**Facility Planning & Control**

**9. CODE ANALYSIS & ADA STANDARDS COMPLIANCE**

The purpose of the Analysis of the Louisiana Building Code for State owned buildings is to assure that the Designer follows the applicable requirements of the code in the design and preparation of the Construction Documents for the project. In addition to the Code, the Designer shall design the project to be fully compliant with **2010 Standards for Accessible Design** as well as all applicable provisions of the Americans with Disabilities Act (ADA), including but not limited to the standards contained in 28 CFR 35 (Nondiscrimination on the Basis of Disability in State and Local Government Services), 28 CFR 36 (Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities), 28 CFR 36 Appendix A (Standards for Accessible Design) referred herein as ADA Standards. Recognizing that each project is unique, the information requested should be considered the minimum required and additional information should be included as necessary. The analysis is to be submitted by the Designer with both the Schematic Design and the Design Development Phase submittal to Facility Planning and Control. Give the minimum requirement of the code and the paragraph reference number where the information is located. Performance based design shall only be used to comply with code requirements with the concurrence of Facility Planning and Control. The designer is reminded that code compliance is the responsibility of the designer.

The Designer shall design the project to be fully compliant with all applicable Americans with Disability Act (ADA) standards and shall completely document all such features of the design. See the following section entitled Americans with Disabilities Act Design & Construction Standards.

The following is a guide format for the Designer in the preparation of this analysis.

 **CODE ANALYSIS**

 **LOUISIANA BUILDING CODE FOR STATE OWNED BUILDINGS**

**PROJECT TITLE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE \_\_\_\_\_\_\_\_\_**

**PROJECT NUMBER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PART NO. \_\_\_\_\_ WBS NO. \_\_\_\_\_\_\_\_\_\_\_\_\_**

**PRIMARY DESIGNER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**List edition date for the following references:**

Life Safety Code (NFPA 101) \_\_\_\_\_\_ International Building Code \_\_\_\_\_\_

International Mechanical Code \_\_\_\_\_\_ National Electric Code (NFPA 70) \_\_\_\_\_\_

International Plumbing Code \_\_\_\_\_\_

International Residential Code, Part VII Plumbing \_\_\_\_\_\_

Americans with Disabilities Act Accessibility Guidelines \_\_\_\_\_\_

Title 51 – State Sanitary Code (As Applicable) \_\_\_\_\_\_

**I. OCCUPANCY**

Occupancy classification of the structure (include mixed or sub-occupancies).

NFPA IBC

Classification of Hazard of Contents.

NFPA IBC

Minimum Construction Requirements.

NFPA

IBC

Sprinkler System Requirement of NFPA IBC

Required by program (yes) (no)

Fire Alarm System Requirement of NFPA IBC

Required by program (yes) (no)

List detailed occupancy requirements for NFPA 101 and IBC (show sections referenced).

**II. BUILDING SHELL**

Building area per floor.

Total net area (multi-story)

Occupancy per floor by NFPA IBC

Total occupancy by NFPA IBC

Finished grade elevation (feet)

Building height above grade (feet) (stories)

Building height below grade (feet) (stories)

Separation distance from exterior walls to property lines.

Percent of exterior openings per floor.

**III. TYPE OF CONSTRUCTION**

Minimum type of construction acceptable for project.

 NFPA IBC

Maximum allowable heights and floor areas for Types of Construction

and Occupancy Classifications (show sections referenced).

 NFPA

 IBC

List Construction Rating Requirements for NFPA 101 and IBC, show both paragraph and requirement.

Party Walls NFPA IBC

Fire Walls NFPA IBC

Shaft Enclosures (vertical openings) NFPA IBC

Interior Bearing Walls-one floor only NFPA IBC

 more than one floor NFPA IBC

 roof only NFPA IBC

 Interior Non-Bearing Partitions NFPA IBC

Columns one floor only NFPA IBC

 more than one floor NFPA IBC

 roof only NFPA IBC

Beams, Girders, etc.-one floor only NFPA IBC

 more than one floor NFPA IBC

 roof only NFPA IBC

Floor/Ceiling Construction NFPA IBC

Roof/Ceiling Construction NFPA IBC

Exterior Bearing Walls NFPA IBC

Exterior Non-Bearing Walls NFPA IBC

List special requirements, i.e.:

 finish materials, combustible materials, roof coverings, etc. (show sections referenced)

**IV. SEPARATION REQUIREMENTS**

Occupancy Separation NFPA IBC

Partitions within tenant space NFPA IBC

Tenant Separation NFPA IBC

NFPA

IBC

**V. MEANS OF EGRESS**

Capacity of Egress per floor NFPA IBC

 main floor NFPA IBC

Requirements for separation of exits (show sections referenced).

