



*Office of Facilities Coordination*

# **Overview of the Components and Methodologies Used to Determine Space Requirements**

*And it's Impact on*

# **Infrastructure Funding**

*As developed by the Texas Higher Education Coordinating Board*

Presentation Date: November 4, 2004



# TAMU Infrastructure Funding

- **Space Inventory**
- **Current Funding**
  - Projected Space Needs
  - State Supported Infrastructure Funding
  - Funding for TAMU-College Station Campus
  - Expenses
- **Education & General Funding Only**
  - *Auxillary Functions Excluded*

- 
- Texas A&M University – College Station



## TAMUS Components Located in CS

- **SAGO**
- **TAMU**
- **Agriculture**
  - Tx Agri Experiment Station (TAES)
  - Tx Cooperative Extension (TCE)
  - Tx Forest Service
- **Tx Veterinary Medical Diagnostic Laboratory**
  - (TVMDL)
- **Engineering**
  - Tx Engineering Experiment Station
  - Tx Engineering Extension Service
  - Tx Transportation Institute
- **Health Science Cntr**
- **Non-Institutional**
  - Research Foundation
  - USDA



# Space Profile by Campus Location

| Bldg Count | Campus Location                | Gross Area        | Assignable        |
|------------|--------------------------------|-------------------|-------------------|
| 257        | Main Campus                    | 11,857,043        | 8,203,042         |
| 64         | West Campus                    | 2,145,442         | 1,382,612         |
| 179        | Vet School Area                | 1,715,089         | 1,264,434         |
| 51         | Airport Area                   | 289,358           | 249,489           |
| 6          | Research Park                  | 299,527           | 195,780           |
| 3          | Bush Library Complex           | 316,663           | 189,588           |
| 68         | Brayton Fireman Training Field | 145,490           | 113,166           |
| 105        | Riverside Campus               | 672,407           | 531,634           |
| 15         | Leased Space                   | 267,057           | 95,110            |
| 17         | ASTREC                         | 118,099           | 81,828            |
| 32         | University Farm                | 91,409            | 73,576            |
| <b>797</b> | <b>COLLEGE STATION TOTAL</b>   | <b>17,917,584</b> | <b>12,380,259</b> |
| <b>782</b> | <b>Less: Leased Space</b>      | <b>17,650,527</b> | <b>12,285,149</b> |

- 
- **Historical** Funding Formulas
- 



# TAMU Infrastructure Funding

- **Institutional Cost Elements**
- **Principle:**
  - Provide funding for **Biennial needs**
  - Based on **Current** Expenses
  - Infrastructure based on **Current** Inventory



# TAMU Infrastructure Funding

- Faculty Salaries
- Nursing Faculty Salaries
- Departmental Operating Expenses
- Research Enhancement
- Library
- Instructional Administration
- Student Services
- Institutional Support
- Building Maintenance
- Plant Support Services
- Custodial Services
- Grounds Maintenance
- Mothballed Facilities
- Utilities
  - Actual Cost



# Grounds Maintenance

- Formula
  - **Data Components**
    - Average Hourly Earnings for Services (SW)
      - January 1996
      - Source: U.S. Department of Commerce
    - Headcount Enrollment (HC)
      - Fall 1996
    - Total Building Perimeter (P)
    - Lawn & Regularly Maintained Acreage (L)

$$\text{Funding} = (0.44 \times \text{SW}) \times [(0.70 \times \text{P}) + (122 \times \text{L}) + (.50 \times \text{HC})]$$

- CURRENT Funding Formulas



## TAMU Infrastructure Funding

- To “Simplify” the calculation of the funding support the process now is based on the formula:

$$\text{Calculated Space Need} \times \text{Funding Rate} =$$

**\$ Infrastructure Funding \$**

*Adopted for use in determining the 1997-98 Biennial Funding*



- **CURRENT Funding Formulas**



## **TAMU Infrastructure Funding**

- **Space Projection Models Developed for:**
  - Academic Institutions
  - Health-Related Institutions
  - TAMU College of Veterinary Medicine
  - TAMU System Service Agencies
- **Initially intended to Evaluate**
  - Building Request
  - Construction Funding
- **Current Driver for Infrastructure Funding**

- THECB Space Needs Projection

## Model Elements



# TAMUS Infrastructure Funding

| Factor                     | Academic | Health-Related | Service Agencies         |                     |                       |
|----------------------------|----------|----------------|--------------------------|---------------------|-----------------------|
|                            |          |                | TCE <sup>1</sup><br>TEEX | TAES<br>TEES<br>TTI | TFS<br>TVMDL<br>TWDMS |
| Teaching                   | X        | X              | X                        |                     |                       |
| Library                    | X        |                | X                        | X                   | X                     |
| Research                   | X        | X              |                          | X                   |                       |
| Office                     | X        | X              | X                        | X                   | X                     |
| Support                    | X        | X              | X                        | X                   | X                     |
| Clinical                   |          | X              |                          |                     |                       |
| Multiple Campus Adjustment |          | X              |                          |                     |                       |

<sup>1</sup>Texas Cooperative Extension (formerly TAES)

