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## Contents

1. Introduction/Challenge
   - A. Goals
   - B. Approach
   - C. Process
   - D. Challenge

2. The Questions (and issues)

3. Resources
   - A. Summary/Issues
     - Overview
     - Trend Charts
   - B. Campus Maps
   - C. UNM Profile: Students, Faculty and Programs

4. People and Programs
   - 1. Implications of Planning Documents
     - a) Physical Implications of UNM 2000
     - b) Physical Implications of CHE's Planning for the Class of 2005
   - 2. Trends
     - a) Introduction
     - b) Broad Future Trends
     - c) Enrollment Trends
     - d) Trends in Curriculum
   - 3. Enrollment Trend
     - a) Executive Summary
     - b) Enrollment Trends and Student Body Characteristics
     - c) Factors Affecting Enrollment Levels at UNM
     - d) Enrollment Projections

5. Land and Facilities
   - 1. Concise Planning History
     - a) Existing Land use zones
     - b) Description per zone

---

**UNM Master Plan**

Project Information Package

ARC 2/92
3. Site and Lands ............................................................................................................. E-23

Descriptive Information regarding the campus:
   a) Existing campus maps (north, main, south).
   b) UNM Land ownership
   c) Acreage
   d) Densities
   e) Available building sites
   f) Exterior environment/Landscaping

4. Facilities ....................................................................................................................... E-29
   a) Age of structures (condition)
   b) UNM in 1969 and 1991 (facility, size comparison)
   c) Comparison to Peer Institutions
   d) Comparison to other standards
   e) Projection of facility needs

5. Major Utility Systems ............................................................................................... E-55
   a) Heating/cooling
   b) Electrical
   c) Water
   d) Sanitary sewer
   e) Communication

6. Transportation/Access ............................................................................................... E-65
   a) Pedestrian
   b) Vehicles
      (1) Service vehicles
      (2) Staff/Students
      (3) Visitors
   c) Parking

7. Proposed Capital Projects ........................................................................................ E-73

F. Area Issues .................................................................................................................. F-1
   1. Medical Center Issues ............................................................................................ F-2
   2. Science and Engineering ....................................................................................... F-19
   3. General Campus Issues ........................................................................................ F-45

G. Resources Consulted ................................................................................................. G-1
   1. Books ..................................................................................................................... G-2
   2. List of Persons Interviewed ................................................................................... G-6
Maps

Section III B
Maps in this section are numbered.

1. Albuquerque Metropolitan Area-Employment and Residential Growth
2. Campus Location and Generalized Land Ownership
3. Central-North Campus Generalized Ownership
4. Historic Development Map
5. Facilities with Building Numbers
6. Central/North Land Use Planning Zones (with acreages)
7. Central/North Parking Zones (with acreages
8. Building Density by Parking Zones
9. South Campus Planning Zones
10. Major Use of Buildings by CHE Categories
11. Age of Buildings
12. Pedestrian and Service Routes
13. Major Malls/Plazas (Exterior Environment)
14. Utility Network System
15. Parking Zones and Adequacy
16. Major Vehicular Circulation
17. Central Campus Sites Map
18. North Campus Sites Map
19. South Campus Sites Map

Section III D

1. UNM Geographic Origin of Students. Fall Semester 1990.......................... D-59

Section III F

1. Medical Center, New Patient Entrance .................................................. F-17
2. Science and Technology Long Range Development Options.................... F-25
<table>
<thead>
<tr>
<th>Exhibit</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>UNM Student Enrollment by School or College, Fall 1991</td>
<td>C-2</td>
</tr>
<tr>
<td>C2</td>
<td>UNM Fall 1991 Enrollment by Degree Status</td>
<td>C-3</td>
</tr>
<tr>
<td>C3</td>
<td>UNM Faculty Increases from 1982 to 1990</td>
<td>C-3</td>
</tr>
<tr>
<td>D1</td>
<td>College Age Population Trends: 1980-2050</td>
<td>D-24</td>
</tr>
<tr>
<td>D2</td>
<td>Projections for College Student Population</td>
<td>D-25</td>
</tr>
<tr>
<td>D3</td>
<td>UNM Long Range Enrollment Projections, 1995-2000</td>
<td>D-34</td>
</tr>
<tr>
<td>D4</td>
<td>UNM Total Enrollment 1977-1990</td>
<td>D-48</td>
</tr>
<tr>
<td>D5</td>
<td>UNM Enrollment by Student Type 1977-1990</td>
<td>D-49</td>
</tr>
<tr>
<td>D6</td>
<td>UNM Percentage of Undergraduate/Graduate Enrollment</td>
<td>D-51</td>
</tr>
<tr>
<td>D7</td>
<td>UNM Age of Students by Classification Level</td>
<td>D-52</td>
</tr>
<tr>
<td>D8</td>
<td>Percent Enrollment by Race/Ethnicity</td>
<td>D-54</td>
</tr>
<tr>
<td>D9</td>
<td>UNM Total Enrollment by Race/Ethnicity 1977-1990</td>
<td>D-56</td>
</tr>
<tr>
<td>D10</td>
<td>Population, Ages 10 to 44, the United States and New Mexico</td>
<td>D-63</td>
</tr>
<tr>
<td>D11</td>
<td>Population by Race/Ethnicity, United States and New Mexico, 1990</td>
<td>D-64</td>
</tr>
<tr>
<td>D12</td>
<td>Projected Population Increase, 1990-2020</td>
<td>D-65</td>
</tr>
<tr>
<td>D13</td>
<td>New Mexico, Projected Population: Selected Age Groups</td>
<td>D-66</td>
</tr>
<tr>
<td>D14</td>
<td>Labor Force Characteristics, the United States and New Mexico</td>
<td>D-69</td>
</tr>
<tr>
<td>D15</td>
<td>Unemployment Rate, New Mexico, 1961-1990</td>
<td>D-69</td>
</tr>
<tr>
<td>D16</td>
<td>New Mexico Nonagricultural Wage and Salary Employment</td>
<td>D-70</td>
</tr>
<tr>
<td>D17</td>
<td>Per Capita Personal Income, the United States and New Mexico</td>
<td>D-71</td>
</tr>
<tr>
<td>D18</td>
<td>Real Per Capita Personal Income, New Mexico, 1961-1990</td>
<td>D-72</td>
</tr>
<tr>
<td>D19</td>
<td>New Mexico High School Graduates by Race and U.S. Tots</td>
<td>D-76</td>
</tr>
<tr>
<td>D20</td>
<td>New Mexico High School Graduates and UNM Undergraduates</td>
<td>D-76</td>
</tr>
<tr>
<td>D21</td>
<td>Percentage of High School Dropouts, 1980-1989</td>
<td>D-78</td>
</tr>
<tr>
<td>D22</td>
<td>Enrollment Rates in Institutions of Higher Education</td>
<td>D-80</td>
</tr>
<tr>
<td>D23</td>
<td>Number of Bachelor's and Master's Degrees</td>
<td>D-82</td>
</tr>
<tr>
<td>D24</td>
<td>Total Doctoral and First Professional Degrees</td>
<td>D-83</td>
</tr>
<tr>
<td>D25</td>
<td>Percent of Bachelor's and Master's Degrees by Race/Ethnicity</td>
<td>D-84</td>
</tr>
<tr>
<td>D26</td>
<td>Actual and Projected Population, Bernalillo and Sandoval Counties</td>
<td>D-87</td>
</tr>
<tr>
<td>D27</td>
<td>Retention to Third Semester of 1st Time Freshman, UNM</td>
<td>D-96</td>
</tr>
<tr>
<td>D28</td>
<td>Historic and Projected Enrollment by Level, UNM</td>
<td>D-98</td>
</tr>
<tr>
<td>D29</td>
<td>Projected Enrollment by Level, U.S. 4-year Institutions</td>
<td>D-99</td>
</tr>
<tr>
<td>D30</td>
<td>Inputs and Outputs for Undergraduate Enrollment, UNM</td>
<td>D-102</td>
</tr>
<tr>
<td>D31</td>
<td>Long Range Enrollment Projections for UNM</td>
<td>D-104</td>
</tr>
<tr>
<td>E1</td>
<td>1908 Tight Plan</td>
<td>E-3</td>
</tr>
<tr>
<td>E2</td>
<td>1915 Griffin Plan</td>
<td>E-3</td>
</tr>
<tr>
<td>E3</td>
<td>1955 Meem Plan</td>
<td>E-5</td>
</tr>
<tr>
<td>E4</td>
<td>1960 Warnecke Plan</td>
<td>E-6</td>
</tr>
<tr>
<td>E5</td>
<td>1960 Warnecke Plan - Central Campus</td>
<td>E-7</td>
</tr>
<tr>
<td>E6</td>
<td>1960 Warnecke Plan - North Campus</td>
<td>E-8</td>
</tr>
<tr>
<td>E7</td>
<td>1960 Warnecke Plan - South Campus</td>
<td>E-9</td>
</tr>
<tr>
<td>E8</td>
<td>1963 Eckbo Plan</td>
<td>E-12</td>
</tr>
<tr>
<td>E9</td>
<td>1964 Flatow Moore Bryan and Fairburn Plan</td>
<td>E-12</td>
</tr>
<tr>
<td>E10</td>
<td>1969 Stiegel Plan - North Campus</td>
<td>E-13</td>
</tr>
<tr>
<td>E11</td>
<td>1970 McKinney Plan - South Campus</td>
<td>E-13</td>
</tr>
<tr>
<td>E12</td>
<td>1975 McKinney Plan - North Campus</td>
<td>E-15</td>
</tr>
<tr>
<td>E13</td>
<td>Glenborough/FAMA Plan - South Campus</td>
<td>E-15</td>
</tr>
<tr>
<td>E14</td>
<td>UNM Summary of Building Data by Parking Zone</td>
<td>E-24</td>
</tr>
<tr>
<td>E15</td>
<td>UNM Summary of Building Data by Planning Zone</td>
<td>E-25</td>
</tr>
<tr>
<td>E16</td>
<td>UNM Facilities Profile - Gross Square Footage</td>
<td>E-30</td>
</tr>
<tr>
<td>E17</td>
<td>UNM Facilities Profile - Present Value of Facilities</td>
<td>E-31</td>
</tr>
<tr>
<td>E18</td>
<td>UNM Facilities Profile - Growth of Facilities</td>
<td>E-32</td>
</tr>
<tr>
<td>E19</td>
<td>UNM Facilities Profile - by Major Use (CHE Categories)</td>
<td>E-33</td>
</tr>
<tr>
<td>E20</td>
<td>UNM Facilities Profile - by Major Use (CHE Categories)</td>
<td>E-34</td>
</tr>
<tr>
<td>E21</td>
<td>UNM Facilities Profile - 1969 vs. 1991</td>
<td>E-35</td>
</tr>
<tr>
<td>E22</td>
<td>Peer University Comparisons</td>
<td>E-38</td>
</tr>
<tr>
<td>E23</td>
<td>Peer University Comparisons</td>
<td>E-39</td>
</tr>
<tr>
<td>E24</td>
<td>Peer University Comparisons</td>
<td>E-40</td>
</tr>
<tr>
<td>E25</td>
<td>Comparisons with California Universities</td>
<td>E-41</td>
</tr>
<tr>
<td>E26</td>
<td>UNM Gross Square Feet Space Projections</td>
<td>E-43</td>
</tr>
<tr>
<td>E27</td>
<td>UNM Gross Square Feet Space Projections</td>
<td>E-44</td>
</tr>
<tr>
<td>E28</td>
<td>UNM Gross Square Feet Space Projections</td>
<td>E-45</td>
</tr>
<tr>
<td>E29</td>
<td>UNM Gross Square Feet Space Projections</td>
<td>E-46</td>
</tr>
<tr>
<td>E30</td>
<td>General Classroom Utilization</td>
<td>E-52</td>
</tr>
<tr>
<td>E31</td>
<td>Overview of UNM Computer Network</td>
<td>E-62</td>
</tr>
<tr>
<td>E32</td>
<td>Overview of UNM Computer Network</td>
<td>E-63</td>
</tr>
<tr>
<td>E33</td>
<td>UNM Funding Allocations by CHE Categories</td>
<td>E-73</td>
</tr>
<tr>
<td>E34</td>
<td>State Capital Outlay Appropriations for NM Public 4-Year Institutions</td>
<td>E79</td>
</tr>
<tr>
<td>E35</td>
<td>UNM Capital Outlay Projects, Analysis of Funding Sources</td>
<td>E80</td>
</tr>
<tr>
<td>F1</td>
<td>UNM Research Interactions</td>
<td>F-24</td>
</tr>
<tr>
<td>F2</td>
<td>UNM Science and Engineering - Space and Credit Hours</td>
<td>F-27</td>
</tr>
<tr>
<td>F3</td>
<td>UNM Science and Engineering Research</td>
<td>F-28</td>
</tr>
<tr>
<td>F4</td>
<td>Percent Difference Enrollment and Credit Hours 1979-1990</td>
<td>F-29</td>
</tr>
<tr>
<td>F5</td>
<td>UNM Science and Engineering - Square Feet and Value</td>
<td>F-30</td>
</tr>
<tr>
<td>F6</td>
<td>Space Trends</td>
<td>F-31</td>
</tr>
<tr>
<td>F7</td>
<td>UNM Compared to Other Universities</td>
<td>F-32-F-33</td>
</tr>
<tr>
<td>F8</td>
<td>UNM Space Assessment</td>
<td>F-34-F-33</td>
</tr>
<tr>
<td>F9</td>
<td>UNM Space Needs</td>
<td>F-39-F-41</td>
</tr>
<tr>
<td>F10</td>
<td>Facility Relationships</td>
<td>F-42</td>
</tr>
<tr>
<td>F11</td>
<td>UNM Science and Engineering Capital Requests</td>
<td>F-43</td>
</tr>
</tbody>
</table>
The University of New Mexico is preparing to update its long-range master plan that guides the physical development of the campus. This plan will establish the development "vision" of the campus for the next 20-30 years.

Preliminary Planning Goals
The following are the preliminary expectations that the master plan should fulfill. Expressed as goals, they will guide implementation of specific planning activities:

To develop a master plan for UNM that:


2. Provides long-range vision for UNM physical development.

3. Provides a policy decision-making framework for guiding growth and development for the next 20-25 years.

4. Develops guidelines for the design of the physical environment.

Specific Objectives

6. Maximize UNM's internal resources for completion.

7. The scope of the plan should include UNM Hospital.

8. Results of the plan:
   a. Allow UNM to be able to make broad decisions regarding land sales and purchases.
   b. Provide guidelines to define character of UNM's physical environment.
- scale
- height
- density
- broad land use
- campus linkages required
- architectural quality
- landscape considerations
- pedestrian amenities
- signage
- safety considerations (lighting)

c. Plan should not be highly detailed, but be flexible in implementation.

The planning approach is based on the following premises:

a. Planning process should allow the development of a long-range "vision" unhindered by existing constraints.

- Planning process will concentrate on "big picture" opportunity and constraints.
- UNM Master Planning will not focus on operational matters including:
  - detailed asset management
  - capital outlay planning
  - implementation concerns

b. The planning process will provide focused participation opportunities for:
- UNM institutional representatives (Regents, administration, faculty, staff, students)
- Selected outside community members
- Invited "experts"
- General public

c. Long-range planning should capitalize upon existing resources including:

- Staff resources: A core planning team will be organized with representatives of the UNM
Facilities Planning Department, UNM Physical Plant and others as required. ARC will organize and facilitate the planning process.

- Existing reports.

d. A structured planning framework will be used to collect and document background information to facilitate informed decision-making. This approach will seek to bring the proper information, to the right people to make decisions within a long-range perspective (see Exhibit 3).

e. Various key UNM groups will be kept informed of the progress of planning efforts throughout the planning process.

The first step in the planning process will be to develop a Long Range "Vision" for UNM campus development. A series of "Vision" workshops will be held in February 1992. The workshops will be open to the entire University community. The initial sessions will be held with institutional representatives. Ideas generated at this session will serve as the basis for subsequent workshops with community representatives, selected "experts" and the public. Beginning discussions will be free wheeling and unconstrained. Later planning will integrate physical constraints and opportunities to identify a scenario that best implements the vision.

This information package provides background information and identifies relevant issues and questions for participants. This package will be revised to reflect the findings of each subsequent workshop.

The final step will be to develop a master plan document reflecting the adopted vision. It is anticipated that the final document will draw upon the information package developed during the vision participation opportunities.
Overview of Planning Process

1. Assess Existing Operational and Physical Environment
2. Identify/Project Future "Vision"
3. Identify Steps (strategies to get there)

Project Information Package
ARC 2/92

1. Introduction
Vision Questions

1. What is your vision for UNM?
2. How can the physical environment at UNM best support the programs and services expected for the future?

Through a process of interview and discussion among the core planning team, a series of questions have been identified that will guide overall planning. Answers to these questions will help define issues and potential responses. Questions have been grouped in six broad categories:

i. Academic Programs, Research and Service
ii. Growth and Change
iii. Environment for Learning
iv. Quality of Life
v. Physical Character
vi. Other

This information package is organized to facilitate the process of addressing these questions. The resource sections are organized to help provide background information to intelligently address long-range planning questions and issues.

General
• What is your long-range vision for UNM (20-25 years in the future)?
• How can the physical environment at UNM best support the programs and services expected for the future?

I. Academic Programs, Research and Service
A. Describe how you see UNM in 20-25 years?
   1. Its role in the State
   2. The nature of its programs (larger, smaller, same, new)
      a) academic
      b) research
      c) service/patient care
      d) ancillary

B. What will be the characteristics of the student of the future?
1. ages
2. numbers
3. where they live
4. characteristics
   a) Lower, higher Division mix
   b) Graduate, professional mix
   c) Traditional vs. non-traditional
      (1) Full-time vs. part-time students.
      (2) Day versus evening students.

C. What will be the characteristics of a future faculty member?
   1. with respect to teaching, research, and community service/patient care?
   2. communications and interactions among faculty in different departments and colleges?

II. Growth and Change

A. What size should the University be?
   1. Is there an optimum enrollment?
   2. Is there a physical (size) limit?

B. What will be the pace of growth?
   1. slow, incremental change
   2. radical change
   3. in-between

C. How should UNM accommodate growth?
   1. Improve utilization
   2. Increase density
   3. expand size
      a} north
      b} south
      c} east
      d} west
      e} remote location(s)
      f} combinations

III. Environment for Learning

A. How can we improve the environment for learning at UNM?
B. How will technology impact the way students are educated?
   1. Impacts of computers and networks
   2. Distance learning
   3. Sizes of classes
   4. Independent learning
   5. Support facilities (e.g. libraries)

IV. Quality of Life
   A. How can we improve the quality of life for students, staff, faculty and visitors at UNM?
      1. What services
      2. Residential life
      3. Safety/security
      4. Access
      5. Signage/directions

   B. How can the physical environment foster interactions and communications between faculty, students, staff and the community.
      1. Colleges
      2. Departments
      3. Faculty
      4. Students
      5. Staff

V. Physical Character
   A. What image should the University project?
      1. The University Community?
      2. Surrounding community?

   B. How should the University relate to the surrounding community?

   C. What characteristics of UNM are unique and should be retained?

   D. What characteristics of UNM need correction and/or refinement?
VI. Other

A. Describe an "ideal" university campus
   1. Who attends?
   2. What is taught?
   3. How do people learn?
   4. What type of facilities?
   5. Nature of exterior spaces?
   6. Relationships between functions?

B. What special characteristics or aspects of the University of New Mexico campus distinguish it, physically, from other universities
   1. Are these features good?
   2. Are these features bad?

C. If you could accomplish only three things at UNM in the next 25 years, what would they be?
Introduction

This section provides comprehensive information resources applicable to address long range physical planning issues at UNM.

Source information regarding people and programs, land and facilities and specific areas is provided. Every effort is made to summarize and illustrate key ideas. Readers are encouraged to examine each section in detail. However, those with a limited time budget can just read the summary (Section A) and scan the maps and highlighted sidebars to gain an overview understanding.

<table>
<thead>
<tr>
<th>Section</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Summary/Issues</td>
<td></td>
</tr>
<tr>
<td>B. Maps</td>
<td></td>
</tr>
<tr>
<td>C. University Profile</td>
<td></td>
</tr>
<tr>
<td>D. People and Programs</td>
<td>Institutional Plans, Trends, Enrollment Growth</td>
</tr>
<tr>
<td>E. Land and Facilities</td>
<td>Planning History, Site Data, Facilities, Major Utility Systems, Parking/Access, Capital Projects</td>
</tr>
<tr>
<td>F. Area Issues</td>
<td>Medical Center, Science and Engineering, General Campus Issues</td>
</tr>
<tr>
<td>G. Resources</td>
<td>Books, People Interviewed</td>
</tr>
</tbody>
</table>
I. Introduction

This section provides an overview of issues, trends and preliminary planning concepts for the University of New Mexico long-range development plan. It provides a summary of major observations and conclusions found in the other sections of this report.

The intent is to set forth a basic framework of information to foster productive discussion of long-range planning issues and opportunities for UNM.

The final long-range development plan will contain long-range development goals, "facts" regarding existing and projected conditions, concepts, which are broad organizing principles and specific strategies to implement the plan.

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**Focus of this report**

**Goals**
- Identifies overall visions for the future

**Facts**
- Provides data about existing and projected conditions
- Identifies constraints and opportunities

**Concepts**
- Identifies a broad framework for making physical planning decisions responding to goals and facts

**Strategies**
- Identifies specific implementation actions including design options
Change is certain. A changing environment will likely impact what is taught, how it is taught and consequently, how much space is required.

Trends/Factors
- Changes in Society
- Demographic Changes
- Science and Technology
- Economic Shifts
- Curriculum Changes
- Demographic Changes
- Institutional Goals

Implications?

II. General Trends
A. General

According to futurists, societal changes, changing demographics, scientific and technological innovations, expansion of the information economy, and an emerging global economy will all bring sweeping change for our institutions.

B. Broad Future Trends
1. Changes in Society
   - There will be an increasing number of single parent families and a large proportion of minorities.
   - People will be more concerned with lifelong health and physical fitness.
   - Increasing concern over environmental awareness.
2. **Demographic Changes**
   
   a) Increasing diversity of the population (women and minorities).
   
   b) Aging of the population.

3. **Rapid Innovations in Science and Technology are expected.**

4. **Shift from National to Global economy.**

C. **Trends in Curriculum**

1. Address issues of diversity

2. **Broad-based instruction vs. technical expertise.**

3. Individually based instruction.

4. Increase in interdisciplinary and multi-disciplinary programs.

5. Increasing use of technological innovations.

D. **Enrollment Trends**

1. **Nationally**
   
   a) Minorities are a growing proportion of the traditional college age population.
   
   b) Declining populations of the traditional 18-24 college age students.
   
   c) Increases in number of women, older students and part-time students.
   
   d) Increased "at risk" enrollments.

2. **New Mexico**
   
   a) Projected enrollment
      
      (1) 15% growth expected in the next ten years.
      
      (2) The projected total enrollments in the year 2020 vary from 34,307 to 36,114 students.

**Trends and potential physical implications are outlined on the following charts.**

---

**UNM Master Plan**

Project Information Package

ARC 2/92
Plan UNM
Trend and Implications Summary
DRAFT

<table>
<thead>
<tr>
<th>Trend</th>
<th>Possible Physical Planning Implication(s)</th>
</tr>
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<tbody>
<tr>
<td>Short Range</td>
<td>UNM will continue to grow in a managed manner</td>
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<tr>
<td>University will continue to grow in a managed manner</td>
<td>• Increase the number of on-campus residents</td>
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<tr>
<td></td>
<td>• Additional residence halls on main, north or south campus?</td>
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<tr>
<td></td>
<td>• Increased academic and auxiliary facility needs</td>
</tr>
<tr>
<td></td>
<td>• Impact on campus utility systems</td>
</tr>
<tr>
<td></td>
<td>• Continuing demand for parking and convenient access. (convenient shuttles to and from all campuses)</td>
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<td>UNM will support areas of emphasis</td>
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<td></td>
<td>• Impacts on main, north and south campuses</td>
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<td></td>
<td>• Expansion development in Science and Engineering quadrant</td>
</tr>
<tr>
<td></td>
<td>• Increased academic emphasis on south campus</td>
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<tr>
<td></td>
<td>• Increased use of institutes and centers to address specialized research issues</td>
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<tr>
<td></td>
<td>• Continued growth of upper division and graduate programs</td>
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<td></td>
<td>• Potential growth and consolidation of programs addressing Latin American issues</td>
</tr>
<tr>
<td>Build academic quality and program definition</td>
<td>• Provide safe and secure environment for students</td>
</tr>
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<td></td>
<td>• Improved campus lighting, security systems</td>
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<td></td>
<td>• Improved nighttime parking shuttles</td>
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<td>Be a leader in development of appropriate learning technologies</td>
<td>• Increased computer networks throughout campus</td>
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<td></td>
<td>• Modernization of classrooms space to support latest technologies</td>
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<td></td>
<td>• Provide flexible classroom space</td>
</tr>
<tr>
<td>Expand upon existing collaborations with other state public schools</td>
<td>• Development of joint-use facilities?</td>
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<td></td>
<td>• Campus expansion toward TVI?</td>
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<tr>
<td>Become &quot;University of the Americas&quot;</td>
<td>• Potential growth and consolidation of programs addressing Latin American issues</td>
</tr>
<tr>
<td>Become a &quot;Top 50&quot; research university</td>
<td>• Expanded library and computer facilities?</td>
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<td></td>
<td>• Expanded research facilities?</td>
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<td>Public Service emphasis</td>
<td>• Expanded academic facilities?</td>
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<tr>
<td></td>
<td>• Expanded cultural facilities (with improved access)?</td>
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<td>Increased financial support</td>
<td>• Development of nearby lands to generate income</td>
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<td></td>
<td>• Lomas Boulevard</td>
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<tr>
<td></td>
<td>• Central Avenue</td>
</tr>
<tr>
<td></td>
<td>• Consideration of revenue-generating spaces in University facilities</td>
</tr>
<tr>
<td>General</td>
<td>• Emphasis on renovation and maintenance of existing facilities</td>
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<tr>
<td></td>
<td>• Exploration of UNM-private collaborations (particularly in research)</td>
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<tr>
<td>High competition for capital resources will continue</td>
<td>• Emphasis on renovation and maintenance of existing facilities</td>
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<td></td>
<td>• Additional facilities will be eligible for historic preservation nomination</td>
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<tr>
<td>Average age of facilities and infrastructure is increasing</td>
<td>• Continuing emphasis on making all sites and facilities accessible to the handicapped</td>
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<td></td>
<td>• Impact of building codes on facility design</td>
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<tr>
<td>Governmental regulations on facilities will continue</td>
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</tbody>
</table>
Plan UNM
Trend and Implications Summary
DRAFT

Mid to Long-Range

Decrease in traditional college age students
More competition for students

Student populations are aging

Increased diversity of students

Rapid increase in science and technology
(impacts all campuses)

Increasing environmental awareness:

Possible Physical Planning Implications:

- More emphasis on providing an attractive, safe environment.
- More emphasis on convenience and service
- Satellite campuses?
- More "non-traditional" students
- Increased emphasis on on-site housing (or more apartment, married student facilities)
- More on-site pre-school programs
- More concern about on-site safety and security
- Increasing computerization and networking throughout UNM
- Increasing access to resources information through distance education
  (more facilities for broadcast and reception)
- Use of national-based "tele-lectures"
- More personalized individual instruction
- More flexible classroom design
- Less need for as much on-site instruction (Satellite campuses, decreasing parking demands, decreased need for general classrooms)
- Increased electrical service requirements (more emergency backup needs)
- Continued need for research facilities (impact all campuses)
- Emphasis on conservation, alternate energy
- Awareness of waste flows and disposal (safety concerns)
Plan UNM
Trend and Implications Summary
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Medical Center Trends

Continued leader in innovative education
Increased third party coverage for those people not covered in new
More managed care programs
Increased competitiveness for patients
Population is getting older
Possibility of national health insurance
Growth of education programs with NM population growth
Fierce competition for research funds
Rapid increase in technology
Patient care and education continue to move to outpatient setting
Outreach to rural areas
Tertiary referral from physicians in state

Possible Physical Planning Implication(s)

- Need to provide same level of services as private providers
  - convenient access
  - improved parking
  - pleasant environment
  - convenient locations (pavilions?)
- Technology will rapidly change nature of services and facilities
- More ambulatory care facilities
  - located in remote locations?
  - day hospitals
- Rehabilitation
- Flexibility in education and research facilities
  - Emphasis on primary care as resource of patients
  - More focus on service and one-stop diagnostic centers
  - Facilities to accommodate the needs of the frail elderly, acute issues, signage, seating, etc.
  - More services- this will probably mean more square footage per function
  - Emphasis on tertiary care
  - Build relationships with primary care providers outside UNM.
    - continuing medical education centers?
    - consider providing on-site a home?
- Incorporation of technology as it relates to patient care, education and research
- Chronic care facilities - hospice/nursing home facilities?

Need to respond to state mandates

New specialized facilities

Continued reliance on non-public sources of revenue
Small growth in state funding for education

- Increased emphasis on patient revenues
- Increased research emphasis
  - additional research facilities
  - increasing technology and utility service demand

Planning Assumptions

- Flexibility in growth patterns - and use and traffic patterns
- "High-Tech" and "High Touch" personal aspects of programs and facilities
- Flexibility in facility design
- Plan so unexpected can be accommodated
- Take services to the customers: patients, students and people of New Mexico

Facility Assumptions

- Traffic entrance, circulation and parking are key aspects
- Expansion of Cancer Center
- Day hospital for Children's Psychiatric Hospital
- North campus student union and educational space (classrooms, discussion rooms, large lecture hall)
- Growth of new programs (e.g. Center for Alcohol, Substance Abuse and Addictions and many others)
- Expanded library
- Administrative facilities
- Expanded laboratory facilities
- Continued growth of hospitals (some on-site, some off)
  - (may be multi-geographically)
  - (may be freestanding children's hospital)
- Administrative services
- Additional research facilities
- Modernization of teaching, research and patient facilities
- Linkage to campus-wide pedestrian routes
Existing/Projected Conditions

The current UNM long-range plan was developed in the early 1960s. It has reached the limits of its vision and it is time to look to the next 20 to 30 years.

While there are current UNM policies to guide academic growth until year 2000. There are no long-range physical development policies.

II. Lands

A. UNM has expanded from 20 acres at its founding to over 700 acres available for direct educational use currently (not including Branch Campuses).

B. UNM owns, leases or has options to use about 125 acres in the vicinity of its Albuquerque campus. These lands are used now for a variety of commercial purposes or are vacant. They can be used for expansion in the future.

III. Facilities

A. Existing Profile

1. UNM has about 6.8 million gross square feet of facilities.
   a) About 3 million gross square feet (about 44% of UNM’s total facilities) has been added to UNM physical plant in the last twenty years.
UNM has, and will continue to make significant investments in its physical assets. However, as the physical plant ages, increasing amount of resources should be devoted to maintenance and renewal.

b) 95% of UNM's gross square feet has been renovated in the last 20 years.

2. Over the last 20 years the proportion of space devoted to academic support, public service, research, and auxiliary services has risen while the proportion of space devoted to instruction, institutional administration and student services has decreased.

B. Future Needs

1. In general, UNM is comparable in space allocations to its peer institutions.

2. It is likely that UNM will add anywhere from 2.9 to 6.3 million additional gross square feet to meet expanding enrollments and educational program needs by the year 2020. An addition of 4.8 million square feet is the mid-range projection. Assuming three-story construction, it will take about 60 acres to accommodate this growth.
UNM Gross Square Feet Added or Renovated

Factors Impacting Facility Needs

UNM Master Plan
Project Information Package
ARCH 2/92
IV. Major Utilities

A. Heating/Cooling

There is adequate capacity on the main and central campuses, but the distribution lines are a constraint. Capacity should eventually be added, possibly by an additional physical plant on the north campus.

B. Domestic Water

a) There are both insufficient source supply and distribution system to provide domestic water to the campus.

b) There is a supply problem caused by hard water clogging the distribution lines. This is a health and safety issue that impacts the ability of the campus to supply water to emergency fire systems.

C. The capacity of both the drainage and sewer lines is adequate at this time.

D. Electrical

Supply is adequate for another 1 million square feet. However, distribution cabling is prone to failure and should be gradually replaced.

E. Other major systems are adequate to accommodate growth.

V. Parking and Access

Providing parking to all those who use the University is a continuing issue. Generally, the demand for spaces on the main campus exceeds the supply. While there are sufficient spaces available on the far north and south campuses to meet existing and projected demands, they are perceived to be inconveniently located.

A recent UNM Parking/Access study recommended the construction of 2,100 new spaces within 500' of the core of the Central...
Campus to meet projected needs through the year 2000.

VI. Capital Needs

UNM has currently some $200 million of capital "wishes" generated by various UNM colleges and departments for major and minor projects. From this list about $40 million was requested from the Legislature through the Commission of Higher Learning. Actual legislative appropriation will be less than requested.

Opportunities/Constraints

The following chart illustrates major physical planning opportunities and constraints. Identification of opportunities and constraints helps to define potential planning responses. This list will be refined as planning continues.

Opportunities

1. To capitalize upon UNM's beautiful exterior environment
2. To extend pedestrian network to north campus (join the two campuses)
3. To rectify some functional problems (psychology etc.)
4. To increase densities in certain parts of the campus without impacting the quality of life.
5. To make UNM more "user-friendly"  
   a) convenient parking  
   b) safer access
6. To address short-range problems with long-range thinking

Constraints

1. Existing infrastructure
2. Funding capacity
3. Crowding in certain parts of the campus
4. How to deal with non-university owned land (edges and perimeters)?

UNM Master Plan

Project Information Package
ARC 2/92
IV. Preliminary Planning Concepts

A. Physical Environment

1. Re-affirm basic planning and design principles:
   a) Maintain/reinforce/extend the unique qualities of UNM’s central core including:
      (1) Southwest architectural style.
      (2) Human scale
      (3) Landscaping
      (4) Exterior environment/Open space
      (5) System of pedestrian movement
   b) Extend development principles to North Campus

2. Join functionally Central-North campuses (Eliminate the barrier of Lomas Boulevard, connecting the two campuses).

3. Provide accommodations for greeting the public (Information areas, signs, maps, parking, etc.).

4. Capitalize upon UNM’s rich cultural heritage in physical design.

5. Beautify and enhance major public edges of UNM.

6. Acknowledge impact and interrelationship UNM has on surrounding neighborhoods.

Possible Strategies:
- "Tame Lomas canyon" by:
  - pedestrian overpasses
  - slowing down traffic
- Create a system of open spaces and pedestrian networks connecting north campus areas.
- Extend central campus networks northward.
Possible Strategies:
- Create positive relationships with surrounding areas. Consider:
  - buffer zones?
  - impact areas?
  - selected acquisition and development?

- Cooperate with other public bodies to:
  - improve public rights-of-way
  - develop public facilities
7. Access/Parking
   a) Identify and reinforce major entrances to UNM
      (1) emphasize, create entry(ies)
      (2) information areas, etc.
   b) Acknowledge major corridors, nodes and focal points
   c) Make UNM assessable to students, faculty, staff and students:
      (1) Convenient, affordable parking
      (2) Clear and safe vehicular access
      (3) Meet higher than minimum accessibility standards.

B. Growth/Change
1. Functions
   a) Recognize that the campus should be service-oriented to its "clients":
      (1) students
      (2) faculty
      (3) staff
      (4) public
   b) Refine and reinforce functional zoning principles:
      (1) Instructional and instructional support in core
      (2) Peripheral and support activities to the outside.
      (a) Locate public service or public oriented activities toward periphery (or where close to

III. Resources
How to accommodate growth?

Possible strategies:

a) Increase density of future building projects (20% developable density everywhere)

b) Use existing space more efficiently

c) Examine reuse of older facilities (Bookstore, Reservoir)

d) Develop future growth plan anticipating 20-30 year enrollments
C. Quality of Life
1. Create a safe and secure environment during the day, evenings, and weekends.
   a) Sufficient exterior lighting
   b) Convenient and accessible parking
   c) Develop a core for residential students
   d) Develop future growth plan anticipating 20-30-year enrollments
2. Accommodate growth:
   a) Increase density of future building projects (20% developable density everywhere)
   b) Use existing space more efficiently (Bookstore, Receiving, Cafeteria)

D. Learning Environment
   Anticipate and accommodate new learning technologies in all UVM facilities.

(b) Possibly consolidate public-oriented art activities off campus. Provides opportunity for gathering visual art exhibition spaces.
Introduction
This section will provide campus maps pertinent to a variety of planning topics including:

1. Albuquerque Metropolitan Area-Employment and Residential growth areas
2. Campus Location and Generalized Land Ownership
3. Central-North Campus Generalized Ownership
4. Historic Development Map
5. Facilities with Building Numbers (see B2-6)
6. Central/North Land Use Planning Zones (with acreages)
7. Central/North Parking Zones (with acreages)
8. Building Density by Parking Zones
9. South Campus Planning Zones
10. Major Use of Buildings by CHE Categories
11. Age of Buildings
12. Pedestrian and Service Routes
13. Major Malls/Plazas (Exterior Environment)
14. Utility Network System
15. Parking Zones and Adequacy
16. Major Vehicular Circulation
17. Central Campus Sites Map
18. North Campus Sites Map
19. South Campus Sites Map

All maps have been generated by the Department of Facilities Planning and ARC's Geographic Information System (MapInfo). This is the same software used by UNM's Real Estate Department.