NFPA

IBC

Special Use Rooms NFPA IBC

Special Requirements NFPA IBC

Stair separation NFPA IBC

Horizontal Exit NFPA IBC

Corridors, Exit Access NFPA IBC

Corridors, Exit Passageways NFPA IBC

Smoke Partitions NFPA IBC

Doors NFPA IBC

Illumination Requirements NFPA IBC

Emergency Lighting Requirements NFPA IBC

Signage NFPA IBC

Maximum Dead End Corridors NFPA IBC

Maximum Common Path of Travel NFPA IBC

Maximum Travel Distance to Nearest Exit NFPA IBC

**VI. DESIGN LOADS**

Minimum Dead Loads IBC

Minimum Live Loads IBC

Minimum Concentrated Loads IBC

Roof Live Loads IBC

Impact Loads IBC

Wind Loads Walls IBC

 Roofs IBC

Seismic Loads IBC

**Facility Planning & Control**

**Americans with Disabilities Act Design & Construction Standards**

The Designer shall design the project to be fully compliant with **2010 Standards for Accessible Design** as well as all applicable Americans with Disabilities Act (ADA) standards, including but not limited to the standards contained in 28 CFR 35 (Nondiscrimination on the Basis of Disability in State and Local Government Services), 28 CFR 36 (Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities), 28 CFR 36 Appendix A (Standards for Accessible Design) herein referred to as ADA Standards and La. R.S. 40:1731-1744. The Designer shall completely document all such features of the design and their compliance with all relevant ADA standards.

It is the Designer’s responsibility and duty to determine the applicability of these standards. Those standards shall be detailed in the plans and specifications and located on the specific drawing sheet where it applies, i.e. restroom layout on the plumbing plan as well as on the architectural plan. **All ADA compliance features shall be completely designed and detailed with all plans, elevations, sections, details, dimensions, notes, references, etc.** It is especially important when dimensions are specifically expressed in the ADA Standards as the maximum or minimum dimension allowed, this information must be emphasized on the plans. It is important to keep in mind that this list is limited in nature and not a comprehensive list of all ADA Standards requirements. The Designer is responsible for **all** ADA Standards requirements.

**The Designer shall not** use statements such as: “Comply with ADA requirements” in an effort to comply with this requirement. It is the Designer’s duty, not the contractor’s, to verify that the design complies with all ADA requirements.

**The Designer shall not** simply include a sheet in the design package showing the ADA Standards from the ADA Standards manual. The information required for compliance should be inserted into to the specific drawing where it applies.

The following are areas of ADA Standards which Facility Planning and Control considers particularly important. Detailed requirements for design and detailing of these areas are described below. These areas represent only a small number of the requirements included in the ADA Standards.This list is not only to assist the Designer in clearly documenting compliance with ADA Standards in these specific areas but the descriptions shall also serve as typical examples of how all ADA features are to be designed and detailed. This list is **not** to be considered comprehensive and simply completing each of these items will **not** constitute due diligence on the part of the Designer. Compliance with the ADA Standards and all other ADA requirements is entirely the responsibility of the Designer. If any failure on the part of the Designer to adequately design, detail and verify compliance with the Americans with Disabilities Act Accessibility Guidelines or standards results in additional costs to the Owner, the Designer will be held responsible.