- THECB Space Needs Projection

**Fall 2002**



## Five-Factor Space Model

| Institution/Agency                | ACTUAL           | PREDICTED        | Surplus/(Deficit) |
|-----------------------------------|------------------|------------------|-------------------|
| <u>Texas A&amp;M University</u>   | 4,886,622        | 5,248,504        | (361,882)         |
| College of Veterinary Medicine    | 375,565          | 427,794          | (52,229)          |
| Texas A&M University at Galveston | 190,285          | 205,290          | (15,005)          |
| <u>TAMU System Agencies</u>       |                  |                  |                   |
| Tx Engineering Exp Station        | 489,521          | 656,395          | (166,874)         |
| Tx Engineering Extension Serv     | 238,341          | 189,463          | 48,878            |
| Tx Transportation Institute       | 132,148          | 254,909          | (122,761)         |
| Tx Agricultural Exp Station       | 724,609          | 855,064          | (130,455)         |
| Tx Cooperative Extension          | 146,493          | 143,250          | 3,243             |
| Tx Vet Med Diagnostic Lab         | 33,296           | 63,708           | (30,412)          |
| Tx Forest Service                 | 15,041           | 10,491           | 4,550             |
| TAMU System Health Sci Center     | 546,766          | 584,020          | (37,254)          |
| <b>TOTAL TAMU SYSTEM</b>          | <b>7,778,687</b> | <b>8,638,888</b> | <b>(860,201)</b>  |
| <b>TAMUS Agency Sub-Total</b>     | <b>1,779,449</b> | <b>2,173,280</b> | <b>(393,831)</b>  |

- 
- *THECB* Space Needs Projection
- 

## Infrastructure Funding



# Process Overview

### Data

Student

Faculty FTE

#Volumes

Research  
Expenditures

% of Total



### Space Model\*

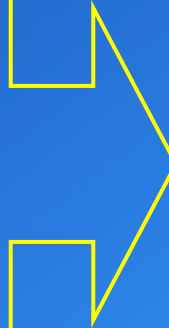
Teaching

Office

Library

Research

Service



### **Predicted**

**Space**

**Need**

X

**Infrastructure**

**Rate**

=

**Funding**

*\*5-Factor Academic Space Model*



# Process Overview

- **Plant Support**
- **Building Maintenance**
- **Custodial**
- **Grounds Maintenance**
- **Utilities**



- Funding Levels



# TAMU Infrastructure Funding

| Member                         | Appropriations<br><b>Bill-FY04</b> | Percent<br>of Total |
|--------------------------------|------------------------------------|---------------------|
| TAMU                           | \$31,702,198                       | 62.0%               |
| VET MED                        | 6,692,766                          | 13.1%               |
| <b>Subtotal - TAMU/Vet Med</b> | <b>38,394,964</b>                  | <b>75.1%</b>        |
| HSC - College Station          | 1,472,174                          | 2.9%                |
| Service Agency Total           | 11,279,512                         | 22.1%               |
| <b>TOTAL</b>                   | <b>\$51,146,650</b>                | <b>100.0%</b>       |

- Funding Sources

FY '04  
2004-2005 Biennium



# TAMU Infrastructure Funding

| <b>DRAFT</b><br>Institution/Agency | Area (Square Feet) |                        | Appropriation Bill Funding |                   | TAMU Rate Funding Comparison |                   |                |
|------------------------------------|--------------------|------------------------|----------------------------|-------------------|------------------------------|-------------------|----------------|
|                                    | Actual             | Predicted <sup>1</sup> | Rate per Square Foot       | Total Dollars     | TAMU Rate/sqft               | Total Dollars     | Difference     |
| TAMU                               | 4,886,622          | 5,248,504              | \$ 6.0402                  | \$ 31,702,198     | \$ 6.0402                    | \$ 31,702,198     | \$ -           |
| Vet Med                            | 375,565            | 427,794                | 15.6448                    | 6,692,766         | 6.0402                       | 2,583,961         | 4,108,805      |
| <b>TAMU &amp; VM Total</b>         | 5,262,187          | 5,676,298              | <b>6.7641</b>              | <b>38,394,964</b> | 6.0402                       | <b>34,286,159</b> | 4,108,805      |
| <b>HSC-College Station only *</b>  | 146,267            |                        | \$ 10.0650                 | \$ 1,472,174      | 6.0402                       | \$ 883,482        | \$ 588,692     |
| TEES                               | 489,521            | 656,395                | 5.2660                     | 3,456,594         | 6.0402                       | 3,964,757         | (508,163)      |
| TEEX                               | 238,341            | 189,463                | 5.2127                     | 987,612           | 6.0402                       | 1,144,394         | (156,782)      |
| TTI                                | 132,148            | 254,909                | 5.4390                     | 1,386,450         | 6.0402                       | 1,539,701         | (153,251)      |
| TAES                               | 724,609            | 855,064                | 5.4346                     | 4,646,927         | 6.0402                       | 5,164,758         | (517,831)      |
| TCE                                | 146,493            | 143,250                | 5.4814                     | 785,205           | 6.0402                       | 865,259           | (80,054)       |
| TFS                                | 15,041             | 10,491                 | 1.5941                     | 16,724            | 6.0402                       | 63,368            | (46,644)       |
| <b>TAMUS Agency Total</b>          | 1,746,153          | 2,109,572              | \$ 5.3468                  | \$ 11,279,512     |                              | \$ 12,742,237     | \$ (1,462,725) |
| <b>Grand Total</b>                 | 7,154,607          | <b>7,785,870</b>       | \$ 6.5692                  | \$ 51,146,650     |                              | \$ 47,911,878     | \$ 3,234,772   |

\* \$11.54/actual sf in CS agreed upon between VPF and HSC (FY'02 & FY'03).