This software combines graphic information with alphanumerical relational databases. There are three basic databases which were the basis of this project:

- CHE Space File Data
- CHE Building Renewal Database
- UNM Scheduling Database

The CHE databases have been extensively...
<table>
<thead>
<tr>
<th>Campus</th>
<th>Building</th>
<th>Building Name</th>
<th>Gross SF</th>
<th>Constructed</th>
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B-8  Project Information Package
ARC 2/92

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</tr>
<tr>
<td>--------</td>
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<tr>
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<tr>
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<td>13,709</td>
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</tr>
<tr>
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<td>5,061</td>
<td>1968</td>
</tr>
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<td>305</td>
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<td>1968</td>
</tr>
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<td>SC</td>
<td>306</td>
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<td>250</td>
<td>1968</td>
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<tr>
<td>SC</td>
<td>307</td>
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<td>1965</td>
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<td>SC</td>
<td>309</td>
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<td>1965</td>
</tr>
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<td>2,618</td>
<td>1981</td>
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<td>SC</td>
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<td>Gymnastics Gymnasium</td>
<td>9,929</td>
<td>1983</td>
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<tr>
<td>SC</td>
<td>313</td>
<td>Track Storage Bldg</td>
<td>1,643</td>
<td>1985</td>
</tr>
<tr>
<td>SC</td>
<td>317</td>
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<td>25,621</td>
<td>1975</td>
</tr>
<tr>
<td>SC</td>
<td>318</td>
<td>Married Stud Apt Lev 1</td>
<td>15,183</td>
<td>1975</td>
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<tr>
<td>SC</td>
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<td>15,183</td>
<td>1975</td>
</tr>
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<td>SC</td>
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<td>1975</td>
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<td>SC</td>
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<td>1986</td>
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<tr>
<td>SC</td>
<td>334</td>
<td>Hancock Dickwood Bldg</td>
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</tbody>
</table>
UNM Profile

UNM is New Mexico's largest institution of higher learning.

Introduction
The University of New Mexico main campus is located in Albuquerque, the region's largest metropolitan area. UNM has three branch campuses at Valencia, Gallup and Los Alamos and also offers classes at other locations in the state. Albuquerque campus facilities comprise approximately 7 million gross square feet.

With over 170 accredited instructional disciplines, UNM attracted a Fall 1991 enrollment of over 25,000 registered students (a full-time equivalent of 18,200), continuing a decade-long trend of enrollment increases. Exhibit C1 shows enrollments by school or college and Exhibit C2...
UNM Student Enrollment (Headcount) by School or College, Fall 1991

<table>
<thead>
<tr>
<th>Program</th>
<th>Headcount</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Programs</td>
<td>2,297</td>
<td>8.80%</td>
</tr>
<tr>
<td>Non-Degree</td>
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<tr>
<td>Certification Programs</td>
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<tr>
<td>Associate Programs</td>
<td>306</td>
<td>1.12%</td>
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<tr>
<td>Bachelor of University Studies</td>
<td>1,434</td>
<td>5.30%</td>
</tr>
<tr>
<td>University College</td>
<td>6,138</td>
<td>22.98%</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>334</td>
<td>1.23%</td>
</tr>
<tr>
<td>Nursing</td>
<td>334</td>
<td>1.23%</td>
</tr>
<tr>
<td>Medicine</td>
<td>334</td>
<td>1.23%</td>
</tr>
<tr>
<td>Law</td>
<td>58</td>
<td>0.21%</td>
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<tr>
<td>Fine Arts</td>
<td>126</td>
<td>0.46%</td>
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<tr>
<td>Engineering</td>
<td>1,268</td>
<td>4.64%</td>
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<td>Education</td>
<td>454</td>
<td>1.66%</td>
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<tr>
<td>Dental Programs</td>
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<td>0.21%</td>
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<td>Business/Commerce</td>
<td>1,311</td>
<td>4.77%</td>
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<td>Arts and Sciences</td>
<td>424</td>
<td>1.58%</td>
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<tr>
<td>Pharmacy</td>
<td>424</td>
<td>1.58%</td>
</tr>
<tr>
<td>University College</td>
<td>6,138</td>
<td>22.98%</td>
</tr>
<tr>
<td>Bachelor of University Studies</td>
<td>1,434</td>
<td>5.30%</td>
</tr>
<tr>
<td>Associate Programs</td>
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<td>0.46%</td>
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<tr>
<td>Certification Programs</td>
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<td>0.06%</td>
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<tr>
<td>Non-Degree</td>
<td>334</td>
<td>1.23%</td>
</tr>
<tr>
<td>Graduate Programs</td>
<td>2,297</td>
<td>8.80%</td>
</tr>
</tbody>
</table>

TOTAL: 25,009  100.00%

*This does not include 345 House Officers - those students who have completed their medical degree and are now fulfilling their residency requirement.

C-2 Project Information Package
ARC 2/92

III. Resources
### Fall 1991 Enrollment by Degree Status

- Graduate: 20% (4,940)
- Non-degree: 16% (4,022)
- Undergraduate: 64% (16,047)

### UNM Faculty:

**Increases in Full- and Part-time Faculty Members from 1982 to 1990**

<table>
<thead>
<tr>
<th>College or School</th>
<th>#Full-time '82</th>
<th>#Full-time '90</th>
<th>#Part-time '82</th>
<th>#Part-time '90</th>
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<td>Arts &amp; Sciences</td>
<td>365</td>
<td>375</td>
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<td>Architecture</td>
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<td>15</td>
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<td>9</td>
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<td>Dental Programs</td>
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<td>7</td>
<td>5</td>
<td>2</td>
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<tr>
<td>Law School</td>
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<td>30</td>
<td>9</td>
<td>12</td>
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<td>20</td>
<td>0</td>
<td>2</td>
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<tr>
<td>Public Administration</td>
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<td>51</td>
<td>53</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Other</td>
<td>13</td>
<td>5</td>
<td>10</td>
<td>13</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1029</strong></td>
<td><strong>1187</strong></td>
<td><strong>253</strong></td>
<td><strong>370</strong></td>
</tr>
</tbody>
</table>

Percentage Change:
- 1982 to 1990 = 15.47% Increase
- 1982 to 1990 = 46.25% Increase

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**Exhibit C2**

**Exhibit C3**
UNM is responsible to the New Mexico Commission of Higher Education for fiscal matters.

UNM is responsible to the New Mexico Commission of Higher Education for fiscal matters. UNM has long been a national leader in percentage enrollment of Hispanics (21%) and Native Americans (3.4%).

For fiscal matters UNM is responsible to the Commission of Higher Education which is charged by law with financing state institutions of higher learning. Nearly 92 percent of students are New Mexico residents for tuition purposes. Non-residents come from all other states and more than 80 foreign countries. Forty-seven percent of students are men, fifty-three percent are women. The student body is much older than in past years, with a median age of 25.2 years in Fall 1990.

UNM's faculty has been growing to serve increased enrollments. During Fall 1991, full-time faculty numbered 1,187, up over 15% from 1982. During the same time period, part-time faculty numbers rose to 370, up 46%. Refer to Exhibit C4 for a breakdown by department.

Mission
In 1964 the New Mexico Commission on Statewide Higher Education stated that UNM should continue as "the one institution in the state offering at all levels of higher education a broad spectrum of programs and degrees in the humanities, social sciences, and sciences, as well as the technical and professional areas."
UNM offers a wide range of academic programs, including many not offered elsewhere in the state.

Programs
Exhibit C2 shows enrollment numbers and percentage of enrollment for all programs.

Undergraduate Programs
• University College is the first academic home for all freshmen and many transfer students. It also permits student to pursue a combination of both interdependent and intercollege courses difficult under the requirements of a single department or college.
• School of Architecture and Planning is the only school in New Mexico offering nationally accredited degrees in architecture and planning. Special emphases are available in energy-conscious design, behavior and design, and planning. A special undergraduate program in environmental design is also offered.
• College of Arts and Sciences is UNM's largest college, consisting of approximately one-third of the University's faculty members and more than 4,000 undergraduate students, with almost all other students taking classes in the college.
• College of Education has become a nationally recognized leader in multicultural education. The college has received awards for its field-based teacher education program for Native Americans and for its collaborative teacher education programs with public schools throughout New Mexico.
• College of Engineering offers a comprehensive array of programs in the major areas of engineering and computer science. Students can become involved in the advanced research taking place in UNM's premier research facilities, such as the Center for High Technology Materials and the UNM/NSF Center for Micro-Engineered Ceramics.
• College of Fine Arts provides disciplined, professional training not only for studio or performing artists, but also for art scholars and historians. UNM's Fine Arts Center contains
theaters, the University Art Museum, a fine arts library, and practice rooms.

- **Schools of Management** offer a range of programs in management, finance, business computer systems, accounting, marketing, international management, and business law, drawing on the resources of the business community to prepare students for careers in the public, private, and nonprofit sectors.

- **College of Nursing** emphasizes a strong foundation in science and clinical experience, offering both bachelor's and master's degree nursing programs.

- **College of Pharmacy** is the only school of pharmacy in the state, offering a five-year undergraduate program which prepares individuals for a wide variety of pharmacy-related roles.

- **Division of Dental Programs** offers dental programs designed to meet a variety of career needs.

- **School of Medicine** offers several undergraduate and graduate programs in the basic sciences, and allied health sciences to help students prepare for careers in the expanding fields of health and mental health.

**Graduate Programs** include the physical and life sciences, engineering, humanities, the arts, education, business, and the social sciences. Additionally, the University has professional degree programs in law, medicine, and management.

**Academic Support and Student Services**

**Libraries:** UNM's collection of books recently reached 1.7 million volumes in seven libraries, making the UNM library system not only the largest in New Mexico, but also one of the most important research resources in the Southwest. In addition to a general library, separate library facilities are provided for business and economics, education,
fine arts and architecture, law, medicine, and science and engineering.

Student Services Center offers one convenient location for many services, including admissions, financial aid, scholarship counseling, registration, cashier, records, and job services.

Career Counseling and Placement assists both current students and graduates in career selection, resume writing, job searches, and gaining interview skills. The Center also arranges for hundreds of companies and governmental agencies to come to campus for student interviews.

Student Health Center provides a variety of services including primary health care and women's health services, immunizations, personal and group counseling, and many health education programs.

Special Services Office aids handicapped students with a variety of services, including readers for the visually handicapped, sign language interpreters for the hearing impaired, cassette tape recorders for recording lectures, transcribers, and tutors.

Ethnic and Minority Programs: African-American, Hispanic, Native American, and Women studies programs are offered in several departments.

International Students: Over 500 foreign students attend UNM each year and a large number of UNM students go abroad to participate in academic programs. On campus, the International Center serves as a gathering place.

Nontraditional Programs: UNM provides special credit and non-credit courses to people not regularly enrolled, including resident and extension credit courses, certificate programs, courses carrying professional Continuing Education units, seminars, symposia, workshops, conferences,
independent study through correspondence, and college preparatory courses.

Evening and Weekend Programs: Because increasing numbers of returning adult and other non-traditional students have families and full-time jobs, UNM has an extensive schedule of late afternoon and evening classes, some permitting students to complete degrees entirely through evening classes, and many undergraduate required courses are offered on weekends as well.

Veterans: UNM is approved for certification of veteran students eligible for educational assistance under the G.I. Bill. On-campus assistance is also available to veterans, including counseling, and a student veteran association is active.

Campus Life
Student activities and organizations offer opportunities to meet people, share ideas and concerns, and enjoy a broader college experience. Activities include dances, concerts, intramural sports, art shows, and lectures. Zimmerman Library, Maxwell Museum of Anthropology, the basketball arena, and Popejoy Hall not only serve the University, but also make UNM one of the state's chief artistic, recreational, scientific, and cultural resources.

Athletics: The UNM Lobos compete in eleven women's sports and thirteen men's sports at the varsity level, as well as in a number of intramural sports.

Leisure Services provides sports and recreational activities, including team, individual, and two-person sports activities. A special program provides trips, clinics, and lessons, and rental facility offers outdoor equipment to students, faculty, and staff.

Recreation and Entertainment: Since its opening in
1968, Popejoy Hall has attracted over five million people to performances ranging from orchestral, dance, musicals, to rock music. Year-round entertainment at UNM also includes movies and lectures.

**Clubs and Organizations:** With more than 240 officially recognized clubs and organizations, ranging from student governments to academic honoraries, students can choose activities that relate to their major field of study, their culture, political affiliation, favorite sport, and more.

**Religious Organizations:** More than sixteen religious groups and denominations maintain campus centers and organizations to meet the religious and social needs of people in the University community.

**Sororities and Fraternities:** Four national sororities and twelve national fraternities are housed at UNM.

**Student Union Building:** The Student Union serves food from breakfast through dinnertime, offers a place to relax, study, see a movie, attend a dance or art show, or prepare homework on a computer or typewriter at the Lobo Lab. The Union also houses a credit union branch, crafts workshops, and a game room. The ballroom and other rooms are available for rental.

**Student Housing**
Every year nearly 2,000 students choose to live in one of six residence halls. Dormitories range from single-sex to coed, and from limited, escorted visitation to unescorted visitation. Later in 1992, an additional 500 apartment-style units will be open for upperclass students. UNM also offers 200 apartments several blocks from campus for student families. For students who prefer off-campus living, UNM offers an apartment referral service. A dining hall is available for students living in the dormitories.

*UNM strives to meet the housing needs of students through several types of dormitories, married student housing and an apartment referral service.*
Financial Aid and Scholarships
A variety of scholarships are offered to students, both from within the state and outside. Awards are based on factors such as high school or college grade point average, advanced placement work, and college entrance exam scores. Grants and loans are awarded based on financial need. Eligibility is determined by a standard formula using information reported on financial aid applications. Work-study programs are available for students who need to supplement their incomes by working part-time.

University of New Mexico Medical Center
The Medical Center is part of UNM and comprises twelve major components:
- UNM School of Medicine
- University Hospital, including the Children’s Hospital of New Mexico
- Cancer Center
- Carrie Tingley Hospital
- Mental Health Center
- Children’s Psychiatric Hospital
- Center for Non-Invasive Diagnosis
- Office of the Medical Investigator
- Emergency Medical Services Academy
- Medical Center Library.

Financial aid, including scholarships and loans, is available to students.
Questions

1. What impacts do existing state and institutional plans have on long range physical planning?

2. What implications will trends have on UNM’s physical environment?

3. How many students can we anticipate by 2020?

4. What will be the characteristics of the student of the future?

This section will provide resource information on the following:


2. Societal, instructional and general higher education trends.

3. Information regarding present and projected enrollment trends and the growth trends of the surrounding Albuquerque community.
1. Implications of Planning Documents

A. UNM 2000

UNM has adopted an Institutional Plan titled UNM 2000. This plan sets institutional goals and objectives for the next 10 years. These goals and objectives set important directions that must be taken in account in long-range physical planning.

The following is an overview of UNM 2000 and specific goals and objectives that have physical planning implications. Please refer to the full document for more detailed discussion of each topic.

A. Mission of the University

To serve the educational needs of the citizens of the state through:

a) Comprehensive educational programs at the associate, baccalaureate, master's and doctoral levels;

b) Research, scholarly and other activities to support educational programs and to create and disseminate knowledge; and

c) Selected services that are part of, contribute to, or originate from the teaching and scholarly activity programs.

B. Major Priorities of UNM 2000 Plan

1. Focus on providing a strong undergraduate education.

a) honors college with a rigorous academic curriculum, residential living, intellectually stimulating environment, and enhanced interaction between faculty and students.

b) A core curriculum.

2. The university will grow, but the growth will be managed.

a) Balance between upper and lower division
b) maintain current percentage of graduate and professional students (25%).
c) Students with a rich diversity.
d) More residential housing.
e) Improved quality of life for all students.

3. The University will strive to enhance the quality of teaching and research by providing broad-based instruction, while building excellence in certain areas.

4. The University will identify, develop and support areas of emphasis...
a) UNM as a University for the Americas
b) The Southwest
c) Science and engineering.

5. The University will endeavor to find greater financial support to achieve these goals.

C. More Specific Ideas

1. Educational Environment
   a) The University strives to be truly superior, not simply adequate.
   b) The University has the responsibility to recognize and respond to social, scientific, cultural and economic needs of the State, as well as to adhere to the academic principles of excellent institutions of higher education.
   c) UNM will maintain and build upon high quality, broad and innovative programs of undergraduate and graduate instruction and research, including multi-disciplinary and interdisciplinary programs.
   d) The University will anticipate and meet the needs of its students.

2. Students
   a) Goal Enrollment - The enrollment goal consists of three elements: quality, size and diversity.
(1) Size -
   (a) Main campus to 29,000 and branch campuses to 5,100.
   (b) Balance of lower and upper division
   (c) Continue to enroll a graduate and professional population of about 25% of the total student population

(2) Diversity - there will be a rich diversity of age, gender, ethnicity, of traditional and non-traditional students, of in-state, out-of-state and international students and of academic interests.

(3) The enrollment goal of quality, growth and diversity must be accompanied by sensitivity to the student’s environment at the University.

b) Goal: Academically and Socially Rich Environment

(1) Objective 1. On-Campus Living
   Because of the importance of the residential experience, the University will increase the percentage and diversity of students residing on campus. The residential environment will include links to the academic programs of the University, including greater interaction between students and faculty outside class.

3. Programs
   a) Objective 3. Areas of Academic Emphasis

   (1) Science and engineering (because of the presence of major scientific laboratories in NM and the emergence of the strong private research and development sector).

   (2) University for the Americas (build upon adjacency to Mexico, Spanish use by
UNM expects upper division growth on the main campus.

UNM 2000 recognizes that a component of academic quality is to provide a safe and secure environment that builds and upon the latest learning technologies.

citizens, cultural and historical inks to Mexico and South America
(3) the Southwest. (as a living laboratory for scholars regarding unique geographical and biological phenomena).

b) Teaching
   (1) Goal. Academic Quality and program Definition
      (a) Objective 7. Associate Degrees
         i) There will be a limited number of associate degrees on the main campus.
      (b) Objective 8. Learning Environment
         i) The special physical characteristics of UNM will be maintained as the campus expands to accept more students.
         ii) The University will seek new ways for the physical environment to contribute to the quality of life on campus.
         iii) Plans will meet changing academic program needs and provide a futuristic learning environment that anticipates new educational requirements of students who will graduate in the year 2000.
         iv) The University will assume a leadership position in the development, coordination and appropriate use of technologies in support of its teaching, research and public service missions.

   (c) Objective 10. University - Public School - Two Year School Collaboration
      i) The University will expand its extensive collaboration and shared programs with the primary and secondary school of NM.
      ii) The University will also expand

UNM will expand upon existing collaborations with public schools and 2 year state institutions.

UNM Master Plan

Project Information Package
ARC 2/92

D-5

III. Resources
and strengthen its collaboration with the state's 2-year institutions (including TVI)

d) Objective 11. Academic Programs at the Branch Campuses

1) Each branch campus will operate as integral parts of the University as a whole.

2) Each campus will have a distinct mission within which the administrative and academic processes will be coordinated with the main campus.

3) Branch colleges will remain as open-admission, 2-year campuses.

e) Objective 14. Libraries

Goal is to move into the "top 50" research university libraries in the nation.

c) Research, Creative Scholarly Activity

1) Goal: Research Quality and Program Definition

(a) Goal is to move will into the "top 50" research universities in the US.

ii) Objective 5. Research Environment

1) Libraries, integrated computer and communication facilities, special collections and museums and other service elements provide essential benefits to all research endeavors.

d) Public Service

1) Goal: Public Service Quality and Program Definition

(a) The University will offer carefully selected public service activities that are part of, contribute to or originate from the teaching and research functions of the institution these
public service programs are designed
to use the University's unique
strengths and resources to increase
the quality of life in the State.
i) Objective 1. Service Professions
ii) Objective 2. Arts and Cultural
   Activities
iii) Objective 3. Intramural and
     Intercollegiate Athletics
iv) Objective 4. Economic
    Development and Social Services.
v) Objective 5. Public Information

4. Goal: Increased Financial Support (to increase
   all sources of revenue to support academic
   programs and client services.
   a) The University will aggressively manage
      ancillary revenue resources to generate a
      maximum return on its assets and programs
      thereby generating additional funds to
      support educational needs.

The purpose of this report was to provide the Commission on Higher Education a guide for future decisions. The Commission on Higher Education produced this report as a strategic plan for the higher education institutions of New Mexico. After analyzing the current and future status of New Mexico in areas of higher education, economics, demographics, and social issues, the Commission reviewed these findings with the people and higher education institutions of the state of New Mexico. With the findings from their Contextual Analysis and from public testimony, the Commission developed their conclusions and goals. As stated in the report: The goal of higher education in New Mexico is to optimize the state's long-range development of its human and natural resources and its economy. The system must assure access to diverse high quality postsecondary educational programs and services that are relevant and affordable to all New Mexico citizens.

In general this document calls for New Mexican higher education institutions to:

- Improve participation and retention rates of all groups, but especially of underrepresented groups, in all programs and levels of higher education, particularly in such fields as mathematics, physical sciences, and engineering.

- Ensure that educational services are available to all ethnic origin and economically and educationally disadvantaged groups.

- Encourage lifelong learning by providing students with access to appropriate experiences, career counseling services, and academic advisement to facilitate career planning preparation, and individual growth.
throughout life.

- Become more cost-efficient.

- Strengthen the interdependence between the state's higher education institutions and its public school system, both quantitatively and qualitatively.

- Provide leadership in response to a broad range of developments that will challenge the state's resources in the coming years. This will require a coordinated effort with communities and economic development agencies, the private sector, the public schools, public health and welfare agencies, and other social policy groups.

- Work with the Commission in defining their mission and role within the state system of higher education.

- Not offer programs if it is impossible for an institution to meet high levels of quality. Resources should be concentrated where quality can be assured. Institutions should concentrate their efforts and resources into program areas where it cannot be adequately met elsewhere. Each program and each institution must be constantly evaluated in an open, supportive and constructive process.

- Ensure the flexibility and adaptability of faculty in responding to changing institutional priorities and needed programmatic changes.

- Establish additional endowments for faculty chairs in areas of particular need to the state's economy. The chairs should be established through matching funds provided by the state and funds raised by the
institutions from private sources. Private funds should come from new fund raising efforts and not from existing institutional or foundation balances. Chairs should be established in the areas of international marketing, small business development, money and banking, entrepreneurship and technology transfer. Endowed chairs should also be established in academic areas related to future centers of technical excellence.

As a research institution, the University of New Mexico should:

- emphasize programs to increase the proportion of enrollment at the upper division, graduate and professional levels and should strengthen their research programs in areas of particular expertise.

- develop new doctoral programs to respond to the need of New Mexico but should not duplicate programs that exist at other NM universities.

- at the same time, remain committed to high quality student centered lower division programs.

- review admission standards periodically to ensure that they provide for the maximum diversity within the student body while improving the quality of the institution.

- improve its accessibility to two-year college graduates, and should establish close articulation agreements with all two-year institutions in NM.

- strive to improve the transfer of technology to the state's economy. They suggest that a consortium of NM institutions be established
to provide for a unified delivery and outreach system. Under this consortium the state's research institutions would be given primary responsibility for the identification and development of new technologies with potential economic development applications. Once identified, these technologies would be disseminated throughout the state by the consortium. Institutions within these consortia have a special responsibility in promoting commercial research and development. They should consider the establishment of a public non-profit corporation to maximize the potential of these efforts. Close cooperation between the research universities and NM national laboratories is essential.

Specifically, UNM should:
- have strong and comprehensive baccalaureate programs with an emphasis on the upper division.
- strengthen and expand its role at the graduate and professional levels and its research programs in basic and applied science and other areas of expertise.
- continue to fulfill its special responsibility to meet the economic, social, and cultural needs of the state. This responsibility includes maintaining balanced programs which are built on liberal studies, which assure economic development, and which preserve a strong academic perspective.
- develop further research and programmatic concentrations including new graduate programs in business, engineering and other technology-related topics. UNM should strengthen its extensive research and education collaboration with both the federal and private sector, as well as its role in...
technology transfer.

- utilize its expertise and current leadership in instructional telecommunications as the coordinating institution in New Mexico for the ITV consortium.

- continue to work closely with Albuquerque T-VI to assist it in developing into a comprehensive community college serving the Albuquerque metropolitan area.
2. Trends

The purpose of this section is to highlight various factors and trends at work in society at large, in government, and in the educational system that are impacting planning, design and use of university educational facilities. Information is collated from various books, reports and commentaries by a variety of futurists.

Every effort has been made to highlight and summarize key ideas as well as provide enough background to make these ideas understandable. It is expected that topics will evolve as additions and amplifications are made.

A. Introduction

Future Trends and their Impact on Higher Education Planning and Facility Design

According to futurists, societal changes, changing demographics, scientific and technological innovations, expansion of the information economy and a emerging global economy will all bring sweeping change for our institutions. The adaptability of Institutions of higher education to effectively address these changes will be a necessity for the 21st century.

Many futurists have attempted to predict the institutional changes and evolving social arrangements that may take place in the 21st century. The impact of these changes will greatly effect the environment of higher education. The following section gives a brief overview of the key trends that observers and futurists believe will affect the social, economic and political nature of the 21st century.

In Alvin Toffler's *The Third Wave*, predictions of an upcoming super-struggle that will form 21st century democracy are made painfully clear. This
super-struggle is between Second Wave people committed to maintaining the Industrial past and Third Wave people who recognize that the world's problems can no longer be resolved within the framework of the industrial order. Toffler predicts that the need for new family, educational and corporate institutions involves the design of more appropriate systems. He believes that legitimate options for the nuclear family, and less standardization and more individualism in the schools will occur. Cultural and moral training may play pivotal roles in the process.

John Naisbitt, in Megatrends, states that the information society will drastically change the way we think, do business and educate ourselves. He insists that the information/technology link will form the basis of exchange in the future, i.e., no longer will money be the only resource for starting businesses. Industry as we now know it will become "brain-intensive" and rely on the extensive technical skills of its workers. Naisbitt anticipates that computers and technological innovations have established the way for a more global society that is interdependent. He believes that even the small community has realized its need for interdependence within the community itself and with the world at large.

Lester Thurow, who describes himself as an "economic educator," believes that the major shift in the 21st century will be that Europe will become the world's largest economy and the United States will become the second largest. In a world capital market, the game will move from a game of inventing new products to a game of inventing new processes. The key problem is educating an American work force that can anticipate the needs of new high-tech procedures. Thurow believes that every industry in America from banking to clothing stores is going to be a high-tech industry. "The United States is the one industrial country in the world that does not have a post-secondary
Key Trends:

- **Rapid growth and innovations in science and technology.**

- A technological and information boom.

- Change from economically independent countries to a globally interdependent and cooperative economy.

- Changing demographics
  - Increase in minorities as a proportion of the population
  - Aging of the population

- Number of single parent families steadily growing.

- Increased environmental issues.

- Cultural diversity continuing as an issue.

Education system for the non-college bound." (The American School Board Journal, September 1991)

According to demographer Richard Hokenson, besides the technological innovations, the crucial changes will be demographic. With the "baby bust" generation now moving into adulthood, a much smaller group than the previous baby boom generation, along with less consumers, there will be fewer marriages resulting in fewer children. As a result, college enrollments will decline and there will be fewer trained adults will be entering the work force. These demographic changes will result in an economy that is "recession sensitive" because populations are not increasing at the same rate. The ability of the economy to stabilize in a recession will be much slower. (1991)

In addition to these demographic changes several authors for the *Futurist* magazine indicate that the major changes in the demographic profile of the American work force will influence trends in the 21st century. These include the increase of minority populations and women in the work force and the overall aging of the population. The following sections will elaborate on the issues presented above and give a general overview of the trends that will continue into the 21st century.

B. Broad Future Trends

1. Changes in the Society
The changes taking place in American society are affecting the design and operation of university facilities. Some of the most significant societal changes that will affect universities are:

- Global Interdependence will restructure the way we do business and communicate around the world.
  The need for basic understanding and communication between various cultures will be
Societal Changes Affecting Higher Education:

- Changes in business and communications stemming from a global society
- Changes in family structure
- Lifestyle changes
- Environmental awareness
- Continuing tight budgets.

...the basis for many institutional and organizational changes in the 21st century. Current political and economic changes in the three powerful regional economic blocs now beginning to dominate international commerce are: the European Community, the Pacific Rim and the North American Alliance. International relationships and world trade will accelerate in the 21st Century. The reductions in military budgets will make monies available for business expansion and as a result the international business climate will become increasingly integrated. (Cetron 1991)

- Family structure is moving away from the traditional working husband, housewife, and children to the majority of women working outside the home and an increasing number of single parent families consisting mostly of minorities. (Cetron 1990)
  The need for before- and after-school care will increase. The growing number of single parent students and married students will look toward the university for more services for day care. The current federal administration has made pre-school care a policy priority.

- People are increasingly concerned with lifelong health and physical fitness.
  The trend toward a sedentary society will lead to more exposure to the risks of an indoor environment, indoor pollution, sharp decrease in muscular activity, and new bad habits including poor diet and posture. Due to the increased use of automation and computers, the sedentary nature of the workplace evolves. (Coates 1991) Universities may increase the access to physical education to prepare students to lead more healthy and productive lifestyles. Attention should be given new designs that can alleviate indoor pollution in general, with specific attention to facility designs for computer and audio-enhanced...
communication terminals in both classrooms and computer labs.

- The trend toward environmental awareness has increased the public demand for industries to increase their social responsibility for environmental impacts resulting from corporate negligence. (Catron 1991) Universities can take steps to provide appropriate disposal of waste such as recycling systems and utilize energy efficient heating and cooling systems. These steps will satisfy both the concerns of public demand and provide long term savings for energy consumption.

- Debt continues and budgets tighten into the 21st century. The coming years are likely to be financially sparse. As the U.S. repays its debts, builds its productive capacity, exports more goods, and as consumers pay a higher price for imports, the level of resources remaining to pay governmental and family expenditures including higher education, will be limited.

2. Demographic Changes
The changing demographics of the American population, particularly among young Americans, will profoundly affect higher education into the 21st century. These changes include the increase in minorities and women in the work force, and the aging of the population.

- Minority diversity increases.
Women and minorities are increasing as a percentage of the American work force. According to a government report, Workforce 2000, 85 percent of the new entrants into the work force during this decade will be either women or minorities who are both disadvantaged. By the year 2000, nearly one in three college students and one-third of the nation's work force will be persons of color. As

Demographic change affecting higher education:

- The percentage of women and minorities is rapidly increasing as part of the work force.
- The U.S. population is aging, creating a new set of issues.
institutions struggle to survive declining "traditional" enrollments, many colleges and universities are encouraging diversity for fiscal as well as moral reasons. (Coates 1991)

- The U.S. population is aging.
  Older people are becoming a larger segment of the population. By the year 2020, when most baby boomers will have reached 65, the elderly will comprise 20% of the U.S. population. (Coates 1991) Issues such as health care, housing and financial support for our aging populations will become increasingly important in the next century.

3. Rapid Innovations In Science and Technology

- Increased access to resources and information will be available through Distance Education and the Electronic University.
  As science and technology advance, universities will have many new options for utilizing such innovations and transforming the traditional classroom. Distance Education, which originated in Britain, is a system that transmits curricula by the BBC at the University level. (Shane 1990) The Electronic University, which was created by Telelearning Systems Inc., has no campus but students enroll in courses, receive lessons, and submit homework over the phone lines via a modem attached to their home computers (Naisbitt 1994).

The ability to connect to outside information sources will create new learning opportunities and educational resources for college students. Educators can expect their students to be prepared for lifelong learning in a world where telecommunications will be a primary source of information. (Grunwald 1991)
Increased use of technological innovations will accelerate and personalize learning levels.

New learning technology will be created by the digitization of information in ways such as:
- compact disks (CD ROM), laser videodiscs
- digital video/TV
- data/computer digitization/ mapping
- video-enhanced communication
- voice communications

These technologies will transform traditional learning styles and make a wide array of resources and materials available for integrating curriculum. Electronically linked media centers will advance by taking advantage of on-line information services. (Herlihy 1989)

4. Shift from National to Global Economy

The shift from national to global economy will:
- force businesses to become more competitive
- increase the need for improved work force skills.

Loss in the international market share by American companies, and the increased competitiveness of foreign firms in the U.S. market have forced U.S. firms to seek ways to improve both domestic and international market organizational structures.

University-industry interaction will continue to increase because of the mutual benefits. Effective transfer of university research to industry helps industry become more competitive, and research support from industry offsets decreases in federal funding for academic research. Federal program changes and court decisions have made it favorable for universities to increase partnerships with industry for several reasons:
- Federal courts have strengthened patent laws.
- Antitrust laws have been relaxed to allow firms to form collaborative research ventures with universities.
- Federal tax laws have provided incentives for research and development.
- Changes in the U.S. Patent administration have streamlined the process. (Kenny 1986)

A closer cooperation between industry/business and university systems to create appropriate training programs is already occurring at some universities. The concept of the university is also changing. The increase of state support for economic development through small business formation, business incubators and entrepreneurship programs, and recent support for research parks and technology centers through universities have increased the formation of university partnerships. In the 21st century, new forms of corporate ownership and organizational structures for university/industry partnerships will need to be addressed for doing business internationally. (Cetron 1991)

Richard E. Anderson indicates that funding of science and technology will continue as two levels of corporate-university partnerships will emerge, "High Technology and Science" and "Mid-level Technology and Industrial Extension". The following is a summary of these two levels.

High Technology and Science. Development corporations are being formed to smooth the technological transfer from university laboratories to commercial production. In addition, states are encouraging the development of research parks near universities. High technology
breakthroughs are expensive to achieve and difficult, as well as undesirable to protect with patents. Therefore, the success of these discoveries will be in the Innovations of mid-level production of goods.

- **Mid-level Technology and Industrial Extension.**
  As we maintain our strength in basic sciences, we must also ensure that technological innovations find their way into the industrial process. This is, of course, the technological transfer issue that has stimulated Incubator programs, university-business cooperation and science parks in the design, manufacture and distribution of goods. Higher education can play an important role in bringing technological innovations to companies of all sizes and in all sectors of manufacturing. This type of corporate higher education partnership does not have the glamour of recumbent genetic research or of superconductivity, but may have more immediate economic impact. Moreover, it probably provides a better fit with regional universities and certainly with area community colleges.*

Futurists add caution that these corporate-university relationships have a tendency to privatize both research and academic arenas, resulting in a shift of public resources from social welfare to business welfare. This could result in the primacy of business/technological competitiveness and presuming that social problems can be eradicated by this new entrepreneurial spirit. Although many people support the principals behind developing corporate-university relationships, this trend should not overshadow the importance of other academic research and programs.
(Slaughter 1990)

- Move from industrial/manufacturing economy to information/service economy. The types of skills that Americans will need have changed from a manual orientation to an intellectual one. The decline of employment in agricultural and manufacturing industries will continue with the exception of those that have become more automated in their management and production systems. Information processing (collecting, analyzing, synthesizing, structuring, storing or retrieving data, text or graphics), as a basis of knowledge is becoming important in more and more jobs (Getron 1990). The Hudson report entitled Workforce 2000 predicts that the jobs of the future will require more technical knowledge and higher levels of literacy. Sweeping technological change, the rise of worldwide communications, and competition in the global marketplace require specialized knowledge and increased literacy. Broadly educated, self-reflective, articulate graduates will be more valuable to the nation, economically and otherwise, than narrowly trained technicians. (Anderson 1988)

C. Enrollment Trends in Higher Education

- Minorities are a growing proportion of the traditional college age population. By the year 2025, they are expected to make up nearly 40% of all 18-24 year olds. (Mingie 1987) Exhibit D-1 shows projections for Whites and minorities.

