with the expected quality of construction The University of Texas El Paso expects from their consultants in all projects. This document will be updated as required and will impact all projects regardless the phase they are in at the moment we issue any updates, clarifications and memoranda's.

These guidelines are intended to supplement the policies and the procedures of the Texas State Building Commission, the latest edition of the UT System Uniform General Conditions and the Supplementary General Conditions for Construction and Design as illustrated in our Contracts. It is expected and assumed that all professionals providing design services for UTEP are well accustomed to work under with these policies and procedures.

It is recognized that particular project situations shall, in the judgment of the Consultant, warrant deviations from these standards. UTEP Facilities and Construction Department welcome any such recommendations and we shall consider each of them and their impact to our projects very carefully. However, unless the Planning and Construction Department issues specific approval for alternatives prior to implementation, the Consultant and his design team must comply with the guidelines as outlined in this publication.

We also welcome recommendations for additions or improvements of this document from users. Please submit any comments or suggestions to the UTEP Director of Planning & Construction.

The information in this manual is organized to follow the sequence of the design process. The first section (A) outlines the **Planning Procedures** which are followed for every University capital project, and it is organized by the phases of the planning process: Schematic Design, Design Development, Construction Documents, Bidding, Construction, and Project Close-out.

The second section (B) contains **Form that** represents the University's commitment to track, document and record the progress of any University projects.

The third section (C) contains **Space Design Guidelines and Standards** that represent the University's expectations regarding the design of the specific spaces, elements and systems typically involved in University projects. (In progress)

The fourth section (D), **The Construction Contract**, outlines specific requirements pertaining to the nature of the construction contract and to the conduct of construction work at the University. (In progress)

The fifth section (E), **Selection and Evaluation Policy**, contains information about the procurement of Architectural and Construction Services. The University of North Texas has established these policies in order to provide fair and equitable evaluation of the firms that are soliciting these opportunities. (In progress)

The sixth and final section (F) collects **Standard Details** that are referenced throughout the manual. (In progress)

A. PLANNING AND DESIGN PROCEDURES

1.0 Designer's Relationship to the University

The Consultant and its team should understand that all UTEP Campus Buildings are under the authority of the University President, The UT System Board of Regents and the UTEP Facilities Management Department. UTEP Facilities Management Department is responsible for the design, operations and maintenance of all buildings and therefore should be considered the "owner" – even though project planning and design for the University is a cooperative procedure involving many persons within the UTEP Campus, State Agencies and other authorities.

At any point in time there is a single representative assigned to each project and serves as the owner representative. This is the person through whom the Consultant is required to work and to whom the Consultant should turn for authoritative information on all matters and questions involving the University and the project at hand. Many other individuals and groups within the University will participate in the capital improvement planning process, but the Consultant should not act on any information other than that the consultant received from, or coordinated through the designated project representative – herein referred to as the Owner Representative (such as the Project Manager, Construction manager, Designer or P&C Director).

The Owner Representative is the contact for all information during the initial phases of a project--the programming phase, the consulting team selection, the design, and the bidding phases culminating throughout construction. This individual coordinates and monitors all project activities for the University. The Consultant shall designate an individual within his or her firm who is directly responsible for the project, and who can be contacted on any matter pertaining to the project. In the event of conflicting directives the consultant will be required to approach the Director of Planning and Construction for clarification in order to insure that he or she has the correct information and therefore meets the needs of the institutions goals.

2.0 Initial Planning Conference

An initial planning conference will be scheduled to discuss general requirements of the program and procedures for facilitating the Consultant work. This conference is held as soon as possible after selection of the Prime Consultant for the project. The Consulting team and all of his sub-consultants which includes but not limited to plumbing, HVAC, electrical and civil design should attend this conference as necessary. The desired outcome of this initial planning conference is for the consultant to have a complete scope of services, a communication chart and a description of responsibilities, a budget and a schedule that all parties can agree too.

3.0 Site & Existing Conditions Information

The University Department for Planning and Construction shall furnish any available topographic surveys and other existing information for new construction; and all record drawings for expansion, remodeling or re-commissioning projects. In the event that the project scope includes civil and road work, the consultant will hire his or her own consultant to create accurate documents that illustrate all existing condition applicable to the project. The University cannot warrant that this information is correct and the Consulting Team must supplement this information with his or her own field surveys, assessments and measurements. The Consultant Team is responsible for reporting to the owner any inaccuracy or discrepancy in the information as provided by the University and shown on the construction contract drawings.