\$ - Statewide average rate

<sup>1</sup>THECB Space Projection Model, Fall 2002



# Process Overview

- **Plant Support**
- **Building Maintenance**
- **Custodial**
- **Grounds Maintenance**
- **Utilities**

**Actual Cost**

**\$ 51.<sup>1</sup> + Million**

**Funding**

**\$ 51.<sup>1</sup> Million**







*Office of Facilities Coordination*  
Texas A&M University

# **Academic Institutions**

## **Space Projection Model**

**Overview of the Components and Methodologies Used to Determine  
Space Requirements**

*As developed by the Texas Higher Education Coordinating Board*



# Academic 5-Factor Model

- **Approved by the THECB in 1992**
- **The model predicts the net assignable area of E&G space an institution needs in five categories:**

**1. Teaching**

**2. Library**

**3. Research**

**4. Office**

**5. Support**

- **Auxiliary spaces are excluded.**

- 
- *THECB* Space Needs Projection
- 



# Academic 5-Factor Model

## Uses:

- **New Construction Request**
- **Funding**
  - Infrastructure Funding Formulas (1997)
  - Higher Education Assistance Fund (HEAF) fund allocation formula



# Academic 5-Factor Model

- **Classrooms**
- **Class Labs**
- **Special Class Labs**
- **Self-Study Labs**
- **Physical Education**
- **Demonstration**
- **Audio/Visual**
- **Animal Quarters**
- **Assembly**
- **Exhibition**
- **Lounge/Meeting Rooms**
- **Locker Rooms**



# Academic 5-Factor Model

- **Teaching Space**

- FTSE is calculated for each program area
  - Undergraduate SCH / 15
  - Masters SCH/12
  - PhD SCH/9
- The derived teaching space depends on funded semester credit hour production by program area and level of course.



# Academic 5-Factor Model

- **Program Areas:**

- Area 1: Most space intensive programs

- Agriculture, Architecture, Engineering, Optometry, Trade and Industrial Arts, Visual/Performing Arts

- Area 2:

- Computer & Information Sci, Health Sci, Home Economics, Life & Physical Sci, Basic Skills, Psychology, Communications, Foreign Lang, Law

- Area 3: All other programs (not space intensive)



# Academic 5-Factor Model

- Teaching Space Program Area per FTSE

|               | <u>Area 1</u> | <u>Area 2</u> | <u>Area 3</u> |
|---------------|---------------|---------------|---------------|
| Undergraduate | 75.0          | 60.0          | 45.0          |
| Masters       | 52.5          | 42.0          | 31.5          |
| Doctorate     | 30.0          | 24.0          | 18.0          |



# Academic 5-Factor Model

- **Teaching Space Coefficient:**
  - Economy of scale factor
    - Applied to those institutions with more than 15,000 undergraduate FTSE.
  - Applied to the same proportion of predicted undergraduate teaching space as the proportion of undergraduate FTSE.
    - A factor of 0.98 is used for 0-1,000 FTSE above 15,000
    - Decreases 0.02 for each 1,000 undergraduate FTSE.
    - Applied only to the predicted undergraduate space.





# Academic 5-Factor Model

- **Space Types:**
  - Reading/Study Rooms
  - Stack Space
  - Library Service Rooms
  - Offices with Library Use Codes
- **Calculation based on:**
  - Association of College & Research Libraries standards for college libraries
  - Data from Nat'l Center for Education Statistics
    - Integrated Postsecondary Education Data Systems (IPEDS)



# Academic 5-Factor Model

- **Calculation:**
  - Stack Space = FTSE x (Volumes x .10 NASF)
  - Study Space = FTSE x 6.25 NASF
  - Staff Space = 12.5% of the Total space Calc
- **Total Prediction = Sum of above**



# Academic 5-Factor Model

- **Space Types:**
  - Research Lab & Laboratory Service Rooms
- **Calculation based on:**
  - 9,000 sqft for every \$1 million\* in Research Expenditures
    - Average of Last 3 years' expenditures

\*Adjusted for inflation using the Consumer Price Index.



# Academic 5-Factor Model

- **Space Types:**
  - Offices, Conference Rooms
  - Associated Service Areas
- **Calculation based on the greater of #1 or #2:**

## 1. Personnel

**Faculty FTE** as reported in the CBM-008

**Non-Faculty** = Faculty FTE x 1.8

Space Needs

190 Sqft x **Faculty FTE**

170 Sqft x **Non-Faculty FTE**

2. 3,500 sqft for each \$1 million\* in E&G Expenditures.