1. **Parking:** Parking areas for handicapped individuals must be identified to include the proper maximum slopes allowed and placement of signage. Accessible parking spaces must be clearly identified in plan so they can be counted. Width and length of spaces and access isles shall be dimensioned and slopes called out. Sign information shall be shown graphically, sign locations shall be dimensioned, and heights called out or dimensioned in elevation. Vertical clearance shall be called out or dimensioned in elevation at parking spaces and long access route. Curb ramps shall be dimensioned including the length, width, distance from adjacent obstructions and slopes of the ramp and flared sides with surface texture and markings indicated.
2. **Accessible routes:** Accessible routes to and from the building must include detectable warnings, curb cuts, all allowable slopes, including the walkways, and signage, and must be detailed on the plans. Required accessible routes shall be indicated in plan and the width dimensioned in plan including turns around obstructions, passing spaces, etc. Vertical clearance shall be called out or dimensioned in elevation at all changes. Surface textures shall be delimited and dimensioned. Changes in levels shall be dimensioned as called for in 3., Ramps.
3. **Ramps:** Widths and lengths of ramps and their landings shall be dimensioned in plan and slopes called out or dimensioned in section with all slope changes indicated. Handrails must be dimensioned in plan and elevation including cross sections of gripping surfaces.
4. **Stairs:** Widths and lengths of stairs and their landings shall be dimensioned in plan and section and treads and riser dimensions and profiles shown. Handrails must be dimensioned in plan and elevation including cross sections of gripping surfaces.
5. **Doors and Entrances:** All doors should be provided maneuvering clearances, accessible hardware & thresholds where required. The clear width of all door openings shall be dimensioned in plan or scheduled. All maneuvering clearances shall be dimensioned according to 2010 Standards for Accessible Design section 404.2. See attached. Accessible hardware, including closers, and thresholds shall be scheduled or detailed and manufacturer’s information clearly detailing compliance with the ADA Standards shall be provided.
6. **Signage:** Signage providing direction or room usage must be mounted at the correct locations and heights. Character proportion, character height and characteristics of raised and brailed characters and pictorial symbols as well as finish and contrast shall be specified. Mounting heights and locations shall be dimensioned in elevation but may be called out.
7. **Restroom fixtures:** Restroom fixtures with their supporting devices have very specific installation requirements. These must be detailed on the plans and verified during construction. Clearance dimensions shall be shown in plan and heights shown in elevation. Mounting heights for grab bars and other accessories shall be dimensioned in elevation or called out as indicated in 2010 Standards for Accessible Design section 604.5. Construction features, such as wall thickness that may affect locations must be taken into consideration. Potential variations from the plans in such things as wall thickness in the field must also be taken into consideration.
8. **Appliances and Cabinets:** Counters, drinking fountains, kitchen counters and cabinets have specific dimensions which must be shown on the plans, adhered to closely and verified during construction. Counters, drinking fountains, kitchen counters and cabinets shall be dimensioned in plan, elevation and section.
9. **Changes**: Change orders or substitutions must be checked to determine if they affect any ADA requirements. For example, a change in flooring could affect the final height of a counter. Change orders and addenda affecting any of the foregoing shall meet the same requirements as stated above.
10. **Tolerances:** Where minimum or maximum dimensions are called for by ADA Standards, the designer shall typically include allowances to ensure compliance unless this is not feasible**.**
11. **Analysis**: The Designer shall provide an analysis of the project identifying the accessible route, compliant doors, and other compliant features listed above.

Verification during construction that work is complying with design documents is the responsibility of the Designer and this shall include compliance with any ADA requirement. The Designer is reminded that the foregoing list includes only selected items from ADA Standards on which Facility Planning and Control is focusing at this time. It is **not** in any way to be considered a complete or comprehensive list. Compliance with the full range of ADA requirements is the sole responsibility of the Designer. The features on this list, while limited, shall serve as examples of how all ADA features shall be designed and detailed.

Facility Planning and Control

**PERCENT FOR UNIVERSAL DESIGN PROGRAM**

Applicability

These requirements shall apply to the construction or renovation of all state buildings for which the estimated construction cost exceeds **two million dollars**.

Definitions

For the purposes of this program, the following terms shall have the indicated meanings.

*Construction*―the process of adding structure to real property by acquiring and assembling the components of buildings or other physical improvements.

*Renovation*―construction to modify, alter or change an existing building for the purpose of adaptive reuse, reconstruction or restoration and may include modification of any or all building systems. It does not, however, include a project the principal purpose of which is the rehabilitation of plumbing, heating, ventilating, air conditioning, electrical or other systems whose purpose is strictly utilitarian.

*State Building*―any building, facility, structure, or park built or renovated using state funds that will be owned by a department or agency in the executive, judicial, or legislative branch of state government, including any state-owned lands or space surrounding or integral to the building. "State building" does not include vehicular bridges and tunnels, or other non-integral structures whose purpose is strictly utilitarian.

*State Funds or State Money*―shall not include federal funds or insurance proceeds for the construction, replacement, renovation, or improvement of a state building damaged by a natural catastrophe when conditions governing the expenditure of such monies specifically preclude their use for the utilization and implementation of universal design features, nor shall it include state monies used as a match for such federal funds or insurance proceeds.

*Universal Design*―as more fully defined in the attached list of Principles of Universal Design, means certain design features that are not currently required by the Americans with Disabilities Act of 1990.

Process

In order to allow for the highest level of flexibility, innovation and imagination to be applied to the implementation of the Principles of Universal Design, these rules establish the philosophical concepts that are to be utilized in the design, construction or renovation of state buildings.