3.1 Survey Criteria

Surveyors contracted by the University or its appointed consultant shall comply with the following guidelines:

A. Digital Data Requirements

- Provide AutoCAD format electronic file with each feature, e.g., sidewalks, roads, buildings, fences, trees, etcetera, on separate layers.
- Surveys must be referenced to any of the UTEP GIS benchmarks. UTEP Campus Facilities will provide the metadata as needed and if available to the campus staff.
- Coordinate system must be State Plane 4202 TXNC Zone, with units of feet. Elevations must be based on GEOID03 NAVD88 as the datum. Latitude and Longitude should be based on NAD 83 (CORS96) (EPOCH:2002.0) as the datum.

- Data attribute formats must be in Excel, DBF4, or tab/comma delimited text files.
 - Pertinent metadata must be provided.
- B. Length of each property line
 - C. Measure angle at each property corner
 - D. Iron pin set at each corner
 - E. Indicate any corner radius
 - F. Location of any existing buildings, driveways, sidewalks, etc.
 - G. Location of any fences or structures within 50' outside of property line
 - H. Indicate any easements, right of ways, and building set back lines
 - I. Establish permanent benchmark location and note on survey
 - J. Width of street
 - K. Type of pavement for each street
 - L. Height and type of curb and show existing curb cuts
 - M. Width and type of sidewalks
 - N. Location and size of gas, water, and other know underground utilities including storm and sanitary sewer lines with flow lines and top of manholes
 - O. Location of existing gas and water meters
 - P. Show catch basins with size and elevation of grating and flow line
 - Q. Location of fire hydrants, traffic signs, street light, power and telephone poles, guy wires, etc.
 - R. Location of trees and type and size
 - S. Show depth and size of below grade structure if applicable
 - T. Give elevations in 1'-0" intervals. Show any unusual grade changes
 - U. If a drainage ditch is along any side of the property line, give elevations of bottom and crest of ditch
 - V. Coordinate with Facilities Department thru the Maintenance Group for locations and tie-ins of underground utilities
 - W. Coordinate with Campus IT Group for locations and tie-ins of underground utilities

3.2 Geotechnical Engineer (to be employed by Designer / Consulting Team)

In addition to providing the normal sub-surface investigation written report, the Geotechnical Engineer is thoroughly involved in the design process and shall complete the following tasks prior to submittal of the final set of Construction Documents.

- A. Review and edit the project's earthwork specifications, final site and structural foundation drawings for compliance with the soils report recommendations.
- B. Estimate the quantities of weathered and bedrock excavation for bid purposes.
- C. Any special analysis or report as required by special circumstances, situations or projects.

4.0 Project Development Schedule

The Consulting Team shall prepare and submit a proposed Project Development Schedule to the designated Project Manager or to the Director for Planning and Construction Department for approval. This schedule is submitted **within fourteen (14) calendar days** from the approval date of the Design Contract, and it shall incorporate the end-of-phase milestone dates stipulated in the Scope of Services as described in the Design Contract. In addition, this schedule shall show:

- A. The start dates and duration of each major phase of design.
- B. The duration and completion dates of each design review period, which are required to maintain the project schedule. Unless agreed upon during the negotiation the Consulting Team should plan for the following review periods.

For most projects, the normal design review periods are:

- Schematic Design Review **ten calendar days**,
- Design Development Review **ten calendar days**,
- Construction Documents Review **thirty calendar days** and
- Final Review and Approval **ten calendar days**.

- C. The projected duration and completion dates of other project-related activities, such as funding decisions, surveys, sub-surface investigations and zoning approvals must be also identified on the master schedule at the onset of the project and agreed by all parties.
- D. The estimated duration of the construction contract award process and the construction period.

The Project Development Schedule will be updated and re-submitted with each end-of-each phase review submittal as described in item B above. This will allow the institution to manage the our client expectation for the delivery of the project and for their proper close out process.

5.0 Review of Design

The Consultant is required to make submittals and presentations, and to participate in review conferences at various stages of the project planning process.