\*Adjusted for inflation



# Academic 5-Factor Model

- **Space Types:**
  - Data Processing/Computer Rooms
  - Shops, Storage, Vehicle Storage
  - Associated Service Areas
- **Calculation based on:**
  - 9% of the Sum of Predicted Space from:
    - Teaching
    - Library
    - Research
    - Office

- 
- *THECB* Space Needs Projection
- 

## Infrastructure Funding



# Process Overview

### Data

Student



Faculty FTE



#Volumes



Research  
Expenditures



% of Total



### Space Model\*

Teaching

Office

Library

Research

Service



### Predicted

**Space**

**Need**

X

**Infrastructure**

**Rate**

=

**Funding**

*\*5-Factor Academic Space Model*

- THECB Space Needs Projection

**Fall 2003**



## Five-Factor Space Model

| <b>Institution/Agency</b>                    | <b>ACTUAL</b>    | <b>PREDICTED</b> | <b>Surplus/(Deficit)</b> |
|--|------------------|------------------|--------------------------|
| <b><u>Texas A&amp;M University</u></b>       | <b>4,869,033</b> | <b>5,289,641</b> | <b>(420,608)</b>         |
| <b>College of Veterinary Medicine</b>        | <b>364,488</b>   | <b>360,764</b>   | <b>3,724</b>             |
| <b>Texas A&amp;M University at Galveston</b> | <b>205,528</b>   | <b>216,108</b>   | <b>(10,580)</b>          |
| <b><u>TAMU System Agencies</u></b>           |                  |                  |                          |
| <b>Tx Engineering Exp Station</b>            | <b>466,102</b>   | <b>658,878</b>   | <b>(192,776)</b>         |
| <b>Tx Engineering Extension Serv</b>         | <b>253,153</b>   | <b>214,946</b>   | <b>38,207</b>            |
| <b>Tx Transportation Institute</b>           | <b>159,110</b>   | <b>273,855</b>   | <b>(114,745)</b>         |
| <b>Tx Agricultural Exp Station</b>           | <b>60,512</b>    | <b>963,220</b>   | <b>(902,708)</b>         |
| <b>Tx Cooperative Extension</b>              | <b>146,493</b>   | <b>110,073</b>   | <b>36,420</b>            |
| <b>Tx Vet Med Diagnostic Lab</b>             | <b>33,296</b>    | <b>46,767</b>    | <b>(13,471)</b>          |
| <b>Tx Forest Service</b>                     | <b>30,927</b>    | <b>13,827</b>    | <b>17,100</b>            |
| <b>TAMU System Health Sci Center</b>         | <b>617,142</b>   | <b>805,659</b>   | <b>(188,517)</b>         |
| <b>Total TAMU SYSTEM</b>                     | <b>7,205,784</b> | <b>8,953,738</b> | <b>(1,747,954)</b>       |
| <b>TAMUS Agency Sub-Total</b>                | <b>1,149,593</b> | <b>2,281,566</b> | <b>(1,131,973)</b>       |

- Funding Sources

FY '04  
2004-2005 Biennium



# TAMU Infrastructure Funding

| <b>DRAFT</b><br>Institution/Agency | Area (Square Feet) |                        | Appropriation Bill Funding |                   | TAMU Rate Funding Comparison |                   |                |
|------------------------------------|--------------------|------------------------|----------------------------|-------------------|------------------------------|-------------------|----------------|
|                                    | Actual             | Predicted <sup>1</sup> | Rate per Square Foot       | Total Dollars     | TAMU Rate/sqft               | Total Dollars     | Difference     |
| TAMU                               | 4,886,622          | 5,248,504              | \$ 6.0402                  | \$ 31,702,198     | \$ 6.0402                    | \$ 31,702,198     | \$ -           |
| Vet Med                            | 375,565            | 427,794                | 15.6448                    | 6,692,766         | 6.0402                       | 2,583,961         | 4,108,805      |
| <b>TAMU &amp; VM Total</b>         | 5,262,187          | 5,676,298              | <b>6.7641</b>              | <b>38,394,964</b> | 6.0402                       | <b>34,286,159</b> | 4,108,805      |
| <b>HSC-College Station only *</b>  | 146,267            |                        | \$ 10.0650                 | \$ 1,472,174      | 6.0402                       | \$ 883,482        | \$ 588,692     |
| TEES                               | 489,521            | 656,395                | 5.2660                     | 3,456,594         | 6.0402                       | 3,964,757         | (508,163)      |
| TEEX                               | 238,341            | 189,463                | 5.2127                     | 987,612           | 6.0402                       | 1,144,394         | (156,782)      |
| TTI                                | 132,148            | 254,909                | 5.4390                     | 1,386,450         | 6.0402                       | 1,539,701         | (153,251)      |
| TAES                               | 724,609            | 855,064                | 5.4346                     | 4,646,927         | 6.0402                       | 5,164,758         | (517,831)      |
| TCE                                | 146,493            | 143,250                | 5.4814                     | 785,205           | 6.0402                       | 865,259           | (80,054)       |
| TFS                                | 15,041             | 10,491                 | 1.5941                     | 16,724            | 6.0402                       | 63,368            | (46,644)       |
| <b>TAMUS Agency Total</b>          | 1,746,153          | 2,109,572              | \$ 5.3468                  | \$ 11,279,512     |                              | \$ 12,742,237     | \$ (1,462,725) |
| <b>Grand Total</b>                 | 7,154,607          | <b>7,785,870</b>       | \$ 6.5692                  | \$ 51,146,650     |                              | \$ 47,911,878     | \$ 3,234,772   |

\* \$11.54/actual sf in CS agreed upon between VPF and HSC (FY'02 & FY'03).

