

A P P E N D I X

ESTIMATED 1973 BREAKDOWN COST OF IMPROVEMENTS TO ORANGE BOWL STADIUMEAST END ZONE STANDS

The east end zone stands will consist of a reinforced concrete lower deck, starting approximately thirty feet above the ground and built upon reinforced concrete supporting columns. This is to provide for field ventilation, and openings for the ingress and egress of floats and equipment. The upper deck will be constructed of structural steel, similar to the existing upper decks. The lower deck will contain approximately 5,250 chair back seats, and the upper deck will contain approximately 4,950 aluminum bench type seats. This addition will also contain ramps, service areas, public facilities, and supports for relocated speaker tower.

The cost estimate for this portion of the stadium improvements is based upon the construction cost of the west end zone lower and upper decks, which were built in 1963 and 1967 respectively. The west end lower deck contains 8,655 bench seats and was built for \$758,200; or for a cost of approximately \$87.60 per bench seat. The upper deck was constructed at a cost of \$473,800 and contains 4,712 aluminum bench seats; or a cost of \$100.50 per seat. Service areas costs are based on the City's (updated) 1968 construction costs for like construction, and from Robert S. Means 1973 Building Construction Cost Data Manual.

1963 Construction Cost per Bench Seat	=	\$100.00
Average 10 year inflationary cost of 5% per year	=	50.00
Chair Back Seats - over Bench Seats	=	35.00
Total Cost per Chair Seat		\$185.00
1. 5,250 Chair Seats (lower deck)	x \$185/seat	= \$971,250.00
2. 4,950 Bench Seats (upper deck)	x \$155/seat	= 767,250.00
3. Service Areas - 2400 square feet	x \$38/sq. ft.	= 91,200.00
4. Public Facilities - 1600 sq. feet	x \$40/sq. ft.	= 64,000.00
5. Shear Wall Columns - 16 Columns	x \$14,125 ea.	= 226,000.00
6. Relocating Speaker Tower		= 100,000.00
TOTAL EAST END ZONE STANDS		\$2,219,700.00
	USE	\$2,250,000.00

LOWER DECK CHAIR SEAT CONVERSION

The lower deck chair seat conversion will require two types of alterations to the lower deck of the north and south sides of the stadium, and one to the west stands lower deck. In order to install chair seats in all locations, it is necessary to widen the existing treads to accommodate chairs where bench seats now exist. In the north and south stands, this will result in a loss of one row of seats in every five rows. In the west end zone the loss will be one row out of every ten. This will be accomplished by adding riser sections to each tread (rows) throughout the north, south, and west stands; and installing chair seats. Additional alterations of north and south stands forward of row 18 will be made, requiring the complete rebuilding of this portion of each side. As a result of this, each row of chairs will be raised, with the box seats being elevated approximately two feet and moved forward approximately four feet.

The cost estimate for this work is based upon a 1965 contract wherein the City altered rows 18 thru 22 and installed chair seats in the present north and south stands. It is proposed using the existing lower steel deck section as a temporary sand form support and pouring a new reinforced concrete deck thereon, with additional supports being installed through the existing steel deck. The steel deck could then be removed and salvaged. This system of construction for lower section of chair seats should reflect some savings in cost per chair seat (Item 2 below).

1965 cost per Chair Seat was	= \$47/seat
Average 8 year inflationary cost of 5% per year	= <u>\$18.80</u>
Total Cost per Chair Seat	\$65.80
1. New Chair Seats above row 22, north and south stands, and in west end zone is 28,800 at \$66/seat	= \$1,900,800.00
2. Chair Seats and Deck Alterations from row 18 toward field and boxes is 10,200 at \$127	= <u>\$1,295,400.00</u>
TOTAL LOWER DECK CHAIR SEAT CONVERSION	\$3,196,200.00
	USE \$3,200,000.00

ALUMINUM BENCH SEATS

Aluminum bench seats will be installed in the upper deck north and south stands in place of the existing fiberglass covered wood bench seats. The west end zone upper deck now contains aluminum bench seats and the new east end zone will have the same type bench seats installed. It will be necessary to remove all existing benches and modify the existing support brackets to accommodate the new aluminum seat boards.

In 1967 the City constructed the west end zone upper deck and installed gold anodized aluminum bench seats at an approximate cost of \$2.50 per seat for the aluminum boards plus \$0.50 per seat for installation. Estimating an inflationary increase of approximately 5% per year, therefore:

1967 Cost per Bench Seat was	= \$3.00	
Average 6 year inflationary cost of 5%	= <u>.90</u>	
Total Cost per Bench Seat	\$3.90	
1. Removal of existing fiberglass and wood bench seats, 18,803 seats @ 20¢		= \$ 3,760.00
2. Modifying seat board brackets (average 4 seats per bracket), 18,803 ÷ 4 = 4,700 @ \$5.00/bracket		= \$ 23,500.00
3. Installation of 18,803 bench seats @ \$3.90		= <u>\$ 73,331.00</u>
TOTAL COST FOR ALUMINUM BENCH SEATS		\$100,591.00
	USE	\$100,000.00

IMPROVED FIELD LIGHTING

Improved field lighting will consist of installing approximately 80 new metal Halide high performance floodlights on each of 8 new towers. These will be approximately 185 feet above ground level, and about 50 feet above the new sky deck roof. The new shear walls (the columns supporting the sky decks) will be designed to also support the new flood lighting. The existing floodlights and towers will have to be removed to allow for the installation of the sky decks.