- A. Presentations and Review Conferences
During the design process, the Designer is expected to make presentations to various groups who must review and approve the proposed project designs. These groups include and not limited to the user group, various groups of UTEP System and Campus Facilities, other officials of the University, and the Board of Regents of the University. The Project Manager will be responsible to schedules all conferences and presentations and will advise the design team the nature and audience to better prepare documents and exhibits.
- B. Schematic Design Conferences
Normally several meetings precede the approval of Schematic Design documents. Conferences are required to clarify the program of requirements, to review and discuss the Designer's design proposals, to discuss the Designer's evaluation as to whether the program requirements are achievable within the project budget and to assist in the definition of alternates which shall become an important component of the Construction Documents.
- C. Presentation to Board of Regents
On certain projects due to the magnitude of the project, the Design Team may be asked to participate or make a presentation of the project design to the Facilities Committee of the Board of Regents for their comments and approval. These presentations are scheduled to occur as early as possible in the Schematic Design and Design Development Phase of project and are scheduled in accordance o the Board of Regents quarterly meeting schedules. The required documents and exhibits will be identified and listed in the design contract.
- D. End-of-Phase Reviews
At least one meeting is devoted to the end-of-phase reviews of the Design Development submittal and Construction Documents submittal for the purpose of discussing any areas of concern that arise during the review process. The Designer and the Designer's primary consultants are expected to attend these review conferences.

5.1 Meetings Memoranda and Meeting Reports

The Consultant Team is expected to record the content of all meetings and or conferences and, within **seven (7) calendar days**, provide a complete and reviewed meeting report containing a complete summary of the decisions and actions that will affect the project. This meeting report is to be distributed to all conferees. Any conferee who has a disagreement or a clarification due to the accuracy of any item listed within the report has **three (3) calendar days to respond** otherwise the report stand as is and as a record of items and issues discussed.

5.2 Submittals for Outside Review

Local building permits are not required since the UTEP Campus is its own Agency Having Jurisdiction, and as such it has a designated Building Official, Reviewing Committee, Environmental &Health Safety Group and Fire Marshall. The Consultant shall submit plans and or any other document required for performing his services to the Project manager who will in turn distribute to the appropriate group for review and approval, except as noted below.

The University of Texas El Paso as the owner is responsible for any submission and documentation to the Texas Higher Education Coordinating Board or the University of Texas System for review and approval with the assistance of the Consultant Team. The Consultant is required to provide the background and technical materials necessary to support these submittals; including a storm water management plan, erosion control plan, and/or traffic control plan. The Consultant will be required to attend public hearing(s) related to these submittals, as required.

5.3 Submittals for University Review

In addition to the various agencies that may exercise plan review authority over the project, various departments within the University also participate in plan reviews at stages specified in the Consultant contract. The UTEP Project Manager shall coordinate these reviews. The review team consists of the following UTEP departments. Though individual titles may change, the current review team is as follows:

Campus Facilities

Assistant Vice President for Business Affairs:	Greg McNicol, AIA
Director of Planning and Construction:	Nestor Infanzon, FAIA, RIBA, LEED AP BC+D
Environmental Health & Safety Department	Robert Moss
Structural Shop	Jesus Olmedo
Electrical Shop	Robert Parham
Mechanical Shop	Bill Kraffen
Plumbing Shop	Juan Dominguez
Police and Safety Officer	Cliff Walsh Police Chief
Parking and Transportation	Paul Stresow
Facilities Maintenance	Luis Morales
Safety Coordinator	Mitchell Carlson
Fire Sprinkles	Floyd Karnes
IT	Marissa Kato
Landscape /Irrigation	Bruce Erhard

The University review team will submit comments to the Consulting Team as necessary. Upon receipt of the review comments, the Consultant shall revise the Design Documents in accordance with the review comments. The Consultant shall prepare a written summary of his or her response to the University's review, and the Consultant shall provide a copy of this to the Project Manager within **ten (10) working days** of the Consultant receipt of the review comments.

The Consultant shall not proceed to the next phase of the project before receiving written approval of the previous phase from the University's designated Owners Representative or the assigned Project Manager. Any work performed prior approval will be performed at the consultants own risk.

5.4 Payments to Consulting Team

The Consulting Team will submit invoices to the UTEP Project Manager for his or her review and final approval. Invoice formats shall comply with the UTEP Purchasing and Planning and Facilities provided format. The Consultant may submit invoices on a monthly basis for up to 90% completion of design phase if previously approved and such process is incorporated into the design contract. The remaining 10% is invoiced upon written approval of design submission.