- Asians are the only minority whose college enrollment has increased, with the highest high
Enrollment Trends:

- Minorities are growing as a proportion of the population, but their participation in higher education is generally not keeping pace.

- While the numbers of "traditional age" students is presently declining, it is offset by increases in women, older and part-time students.

- The need for continual job retraining and learning will increase the number of older students on campus.

- Larger numbers of "high-risk" students can be expected on campus: minorities, academically disadvantaged, disabled and those of low socioeconomic status.

- School completion rate at 96% for males between 25 and 39, compared to 87% for white males. (Coates 1991)

- Declining enrolments and the decreasing number of minority groups (Afro-American, Hispanic and Native American) that are enrolling in universities are a major concern in the 21st century. College participation rates among Afro-Americans and Hispanics peaked in the mid-1970's and have declined since then. (Mingle)

- Declining populations of college age students 18-24 will be offset by increases in the number of women, older students and part-time students. (Mayville 1989)

- Due to rapid advances in science and technology, a constant need for adaptation and learning will increase the number of older students on university and college campuses. Roughly one-half of the work force needs substantial retraining or re-education every five to seven years, either to remain competent in current jobs or to make career shifts. This pace can be expected to accelerate. Lifelong learning will become crucial. Learning may take place within the university or college setting or be provided by employers who have come to expect less from educational institutions.

- The number of enrollees who fit the socioeconomic and demographic profile of "high-risk" students will have a major impact on American colleges and universities. These demographic trends support the idea that the federal government must renew its support for at-risk or high-risk college students. High-risk students are minorities, the academically disadvantaged, the disabled and those of low socioeconomic status. (Jones 1990) According to Ellen Chaffee, increasing enrollments will
Population Trends: 1980-2050
College-Age Population (18-24), Selected Years

<table>
<thead>
<tr>
<th>Year (In thousands)</th>
<th>Total</th>
<th>White</th>
<th>Minority</th>
<th>Minority %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>30,081</td>
<td>25,415</td>
<td>4,666</td>
<td>15.5%</td>
</tr>
<tr>
<td>1982</td>
<td>30,344</td>
<td>23,074</td>
<td>7,270</td>
<td>24.0%</td>
</tr>
<tr>
<td>1983</td>
<td>30,054</td>
<td>22,736</td>
<td>7,318</td>
<td>24.3%</td>
</tr>
<tr>
<td>1984</td>
<td>29,476</td>
<td>22,181</td>
<td>7,295</td>
<td>24.7%</td>
</tr>
<tr>
<td>1985</td>
<td>28,715</td>
<td>21,491</td>
<td>7,224</td>
<td>25.2%</td>
</tr>
<tr>
<td>1990</td>
<td>25,777</td>
<td>18,768</td>
<td>7,009</td>
<td>27.2%</td>
</tr>
<tr>
<td>1995</td>
<td>23,684</td>
<td>16,753</td>
<td>6,931</td>
<td>29.3%</td>
</tr>
<tr>
<td>2000</td>
<td>24,590</td>
<td>17,062</td>
<td>7,528</td>
<td>30.6%</td>
</tr>
<tr>
<td>2025</td>
<td>25,447</td>
<td>15,468</td>
<td>9,979</td>
<td>39.2%</td>
</tr>
<tr>
<td>2050</td>
<td>25,659</td>
<td>14,278</td>
<td>11,381</td>
<td>44.4%</td>
</tr>
</tbody>
</table>

Source: 1980: Current Population Reports, Series P-25, No. 917, Table 1.
1982-2050: Current Population Reports, Series P-25, No. 927, Table 2.

*Does not include Spanish-origin population if they were classified as
"White" rather than "Black and other" in the survey data.

Distribution of College Students by Sex for Selected Years

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>10,985,600</td>
<td>12,056,800</td>
<td>12,233,000</td>
<td>13,043,100</td>
<td>18.7%</td>
</tr>
<tr>
<td>Men</td>
<td>5,794,400</td>
<td>5,868,100</td>
<td>5,858,300</td>
<td>5,998,200</td>
<td>3.5%</td>
</tr>
<tr>
<td>Women</td>
<td>5,191,200</td>
<td>6,188,700</td>
<td>6,374,700</td>
<td>7,044,900</td>
<td>35.7%</td>
</tr>
</tbody>
</table>

Projections for College Student Population for All Age Categories by Selected Years 1995-2020

Projections for College Age Population 13-24 by Sex for Selected Years 1995-2020


Exhibit D2-A
Projections for "Older" Student Age Population (35-54) by Sex for Selected Years 1995-2020


Projections for Graduate Student Population Age 25-34 for Selected Years 1995-2020


Exhibit D2-B
Exhibit D2-C

depend on whether society prepares and
inspires students of color for postsecondary
education. (Chaffee 1990) The number of "high
risk" students: minorities, females, low-income
and disabled individuals, is expected to
continue into the 21st century. These students
have high attrition rates and affect the patterns
of funding, planning for facilities and the long
term planning for the curriculum.

D. Trends in Curriculum
Trends in curriculum will affect learning
development and teaching techniques into the next
century. Although some of these trends are
controversial, they include:

- Curriculums that deal with the issues of
diversity.

- Broad based instruction vs. technical expertise.

- Recognition that many programs will have to
meet the needs of individual students.

- The increase of interdisciplinary and
multi-disciplinary programs.

- Increasing use of technological innovations.

- Research vs. Liberal Arts approach.
There is a call for a culturally responsive
pedagogy designed to enhance teacher
education to meet the challenges of a growing
at risk minority student population. (Irvine 1990)
The back-to-basics movement will be
superseded by a forward-to-the-future basics
movement, which will include the use of
telecommunication techniques together with
other advances in science knowledge and
technical skills for problem solving. (Cetron
1991)
• Knowledge in the 21st century will not be based on memorization of facts and dates. New forms of knowledge, new ways of knowing the world will emerge. Knowledge will be characterized as the ability to discern relationships to recognize the flux of emergent forms and subjects will be approached interactively. (Kaha 1990)

• Some futurists argue that with the increase of technology in the classroom, we can expect to see a resurgence of interest in teaching art, music, literature and drama.

• Literacy: Computer, Cultural and Communications.

John Naisbitt believes that we are moving into a literary-intensive society. He anticipates that to be really successful in the next century, people will have to be trilingual: English, Spanish and computer. Additionally, educators such as Gill and Kaha believe that the interest in cultural literacy will continue to increase as we become a global economy and the percentage of minority populations grows.

Cultural literacy is defined as the basic information needed to thrive in the modern world. Gill and Kaha believe that the interest in cultural literacy has increased. Futurists also believe that basic literacy is the foundation for increasing the skills of the American work force. There is an increased need for computer literacy for understanding databases, communication programs, networking or on-line programs, and the use of various software for problem-solving techniques that will be used in all academic programs. There is a growing mismatch between literacy (vocabulary, reading and writing skills) of the labor force and the competency required by the jobs available. Both ill-prepared new work-force entrants and already employed workers, who cannot adapt to
changing requirements and new technologies, contribute to this mismatch. (Gayle Cetron, 1991)

- Foreign Studies and Modern Languages. An increase in world trade will make cultural understanding a priority for new political and economic frontiers. For example, many of the trade problems with Japan are due to cultural misunderstandings. The expansion of the free market economy in Eastern European countries and the expansion of trade with Pacific Rim countries will demand higher education programs to include cultural and language requirements. A broader understanding of international perspectives may enhance students' acceptance of the cultural diversity within our own society.

- Integrating languages into various curriculums will be come a standard part of language proficiency.

- An increase in foreign-exchange programs will improve the competence of American students.

- The U.S. can also expect increasing enrollments of foreign students (Cetron and Davies 1991)

- Mathematics and Science
  In a recent report, Mathematical Sciences in the Year 2000, the growing concerns about the health of mathematical sciences at our colleges and universities were highlighted. These concerns included the failure to keep women and minorities in the mathematics and science pipeline, and the quality of education in mathematical sciences. (Kirwan 1990) The report recommended:
  - improving the attrition rate for women and minorities in mathematics and sciences by
increasing financial aid and scholarships; and improvement of teaching techniques for these programs in the form of smaller group learning environments and practical applications seminars.

- partnerships with business and industry

- Physical Education and Health
  - Americans are recognizing the need for increased physical awareness and development of lifelong physical skills and sports.
  - Because of an aging population, physical education services will need to expanded to include a increased proportion of older people. University sports facilities may well expand programs and offer more classes orientated to our aging populations. (Bain, 1988)
III. Resources
3. Enrollment Trends

Executive Summary
The purpose of the facilities master planning process is to identify and guide development of UNM facilities in future years. Enrollment levels impact numerous elements of the facilities master planning process. Therefore, an integral part of the planning process involves a careful study of enrollment, especially future enrollments. Available enrollment data for both UNM and for the nation’s 4-year public institutions are reviewed to identify enrollment trends and changes in student body demographics. This section also identifies and discusses a number of factors, both external and internal, affecting enrollment. Findings from this analysis are summarized below.

Projected Enrollment
Long-range projections were prepared as rough estimates of the enrollment levels that UNM may face if recent enrollment trends continue through the next 30 years.

- The projected total enrollments in the year 2020 vary from 34,307 to 36,114 students.
  Three sets of long-range projections were prepared for UNM. The set that most resembles the PPS projections (through 2005) suggests that UNM will enroll over 29,500 students by 2005 and over 34,300 students by 2020.

Enrollment projections for UNM prepared by UNM’s office of Planning and Policy Studies (PPS) indicate that:

- UNM’s enrollment is projected to grow faster through 2005 than it did during the 1977 to 1990 period. UNM’s total 1990 enrollment (excluding medicine) of 24,314 students is projected to grow to 28,698 students in the year 2000 (an 18% increase), and to reach 29,799 students by 2005 (a 22.6% gain since 1990).
### Exhibit D3
Long Range Enrollment Projections, University of New Mexico
1995 – 2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Total NM Population</th>
<th>PPS Projections</th>
<th>Average of 1980 &amp; 1990†</th>
<th>1980‡‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>1,303,302</td>
<td>22,017</td>
<td>22,017</td>
<td>22,017</td>
</tr>
<tr>
<td>1990</td>
<td>1,515,059</td>
<td>24,314</td>
<td>24,314</td>
<td>24,314</td>
</tr>
<tr>
<td>1995</td>
<td>1,631,382</td>
<td>25,757</td>
<td>26,181</td>
<td>26,870</td>
</tr>
<tr>
<td>2000</td>
<td>1,734,944</td>
<td>28,996</td>
<td>28,843</td>
<td>29,576</td>
</tr>
<tr>
<td>2005</td>
<td>1,838,536</td>
<td>29,799</td>
<td>29,505</td>
<td>30,282</td>
</tr>
<tr>
<td>2010</td>
<td>1,940,042</td>
<td>31,147</td>
<td>31,987</td>
<td>32,737</td>
</tr>
<tr>
<td>2015</td>
<td>2,041,176</td>
<td>32,757</td>
<td>33,620</td>
<td>34,482</td>
</tr>
<tr>
<td>2020</td>
<td>2,137,774</td>
<td>34,307</td>
<td>35,211</td>
<td>36,114</td>
</tr>
</tbody>
</table>

% Increase
1990 – 2020 41.1% 41.1% 44.8% 48.5%

* Calculated by multiplying projected NM population by the percentage of New Mexico population enrolled at UNM in 1980 (0.31500311)
† Calculated by multiplying projected NM population by average of percentage of New Mexico population enrolled at UNM in 1990 and 1990 (0.01647068)
‡‡ Calculated by multiplying projected NM population by the percentage of New Mexico population enrolled at UNM in 1980 (0.01899326)


- Undergraduates are expected to represent the fastest growing component of UNM’s enrollment, increasing by 25.5% between 1980 and 2005. Total undergraduate enrollment is projected to increase from 15,993 students in 1990 to 19,094 in 2000 and 20,071 in 2005.

- UNM is also projected to enroll 23.9% more graduate law students by 2005. The 1990 graduate and law enrollment of 4,388 is projected to rise to 5,144 in 2000 and 5,438 students by 2005.

- Except for the non-degree category, UNM’s enrollments are projected to grow at considerably faster rates between 1995 and 2000 than during either the 1990 to 1995 or
2000 to 2005 periods. Non-degree enrollments are projected to grow quickly between 1990 and 1995, and then decline over the 1995 to 2005 period.

A comparison between the PPS projections for UNM and U.S. Department of Education projections for the nation's public 4-year institutions for the 1980s reveal that:

- New Mexico's younger, faster growing population will contribute to UNM enrollment growth rates higher than those projected for the U.S. during the 1990s.

Enrollment and Student Demographics Trends
A variety of information on enrollment trends and characteristics of student bodies both at UNM and nationally was reviewed. Significant trends include:

- Student headcount. Compared to the 1960s and most of the 1970s, enrollment during the 1980s grew relatively slowly. Total enrollment at UNM increased by approximately 14.1 percent between 1977 and 1990. UNM's enrollment grew fastest in terms of non-degree students (39.8%) and graduate law students (17.8%). Undergraduate enrollment grew by only 7.8 percent during this time period while the number of first-time freshman actually declined by 27.8 percent. National data indicate that total enrollments and the number of first-time freshmen at 4 year institutions grew faster nationally than at UNM while graduate/first professional enrollments grew faster at UNM than nationally.

- Credit Hours/FTEs. UNM credit hour data indicates a shift away from lower division classes to upper division and graduate/first professional classes.

The student body is growing older. Women account for the majority of students.

Minority students are a larger proportion of enrollment that at most four-year public institutions.
• **Part-time/full-time status.** The total number of part-time students at UNM decreased between 1984 and 1991, both in absolute terms and as a proportion of total enrollment. This trend, however, is not applicable at the graduate level as part-time enrollment increased among graduate students. Nationally, the proportion of students enrolled part-time at public 4 year schools is lower than at UNM and has been stable over the last several years.

• **Age of students.** The UNM student body, especially non-degree and graduate/final professional students, was older in 1990 than in 1977. This trend is consistent with national level data.

• **Gender of students.** Over the last 15 years, female enrollment grew at much faster rates than male enrollment and women have accounted for a majority of college students for over a decade. This is true both at UNM and nationally.

• **Race/ethnicity of students.** Minority students account for a larger proportion of UNM's enrollment than is the case nationally at 4 year public institutions. At UNM, minorities vacillated between 29 and 31 percent of total enrollment during the 1977 to 1990 period. Notably, Hispanic students at UNM declined as a proportion of total enrollment. In the U.S., minority enrollment at public 4-year schools rose from 13.9 percent of total 1976 enrollment to 16.9 percent in 1988.

• **Geographic origin of students.** The proportion of UNM students from Bernalillo County declined from 63.3 percent in 1977 to 49.9 percent in 1990. Commensurately, the percentage of students from other New Mexico counties and, more notably, from out-of-state and from foreign countries increased.
Factors Affecting Enrollment Levels at UNM

A variety of factors affecting or potentially affecting enrollment levels at UNM were identified. For this discussion, these factors were divided into 2 categories: external and internal factors. External factors include population trends, the economy and a variety of educational demographics (e.g. number of high school graduates) that UNM as an Institution has minimal or no control over but which affect or can potentially affect UNM’s enrollment. Internal factors refer to factors such as UNM’s enrollment goals, admission policies and student recruiting programs which affect or can potentially affect enrollment levels and that UNM can directly address to modify.

External Factors

- Population. New Mexico will have sufficient potential students to support considerably higher enrollments at UNM and at the state’s other higher education institutions. This is due to the fact that New Mexico’s population is growing at a faster rate than the U.S. population as a whole and is significantly younger than the total U.S. population.

  - Between 1980 and 1990, New Mexico’s population grew by 16.2 percent, from 1,303,302 to 1,515,069 persons. Nationally, the population grew by 9.7 percent.

  - In 1990, approximately 39.5 percent of New Mexico’s population was under 20 years of age but only 28.7 percent of the U.S. population was under age 20.

  - Minority groups accounted for a nearly half (49.6%) of New Mexico’s population in 1990. The largest minority groups in New Mexico are Hispanics and Native Americans, who accounted for 38.2 and 8.5 percent, respectively, of the state’s population. Minorities comprised 24.4 percent of the U.S.
population in 1990.

- **New Mexico's population** is projected to continue growing at significantly higher rates than the U.S. population. Although the state's population will generally grow older as the "baby boomers" age, the number of persons under age 25 is projected to grow throughout the next 30 years. The age group 20 to 24, which includes most persons of traditional college age (i.e., ages 18 to 24), is projected to increase in New Mexico from 107,220 persons in 1990 to 135,358 persons in 2005, a 26.2 percent increase. The number of persons in this age group is projected to increase by 34.4 percent over the 1990 to 2020 period. Nationally, the size of the traditional college age population during the 1990s is expected to be smaller than or comparable to the size of this cohort during the 1980s.

- **Economy.** PPS has established that undergraduate enrollment levels at UNM do respond to the economy. The long-term economic outlook of relatively steady, slow-to-moderate economic growth suggests a pattern of moderate enrollment growth at UNM, albeit faster growth than during the 1980s when the Albuquerque economy grew at relatively higher rates.

- Over the last 30 years, UNM's undergraduate enrollment has generally grown more quickly when real per capita personal income grew because rising personal income levels facilitate college attendance. UNM's enrollment has also grown more quickly when New Mexico's unemployment rate has risen. Faced with more limited employment options, potential students are more likely to enroll at UNM during periods of higher unemployment.

- In terms of the long-term economic outlook,
The number of New Mexico high school graduates in a given year is the most important factor impacting undergraduate enrollment at UNM.

Published commentary suggests that New Mexico's economy will experience slow to moderate, but sustained growth over the next several years so long as the state's economic linchpins (services, federal spending) hold up and the national economy does not fall into a severe recession.

- Educational demographics. The most important factor impacting undergraduate enrollment is the number of persons who graduate from high school in any given year. PPS incorporates the annual number of New Mexico high school graduates as a third variable in their undergraduate enrollment projection model for UNM. Other educational factors impacting enrollment include higher education participation rates (i.e. the proportion of the population that attends an institution of higher education) and ability of the state's population to stay in school long enough to complete a baccalaureate or higher level degree. In general, educational attainment trends in New Mexico indicate growing higher education enrollments in the future.

- Supply of high school graduates. Generally, growth in the number of high school graduates helped push UNM's undergraduate enrollment upward. The number of New Mexico high school graduates grew steadily through the 1960s and 1970s, peaking in 1979, as the "baby boom" generation passed through the state's high schools. The number of graduates declined throughout the 1980s, but is projected to reach new highs during the 1990s.

The racial/ethnic composition of the state's graduating classes also changed as minorities, primarily Native Americans, grew as a proportion of the state's graduates. Hispanics, who are the state's largest minority group and one of the fastest growing, did not increase significantly as a percentage of the state's
graduates. Available data also indicate that students (especially Hispanics) are more likely to drop out of high school in New Mexico than nationally, suggesting that the number of graduating seniors potentially able to attend UNM may increase if the state's school districts are able to lower their dropout rates.

- Higher education participation. The available data suggest that minorities enroll in college at significantly lower rates than Anglos and that New Mexico's population is less likely to enroll in an institution of higher education than is the case nationally. Still, the proportion of New Mexico's high school graduates who enrolled in higher education institutions shortly after graduation increased significantly between 1978 and 1989. UNM enrolled a smaller percentage of these students, however, as New Mexico's 2 year colleges and vocational-technical schools and institutions outside the state enrolled higher percentages of New Mexico's high school graduates.

- UNM's setting. Albuquerque community trends. The Albuquerque metropolitan area, by virtue of its status as the physical setting for UNM's main campus and as the population center of the state, affects UNM in various ways. For example, Bernalillo County contributed nearly half of UNM's student body in 1990. UNM 2000 envisions expanded activity and services not only at its current sites, but also around the state, including the greater Albuquerque metropolitan area. The analysis conducted for this paper suggests that should UNM consider branch or satellite campuses in the Albuquerque metropolitan area, the Northwest and north Interstate 25 areas deserve prominent consideration as potential expansion "sites."

- Population. Though the rate of increase is expected to be slower than in the 1970s and
1980s, the Bureau of Business and Economic Research (BBER) projects continued population growth in both Bernalillo and Sandoval counties during the 1990 to 2010 period.

- **Economy.** The most recent available employment projections for the Albuquerque area indicate moderate growth during the 1989 to 1992 period followed by relatively high employment growth through mid-1995. After 1995, employment growth is once again projected to be moderate. The data reviewed for this paper suggests that UNM should expect slower enrollment growth during peak periods of employment expansion.

- **Employment centers.** The Albuquerque area's major employment centers are not expected to change drastically. Existing centers: downtown, uptown, the portion of Albuquerque's southeast quadrant that includes Kirtland, Lovelace, UNM and TVI, are projected to experience slight declines in employment attributable to growth in other geographic areas. Emerging major employment centers include the north Interstate 25 corridor (e.g., Journal Center/Renaissance Center area) and the Northwest (e.g. Seven Bar area), especially if the planned Cottonwood Mall project is realized.

- **New residential development.** In the next decade, residential growth in the greater Albuquerque area will be focused on the northwest side, especially in Taylor Ranch, Paradise Hills and Rio Rancho. Despite the rapid growth of the last decade, large blocks of relatively low-cost developable land are still available in these areas. Residential development in the Northeast Heights, however, is expected to slow greatly due to a
UNM relies to a large extent for funding and governance on the state government. State actions can affect enrollment levels and capabilities of UNM to accommodate students. Federal actions also have potential to affect enrollment, particularly with levels of financial aid.

- **Government/political environment.**
  Government and politics can affect enrollment levels at UNM in various ways, including financially and through regulatory mechanisms. Potential state government actions which could affect enrollment levels include insufficient funding for capital projects, mandated enrollment targets or limits, centralized admission standards and externally prepared mission statements. Federal government actions potentially affecting enrollment include major reductions in federal student financial aid programs and national youth service legislation.

**Internal Factors**
UNM is currently in the process of redefining and refocusing programs and services to meet the goals of the UNM 2000 long-range plan. While UNM recognizes the need to add services if necessary, the reallocation process is guided by the recognition that resources are limited, and consequently, by the need to reduce and eliminate some programs. Many of the changes in UNM's programs, services and administration may potentially impact enrollment levels. Some of the main internal program and policy areas impacting enrollments and student demographics are noted below.

- **Curriculum and academic degree programs.**
  The University’s curriculum and its available academic programs impact enrollment in at least two ways:

  - A potential student’s decision on whether or not to attend UNM may hinge on the availability of courses in a particular field or program at a convenient time. For example, the impact on enrollment of the evening and weekend degree program has been substantial.
- The characteristics of UNM's student body are also subject to change depending on the University's curricular and degree program emphases. For example, graduate studies are an increasingly important component at UNM. Graduate students are generally older than the traditional undergraduate and are more likely to have a wide range of responsibilities beyond school. This suggests that in order to continue building graduate enrollments, UNM will need to address the needs of older students, needs which frequently revolve around convenience related to such issues as class scheduling, child care and parking.

- **Faculty recruiting and retention.** Possible future faculty shortages could force UNM to limit enrollments.

  - Based on current faculty "turnover" rates and projected enrollments, UNM will need to hire approximately 1,200 faculty over the next decade, 1,000 as replacements for existing faculty and 200 to meet growth needs. UNM could face the need to limit enrollments if it is unable to maintain sufficient qualified faculty to serve larger enrollments. Consequently, future enrollment levels may be affected to some degree by what UNM does to recruit and retain faculty.

- **Student admissions and recruiting.**
  
  Admissions policies, programs and goals directly affect enrollment. **UNM 2000** includes various goals with enrollment implications.

  - **UNM 2000** stipulates that the University is expected to increase admission standards. Tightened admission standards can initially be expected to exert a downward pressure on enrollments, at least until UNM is increasingly recognized as an option by high-achieving students who would have otherwise chosen to
attend another institution.

- UNM is also expected to increase the diversity of the student body, particularly in terms of "underrepresented populations" such as minorities and students from rural areas. Successfully recruiting underrepresented populations may be more difficult if UNM tightens admissions standards, especially since these populations are often plagued by a higher incidence of educational deficiencies. In addition, increasing competition should be expected from other institutions (including out-of-state schools) for qualified minority students. This implies the need for alternate admissions routes, and facilitating entry into the University for qualified transfers from branch campuses and 2 year institutions, where many students from underrepresented groups may be found.

- Recruitment is recognized in UNM 2000 as an essential tool for achieving the enrollment goals established in this plan. Given UNM's somewhat contradictory enrollment goals: more highly qualified students, higher proportions of students from underrepresented groups and higher total enrollments, reaching the projected enrollment levels will depend in part on the efficacy of the various personnel and departments engaged in recruiting for UNM.

- **Student retention and graduation.** UNM's ability to retain a student, ideally through completion of a degree program, obviously impacts enrollment.

- Support programs and services such as student housing, financial aid, academic advising, counseling services, and a variety of extracurricular activities are integral components of the retention effort. Such
programs and services may play a large role in whether a student is able and willing to continue his/her studies at UNM. Students who leave UNM prior to completing a degree program not only represent a lost enrollment opportunity, but may also represent a walking recruiting liability if they feel that UNM failed them.

- Improved retention efforts are probably necessary even if the students UNM enrolls are increasingly better prepared. The more stringent freshman admission policy instituted by the University in 1983 has apparently resulted in improved retention rates (to the third semester) for all ethnic/racial groups. However, the retention rates for Native American and Black students are still significantly lower than for Whites, Asians and Hispanics.
B. Enrollment Trends and Student Body Characteristics

The purpose of this section is to provide the Planning Council and others involved in the current Facilities Master Planning process with an overview of higher education enrollment trends both at UNM and nationally, to identify factors affecting higher education enrollment levels, and to review available enrollment projections for UNM.

This section draws heavily on data collection and analysis conducted by UNM's Planning and Policy Studies office and the Bureau of Business and Economic Research (BBER). Other principal resources consulted include reports generated by the New Mexico Commission on Higher Education (NMChE) and the United States (U.S.) Department of Education's National Center for Education Statistics (NCES).

The intent of this subsection is to identify enrollment trends at UNM and at the national level, especially at four-year public institutions. The information presented here addresses enrollment at various levels (e.g., total, undergraduate) and the characteristics of students (e.g., age, sex, race/ethnicity).

Unless otherwise noted, the information concerning enrollment trends presented in this subsection is derived from data reported for UNM in Selected Indicators on Students (J.A. Bergdahl, UNM Planning and Policy Studies, June 1991) and, nationally, in Digest of Education Statistics (NCES, 1990). The UNM data are generally for the 1977 to 1990 period while the most recent national data published by NCES are for the 1976 to 1988 period. Although the time frames covered by these two data sources differ somewhat, the national data still provide a comparative perspective.

B.1. Total UNM Enrollment by Type of Student, 1977 – 1990

Total enrollment at UNM increased by approximately 14.1 percent between 1977 and 1990. UNM's enrollment grew fastest in terms of non-degree students (39.8%) and graduate/first professional students (17.8%). Undergraduate enrollment grew by only 7.8 percent during this time period while the number of first-time freshmen actually declined by 27.8 percent. Available national data indicate that total enrollments and the number of first-time freshmen at 4 year institutions grew faster nationally than at UNM, while graduate/first professional enrollments grew faster at UNM than nationally.

- Total enrollment at UNM increased by 14.1 percent between 1977 and 1990, from 21,666 students in 1977 to 24,723 students in 1990 (Exhibit D4). This increase represents a 1.0 percent compounded annual rate of growth. Nationally, enrollment at four-year institutions increased at an annual rate of 1.2 percent during the 1976 to 1988 period.

- The number of regular undergraduate students at UNM increased at an annual rate of 0.6 percent (total of 7.8%) during the 1977 to 1990 period, from 14,630 to
15,993 students (Exhibit D4) (Burris-Woodall, UNM Planning and Policy Studies). Between 1976 and 1988, undergraduate enrollment at U.S. colleges and universities grew at an annual rate of 1.5 percent.

Exhibit D4
Total Enrollment and Undergraduate Enrollment, University of New Mexico 1977 – 1990

- The number of first-time freshman at UNM declined from 2,513 students in 1977 to 1,815 students in 1990, a 2.5 percent annual rate of decrease. At the national level, the number of first-time freshman at 4 year schools increased at an annual rate of 0.7 percent between 1976 and 1988 (Exhibit D5).

- UNM's graduate and first professional enrollments (including law and medicine) increased by 17.8 percent during the 1977 to 1990 period, from 3,968 students in 1977 to 4,676 students in 1990. This translates into an annual growth rate of 1.3 percent. Nationally, graduate and first professional enrollments increased at an annual rate of 0.9 percent from 1976 to 1988 (Exhibit D5).

- The number of non-degree students at UNM has fluctuated since 1977.
Non-degree enrollment increased from 2,813 in 1977 to 5,195 students in 1984, fell over the following three year period from 5,045 students in 1985 to 3,801 students in 1988, and then increased over the next 2 years to 3,934 students in 1990. Overall, from 1977 to 1990 the number of non-degree students rose by 39.8 percent (Exhibit D5).

**Exhibit D5**
Total Non-Degree, Graduate/First Professional and First-Time Freshman Enrollment, University of New Mexico, 1977 – 1990

![Graph showing enrollment trends from 1977 to 1990.](image)

**B.2. UNM Enrollment by Student Credit Hours and FTEs, 1977 – 1990**

UNM credit hour data indicate a shift away from lower division classes to upper division and graduate/first professional classes. Lower-division credit hours peaked in 1985 and then declined. In contrast, upper division and graduate/first professional (excluding the medical school) credit hours increased steadily since 1986. This trend is consistent with the NMCHE statewide plan and is explicitly defined as an objective in UNM-2000.

- Between 1977 and 1990, lower division credit hours peaked in 1985 at 149,225, or 60.8 percent of total enrollment. Using UNM's standard of 15 undergraduate credit hours equals 1 full-time student, this figure translates into a lower division Full Time Equivalent (FTE) of 9,948. Lower division credit hours then declined to 141,254 in 1990, or 55 percent of total credit hours. The 1990 FTE was 9,417.

- Upper division credit hours reached a low of 65,998 (FTE – 4,400) or 26.8
percent of total enrollment in 1985. Between 1986 and 1990, enrollment in upper division courses rose steadily to 80,466 (FTE = 5,563), accounting for 31.3 percent of total credit hours.

- The average number of credit hours undertaken by undergraduates declined slightly, from 13.2 in 1977 to 12.6 in 1990.

- In terms of credit hours, the most significant trend occurred in graduate/first professional enrollments, which increased from 21,524 credit hours (9.1% of total enrollment) in 1977 to 34,811 (13.5% of total enrollment) in 1990. (These figures include law but exclude medicine). Using UNM’s graduate FTE of 12 hours equals one full-time graduate student, these figures represent an increase from a 1977 FTE of 1,794 to a 1990 FTE of 2,901, a 61.7 percent increase.

- Total student credit hours increased from 236,373 in 1977 to 256,511 in 1990, an 8.5 percent increase. In FTE terms, enrollment increased from 16,579 in 1977 to 17,681 in 1990.

**B.3. UNM Enrollment by Part-time and Full-time Status, 1984 – 1991**

The number of part-time students at UNM decreased between 1984 and 1991 both in absolute terms and as a proportion of total enrollment. This trend, however, is not applicable at the graduate level as part-time enrollment increased among graduate students. Nationally, the proportion of students enrolled part-time at public 4 year schools is lower than at UNM and has been stable over the last several years.

- Total full-time enrollment at UNM grew from 12,874 students in 1984 to 15,162 in 1991, a 17.8 percent increase. Total part-time enrollment decreased by 13.9 percent, from 11,435 to 9,847 students (UNM, Official Enrollment Report, Main Campus, Fall 88 and Fall 91).

- The proportion of UNM students enrolled part-time fell from 47 percent in 1984 to 38.4 percent in 1991. Nationally, part-time enrollment at 4 year public institutions was significantly lower, hovering between 30 and 31 percent of total enrollment between 1984 and 1988.

- The downward trend in the proportion of UNM students enrolled part-time primarily results from changes occurring at the undergraduate level (Exhibit D6). Whereas the percentage of undergraduates enrolled full-time increased between 1987 and 1989, the proportion of graduate students enrolled full-time fell (NMCHE, "Student File Reports" for the years 1987 to 1990).
### Exhibit D6
Percentage of Undergraduate and Graduate Students Enrolled Full-Time and Part-Time, University of New Mexico, 1987-88 to 1990-91

<table>
<thead>
<tr>
<th>Year</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full-time</td>
<td>Part-time</td>
</tr>
<tr>
<td>1987-88</td>
<td>62.9%</td>
<td>37.1%</td>
</tr>
<tr>
<td>1988-89</td>
<td>71.8%</td>
<td>28.2%</td>
</tr>
<tr>
<td>1990-91</td>
<td>73.2%</td>
<td>26.8%</td>
</tr>
</tbody>
</table>

Full-time = 12 or more hours for undergraduates and 9 or more hours for graduates.

Note, however, that UNM calculates FTE using 16 hours for undergraduates and 12 hours for graduate students.

Source: Commission on Higher Education, Student File Report Part-C, Table C-4, Fall 1990.


The UNM student body, especially non-degree and graduate/first professional students, was older in 1990 than in 1977. This trend is consistent with national data indicating that persons under age 25 constitute a declining proportion of the nation's college students while persons age 35 and older increased as a percentage of total U.S. college enrollment between 1975 and the late 1980s.

- The median age of all UNM students rose from 23.0 in 1977 to 25.2 in 1990. For undergraduates, however, the median age only rose from 21.1 in 1977 to 22.2 in 1990 (Exhibit D7). The median age of non-degree students and graduate/first professional students increased more dramatically – from 28.5 to 33.2 for non-degree students and from 28.8 to 32.7 for graduate/first professional students.

- The upward trend in the age of UNM's students is consistent with national higher education trends. Persons under age 25 represent a declining proportion of the nation's college students. In 1975, this age group accounted for 63.1 percent of total higher education enrollment. By 1985, this figure had fallen to 58.4 percent and the Department of Education projected a 1989 level of 57.2 percent. In contrast, the proportion of students age 35 and older increased from an estimated 12.4 percent of total 1975 enrollment to a projected 16.2 percent in 1989.

Gender trends at UNM and nationally at all 4 year public institutions are largely consistent. Female enrollment grew at much faster rates than male enrollment over the last 15 years and women have accounted for a majority of college students for over a decade. Women increased as a percentage of UNM's student body at both the undergraduate and graduate/professional levels but men have increased as a proportion of UNM's non-degree enrollment.

- Female enrollment at UNM grew from 10,680 in 1977 to 13,202 in 1990, a 23.8 percent increase. The male headcount rose by 4.7 percent, from 11,006 students in 1977 to 11,521 students in 1990. Enrollment figures for all 4 year public institutions for the 1975 to 1988 period exhibit a similar pattern. The number of women enrolled increased by 27.1 percent while male enrollment declined by 2.8 percent.

- Female students have represented 50 percent or more of all students at UNM since 1978. In the U.S. as a whole, women have accounted for a majority of total
enrollment at public four year institutions since 1980.

- The proportion of UNM students that are women increased from 45.9 percent in 1975 to 49.2 percent in 1977 to 53.4 percent in 1990. Nationally, the female component of enrollment at 4 year public institutions increased from 45.8 percent in 1975 to 52.5 percent in 1988.

- At the undergraduate level, female students rose from 48.2 percent of UNM enrollment in 1977 to 53.7 percent in 1990. The increasing proportion of female students is even more pronounced at the graduate/first professional levels, where women increased from 44.5 percent of UNM enrollment in 1977 to 51.6 percent in 1990.

- Although women have comprised a majority of the non-degree students since 1977, male non-degree enrollment increased from 39 percent of this enrollment in 1977 to 45.5 percent in 1990.


Minority students account for a larger proportion of UNM’s enrollment than of total enrollment at the nation’s 4 year public institutions. However, whereas minority students grew nationally in both absolute terms and as a proportion of total students, at UNM the increase in the number of minority students was consistent with total enrollment growth. As a result, minority enrollment at UNM vacillated between 29 and 31 percent of total enrollment during the 1977 to 1990 period (Exhibit D8).

Reflecting New Mexico’s demographic profile, Native Americans account for a larger proportion of UNM’s enrollment than is the case nationally while the opposite is true for Blacks. Neither of these 2 groups, however, increased significantly as a proportion of total enrollment either at UNM or nationally. In contrast to national trends, Hispanic students at UNM fell as proportion of total enrollment due to no growth in the number of Hispanic students. Asian students, however, achieved dramatic enrollment increases in both absolute and proportional terms at both UNM and in the U.S. as a whole.