\$ - Statewide average rate

<sup>1</sup>THECB Space Projection Model, Fall 2002





*Office of Facilities Coordination*

# **Overview of the Components and Methodologies Used to Determine Space Requirements**

*And it's Impact on*

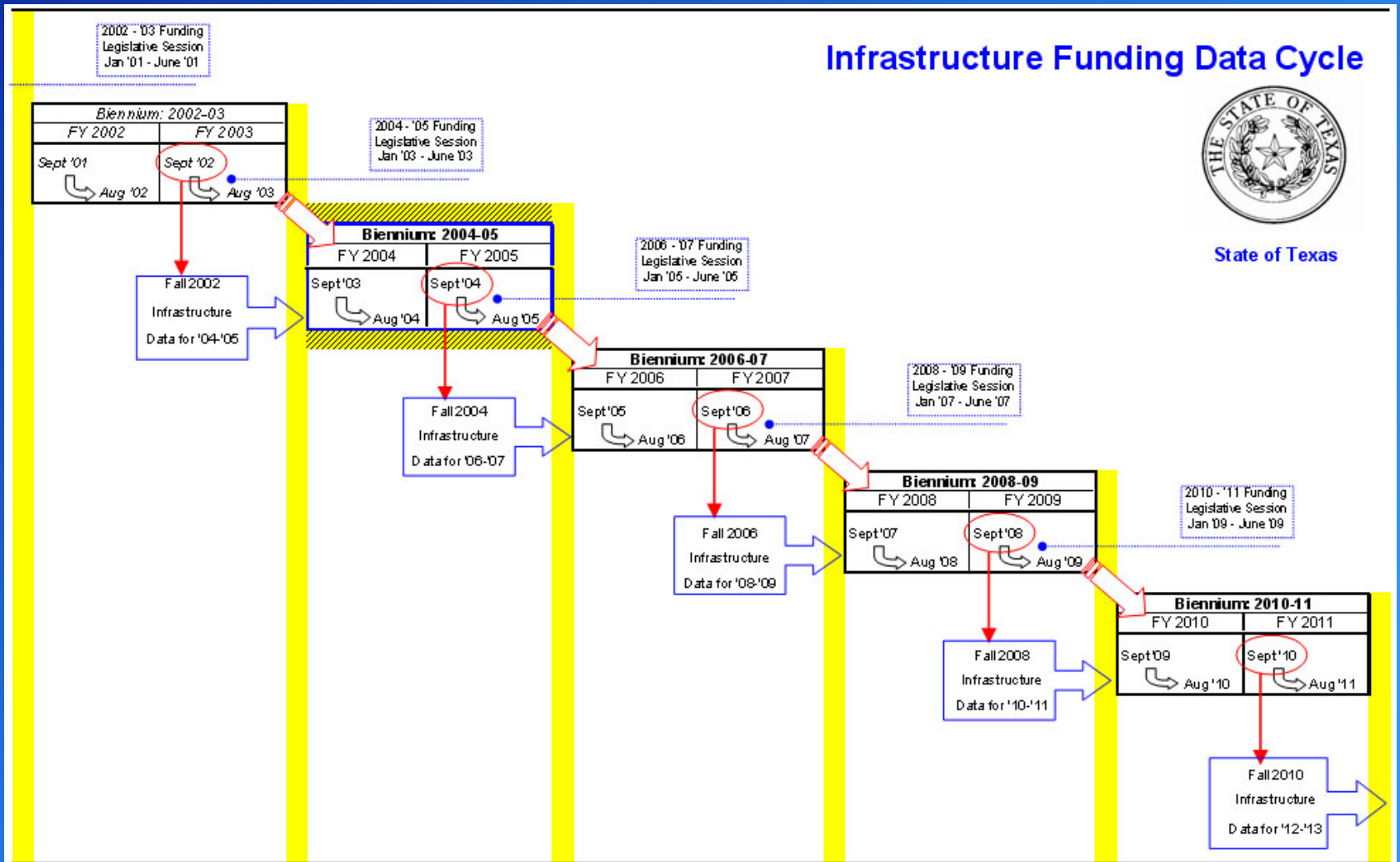
# **Infrastructure Funding**

*As developed by the Texas Higher Education Coordinating Board*

- 
- Texas A&M University
- 



# Infrastructure Funding Timing



State of Texas



# Infrastructure Funding Timing

Texas A&M University

## FACULTY REINVESTMENT

### Impact on THECB Space Projection Model & Infrastructure Funding

| Scenario                    | Assignable Area |           |                    | Infrastructure Funding* |                 |             |
|-----------------------------|-----------------|-----------|--------------------|-------------------------|-----------------|-------------|
|                             | Actual          | Predicted | Surplus/ (Deficit) | TAMU Appropriation      | Annual Increase | Cummulative |
| Fall 2002                   | 4,886,622       | 5,248,504 | (361,882)          | \$ 31,702,198           | \$ -            | \$ -        |
| <b>Faculty Reinvestment</b> |                 |           |                    |                         |                 |             |
| Fall '04 100 New Faculty    | 4,886,622       | 5,385,336 | (498,714)          | 32,528,695              | 826,497         | 826,497     |
| Fall '05 100 New Faculty    | 4,886,622       | 5,522,167 | (635,545)          | 33,355,187              | 826,491         | 1,652,989   |
| Fall '06 100 New Faculty    | 4,886,622       | 5,658,999 | (772,377)          | 34,181,684              | 826,497         | 2,479,486   |
| Fall '07 147 New Faculty    | 4,886,622       | 5,860,141 | (973,519)          | 35,396,629              | 1,214,945       | 3,694,431   |
| 447 Total New Faculty       |                 |           |                    |                         | \$ 3,694,431    |             |