1. Features following the Principles of Universal Design will be determined by the designer and confirmed by the owner.

a. As part of the Design Development services, the designer will review the Principles of Universal Design, existing examples of universal design and other information and use this information to identify and develop features that utilize universal design principles as well as conforming to the mission of the project.

b. The designer will translate these principles into design features the cost of which will make up at least 2% of the estimated construction cost.

c. As part of the Design Development submittal, the designer will provide a report using the attached format.

d. The project manager will review this report and verify that the features follow the Principles of Universal Design and that the cost allocation is reasonable. As part of the project manager’s response to the Design Development submittal he will approve of the report or require re-submittal.

e. Approval of this report will authorize the designer to incorporate the features in the project design. Once approved, this report will be final and will serve as the documentation of compliance with the provisions of RS 38:2318.2 unless the project scope is changed in such a way that the estimated construction cost is increased by more than 2 percent. If this situation obtains, the designer shall modify his/her report by including additional features or expanding existing ones to maintain the minimum 2 percent.

f. Questions about the validity of proposed universal design features between the designer and the project manager that cannot be resolved may be referred to an advisory group established by AIA Louisiana (Louisiana Chapter of the American Institute of Architects) in accordance with RS 38:2318.2(F)(1) Features determined to be invalid will not be included in the approved list and the designer will modify his/her report to include additional features or expand existing ones to maintain the minimum 2 percent. (1)(a) Equitable Use.  The design is useful and marketable to people with diverse abilities.

g. If the construction contract award amount varies from the estimated construction cost it will be assumed that all costs vary on a proportional basis and therefore the cost of the universal design features will continue to represent 2 percent of the total cost.

Facility Planning and Control

**PERCENT FOR UNIVERSAL DESIGN PROGRAM**

**Guidelines**

1. Equitable Use.  The design is useful and marketable to people with diverse abilities.

 Guidelines:  Provides the same means of use for all users: identical whenever possible; equivalent when not.  Avoids segregating or stigmatizing any users.  Incorporates provisions for privacy, security, and safety that should be equally available to all users.  Makes the design appealing to all users.

2. Flexibility in Use.  The design accommodates a wide range of individual preferences and abilities.

Guidelines:  Provides choice in methods of use.  Accommodates right or left handed access and use.  Provides adaptability to the user's pace.

3. Simple and Intuitive Use.  Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Guidelines:  Eliminates unnecessary complexity.  Consistent with user expectations and intuition.  Accommodates a wide range of literacy and language skills.  Arranges information consistent with its importance.  Provides effective prompting and feedback during and after task completion.

4. Perceptible Information.  The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Guidelines:  Uses different modes (pictorial, verbal, tactile) for redundant presentation of essential information.  Provides adequate contrast between essential information and its surroundings.

 Maximizes "legibility" of essential information.  Differentiates elements in ways that can be described which includes making it easy to give instructions or directions.  Provides compatibility with a variety of techniques or devices used by people with sensory limitations.

5. Tolerance for Error.  The design minimizes hazards and the adverse consequences of accidental or unintended actions.

Guidelines:  Arranges elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.  Provides warnings of hazards and errors.  Provides fail-safe features.  Discourages unconscious action in tasks that require vigilance.

6. Low Physical Effort.  The design can be used efficiently and comfortably and with a minimum of fatigue.

Guidelines:  Allows user to maintain a neutral body position.  Uses reasonable operating forces.  Minimizes repetitive actions.  Minimizes sustained physical effort.

7. Size and Space for Approach and Use.  Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

Guidelines:  Provides a clear line of sight to important elements for any seated or standing user.  Makes reach to all components comfortable for any seated or standing user.  Accommodates variations in hand and grip size.  Provides adequate space for the use of assistive devices or personal assistance.

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| **Facility Planning & Control** |
| **Universal Design Report** |
| **Project Name:** |  |
| **Project No.:** |  |
| **AFC:** |  |
| **Designer:** |  |
| **Date:** |  |
| **Building Element** | **ADAAG Minimum Design or Standard Practice for Occupancy and Quality Level.** | **Cost of ADAAG Minimum or Standard Practice. (A)** | **Universal Design Feature and Why It Exceeds Minimum Design Standards.** | **Cost of Universal Design Feature (B)** | **Cost Difference (B minus A)** | Equitable Use | Flexibility in Use | Simple & Intuitive Use | Perceptible Information | Tolerance for Error | Low Physical Effort | Size & Shape for Approach & Use |
|  |  |  |  |  |  |   |   |   |   |   |   |   |
|  **Doors** |  **3'-0" doors** |  **$ 26,216**  | **3'-6" doors allow easy access by the mobility impaired and is more convenient for all.**  |  **$ 29,156**  |  **$ 2,940**  | **X** | **X** | **X** |  | **X** |  | **X** |
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| **Total Additional Cost** |  **$ 2,940**  |   |   |   |   |   |   |   |
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