Anglo students continue to dominate enrollment at the graduate/first professional level, comprising 87 percent of these students nationally (1988) and 74 percent (1990) at UNM. Consequently, all major minority groups, except Asians, represented a smaller proportion of graduate/first professional students than of the entire student body or of undergraduate enrollment.

- Minorities represent a considerably higher proportion of enrollment at UNM than the national average for 4 year public institutions. At UNM, the minority proportion (excluding non-resident aliens) of the student body remained relatively
constant at approximately 30 percent between 1977 and 1990. Nationally, minority students increased as a proportion of total enrollment from 13.9 percent in 1976 to 16.9 percent in 1988 (Exhibit D8).

**Exhibit D8**

Percent Enrollment by Race/Ethnicity, University of New Mexico and all United States Four Year Public Institutions, Selected Years

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<thead>
<tr>
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<tbody>
<tr>
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<td>86.1%</td>
<td>85.5%</td>
<td>85.1%</td>
<td>84.3%</td>
<td>84.2%</td>
<td>83.4%</td>
<td>83.1%</td>
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</tr>
<tr>
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<tr>
<td>Hispanic</td>
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<td>8.9%</td>
<td>8.8%</td>
<td>8.4%</td>
<td>8.5%</td>
<td>8.3%</td>
<td>8.4%</td>
<td>—</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1.8%</td>
<td>2.1%</td>
<td>2.4%</td>
<td>2.6%</td>
<td>3.2%</td>
<td>3.7%</td>
<td>3.9%</td>
<td>—</td>
</tr>
<tr>
<td>Native American</td>
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<td>0.6%</td>
<td>0.6%</td>
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</tr>
<tr>
<td>Total Minority</td>
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<td>15.1%</td>
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<td>16.9%</td>
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<table>
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</tr>
<tr>
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<td>2.0%</td>
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<tr>
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<tr>
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<td>30.6%</td>
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<td>29.4%</td>
<td>29.9%</td>
</tr>
</tbody>
</table>

Note: does not include non-resident aliens.


In terms of specific ethnic/racial groups:

- Anglos. The number of white non-Hispanic students (i.e. Anglos) at UNM increased from 14,950 in 1977 to 17,232 in 1990, a 15.3 percent increase (Exhibits 6 & 9). As a percentage of UNM's total enrollment, Anglos consistently accounted for about 70 percent of the student body. Anglos also remained a relatively constant proportion of UNM's undergraduate enrollment (66 - 67%) and graduate/first professional enrollment (74 - 76%). Nationally, Anglos accounted for a much higher proportion (67% in 1988) of the nation's graduate/first professional degree students (excluding non-resident aliens). Anglos did increase as a proportion of UNM's non-degree enrollment, from 72 percent in 1977 to 77.5 percent in 1990.
Hispanics. Although the number of Hispanic students at UNM was relatively constant between 1977 and 1990, Hispanics steadily declined as a proportion of total enrollment, from 24.7 percent (5,351 students) in 1977 to 21.6 percent (5,340 students) in 1990 (Exhibits 8 & 9). Hispanics also declined as a percent of UNM's undergraduate (from 27% to 24.7%), graduate/first professional (from 18.1% to 16.2%) and non-degree (from 22% to 15.6%) students.

Nationally, Hispanic students represent a far smaller proportion of enrollment than at UNM. However, the number of Hispanics attending public 4 year schools in the U.S. increased from 129,300 in 1976 to 215,800 in 1988, a 66.9 percent increase. Hispanics increased from 2.8 percent of total 1976 enrollment to 3.9 percent in 1988. The total number (including private institutions) of Hispanic students enrolled in graduate/first professional programs increased by 57.9 percent, from 30,900 in 1976 to 48,800 in 1988. Hispanic enrollment rose from 2.1 percent of total 1976 graduate/first professional enrollment to 3.1 percent in 1988.

Native Americans (American Indians, Eskimos and Aleuts). The number of Native American students at UNM increased by 21.4 percent during the 1977 to 1990 period, from 693 to 841 (Exhibits 8 & 9). Native American enrollment at UNM is significantly higher than nationally. In 1990, Native Americans accounted for 3.4 percent of UNM's total enrollment, 3.9 percent of undergraduates, 2.4 percent of students in graduate/first professional programs and 2.4 percent of non-degree enrollment. In general, these figures are not significantly different from 1997 levels.

While Native Americans constitute a smaller proportion of college students nationally than at UNM, the enrollment changes (and lack of change) at UNM and in the U.S. as a whole are similar. Nationally, total Native American enrollment at 4 year public schools rose by 18.1 percent between 1976 and 1988, from 28,200 to 33,300. Native Americans continued, however, to represent approximately 0.6 percent of total enrollment at public 4 year schools and about 0.4 percent of total graduate/first professional enrollment.

Blacks. The total number of Black students attending UNM rose from 412 in 1977 to 494 in 1990 (Exhibits 8 & 9). This represents a 19.9 percent increase. In 1990, Black students accounted for 2 percent of total enrollment, 2.2 percent of undergraduates, 1.4 percent of graduate/first professional enrollment and 2 percent of non-degree students at UNM. As with Native Americans, none of these figures have changed considerably since 1977.

Nationally, Black enrollment at 4 year public institutions increased by only 6.3
### Number of Students by Race/Ethnicity

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Anglo</th>
<th>Hispanic</th>
<th>Native American</th>
<th>Black</th>
<th>Asian†</th>
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<td>1990</td>
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<td>17,232</td>
<td>5,340</td>
<td>841</td>
<td>494</td>
<td>710</td>
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### Percent of Students by Race/Ethnicity

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<tr>
<th>Year</th>
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<th>Hispanic</th>
<th>Native American*</th>
<th>Black</th>
<th>Asian†</th>
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<td>1977</td>
<td>69.0%</td>
<td>24.7%</td>
<td>3.2%</td>
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<td>1.3%</td>
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<tr>
<td>1978</td>
<td>69.5%</td>
<td>23.9%</td>
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<td>1.4%</td>
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<tr>
<td>1979</td>
<td>69.6%</td>
<td>23.6%</td>
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<tr>
<td>1980</td>
<td>70.5%</td>
<td>22.7%</td>
<td>3.0%</td>
<td>2.0%</td>
<td>1.8%</td>
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<tr>
<td>1981</td>
<td>70.5%</td>
<td>22.5%</td>
<td>3.1%</td>
<td>2.0%</td>
<td>1.5%</td>
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<tr>
<td>1982</td>
<td>70.3%</td>
<td>22.8%</td>
<td>3.0%</td>
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<tr>
<td>1983</td>
<td>69.7%</td>
<td>22.7%</td>
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<tr>
<td>1984</td>
<td>69.5%</td>
<td>22.6%</td>
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<tr>
<td>1985</td>
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<td>22.9%</td>
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<tr>
<td>1986</td>
<td>68.6%</td>
<td>22.6%</td>
<td>3.2%</td>
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<td>2.7%</td>
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<tr>
<td>1987</td>
<td>70.0%</td>
<td>22.9%</td>
<td>3.2%</td>
<td>1.8%</td>
<td>2.9%</td>
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<tr>
<td>1988</td>
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<td>21.7%</td>
<td>3.3%</td>
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<tr>
<td>1989</td>
<td>70.7%</td>
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<tr>
<td>1990</td>
<td>69.7%</td>
<td>21.8%</td>
<td>3.4%</td>
<td>2.0%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

* Native Americans refers to American Indians, Eskimos and Aleuts.
† Asians and Pacific Islanders.

percent between 1976 and 1988 and, as a result, declined as a proportion of total enrollment at these schools from 8.6 percent to 8.1 percent. Black graduate/first professional enrollment grew even more slightly (1.2%) and black students fell from 6 to 5.7 percent of total graduate/first professional enrollment.

- **Asian/Pacific Islanders.** The number of Asian students at UNM increased by more than 154 percent, from 262 in 1977 to 717 in 1990 (Exhibits 8 & 9). Asians doubled or more than doubled as a proportion of enrollment at all levels between 1977 and 1990: total (1.3% to 2.9%), undergraduate (1.1% to 2.1%), graduate/first professional (2.2% to 5.3%) and non-degree (1% to 2.1%).

The national increase in Asian students at 4-year public schools was just as dramatic, up by over 140 percent between 1976 and 1988. Consequently, the Asian proportion of total enrollment rose from 1.8 percent in 1976 to 3.8 percent in 1988. At the graduate/first professional level, Asian students increased by 110 percent and doubled as a proportion of total graduate/first professional enrollment (from 1.9% to 3.8%).

It should be noted that the Asian/Pacific Islander populations of both the U.S. and New Mexico more than doubled between 1980 and 1990.

- Between 1988 and 1990, the proportion of first-time freshmen at UNM that were Anglo dropped from 66.6 to 58 percent. Commensurately, all minority groups except Asians increased their representation in the first-time freshmen classes of 1989 and 1990. The largest increase was posted by Hispanics, who increased from 24.8 percent of the 1988 class to 32.1 percent of the 1990 class.

The most significant change in UNM students' geographic origin – the home residence of the students as reported on their admission applications to UNM – was the decline in the proportion of UNM students from Bernalillo County. Commensurately, the percentage of students from other New Mexico counties and, more notably, from out-of-state and from foreign countries increased. (See Map 1 of this section.)

- The percentage of UNM students from Bernalillo County dropped from 63.3 percent (13,714 students) in 1977 to 49.9 percent (12,337 students) in 1990.

- Students from other New Mexico counties increased from 20.1 percent of UNM's 1977 enrollment to 22.5 percent in 1990.

- The reported proportion of UNM students from out-of-state also increased, from
III. Resources
14.8 percent (3,206 students) in 1977 to 23.5 percent (5,810 students) in 1990.

- The percentage of UNM students from foreign countries more than doubled from 1.7 percent (368 students) in 1977 to 4.1 percent (1,014 students) of UNM's 1990 enrollment.

C. Factors Affecting Enrollment Levels at UNM

The purpose of this subsection is to identify and discuss a variety of demographic, economic, political, and institutional factors affecting enrollment levels at UNM. For the purposes of this discussion, these factors are divided into two broad categories: external factors and internal/institutional factors.

C.1. External Factors

*External factors* refer to those trends, processes, and phenomena originating in society at large, in government and the political environment, and in the education system that UNM as an institution has minimal or no control over but which affect or can potentially affect enrollment levels at UNM.

The external factors focused on in this section regard trends related to the demographic characteristics of New Mexico's population, the New Mexico economy, educational attainment in this state and the outlook for UNM's setting: the Albuquerque metropolitan area.

C.1.A. Demographics

The material below compares and contrasts the U.S. and New Mexican populations in 1980 and 1990 in terms of age and race/ethnicity. Also presented below is an overview of the most recent BBER population projections for New Mexico, including selected age breakdowns.

- **Population**

  A comparison of 1980 and 1990 Census data reveals that New Mexico's population is growing at a faster rate than the U.S. population as a whole and is significantly younger than the national population. These data also reveal that minorities represent a much larger proportion of the population in New Mexico than nationally.

  - The Census Bureau reported that the U.S. population grew from 226.5 million in 1980 to 248.7 million in 1990. This represents a 9.7 percent increase. New Mexico's population increased by 16.2 percent, from 1,303,302 in 1980 to 1,515,069 in 1990. New Mexico ranked 11th among the 50 states in terms of the 1980 to 1990 percentage increase of its population. Despite faster growth than in most of the nation, New Mexico's 16.2 percent (217,767 persons) population gain during the 1980s was considerably lower than during the 1970 to 1980 decade,
when the state's population grew by 26.1 percent (286,247 persons).

- New Mexico's population is considerably younger than the U.S. population as a whole. In 1990, approximately 39.5 percent of New Mexico's population was under 20 years of age but only 28.7 percent of the total U.S. population was less than 20 years of age. Persons under age 30 comprised 47.8 percent of New Mexico's population versus 44.9 percent of the U.S. population.

- The number of persons in the U.S. population of traditional college age (ages 18 to 24) declined by 10.9 percent between 1980 and 1990. In New Mexico, the number of persons ages 18 to 24 decreased by 14.8 percent during this time period.

- The aging of the "baby boom" generation, which by 1990 was 25 to 44 years of age, is evident in a comparison of population data (by 5 year age cohorts) for persons ages 10 to 44 (Exhibit D10). In the U.S. as a whole, the number of persons in the 4 cohorts comprising ages 25 to 44 increased significantly while the number of persons in the 3 cohorts covering ages 10 to 24 (the "baby bust") decreased in both absolute terms and as a percentage of the total population following the "passage" of the baby boomers.

In New Mexico, the pattern is similar with one exception: New Mexico's population ages 10 to 14 increased by 6.8 percent between 1980 and 1990 whereas in the U.S. as a whole this cohort shrunk by 6.2%. This difference reflects the larger proportion of persons in New Mexico under 20 years of age.

- Minority groups accounted for nearly half (49.6%) of New Mexico's population in 1990 (Exhibit D11). The largest minority groups in New Mexico were Hispanics and Native Americans, who accounted for 38.2 and 8.5 percent, respectively, of the state's population. Nationally, minorities comprised 24.4 percent of the population in 1990. Blacks (11.7%) and Hispanics (9%) represent the largest minority groups in the U.S. as a whole.
### Exhibit D10

**Population Ages 10 to 44, United States and New Mexico**

#### United States: All Races

<table>
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<tr>
<th>Age Cohort</th>
<th>1980 % of Total</th>
<th>1980 % of Total</th>
<th>1990 % of Total</th>
<th>1990 % of Total</th>
<th>% Change 1980 - 1990</th>
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<td>19,020,312</td>
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<td>51.0%</td>
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</table>

Total Pop. 226,545,805

(all ages)

#### New Mexico: All Races

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<tr>
<th>Age Cohort</th>
<th>1980 % of Total</th>
<th>1980 % of Total</th>
<th>1990 % of Total</th>
<th>1990 % of Total</th>
<th>% Change 1980 - 1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>114,101</td>
<td>8.8%</td>
<td>121,632</td>
<td>8.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>15-19</td>
<td>132,308</td>
<td>10.1%</td>
<td>133,483</td>
<td>7.5%</td>
<td>8.9%</td>
</tr>
<tr>
<td>20-24</td>
<td>125,423</td>
<td>9.6%</td>
<td>108,053</td>
<td>7.0%</td>
<td>-15.4%</td>
</tr>
<tr>
<td>25-29</td>
<td>119,344</td>
<td>8.9%</td>
<td>126,083</td>
<td>8.3%</td>
<td>5.5%</td>
</tr>
<tr>
<td>30-34</td>
<td>101,003</td>
<td>7.8%</td>
<td>130,868</td>
<td>6.8%</td>
<td>29.0%</td>
</tr>
<tr>
<td>35-39</td>
<td>76,326</td>
<td>6.0%</td>
<td>121,963</td>
<td>8.0%</td>
<td>55.7%</td>
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<tr>
<td>40-44</td>
<td>66,702</td>
<td>5.1%</td>
<td>103,754</td>
<td>7.0%</td>
<td>58.5%</td>
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</tbody>
</table>

Total Pop. 1,303,302

(all ages)

Exhibit D11
Population by Race/Ethnicity, United States and New Mexico, 1990

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>United States</th>
<th>New Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>White</td>
<td>188,128,296</td>
<td>75.6%</td>
</tr>
<tr>
<td>Black</td>
<td>29,216,293</td>
<td>11.7%</td>
</tr>
<tr>
<td>American Indian†</td>
<td>1,793,773</td>
<td>0.7%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>6,968,359</td>
<td>2.9%</td>
</tr>
<tr>
<td>Other</td>
<td>249,093</td>
<td>0.1%</td>
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<tr>
<td>Hispanic†</td>
<td>22,934,059</td>
<td>9.0%</td>
</tr>
<tr>
<td>Total</td>
<td>248,709,873</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*The concept of race as used by the Census Bureau reflects self-identification by respondents; it does not denote any scientific definition of biological stock.
†Hispanic may be of any race.
††Includes American Indians, Eskimos, and Aleuts.

Source: U.S. data from telephone communication with Census Bureau, Race/Ethnicity staff, 11/22/91. 1990 Census, New Mexico STF-1A file.

Population Projections

New Mexico's population is projected to continue growing at significantly higher rates than the U.S. as a whole. Although the state's population will generally grow older as the "baby boom" matures, the number of persons under age 25 is projected to grow throughout the next 30 years. In particular, these projections suggest that while nationally the size of the traditional college-age population (persons ages 16 to 24) during the 1990s will be smaller than or comparable to the size of this cohort during the 1980s, New Mexico's traditional college-age population in the 1990s will be larger than it was during the previous decade. Available projections also indicate that white non-Hispanics are expected to decline to less than half of New Mexico's population while minorities, primarily Hispanics and Native Americans, will increase as a proportion of the state's population.

New Mexico's population is projected to grow at significantly higher rates than the U.S. population. BBER projects that New Mexico's 1990 population of 1.52 million will increase by 20.9 percent to 1.84 million persons in 2005 (Exhibit D12). Projections for 2020 indicate a population of 2.14 million, representing an increase of 40.6% over the 1990 to 2020 period. Nationally, the Census Bureau is projecting a 10.1 percent population increase between 1990 and 2005, from 250.4 to 275.6 million. By the year 2020, the U.S. population is projected to reach 294.4 million, a 17.6 percent increase over 1990 levels (Census Bureau, Current Population Reports, Series P-25, No. 1018, Middle Series, 1989). This same set of Census Bureau projections indicates a 24.9 percent population increase in New Mexico between 1990 and 2020.
### Exhibit D12
#### Projected Population and Projected Percent Increase, New Mexico, 1990 – 2020

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 4</td>
<td>126,375</td>
<td>158,195</td>
<td>137,033</td>
<td>141,442</td>
<td>146,460</td>
<td>155,519</td>
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<tr>
<td>5 – 9</td>
<td>130,881</td>
<td>128,269</td>
<td>140,149</td>
<td>139,062</td>
<td>143,374</td>
<td>153,266</td>
</tr>
<tr>
<td>10 – 14</td>
<td>122,131</td>
<td>133,185</td>
<td>130,549</td>
<td>142,569</td>
<td>141,425</td>
<td>150,650</td>
</tr>
<tr>
<td>15 – 19</td>
<td>114,391</td>
<td>23,621</td>
<td>134,775</td>
<td>132,435</td>
<td>144,313</td>
<td>147,338</td>
</tr>
<tr>
<td>20 – 24</td>
<td>493,778</td>
<td>522,500</td>
<td>542,956</td>
<td>555,358</td>
<td>575,972</td>
<td>606,957</td>
</tr>
<tr>
<td>25 – 29</td>
<td>107,220</td>
<td>13,545</td>
<td>123,436</td>
<td>135,358</td>
<td>139,186</td>
<td>144,058</td>
</tr>
<tr>
<td>35 – 39</td>
<td>150,410</td>
<td>125,391</td>
<td>137,257</td>
<td>114,484</td>
<td>124,717</td>
<td>134,602</td>
</tr>
<tr>
<td>40 – 44</td>
<td>122,405</td>
<td>152,173</td>
<td>127,151</td>
<td>109,102</td>
<td>116,152</td>
<td>139,046</td>
</tr>
<tr>
<td>50 – 54</td>
<td>501,409</td>
<td>619,173</td>
<td>604,582</td>
<td>611,035</td>
<td>620,289</td>
<td>629,929</td>
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<tr>
<td>55 – 59</td>
<td>98,129</td>
<td>107,402</td>
<td>124,212</td>
<td>133,581</td>
<td>128,773</td>
<td>117,920</td>
</tr>
<tr>
<td>60 – 64</td>
<td>67,236</td>
<td>61,989</td>
<td>106,823</td>
<td>123,565</td>
<td>152,820</td>
<td>110,848</td>
</tr>
<tr>
<td>65 – 69</td>
<td>62,269</td>
<td>65,704</td>
<td>81,126</td>
<td>105,652</td>
<td>122,096</td>
<td>126,977</td>
</tr>
<tr>
<td>70 – 74</td>
<td>56,622</td>
<td>60,850</td>
<td>65,531</td>
<td>79,483</td>
<td>103,095</td>
<td>129,134</td>
</tr>
<tr>
<td>75 and over</td>
<td>220,756</td>
<td>175,650</td>
<td>377,692</td>
<td>442,192</td>
<td>498,788</td>
<td>533,177</td>
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<tr>
<td>65 and over</td>
<td>154,132</td>
<td>190,281</td>
<td>270,087</td>
<td>229,800</td>
<td>258,198</td>
<td>357,375</td>
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<tr>
<td>Total</td>
<td>1,520,225</td>
<td>1,631,322</td>
<td>1,734,344</td>
<td>1,888,958</td>
<td>1,944,842</td>
<td>2,157,723</td>
</tr>
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</table>

#### Percent Increase

<table>
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<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 4</td>
<td>8.4%</td>
<td>6.9%</td>
<td>6.2%</td>
<td>11.9%</td>
<td>15.9%</td>
<td>23.1%</td>
</tr>
<tr>
<td>5 – 9</td>
<td>6.1%</td>
<td>2.3%</td>
<td>6.9%</td>
<td>6.3%</td>
<td>5.9%</td>
<td>17.1%</td>
</tr>
<tr>
<td>10 – 14</td>
<td>7.0%</td>
<td>8.5%</td>
<td>6.8%</td>
<td>16.7%</td>
<td>15.8%</td>
<td>20.3%</td>
</tr>
<tr>
<td>15 – 19</td>
<td>1.8%</td>
<td>7.1%</td>
<td>1.5%</td>
<td>15.8%</td>
<td>26.2%</td>
<td>28.6%</td>
</tr>
<tr>
<td>20 – 24</td>
<td>6.2%</td>
<td>5.4%</td>
<td>5.4%</td>
<td>12.6%</td>
<td>16.9%</td>
<td>22.9%</td>
</tr>
<tr>
<td>25 – 29</td>
<td>5.1%</td>
<td>5.4%</td>
<td>6.2%</td>
<td>26.2%</td>
<td>24.2%</td>
<td>34.4%</td>
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<tr>
<td>30 – 34</td>
<td>-9.2%</td>
<td>19.7%</td>
<td>7.4%</td>
<td>1.0%</td>
<td>8.7%</td>
<td>16.7%</td>
</tr>
<tr>
<td>35 – 39</td>
<td>-17.8%</td>
<td>16.3%</td>
<td>8.0%</td>
<td>-12.2%</td>
<td>-4.0%</td>
<td>3.5%</td>
</tr>
<tr>
<td>40 – 44</td>
<td>3.9%</td>
<td>-3.7%</td>
<td>18.8%</td>
<td>-10.9%</td>
<td>-5.1%</td>
<td>12.6%</td>
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<tr>
<td>45 – 49</td>
<td>25.2%</td>
<td>-17.2%</td>
<td>15.3%</td>
<td>20.6%</td>
<td>2.7%</td>
<td>16.0%</td>
</tr>
<tr>
<td>50 – 54</td>
<td>2.2%</td>
<td>2.6%</td>
<td>11.2%</td>
<td>4.3%</td>
<td>2.0%</td>
<td>15.5%</td>
</tr>
<tr>
<td>55 – 59</td>
<td>51.3%</td>
<td>5.7%</td>
<td>8.4%</td>
<td>63.3%</td>
<td>57.4%</td>
<td>44.1%</td>
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<tr>
<td>60 – 64</td>
<td>50.8%</td>
<td>24.4%</td>
<td>-16.6%</td>
<td>83.8%</td>
<td>97.7%</td>
<td>64.9%</td>
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<tr>
<td>65 – 69</td>
<td>32.4%</td>
<td>50.4%</td>
<td>4.0%</td>
<td>69.7%</td>
<td>96.2%</td>
<td>104.0%</td>
</tr>
<tr>
<td>70 – 74</td>
<td>12.1%</td>
<td>57.3%</td>
<td>24.9%</td>
<td>35.8%</td>
<td>73.1%</td>
<td>115.2%</td>
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<tr>
<td>75 and over</td>
<td>39.5%</td>
<td>28.3%</td>
<td>-9.6%</td>
<td>61.3%</td>
<td>78.9%</td>
<td>78.6%</td>
</tr>
<tr>
<td>65 and over</td>
<td>5.3%</td>
<td>30.5%</td>
<td>43.4%</td>
<td>13.5%</td>
<td>37.3%</td>
<td>155.5%</td>
</tr>
<tr>
<td>Total</td>
<td>14.1%</td>
<td>11.9%</td>
<td>10.1%</td>
<td>20.3%</td>
<td>27.7%</td>
<td>40.6%</td>
</tr>
</tbody>
</table>

† On July 1 of each year.


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**UNM Master Plan**

Project Information Package

ARC 2/92

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III. Resources
BBER projections indicate that although the number of children in New Mexico is increasing, overall, New Mexico's population will grow older over the next 30 years (Exhibits D12 & D13). Although increasing in absolute terms, persons in the 0 to 19 age cohort are projected to gradually decline as a proportion of New Mexico's total population, from 32 percent in 1990 to 30 percent in 2005 and 28 percent in 2020. The proportion of the population ages 20 to 44 is projected to decline from 39 percent in 1990 to 33 percent in 2005 and then stabilize at approximately 32 percent over the 2005 to 2020 period. As the "baby boomers" grow older, the proportions of the state's population in the age groups 45 to 64 and 65 and over are expected to rise from 18 and 11 percent, respectively, to 24 and 12 percent between 1990 to 2005. By the year 2020, these age groups are projected to comprise 23 and 17 percent of the state's population.

Exhibit D13
Projected Population: Selected Age Groups as a Percent of Total Population
New Mexico, 1990 – 2000

The group ages 20 to 24, which includes most persons of traditional college age (i.e., ages 18 to 24), is projected to increase in New Mexico from 107,220 persons in 1990 to 135,358 persons in 2005. This represents a 26.2 percent increase. By 2020, persons in this age group are expected to number 144,058, a 34.4 percent increase over the 1990 to 2020 period.
The 1991 BBER projections do not include a race/ethnicity breakdown. However, BBER's 1989 projections indicate that while New Mexico's Anglo (i.e., white non-Hispanic) population will grow in absolute terms, as a proportion of the state's population, Anglos will decline from approximately 50 percent in 1990 to 44 percent in 2005. In contrast, these projections indicated that New Mexico's Hispanics will increase from 37 percent of the 1990 population to 42 percent in 2005. Native Americans, who represented approximately 9 percent of the state's 1990 population, will account for 11 percent in 2005. Other racial groups, primarily Blacks and Asian/Pacific Islanders, will also increase as a percentage of New Mexico's population, from 2 percent in 1980 to approximately 3 percent in 2005. The growing diversity of New Mexico's population is consistent with the U.S. as a whole, where it is clear that minority populations are growing at much faster rates than the white non-Hispanic population.

C.1.B. Economic Review and Outlook
UNM's Planning and Policy Studies office notes in their "environmental analyses" that UNM is affected by the performance of New Mexico's economy in two ways. The first is that the tax revenues which support UNM are directly impacted by the state's economy (e.g., oil severance tax revenues). Secondly, Planning and Policy Studies has established that undergraduate enrollment levels at UNM respond to the economy, with the statewide unemployment rate and real per capita personal income identified as the two economic variables that are most useful for predicting undergraduate enrollment.

The material below provides an overview of the New Mexico economy. Selected data are presented on the state's labor force, employment structure by major industry, and income. While most of the information is for the 1980 to 1990 period, the time series on unemployment rates and real per capita personal income (RPCI) cover the 1961 to 1990 period since these measures of economic conditions are used to project undergraduate enrollment. Also presented below is a discussion of the state's economic outlook, especially the factors affecting the New Mexico economy.

- Employment and Income
New Mexicans suffer more unemployment and are poorer economically than the U.S. population as a whole. Although employment grew at a faster rate in New Mexico than nationally during the 1980s, the state's economy is heavily dependent on federal spending and employment and is vulnerable to federal spending cutbacks.

- Employment in New Mexico grew significantly faster during the 1980s than employment nationally. Total employment in New Mexico increased by 26.2 percent between 1980 and 1990, from 520,000 to 656,000 jobs (Exhibit D14). Nationally, employment grew by 18.7 percent during the 1980 to 1990 period.
• New Mexico's unemployment rate was consistently higher than the U.S. unemployment rate (Exhibit D14). In 1980, New Mexico's unemployment rate averaged 6.3 percent versus the national average of 5.5 percent.

• New Mexico's unemployment rate during the 1961 to 1990 period is shown in Exhibit D15. As noted, New Mexico's unemployment rate is one of the principal variables in the model used by Planning and Policy Studies to generate enrollment projections for UNM. New Mexico's unemployment rate rose from 7.5 percent in 1980 to 10.1 percent in 1983, matching a high for the 1961 to 1990 period previously reached in 1975. Between 1986 and 1990, the unemployment rate fell steadily to 6.3 percent. The lowest annual unemployment rate during the 1961 to 1990 period was recorded in 1978 - 5.7 percent.

• New Mexico's employment structure by major industry group is presented in Exhibit D16. The economic sectors employing the largest proportions of New Mexico workers in 1990 were government (25.9%), services (25.4%) and retail trade (19.5%). These 3 sectors accounted for nearly 71 percent of all covered employment in 1990.

While employment increased in all sectors except mining and construction between 1980 and 1990, the only sectors which increased their share of total covered employment were services, retail trade and manufacturing. The largest "losers" were the mining and construction sectors. Although government employees represented a somewhat smaller proportion of total covered employment in 1990 than in 1980, the number of persons directly employed by government entities (federal, state, and local) rose from 125,000 in 1980 to 149,100 in 1990.

• Direct federal employment accounted for 5.8 percent of New Mexico's covered employment. This figure does not, however, accurately convey the importance of the federal government's impact on New Mexico employment. In 1988, BBER estimated that federal spending accounted for approximately 33 percent of the gross state product. A recent report estimates that approximately 13.6 percent of all economic activity in New Mexico in 1990 originated with the Department of Energy (DOE) and that approximately 11.6 percent of all New Mexico employment was either directly or indirectly related to the DOE (DOE and New Mexico State University, "The Social and Economic Impact of the Department of Energy on the State of New Mexico, 1990").

Federal spending is channeled into New Mexico primarily through the the state's military installations (e.g. Kirtland, Holloman and Cannon Air Force bases and White Sands Missile Range) and through various installations funded by the
Exhibit D14
Labor Force Characteristics, United States and New Mexico, 1980 - 1990

**United States**

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1985</th>
<th>1990</th>
<th>% Change</th>
<th>% Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civilian Labor Force</td>
<td>106,940,000</td>
<td>115,461,000</td>
<td>124,787,000</td>
<td>8.0%</td>
<td>8.1%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Total Employment</td>
<td>99,303,000</td>
<td>107,500,000</td>
<td>112,914,000</td>
<td>7.9%</td>
<td>10.0%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Total Unemployment</td>
<td>7,637,000</td>
<td>8,312,000</td>
<td>6,874,000</td>
<td>8.8%</td>
<td>-17.3%</td>
<td>-10.0%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>7.1%</td>
<td>7.2%</td>
<td>5.5%</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>


**New Mexico**

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1985</th>
<th>1990</th>
<th>% Change</th>
<th>% Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civilian Labor Force</td>
<td>582,000</td>
<td>644,000</td>
<td>700,000</td>
<td>14.6%</td>
<td>6.7%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Total Employment</td>
<td>520,000</td>
<td>587,000</td>
<td>656,000</td>
<td>12.9%</td>
<td>11.8%</td>
<td>26.2%</td>
</tr>
<tr>
<td>Total Unemployment</td>
<td>42,000</td>
<td>57,000</td>
<td>44,000</td>
<td>35.7%</td>
<td>-22.8%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>7.5%</td>
<td>8.8%</td>
<td>6.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: New Mexico Department of Labor, Economic Research and Analysis Division.
Note. All figures are rounded, annual averages.

Exhibit D15
Unemployment Rate, New Mexico, 1961 - 1990

Source: New Mexico Department of Labor data as reported by UNM Planning and Policy Studies.
Exhibit D16

New Mexico Nonagricultural Wage and Salary Employment by Sector for Selected Years†

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Mining</td>
<td>29,400</td>
<td>21,000</td>
<td>15,700</td>
<td>-46.9%</td>
</tr>
<tr>
<td>Construction</td>
<td>32,100</td>
<td>37,500</td>
<td>29,700</td>
<td>-7.5%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>34,400</td>
<td>37,300</td>
<td>43,100</td>
<td>25.3%</td>
</tr>
<tr>
<td>Transportation &amp; Public Utilities</td>
<td>28,300</td>
<td>30,000</td>
<td>26,700</td>
<td>1.4%</td>
</tr>
<tr>
<td>Wholesale</td>
<td>21,400</td>
<td>23,000</td>
<td>24,500</td>
<td>14.5%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>92,000</td>
<td>99,600</td>
<td>112,400</td>
<td>37.1%</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>21,100</td>
<td>25,800</td>
<td>26,100</td>
<td>23.7%</td>
</tr>
<tr>
<td>Services</td>
<td>91,800</td>
<td>113,200</td>
<td>148,200</td>
<td>59.3%</td>
</tr>
<tr>
<td>Government</td>
<td>125,000</td>
<td>132,800</td>
<td>145,100</td>
<td>19.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>465,400</td>
<td>520,200</td>
<td>575,300</td>
<td>23.6%</td>
</tr>
</tbody>
</table>

Employment by Sector as a Percentage of Total Nonagricultural Wage and Salary Employment†

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>6.3%</td>
<td>4.0%</td>
<td>2.7%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Construction</td>
<td>6.9%</td>
<td>7.2%</td>
<td>5.2%</td>
<td>-1.7%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>7.4%</td>
<td>7.2%</td>
<td>7.5%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Transportation &amp; Public Utilities</td>
<td>6.1%</td>
<td>5.8%</td>
<td>5.9%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Wholesale</td>
<td>4.6%</td>
<td>4.4%</td>
<td>4.3%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>17.6%</td>
<td>19.1%</td>
<td>19.5%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate</td>
<td>4.5%</td>
<td>5.0%</td>
<td>4.9%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Services</td>
<td>19.7%</td>
<td>21.8%</td>
<td>25.4%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Government</td>
<td>26.9%</td>
<td>25.5%</td>
<td>25.9%</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.0%</td>
<td>100.3%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

* Includes full-time and part-time wage and salary workers who worked or received pay during a specified monthly pay period in a given year. Agricultural workers, self-employed, unpaid family workers, private household workers and members of the armed forces are excluded.

Note: Industrial classification is based on the 1987 Standard Industrial Classification Manual.
Source: New Mexico Department of Labor, Nonagricultural Wage and Salary Employment.

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D-70 Project Information Package
ARC 2/92

III. Resources
Department of Energy (e.g. Sandia National Laboratories, Los Alamos National Laboratory and the Waste Isolation Pilot Project).

- Per capita personal income (PCPI), which is calculated by dividing an area's total personal income by the resident population, represents the average income per person in an area. A comparison of PCPI figures for New Mexico and the United States indicates that New Mexico's PCPI was consistently lower than the national average between 1980 and 1990 (Exhibit D17). In 1980, New Mexico's PCPI was equal to 82 percent of the nation's PCPI. This percentage dropped to 61 percent in 1985 and approximately 76 percent in 1990. In 1990, New Mexico's PCPI ranked 46th among the 50 states.

**Exhibit D17**
Per Capita Personal Income, United States and New Mexico, 1980 – 1990

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>$9,919</td>
<td>$13,866</td>
<td>$18,685</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>New Mexico</td>
<td>$8,169</td>
<td>$11,188</td>
<td>$14,228</td>
<td>82%</td>
<td>81%</td>
<td>76%</td>
</tr>
</tbody>
</table>

Source: U.S. Bureau of Economic Analysis (BEA), Regional Information System.

- As indicated previously, real (i.e. adjusted for inflation) per capita personal income (RPCPI) is one of the predictor variables in the model used by Planning and Policy Studies to generate UNM enrollment projections. New Mexico's RPCPI (in 1961 dollars) for the 1961 to 1990 period is presented in Exhibit D18. These data indicate that New Mexico's RPCPI rose steadily from $1,923 in 1961 to $3,239 in 1979, a 68.4 percent increase. Between 1979 and 1983, New Mexico's RPCPI fell by 7.9 percent to $2,983 and did not rise above the 1979 level again until 1989.

- According to the Census Bureau, 20.9 percent of all New Mexicans had incomes below the poverty level in 1990. Nationally, only 13.5 percent of the population was defined as poor. (In 1980, a family of four was defined as poor if their income was below $13,360.) Minority groups, especially Native Americans, have much higher poverty rates than non-Hispanic Whites.