\*Funding Rate per Predicted SqFt: \$6.04024

#### Assumptions:

1. No change in enrollment.
2. Research & Current Fund E&G Expenditures per faculty held at Fall 2002 levels.
3. All new faculty will be 100% time & will be a part of the university's research program
4. All new faculty will be solely appointed to Texas A&M University (i.e. no TAMUS Agency in part)
5. Infrastructure funding rate held constant at 2004-05 Biennial levels\*\*.

#### \*\*Funding Rate History (per predicted sqft):

| Year  | Rate     | Yrly Change |
|-------|----------|-------------|
| FY'02 | \$8.3500 |             |
| FY'03 | 7.3240   | -\$1.026    |
| FY'04 | 6.0402   | -1.284      |

### Reinvestment Plan's Impact on Infrastructure Funding by Biennium

| Biennium: 2002-03 |           | Biennium: 2004-05 |           | Biennium: 2006-07 |           | Biennium: 2008-09 |           | Biennium: 2010-11 |           |
|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|
| FY02              | FY03      | FY04              | FY05      | FY06              | FY07      | FY08              | FY09      | FY10              | FY11      |
| Fall 2001         | Fall 2002 | Fall 2003         | Fall 2004 | Fall 2005         | Fall 2006 | Fall 2007         | Fall 2008 | Fall 2009         | Fall 2010 |
|                   |           |                   |           |                   |           |                   |           |                   |           |
|                   |           |                   | \$ -      | 826,497           | 826,497   | 826,497           | 826,497   | 826,497           | 826,497   |
|                   |           |                   |           | \$ -              | \$ -      | 826,491           | 826,491   | 826,491           | 826,491   |
|                   |           |                   |           |                   | \$ -      | 826,497           | 826,497   | 826,497           | 826,497   |
|                   |           |                   |           |                   |           | \$ -              | \$ -      | 1,214,945         | 1,214,945 |
|                   |           |                   |           |                   |           |                   |           | 3,694,431         | 3,694,431 |

### UnFunded Infrastructure

|          |      |         |         |           |  |           |           |   |   |
|----------|------|---------|---------|-----------|--|-----------|-----------|---|---|
| Fall '04 |      | 826,497 |         |           |  |           |           |   |   |
| Fall '05 |      |         | 826,491 | 826,491   |  |           |           |   |   |
| Fall '06 |      |         |         | 826,497   |  |           |           |   |   |
| Fall '07 |      |         |         |           |  | 1,214,945 | 1,214,945 |   |   |
| Total    | \$ - | 826,497 | 826,491 | 1,652,989 |  | 1,214,945 | 1,214,945 | 0 | 0 |

#### Total Unfunded Over Three Bienniums

**\$ 5,735,868**

Average per Year \$ 1,147,174

#### Implication/Solutions

1. Legislative change: Allow in id-biennium funding adjustments to reflect actual/known growth.
2. Identify alternative funding sources to address infrastructure needs driven by inter-biennium growth.
3. Develop a capital plan that does not result in a facilities inventory in excess of the predicted space total.
4. Maximize the infrastructure funding rate for each biennium. Stabilize current funding level trend.



## Infrastructure Funding Timing

### Impact on THECB Space Projection Model & Infrastructure Funding

| Scenario                    | Assignable Area |           |                    | Infrastructure Funding* |                 |             |
|-----------------------------|-----------------|-----------|--------------------|-------------------------|-----------------|-------------|
|                             | Actual          | Predicted | Surplus/ (Deficit) | TAMU Appropriation      | Annual Increase | Cummulative |
| Fall 2002                   | 4,886,622       | 5,248,504 | (361,882)          | \$ 31,702,198           | \$ -            | \$ -        |
| <b>Faculty Reinvestment</b> |                 |           |                    |                         |                 |             |
| Fall '04 100 New Faculty    | 4,886,622       | 5,385,336 | (498,714)          | 32,528,695              | 826,497         | 826,497     |
| Fall '05 100 New Faculty    | 4,886,622       | 5,522,167 | (635,545)          | 33,355,187              | 826,491         | 1,652,989   |
| Fall '06 100 New Faculty    | 4,886,622       | 5,658,999 | (772,377)          | 34,181,684              | 826,497         | 2,479,486   |
| Fall '07 147 New Faculty    | 4,886,622       | 5,860,141 | (973,519)          | 35,396,629              | 1,214,945       | 3,694,431   |
| 447 Total New Faculty       |                 |           |                    | <b>\$ 3,694,431</b>     |                 |             |

| Biennium          |           |
|-------------------|-----------|
| Biennium: 2010-11 |           |
| FY10              | FY11      |
| 12009             | Fall 2010 |
| 326,497           | 826,497   |
| 326,491           | 826,491   |
| 326,497           | 826,497   |
| 1,214,945         | 1,214,945 |
| 3,694,431         | 3,694,431 |
| 0                 | 0         |

\*Funding Rate per Predicted SqFt: \$6.04024

Assumptions:

1. No change in enrollment.
2. Research & Current Fund E&G Expenditures per faculty held at Fall 2002 levels.
3. All new faculty will be 100% time & will be a part of the university's research program
4. All new faculty will be solely appointed to Texas A&M University (i.e. no TAMUS Agency impact)
5. Infrastructure funding rate held constant at 2004-05 Biennial levels\*\*.