6.0 Project Development Phases

At the beginning of each project, the Consulting Team shall confer with the Project Manager and develop a scope of service for the proposed task. During this meeting the consulting team will provide a detail schedule which will include the phases of the project that the institution would like to have. Depending on size, scope, schedule and budget, the institution could accept a modified list of phases that are not standard practice for design services. Phases can be blended and completely removed from the process, but this will have to be agreed upon at the onset of the project.

6.1 Schematic Design Phase

At the beginning of the Schematic Design Phase, the Consulting Team shall confer with the Project Manager and the users to review the program and establish the project requirements. Based on an approved

summary of the project requirements, the Consulting Team shall prepare a Schematic Design illustrating the recommended implementation of the program and project requirements.

The Consulting Team is expected to involve the assigned Project Manager – and through that individual, the user group and other appropriate members of the University's Facilities – during the development of the schematic design. The Consulting Team is expected to explore a range of alternatives that best implement the program and project requirements.

Schematic Design Submittal

The Schematic Design Submittal to the University shall be per contract or as discussed prior to submittal. Include the following information as a minimum:

- A. Show proposed walkways, vehicular and service access on the site plan. Include existing and proposed landscape.
- B. All necessary Floor plans and Site plans required to illustrate the concept, Identification of each room or space by functional name.
- C. Any Elevation, Sections and images required to illustrate the branding, concept and vertical height limitations.
- D. An updated Project Budget.
- E. An updated Project Design Schedule.

6.2 Design Development Phase

Based upon the approved schematic submittal and after receiving the notice to proceed the Consulting Team shall prepare the Design Development documents.

Design Development Submittal

The Design Development Submittal to the University shall be per contract or as discussed prior to submittal. Include the following information as a minimum:

- A. Site drawing(s) showing adjacent buildings, significant existing features including existing landscaping, site utilities, proposed construction limits, proposed site improvements, and other site data furnished on the previous submittal.
- B. Floor plans shall identify each room or space by name and number. All room numbers must reflect the permanent room numbering signage system. The University will establish the room numbering system prior to committing to the drawings
- C. Elevation drawings of every exterior side of each structure showing materials, features, openings, floor and rooflines, grade lines, footings, and everything exposed to view above eaves or parapets. Show partial elevations of adjacent campus buildings on elevation drawings.
- D. Section(s) through the entire building selected to best show the relationships of architectural and engineering features.
- E. A room finish schedule showing the type of material to be used for floors, walls, and ceilings. The proposed interior finishes concept shall be presented to the University for approval. The University must approve all finish materials selections prior to their specification by the Consulting Team. This shall include concepts for the following:
 - All floor material types and locations.
 - All wall finish materials and locations.
 - Identify exterior materials, including wood species, brick and/or stone.
 - Identify millwork locations and materials
 - Identify ceiling materials and locations.
- F. Equipment and furniture layouts for all rooms indicating the adequacy of the arrangement and configuration of such rooms for planning telephone and data requirements.
- G. An outline specification indicating materials, types of construction, and equipment to be used. Include a description of each plumbing, HVAC, fire protection and electrical system design concept. Include elevator characteristics, and include the names of proposed manufacturers

- of HVAC, plumbing, fire protection, special systems, electrical equipment and fixed equipment.
- H. The maximum hot water and chilled water demand--for the purpose of determining whether the existing heating and cooling systems will be adequate to meet anticipated demand or whether modifications to these systems or a new standalone system will be required.
 - I. A tabulation of building data, including square feet of floor area, cubic content, roof deck "U" factor, heating load in BTUH, air conditioning in tons, plumbing load in drainage fixture units, water demand in peak GPM, electrical loads in KVA, the design live loads and number of occupants.
 - J. An up-dated Project Design Schedule.

6.3 Construction Documents Phase

Based upon the approved Design Development Submittal and written notice to proceed, the Consulting Team shall prepare the Construction Documents. As stated in the Consulting Team contract, the building design must be in compliance with all applicable codes, laws, ordinances, and regulations.