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The Relationship Between the Economy and UNM's Undergraduate Enrollment
UNM's Planning and Policy Studies office has established that undergraduate enrollment levels at UNM do respond to the economy. Over the last 30 years, UNM's undergraduate enrollment has generally grown more quickly when per capita personal income grew; rising income levels facilitate college attendance.
UNM's enrollment has also grown more quickly when New Mexico's unemployment rate has risen. Faced with more limited employment options, potential students are more likely to enroll at UNM during periods of higher unemployment. When employment opportunities are expanding, potential undergraduates are more likely to "drop out" or otherwise deter their education. However, enrollment growth during economic downturns has limitations. Prolonged, especially severe, economic depression would eventually force enrollments downward as the personal financial resources necessary for college attendance and the institutional resources necessary to accommodate students dry up.

It should be noted that while the predictor variables used in the UNM Planning and Policy Studies undergraduate enrollment projection model (real per capita personal income, the state unemployment rate and the number of high school graduates) are discussed independently in this report, caution should be exercised when interpreting the impact of any single variable on enrollment, as the predictive power of the model is based on the collective relationship of these three variables and enrollment.
**Economic Outlook**

Economic conditions in New Mexico are influenced by a variety of factors, including federal spending levels, the national economy and the condition of volatile economic sectors such as construction and mining. (Some of these factors are discussed in more detail below.) The short-term outlook for New Mexico is relatively bright as economists are projecting an improving state economy in 1992. This assumes a national economic recovery and that funding for the state's defense installations and national laboratories is not substantially cut. In terms of the long-term economic outlook, published commentary suggests that New Mexico's economy will experience slow to moderate but sustained growth over the next several years so long as the state's economic linchpins (services, government) hold up and the national economy does not fall into a severe recession. More rapid economic growth is possible if the mining and construction sectors expand and/or the border areas experience accelerated development.

- **Federal spending in New Mexico is currently an integral – and disproportionately large – component of the state’s economy.** Major reductions in federal Defense (DOD) and Energy (DOE) department funding for New Mexico facilities would have significant, possibly major, negative impacts on the state’s economy. To date, New Mexico’s federal installations have not had their funding significantly reduced. Some New Mexico installations are, in fact, the expected beneficiaries of recent DOD/Congressional decisions to restructure and relocate military forces. Furthermore, the state’s national laboratories are already engaged in the process of diversifying their activities away from nuclear weapons research. Consequently, it appears that federal monies should continue flowing into New Mexico through the foreseeable future.

- **National economy.** Historic periods of slow economic growth in the Albuquerque area are linked to the overall health of the U.S. economy (BBER, "Socioeconomic Projections: Albuquerque, 1980 -- 2000," City of Albuquerque, July 1989.). This relationship is also assumed to hold true for the state economy. The national economy has not demonstrated a sustained recovery from the national recession that began in 1980. Recent economic data indicate that the national economy will remain sluggish through at least the second quarter of 1992 while the long-term national economic outlook is clouded by the continuing problem of high federal budget deficits.

- **Construction sector.** This sector, which not only can create significant employment opportunities but also serves as an important barometer of economic conditions, has been slumping in New Mexico since 1985. Approximately 7,800 construction jobs, over 5,000 of them in the Albuquerque area, were lost statewide between 1985 and 1990. In 1991, new construction was at 46 year low. Brian McDonald, director of the BBER, indicated recently that the Albuquerque construction sector should grow significantly in 1992 as low
mortgage interest rates stimulate residential construction (B. McDonald, "1992 Albuquerque Business Outlook Conference," 12/6/91). A shrinking inventory of existing homes available for sale should also stimulate construction (Martha Man, Albuquerque Journal, 1/23/92). Still, the ongoing savings and loan bailout will continue to act as a restraint on the construction industry by absorbing needed financial resources and by generally engendering a restrictive lending climate, especially for commercial real estate projects.

- Manufacturing sector. Numerous observers have noted that New Mexico needs to diversify its economy so as to depend less on services and government. The manufacturing sector is frequently noted as a key area for expansion. Between 1980 and 1990, manufacturing employment grew by over 25 percent. However, as a percentage of total employment, manufacturing increased only slightly to 7.5 percent. Recent developments in this sector have been mixed. Announced layoffs (e.g. TMC in Roswell) have been offset by new plants or expansion at existing manufacturing facilities (e.g. General Mills in Albuquerque, Intel and Martin Marietta in Rio Rancho).

- Mining/natural resources. The mining sector in New Mexico declined precipitously during the 1980s as a result of falling oil and gas prices and the almost complete demise of the state's uranium mining industry. These developments not only resulted in severely curtailed mining employment (down 47% between 1980 and 1990), but in significantly lower severance tax revenues for state government. As in construction, recent developments in this sector also have been mixed. Natural gas production, bolstered by the coal seam tax credit available through at least 1992, has grown significantly since 1990. On the downside, both oil production in the state continued to decline after oil prices stabilized in the wake of the Gulf War (BBER, "The For-UNM Bulletin," Spring 1991). Also, the molybdenum mine in Taos County will suspend operations in January 1992 (loss of 200 jobs) and Phelps Dodge is closing its Tyrone mine near Silver City by February, 1992 (loss of 440 jobs). It should be noted that a sustained increase in oil and gas prices would boost the state's economy and increase the severance tax revenues on which state institutions such as UNM depend.

- Border development. A prospect with potential for large-scale economic impacts on New Mexico is development along the New Mexico-Mexico border, particularly around the recently approved border crossing at Santa Teresa and the proposed crossing at Sunland Park. While economic growth can certainly be expected in this area, especially in the long run, large-scale growth will depend on a variety of factors including the outcome of the U.S.-Mexico Free Trade Treaty negotiations and New Mexico's capacity to compete with established border areas, particularly El Paso.
C.1.C. Educational Attainment in New Mexico

Enrollment at UNM is affected by the available supply of high school graduates, the likelihood that these students will enroll in an institution of higher education, the type of institution students choose to attend, and retention rates for students who enroll at UNM. This subsection provides an overview of UNM’s main source of students (New Mexico high school graduates), data on higher education participation trends and information on degree completion and student retention. Where possible, data is presented for both New Mexico and nationally, and by sex and race/ethnicity.

- Supply of High School Graduates
  The third predictor variable used by UNM Planning and Policy Studies to project undergraduate enrollment is the number of New Mexico high school graduates. This figure grew steadily through the 1960s and 1970s—peaking in 1979—as the “baby boom” generation passed through the state’s high schools. The number of high school graduates declined throughout the 1980s, but is projected reach new highs during the 1990s as the children of New Mexico’s baby boomers enter high school. The racial/ethnic composition of the state’s graduating classes also changed as minorities, primarily Native Americans, grew as a proportion of the state’s graduates. Hispanics, who are the state’s largest minority group and one of the fastest growing, did not increase significantly as a percentage of the state’s graduates. Available data also indicates that students (especially Hispanics) are more likely to drop out of high school in New Mexico than nationally, suggesting that the number of graduating seniors potentially able to attend UNM may increase if the state’s school districts are able to lower their dropout rates.

- During the 1961 to 1990 period, the number of New Mexico high school graduates peaked in 1979 at 19,800. This increase was fueled by the “baby boom” generation, and with the aging of the baby boomers, the number of high school graduates declined both in New Mexico and nationally. Between 1980 and 1989, the number of New Mexico high school graduates fell from 19,117 to 16,128, a 15.6% decrease (Exhibit D19). In the U.S. as a whole, the number of high school graduates dropped by 11.8 percent during the 1980 to 1989 period.

The relationship between the number of New Mexico high school graduates and UNM’s undergraduate enrollment is illustrated in Exhibit D20. Generally, growth in the number of high school graduates helped push UNM’s undergraduate enrollment upward. The decline in the number of high school graduates since 1980 also suggests, however, that UNM’s continued enrollment growth is attributable to other factors such as the increasing proportion of high school graduates attending college, the previously noted influx into the university of older students and improved student retention.
### Exhibit D19

**New Mexico High School Graduates by Race and U.S. Totals, 1980-81 to 1990-91**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic White</td>
<td>9,460</td>
<td>8,335</td>
<td>8,082</td>
<td>8,370</td>
<td>7,944</td>
<td>7,584</td>
<td>7,245</td>
<td>NA</td>
<td>NA</td>
<td>+20.0%</td>
</tr>
<tr>
<td>Black</td>
<td>431</td>
<td>372</td>
<td>427</td>
<td>327</td>
<td>356</td>
<td>339</td>
<td>312</td>
<td>NA</td>
<td>NA</td>
<td>-21.4%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>7,427</td>
<td>7,729</td>
<td>6,450</td>
<td>6,446</td>
<td>6,426</td>
<td>6,371</td>
<td>6,440</td>
<td>NA</td>
<td>NA</td>
<td>-14.2%</td>
</tr>
<tr>
<td>Native American</td>
<td>1,574</td>
<td>1,614</td>
<td>1,813</td>
<td>1,754</td>
<td>1,859</td>
<td>1,601</td>
<td>2,201</td>
<td>NA</td>
<td>NA</td>
<td>+8.9%</td>
</tr>
<tr>
<td>Asian</td>
<td>125</td>
<td>145</td>
<td>158</td>
<td>178</td>
<td>231</td>
<td>194</td>
<td>230</td>
<td>NA</td>
<td>NA</td>
<td>+54.6%</td>
</tr>
<tr>
<td>Total New Mexico</td>
<td>19,117</td>
<td>17,875</td>
<td>16,930</td>
<td>17,075</td>
<td>16,816</td>
<td>16,128</td>
<td>16,426</td>
<td>NA</td>
<td>NA</td>
<td>-15.5%</td>
</tr>
<tr>
<td>Total U.S. (in 1000's)</td>
<td>3,020</td>
<td>2,888</td>
<td>2,677</td>
<td>2,694</td>
<td>2,737</td>
<td>2,665</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>+11.8%</td>
</tr>
</tbody>
</table>

*National figures for 1980-81 and 1982-83 are estimated.

**Source:** New Mexico figures from Higher Education and Economic Development, New Mexico Department of Education. U.S. figures from NCES, Digest of Education Statistics, Table 94, 1999.

### Exhibit D20

**Number of New Mexico High School Graduates and University of New Mexico Undergraduates, 1961 – 1989**

![Graph showing the number of New Mexico high school graduates and University of New Mexico undergraduates from 1961 to 1989.](image)

*Source: data as reported by UNM Planning and Policy Studies, "Undergraduate Enrollment Projections: Data and Model," 5/2/98.*

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**III. Resources**

D-76 Project Information Package
ARC 2/92
The children of the "baby boomers" will graduate from New Mexico high schools in unprecedented numbers. As noted above, the largest number of high school graduates to date in New Mexico was in 19,800 in 1979. In comparison, the Western Interstate Commission on Higher Education (WICHE) projects that during the next 15 years, the number of New Mexico high school graduates will peak at approximately 21,300 around the year 2000. These children are already impacting New Mexico school districts, including APS and Las Cruces Public Schools. Elementary and middle schools are experiencing strong, sustained growth while high school enrollments are projected to increase significantly after 1995. The size of future high school classes is subject, however, to the success of the state's school districts in addressing the dropout problem.

As is true of New Mexico's population in general, minorities represent an increasing share of the state's high school graduates. Anglos (i.e. non-Hispanic whites) have been a minority of the state's graduating classes throughout the 1980s, decreasing from 49.5 percent of the 1980-81 class to 44.1 percent in 1990-91. In contrast, Native Americans grew from 8.8 percent of the state's high school graduates in 1980-81 to 13.4 percent in 1990-91. The percentage of New Mexico high school graduates who are Asian doubled, from 0.7 to 1.4 percent. Hispanic graduates, however, hovered between 38 and 40 percent of the state total. The relatively constant Hispanic proportion may be the result of the high dropout rates for Hispanic students, particularly since the Hispanic population is increasing as a percentage of the state's total population total.

National data published by NCES indicates that the percentage of the population ages 16 to 24 who dropped out of high school (excluding persons who received a GED) generally decreased during the 1980s, from 14.1 percent in 1980 to an estimated 12.6 percent in 1989 (Exhibit D21). The proportions of Blacks (13.3% in 1989) and Hispanics (33% in 1989) who dropped out were consistently higher than the national average. Also, the dropout rate for men (13.6% in 1989) has been higher than the dropout rate for women (11.7% in 1989) since 1977.

The New Mexico Department of Education does not compile statewide statistics on overall dropout rates. Instead, the state reports on the percentage of high school students who drop out during a one year period. The statewide rate for the 1990-91 school year was slightly less than 10 percent. In other words, approximately 10 percent of the students who were enrolled in high school at the start of the school year dropped out by the end of the school year.

The annual dropout rate does not, however, reflect what percentage overall of New Mexico students drop out prior to completing the 12th grade. One proxy measure may be dropout data for Albuquerque Public Schools (APS), which performs longitudinal studies for each class of high school freshmen. Data for
the freshmen class of 1986-87 indicate that 4 years later: 23.4 percent of the students were considered dropouts, 7 percent of the class were still enrolled in APS high schools, 10.1 percent of the students had transferred to schools outside APS and the rest of the class had graduated. As is the case nationally, the dropout rates for minority students were generally higher. The dropout rates for Blacks (25.2%), Hispanics (30%) and Native Americans (24.3%) were higher than the district average (23.4%) whereas the rates for Anglos (18.5%) and Asians (13.5%) were lower than the APS average.

The APS dropout data is probably fairly representative of the state as a whole, in part because APS is the state's largest school district, accounting for approximately 27 percent of total public and private school enrollments in 1990. Also, a comparison of annual dropout rates for the state's school districts suggests that the dropout rates in the state's urban areas are similar. Dropout rates in rural areas, both nationally and in New Mexico, are generally somewhat lower.

Higher Education Participation
The published national and New Mexico data on the proportion of the population who attend institutions of higher education are difficult to compare. The available data suggest, however, that minorities enroll in college at significantly lower rates than Anglos and that New Mexico's population is less likely to enroll in an institution of higher education than is the case nationally. Still, the proportion of New Mexico's high school graduates who enrolled in higher education institutions after graduation increased significantly between 1978 and 1989. During that time period, UNM enrolled a smaller percentage of these students, however, as New Mexico's 2 year colleges and vocational-technical schools and institutions outside the state enrolled higher percentages New Mexico's high school graduates.

- In 1989, approximately 20.5 percent of New Mexico's population age 25 and over had completed 4 years of college or more. Nationally, about 21.5 percent of the population had 4 or more years of college. (U.S. Census Bureau, 1988-89 Current Population Survey report on educational attainment.)

- The percentage of New Mexico's total population enrolled in higher education institutions increased from 3.8 percent in 1970 to 5.1 percent in 1980 to 5.4 percent in 1986. The 1986 percentages for nearby states include: Arizona, 6.9 percent; Utah and California, 6.4 percent; Colorado, 5.6 percent; Oklahoma, 5.2 percent; and Texas, 4.6 percent. (Source: Census Bureau and U.S. Department of Education data as reported by UNM Planning and Policy Studies).

- Exhibit D22 contains U.S. college participation rates for all persons 18 to 24 years old and for high school graduates in this age group. This table includes limited race/ethnicity figures. Similar, published data are not available for New Mexico.

The data in Exhibit D22 indicate that, nationally, 18 to 24 year old Blacks and Hispanics are significantly less likely to be enrolled in an institution of higher education than Whites in the same age group. These data also suggest that the participation rates for the White population improved significantly between 1978 and 1986 while the participation rates for Blacks and Hispanics either improved by relatively smaller margins or actually deteriorated.

- The proportion of New Mexico's high school graduates that enrolled in higher education institutions for the fall semester of the year they graduated rose from 39.3 percent in 1978 to 50.3 percent in 1989 (Exhibit D23). Nationally, the percentage of high school graduates who enrolled in college within 1 year of graduation increased from 50.1 percent in 1978 to 58.9 percent in 1988.

- UNM enrolled 9.7 percent of New Mexico's 1978 graduating class (Exhibit D23). This figure rose to 11 percent in 1984 but then declined steadily and in 1989
### Exhibit D22

**Enrollment Rates for Persons 18 to 24 Years Old in Institutions of Higher Education by Race/Ethnicity, United States, 1975 – 1988**

<table>
<thead>
<tr>
<th>Year</th>
<th>All Students</th>
<th>White</th>
<th>Black</th>
<th>Hispanic Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H.S. Graduates</td>
<td>All</td>
<td>H.S. Graduates</td>
<td>All</td>
</tr>
<tr>
<td>1978</td>
<td>25.3%</td>
<td>31.4%</td>
<td>25.7%</td>
<td>31.1%</td>
</tr>
<tr>
<td>1979</td>
<td>25.0%</td>
<td>31.2%</td>
<td>25.6%</td>
<td>31.2%</td>
</tr>
<tr>
<td>1980</td>
<td>26.6%</td>
<td>31.6%</td>
<td>26.2%</td>
<td>31.8%</td>
</tr>
<tr>
<td>1981</td>
<td>26.2%</td>
<td>32.5%</td>
<td>26.7%</td>
<td>32.5%</td>
</tr>
<tr>
<td>1982</td>
<td>26.6%</td>
<td>35.0%</td>
<td>27.2%</td>
<td>33.1%</td>
</tr>
<tr>
<td>1983</td>
<td>26.2%</td>
<td>32.5%</td>
<td>27.9%</td>
<td>32.9%</td>
</tr>
<tr>
<td>1984</td>
<td>27.1%</td>
<td>33.2%</td>
<td>28.0%</td>
<td>33.7%</td>
</tr>
<tr>
<td>1985</td>
<td>27.8%</td>
<td>33.7%</td>
<td>28.7%</td>
<td>34.4%</td>
</tr>
<tr>
<td>1986</td>
<td>27.9%</td>
<td>34.0%</td>
<td>28.3%</td>
<td>34.1%</td>
</tr>
<tr>
<td>1987</td>
<td>29.6%</td>
<td>36.4%</td>
<td>30.2%</td>
<td>36.6%</td>
</tr>
<tr>
<td>1988</td>
<td>30.3%</td>
<td>37.3%</td>
<td>31.3%</td>
<td>39.1%</td>
</tr>
</tbody>
</table>

* All persons 18 to 24 years of age.
** Persons 18 to 24 years of age who graduated from high school.
† Persons of Hispanic origin may be of any race.

**NOTE:** Data are based upon sample surveys of the civilian noninstitutional population.


### Exhibit D23

**Type of Higher Education Institution Selected by New Mexico College Bound High School Graduates, 1978 – 1988**

<table>
<thead>
<tr>
<th>High School Graduates</th>
<th>UNM</th>
<th>Other NM 4 Year</th>
<th>NM 2 Year</th>
<th>NM Vo-Tech</th>
<th>Out of State, All</th>
<th>Total in College</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>19,505</td>
<td>9.7%</td>
<td>13.8%</td>
<td>5.6%</td>
<td>1.4%</td>
<td>8.9%</td>
</tr>
<tr>
<td>1979</td>
<td>19,800</td>
<td>9.9%</td>
<td>14.4%</td>
<td>5.6%</td>
<td>2.1%</td>
<td>9.7%</td>
</tr>
<tr>
<td>1980</td>
<td>19,547</td>
<td>14.7%</td>
<td>5.6%</td>
<td>2.1%</td>
<td>8.6%</td>
<td>41.4%</td>
</tr>
<tr>
<td>1981</td>
<td>19,117</td>
<td>15.4%</td>
<td>5.9%</td>
<td>4.7%</td>
<td>9.4%</td>
<td>43.8%</td>
</tr>
<tr>
<td>1982</td>
<td>18,725</td>
<td>15.4%</td>
<td>5.9%</td>
<td>4.7%</td>
<td>9.0%</td>
<td>48.4%</td>
</tr>
<tr>
<td>1983</td>
<td>17,813</td>
<td>16.6%</td>
<td>8.1%</td>
<td>2.5%</td>
<td>8.5%</td>
<td>47.9%</td>
</tr>
<tr>
<td>1984</td>
<td>17,370</td>
<td>13.3%</td>
<td>7.3%</td>
<td>2.6%</td>
<td>10.2%</td>
<td>44.3%</td>
</tr>
<tr>
<td>1985</td>
<td>16,998</td>
<td>12.8%</td>
<td>7.8%</td>
<td>2.3%</td>
<td>8.9%</td>
<td>42.0%</td>
</tr>
<tr>
<td>1986</td>
<td>16,591</td>
<td>13.7%</td>
<td>6.5%</td>
<td>2.2%</td>
<td>10.7%</td>
<td>43.2%</td>
</tr>
<tr>
<td>1987</td>
<td>17,075</td>
<td>13.3%</td>
<td>8.2%</td>
<td>2.4%</td>
<td>11.5%</td>
<td>44.9%</td>
</tr>
<tr>
<td>1988</td>
<td>17,428</td>
<td>14.4%</td>
<td>9.2%</td>
<td>4.5%</td>
<td>12.2%</td>
<td>49.0%</td>
</tr>
<tr>
<td>1989</td>
<td>16,856</td>
<td>14.0%</td>
<td>10.2%</td>
<td>6.4%</td>
<td>11.2%</td>
<td>50.3%</td>
</tr>
</tbody>
</table>

* NM = New Mexico

**NOTE:** As of the fall semester following graduation from high school.

stood at 8.6 percent. The scenario was similar at New Mexico’s other 4 year institutions: these colleges enrolled 13.8 percent of the 1978 graduating class, 18.6 percent of the 1983 class but only 14 percent of the 1989 class. The most significant gains were posted by the state’s 2 year colleges and the vocational-technical schools. The proportion of New Mexico’s high school graduates who enrolled in the state’s 2 year colleges jumped from 5.6 percent in 1978 to 10.2 percent in 1989 and, at technical-vocational schools, from 1.4 to 6.4 percent. In 1989, schools outside New Mexico enrolled 11.2 percent of New Mexico’s graduating class, up from 8.9 percent in 1978.

- **UNM Planning and Policy Studies** estimates that approximately 2.3 percent of Bernalillo County’s population ages 25 to 44 was enrolled at UNM as non-degree students in 1989. This figure is down from 3.2 percent in 1985. Planning and Policy Studies projects that during the 1990 to 2010 period, this participation rate will range from 2.5 to 3.5 percent.

---

**Higher Education Degrees Conferred**

Between 1976/77 and 1988/89, the number of bachelor’s and doctoral/first professional degrees awarded increased at a faster rate nationally than at UNM. However, the number of master’s degrees conferred by UNM grew at a much higher rate than in the U.S. as a whole during this time period. Nationally, women have earned a majority of the bachelor’s and master’s degrees awarded for at least the past 10 years, and UNM awarded female students a much higher proportion of its master’s degrees than is the case nationally. Women at UNM also received a larger proportion of the doctoral and first professional degrees than nationally, but still account for less than 50 percent of the recipients of these degrees. In 1988/89, minority students (primarily Hispanics) accounted for at least 22 percent of the degrees awarded by UNM at all levels. This figure is much higher than in the U.S. as a whole, where minorities (primarily Blacks) earned approximately 10 to 13 percent of all degrees awarded in 1988/89.

- **UNM** awarded 1,933 bachelor’s degrees in 1976/77. This figure dropped through most of the 1980’s before increasing to 2,023 in 1988/89, a 4.7 percent increase from 1976/77 (Exhibit D24). In 1989/90, UNM awarded 2,144 bachelor’s degrees. Nationally, the number of bachelor’s degrees conferred rose steadily, increasing by 10.5 percent between 1976/77 and 1988/89.

The number of master’s degrees awarded by UNM jumped from 727 in 1976/77 to 917 in 1988/89, a 26.1 percent increase (Exhibit D24). This figure dropped, however, to 869 in 1989/90. In the U.S. as a whole, the number of master’s degrees awarded fell through the early and mid-1980s, but increased by 1988/89 to within 0.1 percent of the 1976/77 figure.
### Exhibit D24
**Number of Bachelor's and Master's Degrees Conferred by Race/Ethnicity and Sex, University of New Mexico and United States, Selected Years**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>59,122</td>
<td>60,670</td>
<td>57,473</td>
<td>56,016</td>
<td>1.6%</td>
</tr>
<tr>
<td>Native American</td>
<td>3,488</td>
<td>3,593</td>
<td>4,246</td>
<td>4,046</td>
<td>15.7%</td>
</tr>
<tr>
<td>Asian</td>
<td>11,193</td>
<td>16,794</td>
<td>21,334</td>
<td>25,155</td>
<td>45.8%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>17,364</td>
<td>24,333</td>
<td>25,742</td>
<td>25,367</td>
<td>51.5%</td>
</tr>
<tr>
<td>White non-Hispanic</td>
<td>511,569</td>
<td>607,318</td>
<td>625,136</td>
<td>588,166</td>
<td>7.8%</td>
</tr>
<tr>
<td>Non-Resident Alien</td>
<td>10,012</td>
<td>22,589</td>
<td>26,922</td>
<td>26,972</td>
<td>9.7%</td>
</tr>
<tr>
<td>Total</td>
<td>918,388</td>
<td>934,450</td>
<td>964,614</td>
<td>995,526</td>
<td>1.5%</td>
</tr>
<tr>
<td>Total Minority†</td>
<td>21,777</td>
<td>443</td>
<td>164,892</td>
<td>211</td>
<td>112,988</td>
</tr>
<tr>
<td>Women</td>
<td>418,786</td>
<td>676</td>
<td>465,75</td>
<td>935</td>
<td>492,183</td>
</tr>
</tbody>
</table>

### Master's

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>20,345</td>
<td>21,733</td>
<td>11,339</td>
<td>14,076</td>
<td>12.9%</td>
</tr>
<tr>
<td>Native American</td>
<td>785</td>
<td>1,034</td>
<td>2,562</td>
<td>1,133</td>
<td>44.7%</td>
</tr>
<tr>
<td>Asian</td>
<td>3,910</td>
<td>2,626</td>
<td>7,782</td>
<td>10,714</td>
<td>174.0%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5,259</td>
<td>5,864</td>
<td>8,268</td>
<td>7,270</td>
<td>57.2%</td>
</tr>
<tr>
<td>White non-Hispanic</td>
<td>602,777</td>
<td>585</td>
<td>241,216</td>
<td>225,826</td>
<td>568</td>
</tr>
<tr>
<td>Non-Resident Alien</td>
<td>130,747</td>
<td>122,527</td>
<td>26,935</td>
<td>34,072</td>
<td>112.0%</td>
</tr>
<tr>
<td>Total</td>
<td>352,292</td>
<td>254,133</td>
<td>284,354</td>
<td>280,427</td>
<td>811</td>
</tr>
<tr>
<td>Total Minority†</td>
<td>31,557</td>
<td>457</td>
<td>30,910</td>
<td>218</td>
<td>29,041</td>
</tr>
<tr>
<td>Women</td>
<td>43,769</td>
<td>997</td>
<td>148,838</td>
<td>415</td>
<td>142,866</td>
</tr>
</tbody>
</table>

**UNM data:**

- **Total:** The years 1976/77, 1980/81, and 1984/85 include non-resident aliens. **Total minority excludes non-resident aliens.** Women include non-resident aliens. Non-resident aliens were included with various minority groups. Source: J.A. Engels, "Student Indicators on Students," UNM Planning and Policy Studies, June 1981, "Commission on Higher Education, WD-01, Degree File Report." Table H. 1984-85 U.S. data:

**Note:** Some institutions do not report degree data by race/ethnicity and so data for some nonreporting institutions are included.


UNM awarded 3.3 percent fewer doctoral and first professional degrees in 1988/89 (322 degrees) than in 1976/77 (333 degrees) (Exhibit D25). In 1989/90, however, UNM conferred 350 doctoral and first professional degrees. Nationally, the combined total of doctoral and first professional degrees awarded rose by 9 percent during the 1976/77 to 1988/89 period.

Bachelor's degrees accounted for 63.8 percent of the degrees awarded by UNM in 1989/90. This percentage has dropped fairly steadily since the early 1970s, when bachelor's degrees represented approximately 67 to 69 percent of UNM's
Exhibit D25
Total Doctoral and First Professional Degrees Conferred by Race/Ethnicity and Sex, University of New Mexico, Selected Years

<table>
<thead>
<tr>
<th>Year</th>
<th>Black</th>
<th>Native American</th>
<th>Asian</th>
<th>Hispanic</th>
<th>White non-Hispanic</th>
<th>Non-Resident Alien</th>
<th>Total</th>
<th>Total Minority</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978/79</td>
<td>9</td>
<td>11</td>
<td>9</td>
<td>54</td>
<td>251</td>
<td></td>
<td>333</td>
<td>100.0%</td>
<td>107</td>
</tr>
<tr>
<td>1980/81</td>
<td>4</td>
<td>12</td>
<td>7</td>
<td>70</td>
<td>248</td>
<td></td>
<td>341</td>
<td>100.0%</td>
<td>93</td>
</tr>
<tr>
<td>1984/85</td>
<td>4</td>
<td>11</td>
<td>7</td>
<td>56</td>
<td>219</td>
<td></td>
<td>300</td>
<td>100.0%</td>
<td>81</td>
</tr>
<tr>
<td>1988/89</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>59</td>
<td>225</td>
<td></td>
<td>322</td>
<td>100.0%</td>
<td>73</td>
</tr>
</tbody>
</table>

学位授予情况和第一专业学位授予情况

- Black, Native American, Asian, Hispanic, and White non-Hispanic students are included in the total.
- Non-Resident Alien students are included in the total.
- Total minority excludes non-resident aliens.


Master's degrees accounted for 25.8 percent of the 1989/90 total, doctorates for 5.1 percent and first professional degrees for 5.3 percent (law, 3.2%; medicine, 2.1%).

- The number of women awarded bachelor's and master's degrees has outnumbered the number of men awarded these degrees since at least 1981/82. This is true of both the U.S. as a whole and UNM, and reflects the female majority in enrollments at these levels. In 1988/89, U.S. higher education institutions awarded women 52.6 percent of the bachelor's degrees and 51.9 percent of all master's degrees (Exhibit D26). At UNM, women received 52.8 percent of the bachelor's degrees and 61.6 percent of the master's degrees in 1988/89.

Male recipients significantly outnumbered female recipients of 1988/89 doctoral and professional degrees, however, both at UNM and nationally. Women received only 36.5 percent of doctoral degrees and 36.3 percent of the first professional degrees awarded by U.S. institutions. At UNM, women received larger proportions of the doctorates (40.6%) and first professional degrees (48.1%). It should be noted, however, that while women constituted a majority of UNM's law school graduates through most of the 1980s, women have represented a majority of the graduating medical school class only once, in 1987/88.
### Exhibit D26

**Percent of Bachelor's and Master's Degrees Conferred by Race/Ethnicity**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bachelor's</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>3.4%</td>
<td>1.1%</td>
<td>6.5%</td>
<td>0.8%</td>
<td>5.9%</td>
<td>1.4%</td>
<td>5.7%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Native American</td>
<td>0.4%</td>
<td>4.0%</td>
<td>0.4%</td>
<td>4.4%</td>
<td>0.4%</td>
<td>3.6%</td>
<td>0.4%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Asian</td>
<td>1.2%</td>
<td>0.6%</td>
<td>2.0%</td>
<td>1.3%</td>
<td>2.6%</td>
<td>1.7%</td>
<td>3.8%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2.0%</td>
<td>17.2%</td>
<td>2.3%</td>
<td>19.5%</td>
<td>2.7%</td>
<td>20.9%</td>
<td>2.9%</td>
<td>22.1%</td>
</tr>
<tr>
<td>White non-Hispanic</td>
<td>88.4%</td>
<td>77.7%</td>
<td>86.4%</td>
<td>74.8%</td>
<td>85.5%</td>
<td>72.2%</td>
<td>84.5%</td>
<td>69.6%</td>
</tr>
<tr>
<td>Non-Resident Alien</td>
<td>1.6%</td>
<td>2.4%</td>
<td>2.8%</td>
<td>0.8%</td>
<td>2.7%</td>
<td>0.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Minority†</td>
<td>10.0%</td>
<td>22.9%</td>
<td>11.2%</td>
<td>26.0%</td>
<td>17.9%</td>
<td>27.3%</td>
<td>12.8%</td>
<td>28.7%</td>
</tr>
<tr>
<td>Women‡</td>
<td>45.6%</td>
<td>45.3%</td>
<td>49.8%</td>
<td>49.0%</td>
<td>50.9%</td>
<td>52.7%</td>
<td>52.8%</td>
<td>52.8%</td>
</tr>
<tr>
<td><strong>Master's</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>5.6%</td>
<td>1.7%</td>
<td>5.5%</td>
<td>1.4%</td>
<td>5.0%</td>
<td>0.9%</td>
<td>4.6%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Native American</td>
<td>3.3%</td>
<td>3.2%</td>
<td>0.4%</td>
<td>2.6%</td>
<td>0.4%</td>
<td>5.2%</td>
<td>0.4%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Asian</td>
<td>1.3%</td>
<td>0.7%</td>
<td>2.1%</td>
<td>4.9%</td>
<td>2.8%</td>
<td>3.7%</td>
<td>3.5%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.7%</td>
<td>14.0%</td>
<td>2.3%</td>
<td>18.5%</td>
<td>2.4%</td>
<td>17.8%</td>
<td>2.4%</td>
<td>16.4%</td>
</tr>
<tr>
<td>White non-Hispanic</td>
<td>85.0%</td>
<td>90.5%</td>
<td>82.0%</td>
<td>72.5%</td>
<td>79.7%</td>
<td>72.5%</td>
<td>78.2%</td>
<td>68.0%</td>
</tr>
<tr>
<td>Non-Resident Alien</td>
<td>5.2%</td>
<td>7.5%</td>
<td>9.8%</td>
<td>11.0%</td>
<td>9.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Minority†</td>
<td>9.8%</td>
<td>19.5%</td>
<td>10.5%</td>
<td>27.5%</td>
<td>10.6%</td>
<td>27.5%</td>
<td>10.7%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Women‡</td>
<td>43.5%</td>
<td>54.6%</td>
<td>50.5%</td>
<td>52.3%</td>
<td>50.9%</td>
<td>57.2%</td>
<td>51.9%</td>
<td>61.6%</td>
</tr>
</tbody>
</table>

**UNM data:**

- Total minority excludes non-resident aliens. †Women includes non-resident aliens. *Non-resident aliens were included in various admittance groups.

**Sources:**

- U.S. data:


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**Project Information Package**

ARC 2/92

**Resources**
The proportion of all U.S. bachelor's degrees awarded to minorities rose from 10 percent in 1976/77 to 12.8 percent in 1986/89 (Exhibit D26). At UNM, minorities received 22.9 percent of the bachelor's degrees awarded in 1976/77 and 28.7 percent in 1986/89.

Nationally, the percentage of master's degrees awarded to minorities increased from 9.8 percent to 10.7 percent between 1976/77 and 1986/89. During this same period, the proportion of UNM master's degrees going to minorities rose from 19.5 percent to 22 percent.

UNM awarded minorities 22.7 percent of the doctorates and first professional degrees conferred in 1986/89. In 1976/77, 24.6 percent of the doctoral and first professional degrees reportedly went to minorities.

The change in the proportion of degrees at all levels awarded to minorities should be interpreted with caution. Until 1986/89, UNM apparently reported degrees awarded to non-resident aliens as part of the various "minority" counts. Consequently, the 1976/77, 1980/81 and 1984/85 figures for minority groups in Exhibits D24 – D26 are probably high. In 1986/89, 4 percent of all degrees awarded by UNM went to non-resident aliens (UNM Planning and Policy Studies, Selected Indicators on Students, Table 33, June 1991).

In terms of specific ethnic/racial groups:

The proportion of UNM bachelor's degrees awarded to Hispanics increased from 17.2 percent in 1976/77 to 22.1 percent in 1986/89 (Exhibit D26). Hispanics also increased their share between 1976 and 1986 of the master's and doctoral/first professional degrees conferred by UNM. However, after rising substantially between 1976/77 and 1980/81, the Hispanic share of these degrees has fallen off. Nationally, the proportion of degrees awarded to Hispanics, though much smaller than at UNM, rose steadily between 1976/77 and 1986/89.