**\*\*Funding Rate History (\$/predicted sqft):**

| Year  | Rate     | Yrly Change |
|-------|----------|-------------|
| FY'02 | \$8.3500 |             |
| FY'03 | 7.3240   | -\$1.026    |
| FY'04 | 6.0402   | -1.284      |

etal.





## Reinvestment Plan's Impact on Infrastructure Funding by Biennium

| Impact on Scenario   | Biennium: 2002-03 |           | Biennium: 2004-05 |           | Biennium: 2006-07 |           | Biennium: 2008-09 |           | Biennium: 2010-11 |           |
|----------------------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|
|                      | FY'02             | FY'03     | FY'04             | FY'05     | FY'06             | FY'07     | FY'08             | FY'09     | FY'10             | FY'11     |
|                      | Fall 2001         | Fall 2002 | Fall 2003         | Fall 2004 | Fall 2005         | Fall 2006 | Fall 2007         | Fall 2008 | Fall 2009         | Fall 2010 |
| Fall 2002            |                   |           |                   |           |                   |           |                   |           |                   |           |
| <b>Faculty Reinv</b> |                   |           |                   |           |                   |           |                   |           |                   |           |
| Fall '04 100         |                   |           | \$ -              | 826,497   | 826,497           | 826,497   | 826,497           | 826,497   | 826,497           | 826,497   |
| Fall '05 100         |                   |           |                   |           | \$ -              | \$ -      | 826,491           | 826,491   | 826,491           | 826,491   |
| Fall '06 100         |                   |           |                   |           |                   | \$ -      | 826,497           | 826,497   | 826,497           | 826,497   |
| Fall '07 147         |                   |           |                   |           |                   |           | \$ -              | \$ -      | 1,214,945         | 1,214,945 |
| 447                  |                   |           | \$ -              | 826,497   | 826,497           | 2,479,486 | 2,479,486         | 3,694,431 | 3,694,431         |           |

Assumptions:

1. No ci
2. Rese
3. All ne
4. All ne
5. Infras

### UnFunded Infrastructure

|          |      |         |         |           |           |           |           |   |   |
|----------|------|---------|---------|-----------|-----------|-----------|-----------|---|---|
| Fall '04 |      | 826,497 |         |           |           |           |           |   |   |
| Fall '05 |      |         | 826,491 | 826,491   |           |           |           |   |   |
| Fall '06 |      |         |         | 826,497   |           |           |           |   |   |
| Fall '07 |      |         |         |           |           | 1,214,945 | 1,214,945 |   |   |
| Total    | \$ - | 826,497 | 826,491 | 1,652,989 | 1,214,945 | 1,214,945 |           | 0 | 0 |