- A. Owner's reviews of Working Drawings are required at stages per the Consulting Team contract.
- B. At 50% and 100% Final Construction Documents, provide the Project Manager with electronic floor plans in AutoCAD format that include electrical, data, and intended furniture layout.
- C. Final Construction Documents Submittal
The Final Construction Documents shall be prepared as per contract or as discussed prior to submittal on sheets specified
 - The first sheet of drawings shall include the following information: a tabulation of building data, including square feet of floor area, cubic content, roof deck "U" factor, maximum heating load in BTUH, air conditioning in tons, plumbing load in drainage fixture units, water demand in peak GPM, electrical loads in KVA, the design live loads and applicable codes, laws, ordinances, regulations and number of occupants.
 - Provide a "color board" (2 copies) accurately depicting the interior and/or exterior materials, colors and finishes used on the project as well as their location within the project. As previously stated, all material selections must be reviewed and approved by the University prior to submittal of a "color board."
 - An up-dated Project Design Schedule.
- D. Specifications – UTEP has limited storage space so attic stock shall be limited to certain items only. All new buildings are required to provide a storage room specifically for permanent storage.

6.4 Bidding Phase

The Consulting Team, in consultation with the project manager, shall establish the date for receipt of bids. A minimum period of four to six weeks is normally required between the publication of the advertisement for bids and the receipt of bids. The period will be set by the purchasing department in collaboration with the Planning and Construction Department and it will be based on the project schedule and needs for the spaces and project.

Newspaper notice of bidding the project is not required by law, although the Owner may choose to do so. The University will advertise in the Electronic State Business daily as required by law. The Designer will place adequate copies of all bid documents in the El Paso County area plan rooms.

In addition, the Consulting Team will notify general contractors known to the Consulting Team or the University to be capable of doing the project. Written invitations to bid will state the name and location of the project, the owner, the designer and the pre-bid and bid opening dates, times and location.

See UTEP/HSP Policy

A pre-bid conference will be scheduled to occur after bid documents have been available long enough for bidders to review and develop questions, but far enough before bid opening that bidders can adjust to a formal addendum from the designer answering all questions raised at the pre-bid.

The Consulting Team shall provide bid tabulation forms and conduct the bid opening. Consulting Team will advise the University on the implication of any irregularities or unexpected results of the bidding.

7.0 Construction Phase

The Construction Phase begins with the University's receipt of the fully executed copy of the construction contract(s), performance bond, payment bond and insurance certificate. Upon approval of insurance coverage by the University of Texas El Paso Risk Manager, the University will send a Notice To Proceed to the Contractor.

7.1 Pre-Construction Conference

The Consulting Team, in consultation with the Project Manager, shall arrange for a pre-construction conference. The purpose of this meeting is to review the requirements of the project and to provide a framework for the coordination of all construction activities. The Consulting Team shall invite all contractors, the University's Construction Manager and all other interested parties to this conference. The Consulting Team shall distribute copies of meeting minutes to the parties outlined above.

7.2 Periodic Observations

The Consulting Team, where required by the design contract, shall provide liaison and necessary observation of the project to ensure compliance with plans and specifications. The University's Construction Manager will also observe work progress periodically and will provide comments to the Consulting Team through the Project Manager.

7.3 Submittal Review

The University's Construction Manager will be responsible for coordinating in-house reviews of submittals with the necessary individuals at the University Planning and Construction Department. Facilities Maintenance shall have an opportunity to review submittals before final is approved. After University approval, the Consulting Team shall provide the Construction Manager with a copy of the final approved submittal. The Construction Manager will also coordinate material samples or mock-ups requiring University approval, including, if necessary, appropriate mock-up location.

7.4 Project Close-out Responsibilities

The Consulting Team shall provide the following project closeout services upon completion of the project:

- A. Assemble and forward all closing documents and forms.
- B. Computation and disposition of liquidated damages (if required).
- C. Issue Certificate of Substantial Completion & Compliance including punch list / completion list.
- D. Provide Electronic CAD Format Record Drawings as stated in Contract. The drawings should accurately reflect the project as constructed including finish materials, colors and any other architectural and MEP changes that occurred during construction.
- E. Provide Facilities a separate list of all major fixtures & finishes (i.e., lights, wall paints, flooring, laminates, etc.) installed as part of the project.
- F. Complete construction documents including as-built drawings prepared and provided to Planning and Construction Department for archival.

End of Planning Procedures