Native Americans are the third largest recipient, after Anglos and Hispanics, of UNM degrees. In 1986/89, Native Americans received 3.2 percent of the bachelor's degrees awarded by UNM (Exhibit D26). This figure is down from 4 percent in 1976/77. Native Americans also received 3.2 percent of UNM's master's degrees and 1.9 percent of the doctorates/first professional degrees awarded in 1986/89. Both of these proportions are down from previous years. Nationally, Native Americans continue to receive less than 0.5 percent of the degrees awarded at all levels.
The proportion of U.S. bachelor's and master's degrees awarded to Asian Americans increased steadily between 1976/77 and 1988/89, when 3.8 percent of the bachelor's degrees and 3.5 percent of the master's degrees went to Asian Americans (Exhibit D26). UNM reported that the proportion of bachelor's degrees awarded to Asian students rose from 0.6 to 2.2 percent and master's degrees from 0.7 to 1.2 percent. The Asian share of doctorates/first professional degrees, however, dropped from 2.4 to 2.2 percent. While the proportion of the UNM bachelor's degrees awarded to Asian students rose steadily, the percentage of master's and doctoral/first professional degrees awarded to Asian students in 1988/89 was significantly lower than earlier in the 1980s. These decreases may be "false" decreases stemming from the separate degree breakout for non-resident aliens in 1988/89.

Black students received 1.1 percent in both 1976/77 and 1988/89 of the bachelor's degrees awarded by UNM (Exhibit D26). During the interim years, this figure ranged from 0.8 to 1.3 percent. Black students account for a generally decreasing proportion of the master's and doctoral/first professional degrees awarded by UNM. The proportion of UNM master's degrees awarded to Black students declined from 1.7 percent in 1976/77 to 1.3 percent in 1988/89 while Black recipients of doctoral/first professional degrees fell from 2.7 to 0.3 percent of the total. Black students accounted for 5.7 percent of the bachelor's degrees and 3.2 percent of the master's degrees awarded nationally. These proportions are both down from previous years.

C.1.D. UNM's Setting – Albuquerque Community Trends

The Albuquerque metropolitan area, by virtue of its status as the physical setting for UNM’s main campus and as the population center of the state, affects UNM in various ways. For example, Bernalillo County contributed nearly half of UNM’s student body in 1990. UNM 2000 envisions expanded activity and services not only at its current sites, but also around the state, including the greater Albuquerque metropolitan area. This subsection is intended as an overview of the Albuquerque metropolitan area. Demographic, economic and physical growth trends are noted and areas where growth is anticipated are identified.

- Population. Between 1970 and 1980, the population of the Albuquerque metropolitan area grew rapidly. Bernalillo County’s population jumped from 315,774 in 1970 to 420,261 in 1980, representing a compounded annual growth rate of 2.9 percent (Exhibit D27). Sandoval County, which includes Rio Rancho, nearly doubled in population, growing from 17,492 persons in 1970 to 34,400 persons in 1980. Between 1980 and 1990, Bernalillo County’s population growth slowed, but still increased by 1.4 percent annually to 480,577 persons. Sandoval
County, however, continued to grow rapidly, increasing at an annual rate of 6.3 percent during the 1980 to 1990 period. Most of Sandoval County's growth is attributable to the rapid development of Rio Rancho.

The most recent available BBER projections (June 1980) for these counties appear to be overly optimistic. BBER projected a 1990 Bernalillo County population of 509,114 persons. The 1990 Census, however, counted only 480,577 persons, a 6 percent difference. For Sandoval County, the projected population of 67,857 persons differs from the Census count by 7.2 percent. Although part of this discrepancy may be due to Census undercounts, the other contributing factor is slower than expected growth over the last 2 to 3 years.

Though the rate of increase is expected to be slower than in the 1970s and 1980s, BBER projects continued population growth in both Bernalillo and Sandoval counties during the 1990 to 2010 period. In general, Bernalillo County is projected to experience annual growth rates closer to 1 percent than the 2 to 3 percent annual growth of the last 20 years. Sandoval County's growth will slow from 6 or 7 percent a year to 2 to 3 percent annually. The population of Bernalillo County is projected to top 579,000 persons by the year 2000 and nearly 643,000 by 2010. Sandoval County's population is projected to climb to more than 89,000 persons by 2000 and about 110,000 by 2010. The difference between the projected and Census figures for 1990 suggest, however, that the projections for subsequent years may also be somewhat high.
Economy. The difference between projected figures and Census Bureau counts for 1990 are indicative of the national economy's impact on local population and employment growth. Several factors contributing to the recent national recession contributed to slower growth locally. These factors include the large federal deficit, the costs of and more stringent lending guidelines resulting from the savings and loan crisis and the Gulf War. While the nation faces a slow, uneven recovery, Albuquerque has fared somewhat better. Albuquerque's October 1991 unemployment rate of 4.8 percent was below the U.S. rate of 6.4 percent.

As noted previously, the New Mexico economy is highly dependent on federal spending. This circumstance has generally provided the Albuquerque area with a measure of economic stability, resulting in a somewhat recession-resistant economy. The Albuquerque area did not experience the boom/bust cycles characteristic of many western energy areas during the mid 1970s and early 1980s. However, with the exception of Rio Rancho, the Albuquerque area also did not experience the explosive growth that occurred in many Sunbelt locations (e.g. on the West Coast, Texas, Florida) during this time period. More recently, the Albuquerque area did not share in the rapid economic growth that occurred along the East Coast and in several other areas during the late 1980s. Instead, the Albuquerque area's economy grew moderately and steadily between 1970 and the late 1980s.
The most recent employment projections for the Albuquerque area (BBER, Socioeconomic Projections: Albuquerque, City of Albuquerque, July 1989) indicate moderate growth during the 1989 to 1992 period followed by relatively high employment growth through mid-1995. After 1995, employment growth is once again projected to be moderate. The peak of this projected economic expansion is likely to be delayed somewhat due to the unexpected severity and length of the current national recession.

**Employment centers.** The City's Socioeconomic Projections indicate that the Albuquerque area's employment centers are not expected to change drastically. Existing major employment centers—downtown, uptown, the portion of Albuquerque's southeast quadrant that includes Kirtland, Lovelace, UNM and TVI—are projected to experience slight declines in employment attributable to growth in other areas. (See Map 1, Section III B) These areas are still expected to account for almost 50 percent of the metropolitan area's employment in the year 2000. Emerging major employment centers include the north interstate 25 corridor (e.g., Journal Center/Renaissance Center area) and the northwest area (e.g., Seven Bar area), especially if the planned Cottonwood Mall project is realized. Despite high growth rates, by the year 2000 employment in Rio Rancho is projected to account for only 3.1 percent of the Albuquerque area's total employment.

With both the Winrock and Coronado shopping malls, the Uptown area should continue to serve as the metropolitan area's retail hub. Continued office development, including the Commons project, is also expected in the uptown area. The metropolitan area's largest employment center will remain the area around Kirtland Air Force Base. Major employers in the vicinity include the base, Albuquerque International Airport, Sandia National Laboratories, Lovelace, TVI and UNM.

The Downtown area will continue to benefit from the presence of government offices (city, county and federal), service providers (e.g. lodging, banking, and professional services) and potentially from a larger number of shopping and entertainment providers. Recent planning efforts (e.g., Quality of Life projects) indicate that the goal for the Downtown area is to create an arts and entertainment node on a corridor that extends west to Old Town and the Rio Grande and east along Central Avenue to the commercially revitalized Nob Hill area. Projects planned for this corridor include the troubled performing arts center and Albuquerque Biological Park, which is supposed to include the Albuquerque Aquarium, the Rio Grande Botanic Garden and Tingley Aquatic Park. One element of the project is a trolley along Central that could potentially link this area with Downtown, UNM and Nob Hill.
The West Mesa, especially the northwest, is the most attractive of the remaining areas available to developers for both large scale housing development and commercial/industrial centers. Continued population growth on the West Mesa is expected to drive growth in the retail and service sectors in this area. Improvements to Interstate 40, the opening of the Paseo del Norte bridge, and the planned widening of Alameda Boulevard has opened the northwest to continued new development. The Coors Road corridor and Rio Rancho, in particular, have experienced the development of new commercial areas in recent years. The largest of the planned, employment-generating projects in this area is the proposed Cottonwood Mall, a "supermall" tentatively scheduled to open in 1993.

- New residential development. In the next decade, residential growth in the Albuquerque metropolitan area will be focused on the northwest side, especially in Taylor Ranch, Paradise Hills and Rio Rancho. (See Map 1, Section IIIB) Despite the rapid growth of the last decade, large blocks of developable land are still available in these areas. The biggest obstacle to West Mesa development is the lack of both private funds for future land development and public funds for infrastructure, especially water. Still, large-scale development is expected in the next decade in numerous west side areas below the escarpment, including the Riverview, Seven Bar Ranch and Unser-98th Street areas. (APS Planning, Research and Accountability. Five-Year Enrollment Projections 1991-92/1995-96, August 1991.)

Residential development in the Northeast Heights is expected to slow considerably due to the diminishing supply of land and rising land prices. The Northeast Height's remaining stock of developable land consists of small, isolated parcels, the North Albuquerque Acres area and the Academy parcel. The small parcels are likely to develop, but the impact on the northeast area's overall population and housing stock will be limited. High density development of the North Albuquerque Acres area will be constrained by the fractured land ownership of the area. The need for developers to consolidate ownership, an expensive and time-consuming process, will slow development. The largest parcel of vacant land under single ownership in the Northeast Heights is owned by the Albuquerque Academy, which recently initiated the planning process for this 987 acre parcel. Preliminary scenarios indicate relatively low density, upscale housing (Albuquerque Journal, 11/20/91).

The area east of the Sandia Mountains, including Cedar Crest, Edgewood, Tijeras and Moriarty, should continue to experience a steady but moderate rate of residential construction. Most of the area, however, lacks water/sewer infrastructure. Larger, higher-density developments are possible if one or more of the developers working in this area is able to arrange for community

D-90 Project Information Package
ARC 2/92

III. Resources
water/sewer systems.

Other large, undeveloped properties include several sites on the west side (e.g. the Black Ranch and land owned by the Westland Development Company) and the UNM-owned Mesa del Sol property near the airport. Development of these areas is not expected until land prices in the northwest, including Rio Rancho, rise substantially. The infrastructure improvements necessary to develop these properties are unlikely to be financed until the availability of lower-cost land in other areas diminishes. Development of the 13,000 acre Westland property is also impeded by the inability of Westland shareholders to reach a consensus regarding the property’s future. Consequently, none of these properties is expected to experience large-scale development before the year 2000.

2.A.5. Government/Political Environment

Government and politics can affect enrollment levels at UNM in various ways, including financially and through regulatory mechanisms. UNM Planning and Policy Studies has noted various actual and potential impacts of government and politics, especially at the state level, on UNM.

- UNM must annually pursue its funding agenda through the New Mexico Commission on Higher Education and, ultimately, the state legislature. UNM’s success in this continuous, highly politicized process impacts such aspects of the university as tuition levels, state financial aid for students, staff salaries, and capital projects, all of which have enrollment implications.

- In general, UNM must deal with a wide array of regulations addressing many of the University’s functions. These regulations frequently involve specific reporting requirements and/or mandated ways of performing essential functions such as research, employee hiring, waste disposal, etc. While the merit of many of these regulations may be undeniable, they also result in significantly higher administrative overhead costs and absorb financial resources.

- There is a general trend in New Mexico towards more centralized control of the state’s higher education institutions, especially through the Commission for Higher Education. Potential state actions which could affect enrollment levels at UNM include:
  - Establishing enrollment limits or targets, with funding tied to these levels.
  - Centralizing control of freshman admission standards.
  - Imposing externally prepared mission statements on UNM.
- Requiring state approval for degree programs at all levels.
- Imposing state-level control of academic program reviews and outcomes.

- A number of potential federal actions discussed in Washington in recent years also would potentially impact enrollments at UNM. These include:
  - Major reductions in federal student financial aid programs, especially the Pell Grant. Because of the relatively low income levels in New Mexico, such cuts would disproportionately impact UNM. Although reduced levels of federal financial aid might decrease the proportion of New Mexico's students leaving the state to attend school, the overall impact would likely be to depress enrollments at UNM.
  - Broad national service legislation containing civil and/or military service options. If enacted, national service could potentially be either voluntary or mandatory. Service would likely be tied to financial aid programs for higher education similar to the current "army college fund" or along the lines of the post-World War II G.I. Bill. While such legislation might initially depress college attendance, eventually enrollments would likely rise.

C.2. Internal Factors

Internal factors refer to the policies, programs and traits that characterize UNM which affect or can potentially affect enrollment at UNM and which the University can directly address to modify. While any such policy or program may be a response to an external factor, internal factors are distinguished by UNM's capacity to fashion or shape the response to the external stimulus.

UNM is currently in the process of redefining and refocusing programs and services to meet the goals of the UNM 2000 long-range plan. This process is guided by the recognition that resources are limited, and consequently, by the need to reduce and eliminate programs as well as add and grow programs. Preliminary recommendations for the reallocation of resources indicate that UNM will provide fewer but higher quality teaching and research programs and that public and professional service activities will be aligned more closely with academic programs. Administrative functions are expected to be carried out more efficiently, and UNM's organizational structure will be simpler. (Office of the President, Preliminary Recommendation: Reallocation Plans, 8/29/91). Many of the changes in UNM's programs, services and administration may potentially impact enrollment levels. The objective of the following material is to identify some of the main internal factors impacting enrollments and student demographics and to discuss any anticipated changes in these factors.
C.2.A. Curriculum and Academic Degree Programs
The University's curriculum and degree programs impact enrollment in at least two ways. First, a potential student's decision on whether or not to attend UNM may hinge on the availability of courses in a particular field or degree program. While the net effect on enrollment stemming from the availability of, for example, a doctorate in French may be negligible, the impact on enrollment of the evening and weekend degree program has been substantial. UNM Planning and Policy Studies has also noted that while UNM 2000 stresses a north-south orientation (the Americas), the world's political and economic orientation appears to be increasingly along an east-west axis (the Pacific Rim and Europe). How this difference between UNM's focus and the world's economic and political orientation may impact enrollment is, however, difficult to predict.

The characteristics of UNM's student body are also subject to change depending on the University's curricular and degree program emphases. For example, graduate studies are an increasingly important component at UNM. Graduate students represent a growing proportion of UNM's enrollment while graduate degrees have increased as a percentage of UNM's degree total. Graduate students are generally older than the traditional undergraduate and are more likely to have a wide range of responsibilities beyond school. This suggests that in order to continue building graduate enrollments, UNM will need to address the needs of older students, needs which frequently revolve around convenience related to such issues as class scheduling, child care and parking.

C.2.B. Faculty Recruiting and Retention
The enrollment levels projected for the year 2000 by UNM Planning and Policy Studies will require an estimated 200 more full-time faculty than currently employed by the University. Many persons in higher education are anticipating a national faculty shortage by the year 2000. UNM currently loses approximately 100 faculty members annually to voluntary and involuntary termination, retirement, and death. At this rate, the University would need to hire approximately 1,200 faculty members over the next decade. Consequently, UNM might be faced with the need to "cap" enrollments if it is unable to maintain sufficient qualified faculty to serve larger enrollments. (Source: Richard Cady, Report to the UNM Task Force on the Professoriate, 4/10/91)

While UNM's ability to attract and retain sufficient qualified faculty to serve larger student populations is certainly affected by a variety of external factors, including the available supply of new doctorates and salary levels for state employees, there are also factors (e.g. early retirement policies) that UNM can directly influence. As Planning and Policy Studies has noted, a faculty shortage is a direct threat to achieving higher enrollments. Consequently, future enrollment levels may be affected to some degree by what UNM does to recruit and retain faculty.
C.2.C. Student Admissions and Recruiting

Admissions policies, programs and goals directly affect enrollment levels. The enrollment goals formulated for UNM 2000 include increasing the total number of students enrolled at the main campus from 25,000 students in 1991 to approximately 29,000 students in the year 2000. Students in graduate and professional programs should continue to represent approximately 25 percent of enrollment, excluding non-degree students. Better prepared students—in terms of demonstrable academic achievement—are also sought, as is a student body that is more representative of New Mexico’s population. Some of the enrollment implications of these goals are noted below.

- UNM 2000 stipulates that the University is expected to increase admission standards so as to “admit only those well-prepared students judged by selected criteria as likely to be successful at the University.” In particular, UNM will seek to maximize the proportion of incoming freshmen admitted under Plan A, which requires a rigorous high school curriculum. Tightened admission standards can initially be expected to exert a downward pressure on enrollments, at least until UNM is increasingly recognized as an option by high-achieving students who would have otherwise chosen to attend another institution. A major implication of this goal is that additional recruiting activity may necessary to reach the projected enrollment levels.

- The University also is expected to increase the diversity of the student body in terms of age, gender, traditional/non-traditional students, in-state/out-of-state students, international students and ethnicity. In particular, UNM 2000 emphasizes the recruitment of “underrepresented populations,” including ethnic/racial minorities and persons from rural areas, from New Mexico communities not well represented at UNM, and from families in which the potential students are first generation college students.

Successfully recruiting underrepresented populations may be more difficult if UNM tightens admissions standards, especially since these populations are often plagued by a higher incidence of educational deficiencies. In addition, increasing competition should be expected from other institutions (including out-of-state schools) for highly qualified minority students. Major implications of this goal include heightened recruiting activity, the availability of alternate admissions routes, and facilitating entry into the University for qualified transfers from branch campuses and 2 year institutions, where many students from underrepresented groups may be found.

- Recruitment is recognized in UNM 2000 as an essential tool for achieving the enrollment goals established in this plan. At the undergraduate level, recruiting is essentially a centralized task. At the graduate and professional levels, recruiting
is the joint responsibility of the University as a whole and of the individual colleges, schools and departments. Given UNM's somewhat contradicory enrollment goals—more highly qualified students, higher proportions of students from underrepresented groups and higher total enrollments—reaching the projected enrollment levels will depend in part on the efficacy of the various personnel and departments engaged in recruiting for UNM.

C.2.D. Student Retention and Graduation
UNM's ability to retain a student—ideally through completion of their undergraduate, graduate or professional program—obviously impacts enrollment. Support programs and services such as student housing, financial aid, academic advising, counseling services, and a variety of extracurricular activities are integral components of the retention effort. Such programs and services may play a large role in whether a student is able and willing to continue his or her studies at UNM. Students who leave UNM prior to completing a degree program no: only represent a lost enrollment opportunity, but may also represent a walking recruiting liability if they feel that UNM failed them.

UNM's implementation of a more stringent freshmen admission policy since 1983 has apparently resulted in freshmen classes that are better prepared academically when they enroll, consequently perform better academically at UNM, and are less likely to drop out or otherwise leave UNM.

• The proportion of first-time freshmen who return to UNM the following fall semester (the third semester) increased from 63.2 percent of the class starting in 1983 to 73.7 percent of the 1989 class (Exhibit D.28).

• Freshmen retention to the third semester improved for all major racial/ethnic groups between 1983 and 1989:
  - Whites, from 64.5 to 73.6 percent;
  - Hispanics, from 62.6 to 76.1 percent;
  - Native Americans, from 48.6 to 59 percent;
  - Asians, from 66.1 to 77.8 percent; and
  - Blacks, from 64.1 to 68.4 percent.

• The proportion of all eligible undergraduates returning from one semester to another also has improved, from 81 percent in 1973 to 86 percent in 1989. (Source: UNM, "Strategic Planning at the University of New Mexico," May 15, 1990.)

• Since 1983, first-time freshmen at UNM have been increasingly better prepared academically as measured by their high school grade point averages, rank in their graduating class and ACT scores. The academic performance at UNM of
Exhibit D28
Retention to Third Semester of First Time Freshmen, University of New Mexico
Fall 1983 to 1989

<table>
<thead>
<tr>
<th></th>
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<td>2,164</td>
<td>2,387</td>
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<td>1,865</td>
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<td></td>
<td>63.2%</td>
<td>67.4%</td>
<td>65.5%</td>
<td>69.7%</td>
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<td>1,373</td>
<td>1,236</td>
<td>1,471</td>
<td>1,388</td>
<td>1,390</td>
<td>1,179</td>
<td></td>
</tr>
<tr>
<td></td>
<td>64.5%</td>
<td>67.8%</td>
<td>85.5%</td>
<td>70.5%</td>
<td>79.5%</td>
<td>73.6%</td>
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</tr>
<tr>
<td>Hispanic</td>
<td>630</td>
<td>727</td>
<td>529</td>
<td>555</td>
<td>540</td>
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<td>498</td>
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<td></td>
<td>62.6%</td>
<td>66.5%</td>
<td>57.2%</td>
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<td>Native American</td>
<td>111</td>
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<td>126</td>
<td>76</td>
<td>58</td>
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<td></td>
<td>48.6%</td>
<td>43.5%</td>
<td>44.4%</td>
<td>55.3%</td>
<td>60.3%</td>
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<td>59.0%</td>
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<tr>
<td>Asian</td>
<td>56</td>
<td>58</td>
<td>66</td>
<td>57</td>
<td>52</td>
<td>45</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>66.1%</td>
<td>74.1%</td>
<td>80.3%</td>
<td>82.5%</td>
<td>75.0%</td>
<td>95.6%</td>
<td>77.8%</td>
</tr>
<tr>
<td>Black</td>
<td>54</td>
<td>78</td>
<td>45</td>
<td>48</td>
<td>32</td>
<td>33</td>
<td>36</td>
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<tr>
<td></td>
<td>64.1%</td>
<td>64.1%</td>
<td>55.6%</td>
<td>58.8%</td>
<td>56.3%</td>
<td>78.8%</td>
<td>86.4%</td>
</tr>
</tbody>
</table>


Incoming freshmen has also improved since 1983. This assessment is based on the grade point averages of these students, the need to remediate, the number of academic suspensions and the improving retention rates. (Source: UNM, "Strategic Planning at the University of New Mexico," May 15, 1990.)

Improved retention efforts are probably necessary even if the students UNM enrolls are increasingly better prepared. While the more stringent freshman admission policy instituted by the University in 1983 has apparently resulted in improved retention rates for all ethnic/racial groups, the retention rates for Native American and Black students are still significantly lower than for Whites, Asians and Hispanics. And, while the retention rate for Hispanics improved considerably between 1983 and 1989, and by 1989 was higher than for Anglos, the total number of Hispanic first-time freshmen that enrolled declined at nearly twice the rate during this time period as did the number of Anglo freshmen. If the number of Hispanic freshmen rises, as it has the last 2 years, the retention rate for Hispanics may slip without heightened retention activity.

In sum, any significant increase in enrollment will likely require more funding, including more personnel, for support programs related to retention. In addition, UNM’s goal of enrolling a more diverse student body that includes greater proportions of

Project Information Package
ARC 2/92

III. Resources
non-traditional students, ethnic/racial minorities and students from other underrepresented populations is likely to require the modification of some of these programs and services to ensure that they meet changing student needs.

D. Enrollment Projections
Enrollment projections for the University are prepared by UNM’s office of Planning and Policy Studies (PPS). The PPS projections for the 1992 to 2005 period are presented in this subsection and an overview of the methodology used to prepare these projections is provided. Available projections (1990 – 2001) for the nation's 4 year public institutions are presented in this section in order to compare projected enrollment changes at UNM and nationally. Also included in this subsection are “ballpark” type projections for UNM for the years 2010, 2015 and 2020. This latter set of projections is intended as “food for thought” regarding future enrollment levels.

UNM’s total 1990 enrollment (excluding medicine) of 24,314 students is projected to grow to 28,693 students in the year 2000 (an 18% increase), and to reach 29,799 students by 2005 (a 22.6% gain). Undergraduates are expected to represent the fastest growing component of UNM’s enrollment, increasing by 25.5 percent between 1990 and 2005. UNM is also projected to enroll 23.9 percent more graduate/law students by 2005. Except for the non-degree category, UNM’s enrollments are projected to grow at considerably faster rates between 1995 and 2000 than during either the 1990 to 1995 or 2000 to 2005 periods. A comparison of enrollment projections for UNM and for all of the nation’s public 4 year institutions indicates that UNM will experience enrollment growth rates slightly to moderately higher than those projected for the U.S. during the 1990s.

- In 1990, UNM’s total enrollment (excluding medicine) was 24,314 students. Between 1990 and 2000, PPS projects that total enrollment will grow by 4,384 students (18%) to 28,693 (Exhibit D29). By 2005, PPS anticipates that total enrollment will reach 29,799, an increase of 5,485 students (22.6%). Total enrollment at UNM is projected to grow at an annual rate of 1.2 percent during the 1990 to 1995 period, accelerate to 2.2 percent between 1995 and 2000, and then slow to 0.8 percent over the following 5 years (2000 – 2005).

Nationally, total attendance at public 4 year institutions is projected to grow somewhat more slowly than at UNM (Exhibit D30). Enrollment is projected to grow at an annual rate of 0.8 percent between 1991 and 1995 and by 1.5 percent annually during the 1995 to 2000 period.

- Undergraduates are expected to be the fastest growing component of the UNM student body during the 1990 to 2005 period. Undergraduate enrollment at UNM is projected to grow from 15,993 in 1990 to 19,094 in the year 2000, an increase
## Historic and Projected Enrollment by Level, University of New Mexico
### 1970 – 2005

### Historic and Projected Fall Semester Enrollment, 1970 to 2005

<table>
<thead>
<tr>
<th>Year</th>
<th>Undergraduate</th>
<th>Non-Degree</th>
<th>Graduate and Law†</th>
<th>Total‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>12,504</td>
<td>1,431</td>
<td>3,236</td>
<td>17,171</td>
</tr>
<tr>
<td>1975</td>
<td>14,888</td>
<td>2,168</td>
<td>3,839</td>
<td>20,894</td>
</tr>
<tr>
<td>1980</td>
<td>14,395</td>
<td>3,218</td>
<td>3,836</td>
<td>21,453</td>
</tr>
<tr>
<td>1985</td>
<td>15,081</td>
<td>5,548</td>
<td>4,089</td>
<td>24,727</td>
</tr>
<tr>
<td>1990</td>
<td>15,427</td>
<td>4,621</td>
<td>4,064</td>
<td>24,112</td>
</tr>
<tr>
<td>1996</td>
<td>15,338</td>
<td>3,808</td>
<td>4,116</td>
<td>23,262</td>
</tr>
<tr>
<td>1997</td>
<td>16,081</td>
<td>3,948</td>
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<tr>
<td>1998</td>
<td>15,933</td>
<td>3,933</td>
<td>4,388</td>
<td>24,214</td>
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<tr>
<td>1999</td>
<td>16,047</td>
<td>4,022</td>
<td>4,040</td>
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<tr>
<td>2000</td>
<td>15,635</td>
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<td>4,444</td>
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<tr>
<td>2001</td>
<td>16,032</td>
<td>4,570</td>
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<td>2002</td>
<td>16,034</td>
<td>4,540</td>
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<td>2003</td>
<td>16,099</td>
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<tr>
<td>2004</td>
<td>15,909</td>
<td>4,544</td>
<td>4,696</td>
<td>25,149</td>
</tr>
<tr>
<td>2005</td>
<td>15,925</td>
<td>4,523</td>
<td>4,738</td>
<td>25,186</td>
</tr>
</tbody>
</table>

### Compounded Annual Rate of Change, Selected Periods

<table>
<thead>
<tr>
<th>% Annual Change From:</th>
<th>Undergraduate</th>
<th>Non-Degree</th>
<th>Graduate and Law†</th>
<th>Total‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-1980</td>
<td>1.4%</td>
<td>10.5%</td>
<td>1.7%</td>
<td>2.6%</td>
</tr>
<tr>
<td>1980-1990</td>
<td>1.1%</td>
<td>0.1%</td>
<td>1.4%</td>
<td>1.0%</td>
</tr>
<tr>
<td>1990-1995</td>
<td>1.2%</td>
<td>5.2%</td>
<td>1.5%</td>
<td>1.8%</td>
</tr>
<tr>
<td>1995-2000</td>
<td>1.0%</td>
<td>3.3%</td>
<td>0.9%</td>
<td>1.2%</td>
</tr>
<tr>
<td>2000-2005</td>
<td>2.8%</td>
<td>0.5%</td>
<td>2.3%</td>
<td>2.2%</td>
</tr>
<tr>
<td>2005-2006</td>
<td>1.0%</td>
<td>0.8%</td>
<td>1.1%</td>
<td>1.8%</td>
</tr>
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<td>2006-2007</td>
<td>1.8%</td>
<td>1.3%</td>
<td>1.6%</td>
<td>1.7%</td>
</tr>
<tr>
<td>2007-2008</td>
<td>1.5%</td>
<td>0.6%</td>
<td>1.4%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

* 1970 - 1991 figures are actual reported enrollments; 1992 - 2005 figures are projected.
† Excludes medical school.

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**D-98**

**Project Information Package**

**ARC 2/92**

**III. Resources**
Exhibit D30
Projected Enrollment by Level, United States Four-Year Public Institutions

<table>
<thead>
<tr>
<th>Year</th>
<th>Undergraduate</th>
<th>Graduate</th>
<th>Professional†</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>4,758,000</td>
<td>1,108,000</td>
<td>127,000</td>
<td>5,993,000</td>
</tr>
<tr>
<td>1992</td>
<td>4,780,000</td>
<td>1,134,000</td>
<td>131,000</td>
<td>6,045,000</td>
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Compounded Annual Rate of Change, Selected Periods

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<th>Professional†</th>
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† Includes medical school.

of 3,101 students (19.4%). PPS projects that by 2005, UNM will enroll 20,071 undergraduates, 4,078 (25.5%) more than in 1990. Between 1990 and 1995, undergraduate enrollment is expected to grow at an annual rate of 0.8%. The annual growth rate is expected to rise to 2.8 percent between 1995 and 2000, and then decline to 1 percent during the 2000 to 2005 period.

Undergraduate enrollment at all U.S. 4 year public institutions is projected to rise at an annual rate of 0.5 percent between 1991 and 1995. During the 1995 to 2000 period, the number of undergraduates enrolled nationwide at public 4 year schools is expected to grow by 1.7 percent a year.

- The number of graduate and law students enrolled at UNM is projected to reach 5,144 in the year 2000, 756 students (17.2%) more than in 1990. By 2005, UNM is projected to enroll 1,050 more graduate/law students than it did in 1990, a 23.9
percent increase. Like undergraduate and total enrollments, graduate/law enrollment is expected to increase relatively slowly between 1990 and 1995 (0.9% annually), grow at a significantly higher annual rate between 1995 and 2000 (2.3%), and then slow down during the 2000 to 2005 period (1.1% a year). It should be noted, however, that UNM's Fall 1991 graduate/law enrollment of 4,640 was almost 10 percent higher than the 4,225 students projected for 1991.

Graduate enrollment at U.S. public institutions is projected to rise by 1.8 percent annually between 1991 and 1995. During the 1995 to 2000 period, however, graduate enrollment growth is expected to slow to an annual rate of 0.7 percent. Enrollment in first professional programs is projected to rise by 1.7 percent a year between 1991 and 1995. During the 1995 to 2000 period, professional schools are projected to experience enrollment growth of approximately 1.2 percent annually.

- The number of students enrolled at UNM under the non-degree classification is projected to grow quickly during the early 1990s, reaching 4,565 students by 1995. This figure represents 632 more non-degree students (16.1%) than there were in 1990, when UNM had 3,933 non-degree students. After 1995, non-degree enrollment is projected to grow steadily, falling to 4,290 students by 2005. The large increase in non-degree enrollment at UNM projected for 1990 and 1991 has not occurred to date. The U.S. Department of Education does not publish projections for non-degree enrollments.

D.2. Overview of PPS Enrollment Projection Methodology

As previously noted, PPS projects enrollment for 3 components of UNM's total enrollment: undergraduates, graduate and law students (excluding medicine), and non-degree students. The methodology used by PPS to project enrollment for each of these levels/classifications is discussed below.

- Undergraduates. Undergraduate enrollment is projected using a model (regression on a multiple time series using data from 1961 to the present) that includes 3 predictor variables: (1) the number of New Mexico high school graduates, (2) New Mexico's annual unemployment rate, and (3) real New Mexico per capita personal income adjusted for inflation.

The most important of the three variables used in the PPS model is the number of students graduated by New Mexico high schools annually. During the 1960s and 1970s, the number of high school graduates rose steadily and peaked in 1979 at 19,800. This increase fueled rapid growth in UNM's undergraduate enrollment during the 1961 to 1979 period. Since 1980, the annual "yield" of high school graduates decreased both in New Mexico and nationally, contributing to
slower growth in UNM’s undergraduate headcount in the 1980s. Other factors, especially stricter freshman admission standards instituted in 1983, also contributed to slower undergraduate growth in the 1980s.

The other variables used in the PPS model—the state’s annual unemployment rate and real per capita personal income—are a reflection of economic conditions in New Mexico. Over the last 30 years, UNM’s undergraduate enrollment has generally grown more quickly when per capita personal income grew since rising income levels facilitate college attendance. UNM’s enrollment has also grown more quickly when New Mexico’s unemployment rate has risen. Faced with more limited employment options, potential students are more likely to enroll at UNM during periods of higher unemployment. As noted previously, while the predictor variables used in the UNM Planning and Policy Studies undergraduate enrollment projection model are discussed independently in this report, caution should be exercised when interpreting the impact of any single variable on enrollment because the predictive power of the model is based on the collective relationship of these three variables to enrollment.

Undergraduate “inputs” and “outputs” are illustrated in a diagram prepared by PPS (Exhibit D31). During the 1990/91 academic year, the inputs consisted of approximately 11,700 continuing students, 2,000 new freshmen, 1,900 transfers from other institutions, 400 internal transfers from UNM’s non-degree classification, and 1,800 readmitted students. Undergraduate outputs included approximately 2,200 students who graduated from UNM, 1,500 students who either dropped out or transferred to another institution, 600 students who were suspended and 1,800 "stopouts."

- Graduate and law school enrollments. PPS uses a similar methodology (regression on a multiple time series) to project UNM’s total graduate and law school enrollment. Projected graduate/law enrollment at UNM in any particular year is primarily based on the number of undergraduate students enrolled at UNM the previous year. PPS does not prepare projections for the medical school because enrollment is fixed by capacity and administrative choice.

As noted, undergraduate enrollment at UNM grew quickly during the 1960s and 1970s. These high growth rates are reflected in UNM’s graduate/law enrollment, which more than doubled during this time period, from 1,702 students in 1961 to 3,752 students in 1979. As undergraduate enrollment growth slowed, graduate/law enrollment also grew more slowly, increasing from 3,836 students in 1980 to 4,208 in 1989. However, over the last two years graduate/law enrollment growth has accelerated, climbing to 4,388 in 1990 and 4,640 students in 1991.
While UNM's undergraduate enrollment is generally a reliable predictor of graduate/law enrollment, PPS notes that graduate/law enrollment is much more controlled than undergraduate enrollment. In addition, the availability of financial aid is a bigger factor for students considering graduate school than it generally is for undergraduates.

- Non-degree students. In the Fall of 1991, non-degree students comprised 16.1 percent of UNM's total enrollment. PPS has observed, however, that enrollment levels for non-degree students at UNM do not appear to correlate with either economic conditions or the number of graduate or undergraduate students. Non-degree students, however, are probably more sensitive to changes in the price of tuition and the availability of student financial aid than are most undergraduates.

The absence of a predictive relationship between these variables and non-degree enrollment may be due to the heterogeneous character of these students. Students enroll in the non-degree classification for a variety of reasons. Some are temporarily enrolled as non-degree students while they await
entry to graduate or professional programs; approximately 400 non-degree students a year transfer into regular undergraduate programs every year; and some non-degree students are adult casual learners. Non-degree students tend to be older and are more likely to be enrolled part-time than regular undergraduates or graduate students. Perhaps most importantly, approximately 70 percent of non-degree students are from Bernalillo County.

On the basis of this information, PPS projects the number of non-degree students as a percentage of the projected Bernalillo County population ages 25 to 44. Over the last 15 years, non-degree enrollment has been equal to approximately 2 to 3 percent of the estimated number of Bernalillo County residents ages 25 to 44. Over the next 20 years, non-degree students are projected to represent approximately 2.5 percent of Bernalillo County's projected population ages 25 to 44. PPS considers this to be a fairly conservative estimate of future non-degree enrollment.

D.3. Long Range UNM Enrollment Projections

The UNM enrollment projections prepared by PPS extend only to the year 2005. The primary reason for this limitation is the rising level of uncertainty inherent in projections as they extend further and further into the future. This is particularly relevant when so many factors affect the projections, as is the case for UNM's enrollment. The "ballpark" type projections presented below are simple calculations based on the ratio of UNM's total enrollment to New Mexico's total population in 1990, 1980 and the average for these 2 years. These ratios are applied to the most recent BBER population projections for New Mexico to derive projected enrollments. The projections are intended only as rough estimates of the enrollment levels that UNM can expect if recent enrollment trends continue through the next 30 years.