\*\*Fu

**Total Unfunded Over Three Bienniums \$ 5,735,868**

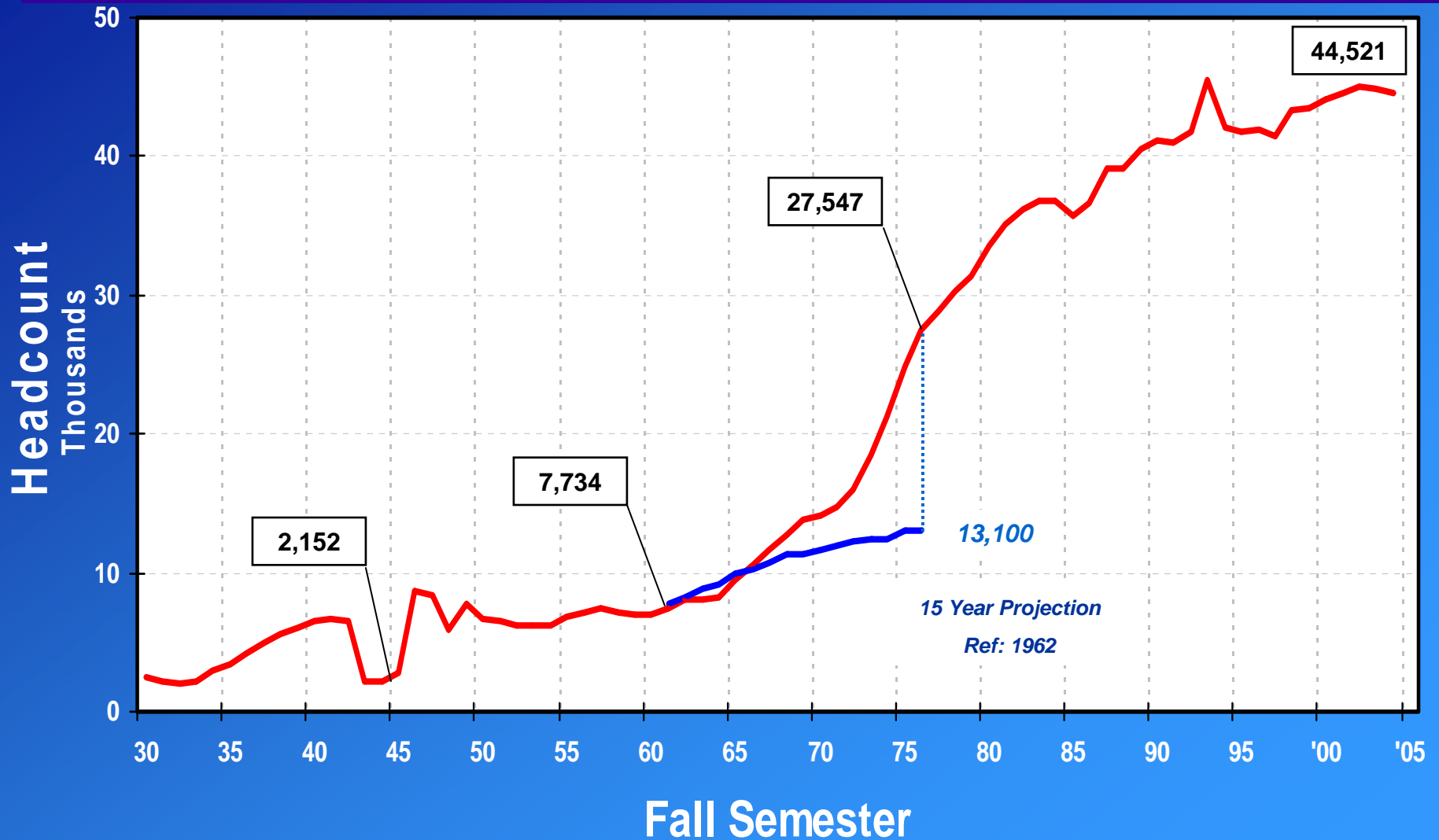
Average per Year \$ 1,147,174

|       |          |          |
|-------|----------|----------|
| FY'02 | \$8.3500 |          |
| FY'03 | 7.3240   | -\$1.026 |
| FY'04 | 6.0402   | -1.284   |

- 
- Texas A&M University – College Station



# Enrollment Profile: 1930 to 2004



- 
- EXPENSES
- 



# TAMU Infrastructure Funding

- **Plant Support**
  - Acquisition & repair of Classroom & Laboratory furniture
  - Central Receiving & Store of Supplies and Equipment
  - Safety, including fire, occupational, radiation, health & sanitation safety.
  - Garbage & Trash Disposal
  - Hauling, Moving, & Storing
  - Property Insurance
  - Truck & Automobile expense in general service
  - Administration of the Physical Plant
  - Preparation of Architectural & Engineering Plans

- 
- EXPENSES
- 



# TAMU Infrastructure Funding

- **Building Maintenance**
  - Minor Repairs & Alterations
  - Costs of Materials
  - Hire of Personnel
  - Other Necessary Expenses for the Repair &/or Painting of:
    - Roofs
    - Exterior Walls
    - Flooring
    - Ceilings
    - Partitions
    - Doors
    - Windows
    - Plaster
    - Screens
    - Window Shades
    - Blinds
    - Plumbing
    - Heating & A/C Equipment
    - Electric Wiring & Light Fixtures



- 
- EXPENSES
- 



# TAMU Infrastructure Funding

- **Custodial Services**

- Care of the Floors, Stairways & Landings, Restrooms
- Cleaning Chalkboards, Windows, Wall, & Furniture
- Includes:
  - Mopping
  - Sweeping
  - Waxing
  - Dusting
  - Polishing
  - Replacement of Chalk
  - Disinfecting Commodes & Urinals
  - Cleaning & Washing other Fixtures
  - Sweeping & Cleaning of Windows
  - Opening & Closing Buildings, Doors & Windows.

- 
- EXPENSES
- 



# TAMU Infrastructure Funding

- **Grounds Maintenance**
  - Begins after site improvements are complete
  - **Land Improvements**
    - **Permanent:** Lawns, Trees, Shrubs, etc
    - **Seasonal:** Flowers, Bulbs, etc
  - **Circulation Systems**
    - **Vehicular:** Streets & Roads
    - **Pedestrian:** Walks & Paths (*Improved & Unimproved*)
  - **Other Activities**
    - Irrigation Systems
    - Non Structural Improvements
      - Walls, Fences, Fountains, Campus Furniture, others
    - **Nurseries, Greenhouses:** areas for special academic study

- 
- EXPENSES
- 



# TAMU Infrastructure Funding

- **Utilities Services**
  - Electricity
  - Steam Heat
  - Water (hot, cold or chilled)
  - Storm & Sanitary Sewers
  - Compressed Air
  - Natural Gas
  - Clocks & Bells
  - Campus Lighting
  - Energy Management Systems
  - Preventative Maintenance to production/distribution systems



*Office of Facilities Coordination*

# **Overview of the Components and Methodologies Used to Determine Space Requirements**

*And it's Impact on*

# **Infrastructure Funding**

*As developed by the Texas Higher Education Coordinating Board*