The following cost estimate for the wiring and for the construction of additional height of the towers above the sky decks is based upon (1) the current catalog list prices of the Halide high performance floodlight fixtures, and (2) the 1973 issue of Robert S. Means Building Construction Cost Data.

Halide lighting fixtures: 640 @ \$355.50 each	= \$227,500.00
Wire, conduit, labor, etc: 8 towers @ \$17,800 each	= 142,400.00
Additional height of 8 towers (shear walls extended beyond sky decks) with 2 walls for each tower: 16 shear walls @ \$20,000 each	<u>320,000.00</u>
TOTAL COST FOR IMPROVED FIELD LIGHTING	\$689,900.00
	USE \$700,000.00

OTHER INTERIOR IMPROVEMENTS

Other interior improvements consist of new modern service areas and public facilities at the 36 and 68 feet levels. These areas will be built in conjunction with the shear walls (supporting columns) of the sky decks, supplemented by some added facilities within the existing stadium on the 36 feet level walkways in all four quadrants.

The following estimates are based upon the updated cost of some service areas built in the stadium in 1968, together with current bid prices received in the past 6 months for some other public facilities.

A.	36 foot and 68 foot walkway level Service Areas	
	36 ft. level: 7200 sq. ft. @ \$38.00/sq. ft.	= \$273,600.00
	68 ft. level: 3600 sq. ft. @ \$42.00/sq. ft.	= 151,200.00
B.	36 foot and 68 foot level Public Facilities	
	36 ft. level: 3600 sq. ft. @ \$42.00/sq. ft.	= \$151,200.00
	68 ft. level: 3600 sq. ft. @ \$47.00/sq. ft.	= <u>\$169,200.00</u>
	TOTAL OTHER INTERIOR IMPROVEMENTS	\$745,200.00
	USE	\$750,000.00

ELECTRONIC SCOREBOARD

It is anticipated this electronic scoreboard will be installed above the west end zone stands on supporting columns integrated with the new exterior treatment of the Bowl. Additional auxilliary units may be installed on internal facia of the upper decks.

The cost of this facility is based solely upon similar installations throughout the country and could cost from \$350,000 to \$2,000,000. The cost of supporting such a scoreboard is also a variable cost, depending upon the size and/or elaborateness of the scoreboard.

Electronic Scoreboard	\$500,000.00
Construction of Supports	<u>100,000.00</u>
TOTAL COST FOR ELECTRONIC SCOREBOARD	\$600,000.00

MECHANICAL RAMPS TO UPPER LEVELS

Mechanical ramps to the upper levels will be installed in each of the four quarters of the stadium to supplement the existing ramps. They will be reversible and will serve both the 36 foot level walkway and the 68 foot level. It is anticipated they will be approximately 6 foot wide.

The estimated cost of this facility is based upon inquiry from Otis and Montgomery Elevator Companies; and verified by calculations from Robert S. Means 1973 Building Construction Cost Data manual.

6 foot wide Mechanical Ramps (4 required)	
560 lin. ft. /each x 4 @ \$600.00/lin. ft.	= \$1,344,000.00
Reinforced concrete structures to carry ramps - 4 @ \$264,000 each	= <u>\$1,056,000.00</u>
 TOTAL COST FOR MECHANICAL RAMPS TO UPPER LEVELS	 \$2,400,000.00

SKY DECKS WITH ELEVATORS

Sky decks with elevators will consist of two levels containing a total of 90 sky rooms with attendant service areas, public facilities and mechanical rooms for air conditioning and elevator equipment. These sky decks and elevators will be supported upon shear walls (supporting columns) which will also maintain the louver facade design of the proposed stadium exterior improvements.

The cost of this facility is based upon the updated square foot construction cost of the Press Box which was built in 1968 for \$152.00 per square foot.

24,750 square feet @ \$215.00/sq. ft. = \$5,321,250.00

TOTAL COST OF SKY DECKS
WITH ELEVATORS \$5,321,250.00

USE \$5,400,000.00

ADDITIONAL EXTERIOR IMPROVEMENTS

The additional exterior improvements will be the cosmetic treatment consisting of grillwork on the exterior of the existing ramps, and colored vinyl-coated mesh between new louver-like columns to complete the entire exterior facade of the Bowl.

The cost estimate for this treatment was determined by calculating costs from Robert S. Means 1973 Cost Data manual, together with the cost of a similar treatment of ramps in 1968.

1. Grillwork on ramps:		
50,000 sq. ft. @ \$5.00/sq. ft.	=	\$250,000.00
2. Vinyl-Cote mesh in columns:		
67,700 sq. ft. @ \$3.00/sq. ft.	=	203,000.00
3. Additional louver-like columns:		
16 @ \$9,000 each	=	<u>144,000.00</u>
 TOTAL ADDITIONAL EXTERIOR IMPROVEMENTS		 \$597,000.00
	USE	\$600,000.00