These projections of UNM's enrollment in the year 2020 vary from 34,307 to 36,114 students. Three sets of figures are provided in Exhibit D32. The set that most resembles the PPS projections (through 2005) are the figures based on the ratio of UNM's 1990 enrollment to the state's 1990 population. This set of projections suggests that UNM will enroll over 29,500 students by 2005 and over 34,300 students by 2020. If UNM's enrollment continues to equal a same proportion of the New Mexico's population that it did in 1990, enrollment will change by the same percentage that New Mexico's population changes.

Because New Mexico's population grew more quickly during the 1980s than UNM's enrollment, the projections derived by averaging the 1980 and 1990 ratios and the projections based simply on the 1980 ratio are higher than those based solely on the 1990 ratio. When the "averaged" ratio is applied to the projected population figures for the state, the projected 2020 enrollment rises by about 900 students to 35,211 students. The projections based on the 1980 ratio indicate a 2020 enrollment of 36,114 students.
PPS considers their enrollment projections conservative because some of the trends and relationships on which they are based appear to be changing in the direction of increasing enrollment. Enrollment figures for 1990 and 1991 also indicate that enrollment may be increasing more rapidly than projected. Consequently, this suggests that either the "averaged" or "1980" projections may be more applicable for planning purposes.

**Exhibit D32**

**Long Range Enrollment Projections, University of New Mexico**

1995 - 2000

| Year | Total NM Population | PPS Projections | Average of 1980 & 1990 | 1980

| 1980 | 1,303,302           | 22,017          | 22,017                 | 22,017
| 1990 | 1,515,069           | 24,314          | 24,314                 | 24,314
| 1995 | 1,631,382           | 25,757          | 26,181                 | 26,870
| 2000 | 1,734,944           | 28,698          | 28,843                 | 29,329
| 2005 | 1,838,538           | 29,799          | 29,505                 | 30,282
| 2010 | 1,940,842           | --              | 31,147                 | 31,987
| 2015 | 2,041,175           | --              | 32,757                 | 33,620
| 2020 | 2,137,774           | --              | 34,307                 | 35,211

% Increase

1990 - 2020: 41.1%

41.1% 44.8% 48.5%

* Calculated by multiplying projected NM population by the percentage of New Mexico population enrolled at UNM in 1990 (0.0000601411).
† Calculated by multiplying projected NM population by average of percentage of New Mexico population enrolled at UNM in 1980 and 1990 (0.0012947032).
‡† Calculated by multiplying projected NM population by the percentage of New Mexico population enrolled at UNM in 1990 (0.0012947032).

Land and Facilities

Questions
1. What image should the University project?
   a) to the University Community?
   b) to the surrounding community?

2. How should the University relate to the surrounding community?

3. What characteristics of UNM are unique and should be retained?

4. What characteristics of UNM need correction and/or refinement?

This section provides information regarding:
- History of physical planning at UNM and current planning principles
- Descriptive information regarding campus lands
- A profile of existing and projected UNM facilities
- Information regarding infrastructure
- Information regarding transportation, access and parking
- Information regarding capital requests and funding.
Planning History/Principles

UNM has long endorsed the concept of continuous planning as the only realistic approach to the intricate problems of campus development.

Selected Development Chronology of UNM

1889  UNM was established by the Territorial legislature.
      August 20 acres donated in Albuquerque.

1892  First building completed.

1901  Dr. William George Tight became UNM's third President. Dr. Tight was a keen student of Pueblo Architecture, and at his recommendation the Pueblo Style was adopted for campus buildings.

1908  The Tight Plan
      While the building mass reflected the "pueblo style", the Master Plan was a formal design with primary and secondary axes.
      (See Exhibit E1.)

1909-1927
      Building program proceeded in a rather unplanned fashion due to lack of finances and partly to continuing hostility against Pueblo Style architecture.

1915  Griffin Master Plan
      Chicago architectural firm of Griffin and Byrne was retained to design two buildings and to prepare a general plans for the growing campus. Although the plan maintains much of the formality of the Tight Plan, it created plazas and enclosures based on siting of the buildings. Much of Griffin's design was influenced by Mayan architecture. Griffin's initial studies for a
Essential elements of the Pueblo Revival Style include:

- Ascending Mass. This is a stepping or organic growth appearance of the building. It simulates the natural growth process of traditional pueblo architecture.
- Massive Walls and Earth Color. Use of massive walls and earth color that reflect native or traditional building materials.
- Covered portals, terraces and enclosed courtyards. Due to the landscape and climate of the Southwest a history of designing cool areas has developed and been integrated into this historic style.
- Architectural Details. Architectural detailing that includes use of corbels, posts, vigas, earth color. Interior details such as vigas lallas, corbels and southwest styled furniture.
- Human Scale. Since traditional building was done manually, the size and scale that was possible was limited to human abilities in handling the material.
- Organic Footprint. This also mimics the natural growth characteristics of traditional southwest building.

compact, continuous pueblo were never completed. (See Exhibit E2.)

1917 Francis Barry Byrne's Master Plan was a continuation of Griffin's plan but encompassed the entire holdings of the University, and not just the academic core.

1927 Pueblo style was adopted as the official architectural style for the University.

1939-1959
John Gaw Meem retained as consulting architect. He prepared several master plans while consulting.

1955 Meem Plan
Geared for a total enrollment of 12,15,000 students. Main Features with continuing validity

i) Building groups be established and devoted to related academic department
ii) Site selected for the library, which will become increasingly central to the academic center of the campus.
iii) Location of instructional athletic fields between the gymnasium and single student housing areas at the eastern edge of the campus.

Meem also eliminated the through streets on campus. (See Exhibit E3.)

1960 Warnecke Plan
John Carl Warnecke and Associates of San Francisco were retained to prepare a plan for the Campus. Main concepts of the plan were to zone the campus by discipline, create a pedestrian enclave in the central campus, keep parking on the periphery and retain the established character. This plan coined the terms, north, central, and south campuses. (See Exhibits E4 thru E7.)

Project Information Package
ARC 2/92

III. Resources
Exhibit E7
1960 Warnecke Plan - South Campus

UNM Master Plan
Project Information Package
ARC 2/92
Planning effort assumed a campus enrollment not exceeding 25,000 and an urban population of 450,000 by 1970. Planning Principles established in this plan are still being used.

The South Campus was shown as athletic facilities and housing.

The Warnecke Plan was officially amended three times:

- Amended 1969 J. McKinney
  University Boulevard, now Redondo Drive was changed from the original Warnecke plan to go around the engineering buildings, and not cut them off from the rest of the central campus.

- Amended 1971 Garrett Eckbo
  The Central Plaza was shifted to what is today Smith's Plaza.

- Amended 1978 J. McKinney
  The Northwest quadrant was incorporated into the central campus.

1960-1970
Period of big growth

1960 Planning for the School of Medicine.

1962 South Campus Master Plan prepared by Marvin May. This was the first plan that illustrated the incorporation of a Research Park on the South Campus. This was located on the northern portion of the South Campus, on the east side of University Blvd.

1963 Fine Arts Complex

US Higher Education Facilities Act - which was to provide funds to the states for construction of academic buildings.
1963 Landscape Master Plan
   This development plan prepared by Garrett Eckbo, of Eckbo, Dean and Williams has been guide for all landscaping since its adoption. A series of malls and large green areas were to take the place of vacated streets. (See Exhibit E8.)

1964 Flatow Moore Bryan and Fairburn, South Campus Master Plan - Research Park
   This Plan shifted the Research Park to the west side of University Boulevard. (See Exhibit E9.)

1965 $42.5 million bond issue approved by NM voters which provided matching funds for federal dollars.

1966 Construction of the basic medical sciences building at the school of medicine.

1965-70
   University issued $33.8 million of building and improvement bonds for projects not eligible for state funding.

1968 Bernalillo County Mental Health/Retardation Center was erected.

1967/1969
   North Campus plans prepared by Don Schlegel. The 1967 plan was a preliminary study to incorporate the AMAFCA ditch into the campus design, and to further develop the medical center plans. In the 1969 plan, Schlegel eliminated the housing proposed in the Warecke plan, expanded the medical center area, and incorporated the law school and physics department into the plan. (See Exhibit E10.)

1970 Federal funds virtually nonexistent.
Exhibit E10
1969 Schlegel Plan - North Campus

Exhibit E11
1970 McKinney Plan - South Campus

UNM Master Plan
Project Information Package
ARC 2/92
1970 **South Campus Master Plan** prepared by Joe McKinney. This was a comprehensive plan that looked at the development of the Research Park in its relationship to the athletic facilities. (See Exhibit E11.)


1972 Parking policy initiated.

1975 **North Campus Master Plan** prepared by Joe McKinney. This plan evaluated existing conditions and projected future needs. Breaking from traditional planning methods, McKinney did not show future building sites but rather future land use. This was the first time that the Medical Center was divided into Health Sciences, Instruction/Research, and Patient Care. (See Exhibit E12.)

1976-77 **Transportation/Parking Study** prepared by Thompson and Robert Crommelin (updated in 1979-80). Proposals have only been partially accepted.

North Campus Guidelines for Use and Development of Lands and Buildings by Howard Hakken was prepared with the help from university staff. This was a comprehensive development plan, that analyzed existing conditions, provided conceptual development plans for the North campus, and suggested development options.

1979 **UNM Master Plan** revised to address development of acquired land bordered by Las Lomas, Roma, Buena Vista and Redondo west.
Historic Preservation
Buildings designated as Historic Landmarks
- Hodgins Hall (103)
- Old Science Building (2)
- Estuaf
- Scholes Hall (10)
- Zimmerman Library (53)

1982 & 1989
5 Year Development Plans
Based on the Warnecke Master Plan, these capital improvement plans were developed to satisfy the requirements of the Commission on Higher Education.

1984 Barker Bol & Associates, South Campus Research Park Plan
This plan studied the feasibility of leasing the land to the private sector for the development of a research park.

Fiatow Moore Bryan, South Campus Athletics
This plan developed the transportation system around the sports complex.

1986 Glenborough/FAMA South Campus Research Park
In 1986 Glenborough leased the research area from the university and was to develop the land for private research use. (See Exhibit E13.)

1989 North Campus, 20 Year Study
A request was made by the regents to develop the North Campus Master Plan. This plan by Joe McKinney essentially took the 1975 plan and developed it further.
The Warnecke Plan was prepared in 1960. At this time, UNM had an enrollment of about 7,300 students and 70 buildings. The plan anticipated a student population of 25,000 and a threefold growth in facilities. The plan articulated development policies still in use today.

**Warnecke General Development Plan**

**Planning Principles**

(a) The Central Campus should be used primarily for academic purposes.

(b) Related subject fields should be grouped together.

(c) The North Campus should be reserved for a future medical center, student residence facilities, and the Physical Plant Department service facilities.

(d) The South Campus should be used for intercollegiate athletic facilities, student housing, and possibly research units, if the land is not required fully for student housing.

(e) Land coverage by buildings should be limited to an average of 20% of gross land area, in order to ensure adequate light, air and spaciousness appropriate to the campus.

(f) The averaged story height above ground of all buildings on the Central Campus should not exceed 2.5 stories.

**Principal Proposals of the Plan - Central Campus**

(a) Create a large "green" at the heart of the campus.
(b) The core of the campus would become a pedestrian preserve.

(c) It is University policy that new buildings conform to the Spanish-Pueblo style of architecture.

(d) New facilities would be related to existing buildings to form courts and patios, varying in size and character; some would be enclosed, others partially enclosed.

(e) Academic capacity would be increased gradually by three methods:
   - Construction of additional buildings to the extent allowed by the land coverage criteria.
   - New buildings would be three and four stories high. The average height of all buildings would rise toward the two-and-one-half story level permitted by the planning criteria.
   - Departments and activities having low priority for central space would be removed gradually to intermediate or outer locations.

(f) The east portion of the campus, beyond the area required for academic purposes, would become primarily a residence hall area for single students.

(g) The landscaped patio, so characteristic of the Southwest, would be developed in spaces enclosed by buildings.

(h) An internal loop road, bounded the academic core area, would provide easy access to all parts of the campus.

(i) Principal parking facilities would be located on the periphery of the campus near the entrance roads, and in the vicinity of the
The Warnecke Plan capitalized upon earlier UNM planning traditions.

Mean Planning Principles:

(a) The suggestion that building groups be established and devoted to related academic departments, e.g., the Sciences group, the Technology group, etc.

(b) The site selected for the Library, which will become increasingly central as the center of academic gravity shifts to the east, and the generous spacing of buildings in this area of the campus.

(c) The location of institutional athletic fields between the gymnasium and single student housing areas at the eastern edge of the campus.

Benefits of Early Planning - Prior to the Warnecke Master Plan:

(a) The University now has sufficient land for growth to an enrollment of 25,000. Much of this land was acquired as a result of planning forecasts long before there was a pressing need for it. Interim use of the land, as for the golf course, was of benefit to the University and to the Albuquerque community.

(b) The continuing use of a single architectural style has given the Central Campus a distinguishing unity of character.

(c) Valuable open areas have been reserved for athletic use and for future expansion.

(d) Student residence halls have been located at the edge of the Central Campus, rather than toward the center, preserving this valuable core area which will be needed for academic expansion.
heavy concentrations of campus population (depressed small surface lots and the bulk of the parking to be underground).

General Campus Planning Principles

a) Central Campus

(1) Should be used primarily for academic purposes with related subject fields grouped together.

(2) The established Spanish-pueblo architectural style should be retained.

(3) A strong effort should be made to re-use older campus buildings that have historical and/or architectural significance.

(4) Careful attention should be given to the siting, size and limitation of height of future building projects due to the physical limits of the campus and the very small amount of developable land that remains.

(5) Campus circulation should be oriented primarily to the needs of students or pedestrians with off-street parking located on the periphery of the campus and accessed by a loop road.

b) North Campus

(1) General Principles

(a) Should be used primarily for health related function; school of medicine, medical center and health sciences.

(b) Should also be used for other functions which need not, and ultimately, could not, be located on the central campus, such as graduate facilities and UNM service functions.

(c) Non-university functions desiring leased location on the north campus must be carefully screened and should relate functionally to existing university programs.

See Map 6, Section III-B for current land use planning zones on Central and North campuses.
(d) Other planning principles and criteria established for the central campus should be adhered to except as to architectural style and building height, which should complement the existing building vernacular.

c) South Campus

(1) Should be used for functions which are not appropriate to, and for which there would not be space, on the central campus including: intercollegiate athletics and related facilities, family student housing and non-university research offices and programs.

(2) Other planning principles and criteria established for the central campus should be adhered to except as to architectural style and building height.

See Map 9, Section III-B for South campus land use planning zones.
Introduction
This section will provide descriptive information regarding the campus including:

A. Data about existing lands
   - UNM Land ownership
   - Acreage
   - Densities
   - Available building sites
B. Exterior Environment

A. Data About Existing Lands

- UNM has expanded from 20 acres at its founding to over 700 acres available for direct educational use currently (not including Branch Campuses).

- UNM owns, leases or has options to use about 125 acres in the vicinity of its Albuquerque campus. These lands are used now for a variety of commercial purposes or are vacant. They can be used for expansion in the future.

- There are three main campus sections:
  - Central Campus - ~165 acres
  - North Campus - ~313 acres
  - South Campus - ~236 acres

- The developed density (land area divided by ground level floor area) varies within each campus. The areas of highest density are surrounding the medical center and the science and technology sector on the central campus (southwest quadrant).

- Existing land use zones or parking zones are inadequate for detailed planning because these zones do not include all UNM owned or controlled lands. The master planners will be proposing revised planning zones in the near future.
### University of New Mexico
### Summary of Building Data By Parking Zone

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<td>283,352</td>
</tr>
<tr>
<td>C</td>
<td>35.86</td>
<td>11</td>
<td>1,015,015</td>
<td>348,811</td>
</tr>
<tr>
<td>D</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E</td>
<td>33.98</td>
<td>28</td>
<td>811,057</td>
<td>195,839</td>
</tr>
<tr>
<td>F</td>
<td>16.79</td>
<td>11</td>
<td>333,921</td>
<td>112,003</td>
</tr>
<tr>
<td>G</td>
<td>30.82</td>
<td>13</td>
<td>779,866</td>
<td>168,418</td>
</tr>
<tr>
<td>S</td>
<td>2.79</td>
<td>2</td>
<td>496,266</td>
<td>134,615</td>
</tr>
<tr>
<td>J</td>
<td>9.19</td>
<td>10</td>
<td>51,985</td>
<td>38,585</td>
</tr>
<tr>
<td>NON-DESIGNATED</td>
<td>15</td>
<td></td>
<td>163,606</td>
<td>30,274</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>164.72</strong></td>
<td><strong>143</strong></td>
<td><strong>4,351,841</strong></td>
<td><strong>1,337,922</strong></td>
</tr>
</tbody>
</table>

---

Exhibit E14

UNM Site Profile

---

E-24

Project Information Package

ARC 2/92

III. Resources
### University of New Mexico
Summary of Building Data By Planning Zone

<table>
<thead>
<tr>
<th>Campus</th>
<th>Zone</th>
<th>Acreage</th>
<th>Buildings</th>
<th>Gross SF</th>
<th>(FP/Acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>A-1 &amp; A-2</td>
<td>55.1</td>
<td>28</td>
<td>976,471</td>
<td>180,717</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>55.8</td>
<td>21</td>
<td>54,800</td>
<td>39,872</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>103.1</td>
<td>25</td>
<td>365,112</td>
<td>180,349</td>
</tr>
<tr>
<td></td>
<td>NON-DESIGNATED</td>
<td>1</td>
<td>467</td>
<td>467</td>
<td></td>
</tr>
</tbody>
</table>

**Subtotal** | 215 | 75 | 2,010,163 | 493,256 | 5.27 |

| Main   | A       | 35.34  | 27       | 788,408  | 242,509   | 15.53 |
|        | A1      | 8.43   | 8        | 389,028  | 121,940   | 13.18 |
|        | B       | 8.31   | 10       | 391,141  | 88,112    | 24.35 |
|        | C       | 9.72   | 7        | 79,459   | 22,137    | 13.66 |
|        | D       | 1.36   | 1        | 46,403   | 15,063    | 25.46 |
|        | E       | 5.21   | 9        | 124,428  | 62,540    | 7.55  |
|        | F       | 22.57  | 12       | 735,112  | 157,134   | 15.88 |
|        | G       | 7.94   | 4        | 398,859  | 109,569   | 31.68 |
|        | H       | 22.87  | 2        | 295,808  | 121,486   | 12.35 |
|        | I       | 4.59   | 3        | 323,795  | 110,192   | 35.11 |
|        | J       | 1.1    | 3        | 45,495   | 16,995    | 34.83 |
|        | NON-DESIGNATED | D | 0 | 0 | |

**Subtotal** | 121.66 | 83 | 4,351,941 | 1,337,922 | 25.25 |

| South  | A       | 132.9  | 7       | 376,995  | 299,950   | 5.17   |
|        | B       | 21.1   | 13      | 243,811  | 92,325    | 10.04  |
|        | C       | 81.7   | 4       | 40,572   | 40,060    | 1.12   |
|        | D       | 0      | 0       | 0        | 0         | 0      |
|        | NON-DESIGNATED | 1 | 720 | 720 | |

**Subtotal** | 235.7 | 25 | 665,173 | 449,257 | 4.35 |

Exhibit E15

UNM Site Profile

UNM Master Plan

Project Information Package
ARC 2/92

III. Resources
III. Resources
Introduction:

A major asset recognized by all is the aesthetic quality of UNM's Central Campus. This pedestrian-oriented environment is carefully planned, beautifully executed and well maintained. Major features include:

- pedestrian networks throughout the interior portion of campus,
- activity nodes at intersection of paths with benches, signs and other features,
- a system of major and minor malls coinciding with major pathways and activities,
- alternating pedestrian and service access along the campus perimeter,
- landscaping emphasis (green areas) on exterior boundaries, pedestrian pathways and in the central core,
- use of water to accent and give respite at major nodal areas.

The landscape and pedestrian linkages on the North and South Campuses are not as well developed.
Facilities

This section addresses the following questions:

- Is current space adequate?
- How do we compare to other Peer institutions?
- What magnitude of growth is reasonable to expect in the future?
- Where will space be allocated?
- How can UNM accommodate expected growth while still maintaining and improving its current quality of life?

See Maps 10 and 11, Section III.B.

Map 10 Major Use of Buildings by CHE Categories
Map 11 Age of Buildings

Introduction

This section presents the following information:

A. A profile of existing facilities and comparison of facilities changes in the last 20 years.
B. How UNM compares to its Peer Institutions and selected California Universities.
C. Projection of facility needs based on historic trends with consideration of other factors.
D. Discussion of factors that could influence space needs at UNM.
E. Current general UNM classroom utilization.

A. Profile of Existing Facilities

UNM has approximately 6.8 million gross square feet of facilities. The categorization of these facilities by use, age and type of improvement is found on the following charts.

Key results of this analysis is as follows:

- UNM has about 6.8 million gross square feet of facilities.
- About 3 million gsf (about 44% of UNM’s total facilities) has been added to UNM physical plant in the last twenty years.
- 95% of UNM’s gsf has been renovated in the last 20 years.
- The present value of facilities as reported to the New Mexico Commission on Higher Education is about $272 million.
- New facilities and additions added since 1970 have a present value of $169 million. This represents 62% of total facility value.
- Renovations done since 1970 represent $49.5 million of present value, 96% of UNM’s renovation investment.
- Over the last 20 years the proportion of space devoted to academic support, public service, research, and auxiliary services has risen while the proportion of space devoted to instruction, institutional administration and student services has decreased.
UNM Gross Square Feet Added or Renovated

Gross Square Feet Growth of UNM

Exhibit E16
UNM Facilities Profile
### Gross Square Feet Growth at UNM

<table>
<thead>
<tr>
<th>Time</th>
<th>GSF New/Added</th>
<th>% Total</th>
<th>GSF Renovated</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1950</td>
<td>773,886</td>
<td>21.23%</td>
<td>64,333</td>
<td>1.27%</td>
</tr>
<tr>
<td>1951-59</td>
<td>1,014,315</td>
<td>14.73%</td>
<td>14,870</td>
<td>0.29%</td>
</tr>
<tr>
<td>1960-69</td>
<td>2,996,911</td>
<td>30.45%</td>
<td>178,879</td>
<td>3.54%</td>
</tr>
<tr>
<td>1970-79</td>
<td>1,507,709</td>
<td>21.69%</td>
<td>456,639</td>
<td>29.64%</td>
</tr>
<tr>
<td>1980+</td>
<td>1,454,489</td>
<td>21.70%</td>
<td>3,399,780</td>
<td>66.27%</td>
</tr>
<tr>
<td>Total</td>
<td>5,287,110</td>
<td>100.00%</td>
<td>5,095,310</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### Gross Square Feet Growth of UNM

<table>
<thead>
<tr>
<th>Time</th>
<th>Central</th>
<th>North</th>
<th>Medical Center</th>
<th>South</th>
<th>Off Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1950</td>
<td>637,286</td>
<td>63,286</td>
<td>24,682</td>
<td>38,522</td>
<td>9,926</td>
</tr>
<tr>
<td>1951-59</td>
<td>917,398</td>
<td>18,825</td>
<td>178,102</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1960-69</td>
<td>1,376,686</td>
<td>184,434</td>
<td>400,190</td>
<td>303,053</td>
<td>71,548</td>
</tr>
<tr>
<td>1970-79</td>
<td>516,656</td>
<td>134,892</td>
<td>527,524</td>
<td>329,011</td>
<td>3,624</td>
</tr>
<tr>
<td>1980+</td>
<td>993,893</td>
<td>9,176</td>
<td>471,151</td>
<td>9,667</td>
<td>412</td>
</tr>
<tr>
<td>Total</td>
<td>4,104,901</td>
<td>410,615</td>
<td>1,801,629</td>
<td>684,453</td>
<td>85,512</td>
</tr>
</tbody>
</table>

### Present Value of Total UNM

<table>
<thead>
<tr>
<th>Time</th>
<th>New/Added</th>
<th>% Total</th>
<th>Renovated</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1950</td>
<td>$7,911,777</td>
<td>2.91%</td>
<td>$56,240</td>
<td>1.10%</td>
</tr>
<tr>
<td>1951-59</td>
<td>$15,432,555</td>
<td>5.67%</td>
<td>$34,888,785</td>
<td>57.67%</td>
</tr>
<tr>
<td>1960-69</td>
<td>$34,479,506</td>
<td>12.68%</td>
<td>$17,476,247</td>
<td>33.90%</td>
</tr>
<tr>
<td>1970-79</td>
<td>$54,753,213</td>
<td>12.78%</td>
<td>$34,295,085</td>
<td>66.52%</td>
</tr>
<tr>
<td>1980+</td>
<td>$62,029,646</td>
<td>30.17%</td>
<td>$68,359,925</td>
<td>132.59%</td>
</tr>
<tr>
<td>Total</td>
<td>$174,656,999</td>
<td>64.21%</td>
<td>$155,586,285</td>
<td>301.79%</td>
</tr>
</tbody>
</table>

### Present Value of New Facilities and Additions at UNM

<table>
<thead>
<tr>
<th>Time</th>
<th>Central</th>
<th>North</th>
<th>Medical Center</th>
<th>South</th>
<th>Off Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1950</td>
<td>$4,571,631</td>
<td>$200,514</td>
<td>$229,259</td>
<td>50</td>
<td>$22,755</td>
</tr>
<tr>
<td>1951-59</td>
<td>$11,884,980</td>
<td>$239,925</td>
<td>$33,031,959</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>1960-69</td>
<td>$31,264,900</td>
<td>$3,994,564</td>
<td>$13,466,231</td>
<td>$3,763,612</td>
<td>$887,503</td>
</tr>
<tr>
<td>1970-79</td>
<td>$27,462,189</td>
<td>$7,272,169</td>
<td>$25,932,072</td>
<td>$4,944,863</td>
<td>$178,655</td>
</tr>
<tr>
<td>1980+</td>
<td>$58,002,933</td>
<td>$440,862</td>
<td>$47,899,439</td>
<td>$1,460,332</td>
<td>$549,818</td>
</tr>
<tr>
<td>Total</td>
<td>$127,185,547</td>
<td>$12,147,044</td>
<td>$121,358,020</td>
<td>$10,169,027</td>
<td>$1,133,955</td>
</tr>
</tbody>
</table>

### Present Value of Renovated Facilities at UNM

<table>
<thead>
<tr>
<th>Time</th>
<th>Central</th>
<th>North</th>
<th>Medical Center</th>
<th>South</th>
<th>Off Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1950</td>
<td>522,794</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1951-59</td>
<td>573,189</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1960-69</td>
<td>11,181,594</td>
<td>90,939</td>
<td>34,234</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1970-79</td>
<td>4,725,584</td>
<td>53,605</td>
<td>1,766,063</td>
<td>0</td>
<td>$269,007</td>
</tr>
<tr>
<td>Total</td>
<td>26,560,933</td>
<td>2,461,590</td>
<td>20,939,114</td>
<td>530,899</td>
<td>$1,252,729</td>
</tr>
</tbody>
</table>

**Exhibit E18**

**UNM Facilities Profile**

**III. Resources**
## UNM Facilities By Major Use (CHE Coding)

<table>
<thead>
<tr>
<th>Category</th>
<th>Gross Square Feet</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INSTRUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Academic Instruction</td>
<td>2,153,885</td>
<td>31.26%</td>
</tr>
<tr>
<td>Vocational/Technical Instruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developmental Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RESEARCH</strong></td>
<td>207,365</td>
<td>2.94%</td>
</tr>
<tr>
<td>Institutes and Research Centers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual or Project Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PUBLIC SERVICE</strong></td>
<td>1,592,967</td>
<td>23.14%</td>
</tr>
<tr>
<td>Support Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Services</td>
<td>227,292</td>
<td>3.30%</td>
</tr>
<tr>
<td>Hospital</td>
<td>388,123</td>
<td>5.64%</td>
</tr>
<tr>
<td>Health Services</td>
<td>755,116</td>
<td>10.97%</td>
</tr>
<tr>
<td><strong>ACADEMIC SUPPORT</strong></td>
<td>539,255</td>
<td>8.28%</td>
</tr>
<tr>
<td>Library Services</td>
<td>520,159</td>
<td>7.55%</td>
</tr>
<tr>
<td>Academic Computing Support</td>
<td>44,774</td>
<td>0.65%</td>
</tr>
<tr>
<td>Academic Administration</td>
<td>74,329</td>
<td>1.08%</td>
</tr>
<tr>
<td><strong>STUDENT SERVICES</strong></td>
<td>304,003</td>
<td>4.42%</td>
</tr>
<tr>
<td><strong>INSTITUTIONAL ADMINISTRATION</strong></td>
<td>392,959</td>
<td>5.71%</td>
</tr>
<tr>
<td><strong>PHYSICAL PLANT</strong></td>
<td>85,189</td>
<td>1.24%</td>
</tr>
<tr>
<td><strong>AUXILIARY</strong></td>
<td>1,459,653</td>
<td>21.19%</td>
</tr>
<tr>
<td>Bookstore</td>
<td>38,283</td>
<td>0.53%</td>
</tr>
<tr>
<td>Golf Course</td>
<td>4,457</td>
<td>0.06%</td>
</tr>
<tr>
<td>Student Centers</td>
<td>145,100</td>
<td>2.11%</td>
</tr>
<tr>
<td>Student Housing</td>
<td>780,803</td>
<td>11.34%</td>
</tr>
<tr>
<td>Parking Structures</td>
<td>492,250</td>
<td>7.15%</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td>66,861</td>
<td>0.91%</td>
</tr>
<tr>
<td>Fraternities/Sororities</td>
<td>31,150</td>
<td>0.55%</td>
</tr>
<tr>
<td>Private Residence</td>
<td>2,072</td>
<td>0.03%</td>
</tr>
<tr>
<td>Private Institute</td>
<td>15,629</td>
<td>0.23%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>6,985,038</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

---

Exhibit E20

UNM Facilities Profile
Some of the facilities that have been added to UNM in the last 20 years:

Central Campus
- Laguna Hall
- De Vargas Hall
- Forums Engineering Building
- Nuclear Engineering Laboratory
- Logan Hall
- Physics Lecture Hall
- Omega Hall
- Woodward Hall
- Humanities Building
- Bookstore
- Art Building
- Mechanical Engineering Building
- Student Service Building
- Graduate School of Management
- Lomas Parking Structure

North Campus
- KNME TV Studio
- Cancer Center
- Nursing and Pharmacy
- Law School
- Health Science Library
- Hospital Addiction
- Surge Building
- Family Practice Center
- Dental Program Building
- Biomedical Research
- Child Care Co-op
- Center for Non-Invasive Diagnosis
- Health Science and Services Building
- Ambulatory Care Building

South Campus
- Lobo Tennis Club
- Gymnastic Gymnasium
- Married Student Housing
- Crystal Growth Facility

UNM Facilities Profile
In general, UNM is comparable in space allocations to its peer institutions.

These are the official Peer Universities of UNM

1. University of Arizona
2. University of Arkansas
3. University of Colorado
4. University of Iowa
5. University of Kansas
6. University of Kentucky
7. University of Missouri
8. University of Nebraska, Lincoln
9. University of Oklahoma
10. University of Oregon
11. University of South Carolina
12. University of Tennessee, Knoxville
13. University of Texas, Austin
14. University of Utah
15. University of Virginia
16. University of Washington

B. Comparison to Peer Universities

All official UNM Peer Universities were surveyed to identify certain key indicators as to amount and use of space. In addition to these comparisons, data was also collected regarding the University of California System. Please note that because of the way each University system collects information regarding space that exact comparisons are sometimes not possible. In general this analysis indicates that UNM is comparable in space allocation to its peer universities.

Information is presented on the following charts.

In general, inspection of this information shows that UNM is comparable in space allocations to its peer institutions, with respect to:

- Proportion of space devoted to major uses and,
- Allocation of space as measured by gross square feet per total student headcount enrollment.
### Exhibit E22

#### Peer University Comparisons

<table>
<thead>
<tr>
<th>University</th>
<th>Comparison Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Chicago</td>
<td>Name Markers</td>
<td>458,206</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>Name Markers</td>
<td>548,206</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>Name Markers</td>
<td>550,206</td>
</tr>
<tr>
<td>University of Illinois</td>
<td>Name Markers</td>
<td>552,206</td>
</tr>
<tr>
<td>University of California</td>
<td>Name Markers</td>
<td>554,206</td>
</tr>
<tr>
<td>University of Texas</td>
<td>Name Markers</td>
<td>556,206</td>
</tr>
<tr>
<td>University of Virginia</td>
<td>Name Markers</td>
<td>558,206</td>
</tr>
<tr>
<td>University of Washington</td>
<td>Name Markers</td>
<td>560,206</td>
</tr>
</tbody>
</table>

### University of California

#### Library Facilities

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Location</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Science Library</td>
<td>Santa Barbara</td>
<td>500</td>
</tr>
<tr>
<td>Humanities Library</td>
<td>San Diego</td>
<td>400</td>
</tr>
<tr>
<td>Social Sciences Library</td>
<td>Los Angeles</td>
<td>300</td>
</tr>
<tr>
<td>Natural Sciences Library</td>
<td>San Francisco</td>
<td>200</td>
</tr>
</tbody>
</table>

#### Research Space

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Location</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Sciences</td>
<td>Los Angeles</td>
<td>500</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>San Francisco</td>
<td>400</td>
</tr>
<tr>
<td>Engineering</td>
<td>San Diego</td>
<td>300</td>
</tr>
</tbody>
</table>

#### Detailed Publication Summary

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Location</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>San Francisco</td>
<td>500</td>
</tr>
<tr>
<td>Medicine</td>
<td>Los Angeles</td>
<td>400</td>
</tr>
<tr>
<td>Business</td>
<td>San Diego</td>
<td>300</td>
</tr>
</tbody>
</table>

### University of Illinois

#### Library Facilities

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Location</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
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<td>General Science Library</td>
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  - ARC 292
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<td>1,257,015</td>
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| NASF                      |              |                |              |                |              |                |              |               |                |              |              |              |

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<th>UoFM % of TOTAL</th>
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Exhibit E23

Peer University Comparisons

UNM Master Plan

Project: Information Package
ARC 2/92
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<td>0.00%</td>
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<td>Organized Activity Units</td>
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Exhibit E24

Peer University Comparisons

E-40 Project Information Package
ARC 2/92

III. Resources
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<th>UCLA % of Total SF</th>
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<td>Organized Activity Units</td>
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</tr>
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*Exhibit E25: Comparisons with California Universities*
C. Space Projections

Methods:
Projecting facility requirements 20 to 30 years in advance is chancy at best. There are many variables that may impact future space use including:

- Enrollment expectations and actual increases
- Individual college and program growth
- Impacts of technology upon space use,

to name a few. While acknowledging the difficulty, some projections of facility growth is useful information for planning purposes. To fulfill this need, the following range of projections is provided for planning purposes:

- **Mid-Range:** These are straight-line projections based on 30 year history of UNM facility data. This range assumes that the future will similar to the past. It represents an average total increase in gross square footage of about 1.9% per year. These projections continue the trend of increasing gross square foot allocations per student from a current allocation of 276 gsf in 1990 to 332 gsf in 2030.

- **Low-Range:** These low-range projections assume that the increases that have occurred in gsf allocations per student will largely stabilize in the future and remain about 276 gsf/student. While total gross square footage will increase due to a growing student population the rate of increase will be about 1.24% per year, well below historic levels.

- **High-Range:** These high-range projections assume an increase in the gsf allocation per student increasing from 276 gsf per student today to 372 gsf in 2030. This equates to a yearly average increase of about 2.32% in total gross square footage.
UNM Projected Gross Square Feet Facility Requirements

- High
- Medium
- Low

Historic: 3.8 million
Projected: 13.1 million
11.6 million
9.7 million

Year:
- 1980
- 1990
- 2000
- 2010
- 2020

Gross Square Feet:
- 0
- 2,000,000
- 4,000,000
- 6,000,000
- 8,000,000
- 10,000,000
- 12,000,000
- 14,000,000

Exhibit E26

UNM Gross Square Feet Space Projections

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III. Resources
UNM GSF Per Student

Historic

Projected

* Based on medium projections

Exhibit E27

UNM Gross Square Feet
Space Projections
UNM Space 2020 Space Needs based on CHE Categories

* Based on mid-range projections

UNM 2020 Space Allocations
(based on mid-range projections)

<table>
<thead>
<tr>
<th></th>
<th>% 1991</th>
<th>% 2020</th>
<th>2020 GSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction</td>
<td>31.28%</td>
<td>30.25%</td>
<td>1,478,664</td>
</tr>
<tr>
<td>Research</td>
<td>2.94%</td>
<td>4.00%</td>
<td>195,526</td>
</tr>
<tr>
<td>Public Service</td>
<td>23.14%</td>
<td>23.50%</td>
<td>1,148,714</td>
</tr>
<tr>
<td>Academic Support</td>
<td>9.28%</td>
<td>9.50%</td>
<td>464,374</td>
</tr>
<tr>
<td>Student Services</td>
<td>4.42%</td>
<td>4.00%</td>
<td>195,526</td>
</tr>
<tr>
<td>Institutional Administration</td>
<td>5.71%</td>
<td>5.00%</td>
<td>244,407</td>
</tr>
<tr>
<td>Physical Plant</td>
<td>1.24%</td>
<td>1.25%</td>
<td>61,102</td>
</tr>
<tr>
<td>Auxiliary</td>
<td>21.19%</td>
<td>22.00%</td>
<td>1,075,392</td>
</tr>
<tr>
<td>Other</td>
<td>0.81%</td>
<td>0.50%</td>
<td>24,441</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.00%</td>
<td>100.00%</td>
<td>4,688,145</td>
</tr>
</tbody>
</table>

Exhibit E28

UNM Gross Square Feet Space Projections

UNM Master Plan

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III. Resources
### Mid-Range Trend
(Trend based on historical growth)

<table>
<thead>
<tr>
<th>Year</th>
<th>Headdcount Grad+Law UG</th>
<th>+Med</th>
<th>Total</th>
<th>GSF</th>
<th>% Effective</th>
<th>St HC</th>
<th>Yrly Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>5,305</td>
<td></td>
<td>5,305</td>
<td>1,971,803</td>
<td>97.1%</td>
<td>571.5</td>
<td>5.40%</td>
</tr>
<tr>
<td>1965</td>
<td>9,212</td>
<td></td>
<td>9,212</td>
<td>2,509,455</td>
<td>211.9%</td>
<td>225.2</td>
<td>11.23%</td>
</tr>
<tr>
<td>1970</td>
<td>13,840</td>
<td>4,109</td>
<td>18,049</td>
<td>3,910,960</td>
<td>230.0%</td>
<td>223.0</td>
<td>5.41%</td>
</tr>
<tr>
<td>1975</td>
<td>17,044</td>
<td>3,788</td>
<td>20,832</td>
<td>4,915,904</td>
<td>236.0%</td>
<td>236.0</td>
<td>1.88%</td>
</tr>
<tr>
<td>1980</td>
<td>18,271</td>
<td>5,636</td>
<td>24,907</td>
<td>5,377,200</td>
<td>243.2%</td>
<td>243.2</td>
<td>2.78%</td>
</tr>
<tr>
<td>1985</td>
<td>20,129</td>
<td>4,386</td>
<td>24,515</td>
<td>6,123,752</td>
<td>249.8%</td>
<td>249.8</td>
<td>2.72%</td>
</tr>
<tr>
<td>1990</td>
<td>19,966</td>
<td>4,674</td>
<td>24,640</td>
<td>6,797,560</td>
<td>276.3%</td>
<td>276.3</td>
<td>2.20%</td>
</tr>
<tr>
<td>1995</td>
<td>21,170</td>
<td>4,994</td>
<td>26,164</td>
<td>7,636,211</td>
<td>283.8%</td>
<td>283.8</td>
<td>2.07%</td>
</tr>
<tr>
<td>2000</td>
<td>23,665</td>
<td>5,154</td>
<td>28,819</td>
<td>9,056,865</td>
<td>310.3%</td>
<td>310.3</td>
<td>2.45%</td>
</tr>
<tr>
<td>2005</td>
<td>24,261</td>
<td>5,438</td>
<td>29,699</td>
<td>9,282,193</td>
<td>311.2%</td>
<td>311.2</td>
<td>2.11%</td>
</tr>
<tr>
<td>2010</td>
<td>24,862</td>
<td>4,547</td>
<td>29,409</td>
<td>10,538,507</td>
<td>314.1%</td>
<td>314.1</td>
<td>1.73%</td>
</tr>
<tr>
<td>2015</td>
<td>24,695</td>
<td>3,916</td>
<td>28,611</td>
<td>10,665,314</td>
<td>322.8%</td>
<td>322.8</td>
<td>1.66%</td>
</tr>
<tr>
<td>2020</td>
<td>24,171</td>
<td>3,912</td>
<td>28,083</td>
<td>11,606,706</td>
<td>331.3%</td>
<td>331.3</td>
<td>1.47%</td>
</tr>
</tbody>
</table>

Average Yearly Growth: 1.90%

### High Range Trend Line
(Trend based on 1% yearly growth; GSF/student)

<table>
<thead>
<tr>
<th>Year</th>
<th>High % Effective</th>
<th>GSF</th>
<th>St HC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>1.971,803</td>
<td>371.5</td>
<td>571.5</td>
</tr>
<tr>
<td>1965</td>
<td>2.504,655</td>
<td>371.5</td>
<td>571.5</td>
</tr>
<tr>
<td>1970</td>
<td>3.910,960</td>
<td>225.2</td>
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</tr>
<tr>
<td>1975</td>
<td>4.915,904</td>
<td>236.0</td>
<td>236.0</td>
</tr>
<tr>
<td>1980</td>
<td>5.377,200</td>
<td>243.2</td>
<td>243.2</td>
</tr>
<tr>
<td>1985</td>
<td>6.123,752</td>
<td>249.8</td>
<td>249.8</td>
</tr>
<tr>
<td>1990</td>
<td>6.797,560</td>
<td>276.3</td>
<td>276.3</td>
</tr>
<tr>
<td>1995</td>
<td>7.636,211</td>
<td>283.8</td>
<td>283.8</td>
</tr>
<tr>
<td>2000</td>
<td>9.056,865</td>
<td>310.3</td>
<td>310.3</td>
</tr>
<tr>
<td>2005</td>
<td>9.282,193</td>
<td>311.2</td>
<td>311.2</td>
</tr>
<tr>
<td>2010</td>
<td>10,538,507</td>
<td>314.1</td>
<td>314.1</td>
</tr>
<tr>
<td>2015</td>
<td>10,665,314</td>
<td>322.8</td>
<td>322.8</td>
</tr>
<tr>
<td>2020</td>
<td>11,606,706</td>
<td>331.3</td>
<td>331.3</td>
</tr>
</tbody>
</table>

Average Yearly Growth: 2.32%

### Low Range Trend Line
(Trend based on 3% yearly growth; GSF/student)

<table>
<thead>
<tr>
<th>Year</th>
<th>Low % Effective</th>
<th>GSF</th>
<th>St HC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>1.971,833</td>
<td>371.5</td>
<td>571.5</td>
</tr>
<tr>
<td>1965</td>
<td>2,504,655</td>
<td>276.3</td>
<td>276.3</td>
</tr>
<tr>
<td>1970</td>
<td>3,910,960</td>
<td>225.2</td>
<td>225.2</td>
</tr>
<tr>
<td>1975</td>
<td>4,915,904</td>
<td>236.0</td>
<td>236.0</td>
</tr>
<tr>
<td>1980</td>
<td>5,377,200</td>
<td>243.2</td>
<td>243.2</td>
</tr>
<tr>
<td>1985</td>
<td>6,123,752</td>
<td>249.8</td>
<td>249.8</td>
</tr>
<tr>
<td>1990</td>
<td>6,797,560</td>
<td>276.3</td>
<td>276.3</td>
</tr>
<tr>
<td>1995</td>
<td>7,636,211</td>
<td>283.8</td>
<td>283.8</td>
</tr>
<tr>
<td>2000</td>
<td>9,056,865</td>
<td>310.3</td>
<td>310.3</td>
</tr>
<tr>
<td>2005</td>
<td>9,282,193</td>
<td>311.2</td>
<td>311.2</td>
</tr>
<tr>
<td>2010</td>
<td>10,538,507</td>
<td>314.1</td>
<td>314.1</td>
</tr>
<tr>
<td>2015</td>
<td>10,665,314</td>
<td>322.8</td>
<td>322.8</td>
</tr>
<tr>
<td>2020</td>
<td>11,606,706</td>
<td>331.3</td>
<td>331.3</td>
</tr>
</tbody>
</table>

Average Yearly Growth: 1.24%

### Exhibit E29
UNM Gross Square Feet Space Projections

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E-46 Project Information Package
ARC 2/92

III. Resources
Assuming slight adjustments in space allocations to reflect space trends (e.g. additional research allocations, slight decrease in administrative space etc.), it is possible to make gross approximations of category of space needs.

D. Factors Impacting Facility Growth

These factors are working notes based on:

- historic trends
- interviews with knowledgeable people
- review of literature
- analysis of existing conditions

1. Areas that will impacted naturally by increased student growth
   a) Instructional Classrooms
   b) Auxiliary and Support Services
      1) Residential Halls

Factors Impacting Facility Needs

Student Growth
Instructional Need
Decentralization of Services
Consolidation of Services
Facilities are old or obsolete
Respond to political mandate
See Section F. Area Issues for a summary of science and engineering expansion issues.

2. Areas which need to expand by interview or other information:
   a) General Classrooms
   b) Science and Engineering Facilities
      1) Optoelectronic Materials Center
      2) Science and Engineering Complex
      3) Additions and Renovations
         a) Chemistry
         b) Physics
         c) Biology
   c) Business School
   d) Fine Art Facilities
      1) Would like to centralize and consolidate all visual arts and exhibition spaces (at Galles Site?)
         a) University Art Museum
         b) Tamarind Institute
         c) Maxwell Exhibition Space
         d) Art Gallery
         e) Graduate Art Studios
         f) Small auditorium
      2) Renovate former Book Store to accommodate media art programs, lecture hall, and computer pod.
      3) Minor renovation/improvements to Fine Arts Center (Fine Arts library, Music and Theater Arts, Administration)
      4) Major Renovations
         a) Carlisle Gym (Dance)
         b) Mattoo Center (Art Studio)
(c) Renovate Performance Halls and Foyer

(5) Long Range?
   (a) Expand Popejoy
   (b) Collaborate with the City?

e) Administration Facilities (P building)
f) Libraries
g) Johnson Center
h) Law School needs additional room for centers and institutes
i) Athletic Facilities
   (a) Stadium expansion
   (b) Strength training facilities
   (c) Baseball/softball park

3. Colleges/Departments Impacted by Growth of Centers and Institutes
   a) Arts and Sciences
   b) Engineering
   c) Law School
   d) College of Education

4. Areas that could grow or expand by decentralization
   a) Student Services
   b) Health Care Activities (Medical Center)

5. Areas that could grow/change from consolidation/centralization
   a) College of Education (currently in 11 separate facilities)
   b) Latin American Programs
   c) Administrative functions
   d) Visual Arts/Exhibition spaces

6. Areas that are presently misplaced functionally
   a) Physics (ideally should be near other
b) Psychology (should be near humanities)
c) Married Student Housing (too far away)
d) School of Architecture (separated from Central campus)

7. Facilities that are old or obsolete for current functions
   College of Education?

8. Facilities that respond to political mandate
   UNM may be called upon to provide programs or facilities responding to a state-wide political mandate.

9. Facilities or Sites that will be available in the future
   a) Reservoir will go away in 1997.
   b) Current bookstore site

10. Facilities or functions with High Public Access Requirements
    a) Museums
    b) Performing Arts
    c) Johnson Center
    d) Business School
    e) College of Education
    f) Medical Center
    g) Student Services
    h) Administration facilities.
    i) Law School
    j) Research facilities
    k) Athletic facilities
E. Current General Classroom Utilization

Utilization analysis measures total potential use versus actual use. Data for this analysis is based actual classroom scheduling during the Fall 1990 schedule using the following formula:

\[
\frac{WSCH}{FTE} \times \frac{SSS}{(WRH)(SOR)} = \frac{ASF}{FTE}
\]

where:

SSS = Student State Size
WRH = Weekly Room Hours
SOR = Station Occupancy Rate
ASF = Assignable Square Feet
WSCH = Weekly Student Contact Hour
FTE = Number of Full Time Students

Analysis indicates that classroom utilization is:

- highest in the mornings from about 9 to 12:30,
- utilization is lowest from about 4 pm to the evenings.

Additional classroom capacity could be achieved if UNM could schedule classes during the periods of lowest utilization.
Utilization and Space Projections

The UNM Department of Facilities Planning is currently in the process of updating its space files in a manner that will allow to assess utilization of all University facilities.


- Surveyed space and utilization standards in other states;
- Examined existing inventories and utilization studies in California universities and colleges;
- Attempted to determine how various academic disciplines have changed in the past several decades and what impact those changes have had on space needs.

Potential Utilization and Projection Methodologies

<table>
<thead>
<tr>
<th>Educational Activities</th>
<th>Station Occupancy rate x room utilization rate x number of stations = utilization x space standard = Ideal net</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>Seminar</td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td># of Faculty x Factor x Space Standards</td>
</tr>
<tr>
<td>Offices</td>
<td># of Faculty x Space Standards</td>
</tr>
<tr>
<td>Support</td>
<td>NetAssignable x Factor</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

= existing and projected facility requirements
Questions
What are the infrastructure constraints and opportunities to accommodate future program growth?

See Map 14, the Utility Network System, in Section III.B.

Introduction:
Major utility systems at UNM include:

- Heating and Cooling
- Domestic Water
- Electric Lines
- Low Pressure Gas
- Telecommunications and Data Communications Systems
- Hazardous Waste

Each will be described in turn:

A. Utility Tunnels
The main infrastructure for the University is housed in a tunnel system that connects many of the major buildings on the central and north campuses. The tunnels contain:

- Steam, supply and return
- Chilled Water
- Domestic Water
- Low Pressure Gas
- Telecommunications
- Closed Circuit TV
- Computer Cable
- Electrical Wiring

There is a capacity problem for tunnels at the highest density areas of campus. It is desirable to connect every major building to the utility tunnels. Since this is often very expensive, utility lines are often extended by direct burial. If there are future problems with these lines they are often times expensive to repair.
B. Heating and Cooling:

1. Heating Supply: Heating on the central campus is provided at Ford Utility Center and also from the waste heat boiler at the Co-Generation plant.
   a) While the steam supply is adequate at this time, the distribution pipe size (6" for central campus, 10" north campus) is not adequate for high demand days. About 50% of existing valves will not hold against existing pressure and will require replacement. Options for increasing distribution capacity include replacing the piping or to create a ring system in which other energy generating plants would be connected to the existing distribution system.

   b) All five boilers at Ford Utility are aging with none less than 16 years old and two installed in 1948. The average life of a boiler is 20 years. One of the large boilers has had extensive damage and is anticipated to fail within the next two years. Maintenance cost to keep the five existing boilers operational is escalating at least 10% each year.

   c) Distribution lines are in varying states of disrepair. While the chilled water and steam supply lines are in fairly good condition, the condensate lines (steam return) are 15-40 years old, leaking, and falling apart. Distribution Lines Insulation contain asbestos. Extensive repair requires contract removal.

2. Cooling Capacity: Sources of chilled water include three chillers at Ford Utility Center, a plant on north campus, a plant in the Health Sciences Building, and a co-generation plant located at the Lomas Parking Structure. At this time there is sufficient capacity to chill enough water to keep all the buildings cooled.
with the current configuration of chillers. The addition of the new dorm will cause marginal capacity on a design day.

The Ozone Protection Regulations will drastically affect the continued operation of the four chillers that use freon 11/12 (a chlorofluorocarbon [CFC]). CFCs will be phased out of production starting in 1992. The cost of CFC is increasing at 10%-15% per year. The is, as yet, no satisfactory substitute for freon and once developed the substitute will require extensive and expensive modifications of UNM's chillers. Given the age of the chillers, it would be advantageous to replace these units with absorption chillers driven by steam turbine generators within the next five years.

C. Domestic Water

1. Sources: The University owns two wells at this time. The primary well is located near Girard and Campus, and feeds the entire campus. Water supplied by the wells is fed into a storage reservoir located north of Johnson Center, under the tennis courts. #5 Well, north of Johnson Center Olympic Pool, is secondary because the drop in the water table has caused the water to become very hard.

   In the case of emergency, the University can be supplied by the city water, but the supply volume is such that it takes eight hours during the night to fill the reservoir for the next day.

2. Distribution System:
   a) There is a critical problem in water distribution. Since the water is extremely hard, there has been a build-up of minerals in the pipes so
that there is less than 50% use of their capacity and they will be completely clogged within 10 years. Piping inside buildings is in similar condition. Because of this buildup, there is not enough pressure to reach the upper levels of the Medical Center and the Chemistry Building, and fire hydrants are unable to reach over two stories.

b) Water lines need to be replaced or the water load needs to be decreased.
   (1) If the fire hydrants were connected to the city water supply so that the fire loads were eliminated from the University system, and the pipes and valves were repaired, there would be enough water pressure for needed services.
   (2) Cleaning the lines, called pigging out, and relining them with a liner that would not allow mineral buildup and softening the water at each building would eliminate the problem that the hard water has caused. This is a very expensive process, and would cause a major disruption in University activities.

D. Sanitary Sewage and Storm Drainage

UNM owns and maintains its storm drainage and sanitary sewer systems. While the drainage system is fairly new and in good condition, around 80% of the cast iron sewer lines are in need of some general repairs. Lack of funding is the only restraint in maintaining these lines. Since University sewer lines connect to the city's sewer lines, they are required to have Manhole Monitoring Systems. These are concrete vaults/rooms that house the equipment to
monitor waste entering the city's sewer system. Increasing the number of buildings on a manhole provides greater opportunity for dilution of chemicals. At this time, the capacity of both the drainage and sewer lines are adequate.

E. Electricity:
1. Sources:
   a) There are two PNM substations west of Hokona Hall. These are connected to a UNM owned switching station which creates 25 feeders leading into the University. The peak use of electricity at the University at this time is 15 MVA. There is the capacity to rise to 20 MVA. Assuming that the same power density would be maintained, this would allow servicing approximately 6 million square feet with the current capacity (net growth capacity of another 1 million square feet of building area).

   b) The voltage used at the University is outdated. Upgrading the system to high voltage capacity would require updating equipment, including all electrical wiring and the transformers at every building. Eventually there will be a need for a substation/switching station for the North Campus.

2. Distribution:
   a) The majority of the electrical cabling used on campus is in Crosslink Polyethylene Insulation. Treeing, cracking of the insulation, has been found to be a problem in this type of insulation. At this time there are two to three major faults a year. These failures are expected to increase with the age of the insulation. Damaged insulation is now being replaced with
Low pressure gas supply and distribution is sufficient.

- **UNM owns both the telecommunication and the data communication systems for the university.** Both these systems use the Central and North Campus tunnel system to access the buildings wherever possible. In the long term there are plans to directly connect to the South Campus with fiber optics through a conduit run down University Boulevard.

**F. Low Pressure Gas**

There are high gas lines that feed into Ford Utility Plant. Pressure is reduced here and reduced for distribution. The capacity and distribution of low pressure gas are adequate.

**G. Telecommunications and Data Communications Systems**

1. **Introduction**

   a) **UNM has owned both the telecommunication and the data communication systems for the university since 1983.** Both these systems use the Central and North Campus tunnel system to access the buildings wherever possible. Those buildings not linked to the tunnel system are connected to the tunnel by trenching. Cables are buried in a conduit system.
   
   b) **While telecommunication and data communication share conduit wherever possible, they do not share conduit with other utilities.**
   
   c) **The South Campus is connected to the rest of campus by fiber optic lines that are leased from U.S. West Communications.** In the long term there are plans to direct connect to the South Campus with fiber optics through a conduit down University Boulevard.

2. **Telecommunications**

Telecommunication equipment is expected to continue to get smaller in...
Because of anticipated downsizing and eventual use of wireless systems, the existing telecommunications facility should be adequate for some time.

A new fiber optic system is in the initial stages of implementation. The design of the new fiber optic system will consist of a main fiber network ring with six connecting zone rings. These zones will be designed to connect as many buildings as possible. This system will initially be used for data and video communication, but in the future may include energy management and the university alarm system.

size with advances in electronic technology. While the telecommunications facility is at its capacity now, if anticipated downsizing of equipment occurs, it is possible that this facility will provide enough space for some time. Today, there is a physical connection to every telephone and fax machine on campus. With the development of PICO cells (wireless radio cells), radio transmission will eliminate the need for this connection.

3. Data Communications
   a) The CIRT building (Computer and Information Research and Technology) is the front end for the computer network, housing the mainframe computers, and providing service to the various computer pods throughout the campus.
   b) The planned implementation of a new fiber optic system will consist of a main fiber network ring with six connecting zone rings. These zones will be designed to connect as many buildings as possible. This system will initially be used for data and video communication, but in the future may include energy management and the university alarm system.

H. Media Technology Services
   (Instructional TV)
   1. Currently, UNM offers 68 ITV (Instructional Television) courses per semester through Media Technology Services. Over 1000 students, mostly graduate and professional level, use the services. The number of courses is growing at 20% to 30% a year. Use of video technology will only increase in the

Use of video technology is expected to increase dramatically in the future.
Overview of the Network Connection for New Buildings and Major Remodels

Exhibit E31
To meet demand for services, additional classrooms equipped to transmit educational programming should double from 4 to 8 in the short term. As the number of classrooms increase there will also be a need for at least one more transmission studio.

It is a general Facilities Planning policy to equip every classroom with the ability to receive video transmissions.

The storage of hazardous waste is becoming extremely difficult.

2. While there are many classrooms that can receive ITV transmissions, there are only 4 classrooms equipped to transmit and receive ITV. This presents scheduling problems. In the next five years the classroom need will at least double to eight. As the number of classrooms increase, there will also be a need for at least one more transmission studio.

3. It is a general Facilities Planning policy to equip every classroom with the ability to receive video transmissions. The new classroom building being planned for UNM will incorporate video receiving and transmission.

I. General Information on Occupational Safety (Hazardous Waste)

1. The storage of hazardous waste is a continuing and future issue. The hazardous waste regulatory environment is changing so quickly that it is difficult to plan for the future. Regulations are becoming more and more restrictive.

2. There is currently one storage area located on the north campus.

3. As the University moves away from one central campus, the storage of hazardous waste becomes more difficult. UNM has a waiver to transport waste from the south campus to the storage facility on the north campus. The University may want to consider another storage area for the south campus in the long term.

4. Development of a central receiving facility by UNM would allow better tracking of incoming chemicals which allow easier compliance with environmental regulations.
Transportation/Parking

Questions that this section address include:
- How can UNM provide adequate parking and traffic access to meet present and projected requirements?

See Maps 15 and 16, Section III.B. 
Map 15 Parking Zones and Adequacy 
Map 16 Major Vehicular Circulation

A recent UNM Parking/Access study had the following conclusions:

- that UNM provide for the construction of 2,100 new spaces within 600' of the core of the Central Campus to meet projected needs through the year 2000.
- that with the recent expansion of the parking structure there are sufficient parking spaces to meet Hospital needs through the year 2000.
- The following actions were recommended:
  - Restripe four surface lots in the Central Campus.
  - Construct two parking structures in the Central Campus.

Introduction
A parking and traffic Master Plan was completed by Walker Parking Consultants/Engineers, Inc. in the summer of 1991. This is a comprehensive study for parking and traffic at UNM including the central and north campuses addressing:

a) supply, demand, and adequacy of existing and future parking
b) alternatives for adding more parking spaces
c) traffic and pedestrian circulation
d) parking management strategies to maximize utilization of parking resources.

The highlights of their study are as follows:

Parking

i. Central and North Campuses
   A. Existing Conditions
      1. Parking Supply
         The total parking supply was established at 8,176 space on the UNM campus. The effective supply is 7,509 spaces or 92% of the total parking supply.
         (1) 49% on the North Campus
         (2) 51% on the Central Campus.

      2. Walking Distances
         Industry standards recommend a maximum walking distance of 1,200 feet or five minutes for university parkers. A distance of 600 feet or 2.5 minutes for faculty/staff and visitors is desirable. At UNM 3,874 spaces (47%) are within 1,200 feet of the campus core. This leads to parking pressure on nearby neighborhoods.

      3. Parking Demand
         The total demand is estimated to be 9,705 spaces.
         (1) Faculty and staff, 4,685
         (2) Resident students -707

UNM Master Plan
Project Information Package
ARC 2/92

III. Resources
Historical Notes Regarding Transportation/Parking

Chronology

1922  UNM's remote location necessitated one of the first university shuttle systems in the U.S.

1908  First master plan had no internal streets or parking lots indicated.

1917  Tracks for the city's electric trolley were extended to the campus.

1935  Main plan - continued tradition of on-street parking lots and also proposed a limited number of improved off-street parking lots.

Late 1950s  University initiated a parking permit system.

1960  Wamacke Plan
   (a) Proposed campus circulation should be oriented primarily to the needs of students as pedestrians.
   (b) The campus road system should be modified to eliminate through traffic.
   (c) Adjacent major city thoroughfares would provide access to an internal loop system be created to provide access to parking areas and serving of buildings.
   (d) The plan projected a need for 8,000 space to accommodate 25,000 student enrollment. The plan proposed that parking needs should be accommodated first by surface lots followed by a series of underground parking garages beneath Johnson Center playing fields. Alternately it was recommended to acquire property adjacent to the campus or construction of multi-level parking garages.

1963  Eckbo Landscape Plan modified Wamacke Plan
   I. Eliminated interior through streets
   II. Loop road concept was retained and simplified
   III. Large peripheral lots replaced the proposed underground parking.
• In the long-term construct another parking structure on the Central Campus.

• Implement a shuttle system to the south campus to accommodate the rest of the parking demand.

• In calculating the North Campus requirements, this study failed to take into account parking needs for the Children's Psychiatric Center, Mental Health, the State Lab, and patient parking for the Cancer Center.

(3) Commuter Students - 4,085
(4) Visitors - 229

4. Parking Adequacy

Parking adequacy is the ability of the parking supply to accommodate the parking demand. It is estimated that UNM has a current parking deficit of 2,196 spaces.

(1) Central Campus has a deficit of 4,503 spaces
(2) North Campus has surplus of 2,307 spaces.

B. Future

1. Supply

In the long term it is assumed that the effective parking supply will be reduced to 5,757 due to new building construction and more pedestrian friendly environments by the year 2000.

2. Demand

Total parking demand is estimated to increase to 11,287 by the year 2000, due primarily to rising student and staff populations.

3. Parking Adequacy

By the year 2000, the parking deficit will climb to 5,523 spaces. Even if the University added enough spaces to accommodate all the demand on campus, it is likely that much of the new supply would be remote and/or at high costs. If such costs are passed along to the parkers, many would seek alternative parking or transit.

C. Priority Parking

UNM has established that priority for parking on the Central Campus shall be to all visitors and dorm residents and all short term parking by faculty/staff and commuters. To
meet this requirement, approximately 550 spaces would have to be added to the Central campus to meet needs through 2000.

II. University Hospital
A. Supply
The parking supply at the Hospital indicated a total of 1,677 spaces. The effective supply is 1,548 spaces (92.3%).

B. Demand
The total current demand at University Hospital is estimated at 1,241 at 10 am and 1,347 spaces at 3 pm.

C. Adequacy
It is estimated that with the recent expansion of the parking structure there are sufficient parking spaces to meet Hospital needs through the year 2000.

III. Recommendations
A. Restripe four surface lots in the Central Campus, which would add 191 spaces.

B. Construct two parking structures in the Central Campus to gain 1,228 spaces.

C. In the long-term construct another parking structure, possibly at the current reservoir site when the City relinquishes this property.

D. Implement a shuttle system to the south campus to accommodate the rest of the parking demand (1,000-3,000 spaces).
The following improvements are recommended:

- **North Campus**
  - Reduce University traffic on Stanford Drive by closing the extension of Mountain and Tucker Roads to through traffic.
  - Provide a satisfactory entrance from the west onto University Boulevard.
  - Reduce vehicular/pedestrian conflicts by providing adequate sidewalks and pedestrian overpasses (Lomas and Yale).

- **Central Campus**
  - Restrict or close streets to vehicular traffic.
  - Provide a better line of sight for vehicle traffic.
  - Expand the central core of the University by enlarging the loop roadway system.
  - Reduce vehicle traffic in adjoining neighborhoods.

### Traffic and Circulation

#### I. General

A. Traffic within the campus is considered to be operating within good and tolerable ranges. However, traffic on adjacent street is an issue.

B. There is good access from all directions to the UNM campus via an arterial roadway system. The arterial system is complemented by an east-west and north-south freeway system.

C. The greatest portion of the traffic now approaches and leaves the North and Central Campuses via Yale and Lomas Boulevard.

D. The surrounding neighborhoods are concerned about the amount of University traffic that now travels and parks on residential streets.

#### II. Major Traffic/Pedestrian Concerns

A. University-related traffic on Stanford Road north of Maple Avenue.

B. Inadequate parking supply for the Central Campus causing motorists to park in neighborhoods south of Central Avenue.

C. Pedestrians crossing Lomas Boulevard at Yale Boulevard and UNM Hospital entrance.

D. Access onto University Boulevard at Tucker Avenue.

E. Inadequate sidewalk widths on Yale Boulevard between Las Lomas Road and Lomas Boulevard.
III. Traffic/Access Goals
   A. Reduce the potential for vehicular/pedestrian conflicts by either separating pedestrians from vehicles or reducing the number of vehicles.

   B. Restrict and/or redirect University traffic now on local residential streets to major arterial roadways.

   C. Provide adequate on-campus parking in order to reduce the need for on-street off-campus parking.

   D. Provide a satisfactory level of service for vehicles within and entering/exiting the campus.

   E. Provide a “walking campus” that encourages intra-campus travel by walking or bicycling.

IV. Recommended Improvements
   A. North Campus
      1. Reduce University traffic on Stanford Drive by closing the extension of Mountain and Tucker Roads to through traffic.

      2. Provide a satisfactory entrance from the west onto University Boulevard.

      3. Reduce vehicular/pedestrian conflicts by providing adequate sidewalks and pedestrian overpasses (Lomas and Yale).

   B. Central Campus
      1. Restrict or close streets to vehicle traffic.

      2. Provide a better line of sight for vehicle traffic.
3. Expand the central core of the University by enlarging the loop roadway system.

4. Reduce vehicle traffic in adjoining neighborhoods.
III. Resources
Capital Funding

Introduction

This section will give an overview of current capital requests and the options for capital outlay funding in New Mexico.

A. Current Capital Requests

UNM has currently some $200 million of capital "wishes" generated by various UNM Colleges and Departments for major and minor projects. From this list about $40 million was requested from the Legislature through the Commission of Higher Learning. Actual legislative appropriation will be less than requested.

The original in-house wish lists for the 1991

<table>
<thead>
<tr>
<th>UNM &quot;Wish Lists&quot; in</th>
<th>$Dollars:</th>
<th>vs. UNM Legislative Requests in</th>
<th>$Dollars:</th>
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<tr>
<td>Minor Capital Projects</td>
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<td>1992 Legislative Request*</td>
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<tr>
<td>Instruction</td>
<td>3,735,000</td>
<td>Institution</td>
<td>25,385,000</td>
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<tr>
<td>Research</td>
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<td>Research</td>
<td></td>
</tr>
<tr>
<td>Public Service</td>
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<td>Public Service</td>
<td>14,005,000</td>
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<tr>
<td>Academic Support</td>
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<td>Academic Support</td>
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<tr>
<td>Student Services</td>
<td>1,654,000</td>
<td>Student Services</td>
<td></td>
</tr>
<tr>
<td>Institutional Admin</td>
<td>90,000</td>
<td>Institutional Administration</td>
<td></td>
</tr>
<tr>
<td>Physical Plant</td>
<td>5,196,000</td>
<td>Physical Plant</td>
<td></td>
</tr>
<tr>
<td>Parking Lot Paving</td>
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<td></td>
<td></td>
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<tr>
<td><strong>Subtotal</strong></td>
<td>$13,151,000</td>
<td><strong>Subtotal</strong></td>
<td>$39,915,000</td>
</tr>
<tr>
<td>Major Capital Projects</td>
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<td>Discretionary Capital Budget</td>
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</tr>
<tr>
<td>Instruction</td>
<td>88,500,000</td>
<td>Instruction</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>7,500,000</td>
<td>Research</td>
<td>350,000</td>
</tr>
<tr>
<td>Public Service</td>
<td>25,725,000</td>
<td>Public Service</td>
<td>175,000</td>
</tr>
<tr>
<td>Academic Support</td>
<td>12,000,000</td>
<td>Academic Support</td>
<td>1,328,000</td>
</tr>
<tr>
<td>Student Services</td>
<td>9,756,000</td>
<td>Student Services</td>
<td>225,000</td>
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<tr>
<td>Institutional Admin</td>
<td>0</td>
<td>Institutional Administration</td>
<td>75,000</td>
</tr>
<tr>
<td>Physical Plant</td>
<td>19,500,000</td>
<td>Physical Plant</td>
<td>185,000</td>
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<td>Auxiliary</td>
<td>15,000,000</td>
<td>Other**</td>
<td>1,470,600</td>
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<td><strong>Subtotal</strong></td>
<td>178,891,000</td>
<td><strong>Subtotal</strong></td>
<td>3,588,600</td>
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<td><strong>Total</strong></td>
<td>$192,162,000</td>
<td><strong>Total</strong></td>
<td>$43,723,600</td>
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</tbody>
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* Includes projects from the UNM North, Central, and South campuses.
** Includes a request for a loan of $206,500.

Exhibit E33

UNM Master Plan
Project Information Package
ARC 2/92
proposed capital outlay projects ranged from minor renovation projects to the building of new facilities. Minor projects for the main campus ranged in estimated cost from $15,000 to $1,000,000. Projects on the Minor Capital Projects List included: renovations of classrooms, laboratories, and administrative spaces, mechanical and electrical improvements, paving of dirt parking lots, reroofing, landscape projects, and handicap accessibility improvements. Major Capital Improvement Projects for the main campus ranged in estimated cost from $756,000 to $24,000,000, and totalled approximately $179 million dollars. Projects were new construction, additions, expansions, and major renovations.

The 1992 Legislative Request totalled approximately $45.4 million dollars and included projects on the main as well as branch campuses. Projects included improvements, expansions and new construction. The projects from the main campuses were: handicap access improvements, the Optoelectronics Material Center, a general classroom facility, the Learning Technologies Center, Science and Technology Planning, campus street paving, a Children's Psychiatric Day Hospital, hospital equipment, a Center for Alcoholism, Substance Abuse and Addiction, and a football stadium expansion. Other funding is being sought from the Discretionary Capital Budget. Some of the projects on this list include: improvements and renovations, acquisition of equipment and land, emergency repairs, and library support. Funding sought from this source totals approximately 3.8 million dollars.
B. Options for capital funding:

(1) State Appropriation
   A process of institutional requests, CHE review and recommendation (based on criteria) and legislative and executive approval. Funds from State-wide GO bonds or revenue bonds based on severance tax income. Tends to be competitive, political and subject to year-to-year fiscal condition of the State.
   (a) Eligible for State Appropriation
      (Instruction, Library, Administration and Services, Research, Public Service, Physical Plant, Multi-Use Facilities, Land Acquisitions)
   (b) Ineligible for State Appropriations
      (Noninstructional athletics, Recreational or entertainment events for students or the general public, All auxiliaries- bookstores, student unions, student housing etc.)

Capital funds for construction from the State are becoming more difficult to obtain.
From 1981 to 90 a $154.3 million was allocated by the State of NM for public four year institutions. UNM received $54.5 million or 35.6% of the total (this is about $8 million/year). UNM represents 48.6% of the enrollment FTE.
(2) UNM revenue bonds
UNM initiated and funded by an on-going revenue stream. Needs approval by administration, regents, CHE and State Board of Finance.

(3) Building Renewal Funds
Used for on-going facility renovation and renewal. Formula generated funds based on complexity, age, and history of buildings. Funds come from institutional land and permanent fund income.
(a) Generated by I&G facilities. Revenue producing structures are generally not eligible (similar to State appropriations). Generates about $600,000/year. Money is spent at institutional discretion (is not subject to actual funds generated on a building basis).
(b) Issues:
   i) Funding level is at about 1% of present value (as computed by CHE). This is less than the 1.5% to 3% recommended levels.
   ii) Equipment is not taken into account. Equipment is a major factor in S&E funding.
   iii) Other UNM revenues are supplementing this fund to bring it within range of suitability.
   iv) Present Value used for funding does not equal replacement cost.

(4) Discretionary
This is revenue from UNM leases, investments, Land and Permanent fund revenue. About $3 million a year is used for discretionary capital projects.

(5) Dedicated
Capital projects funded by operating revenues (Revenue Bonds). A revenue bond dedicated to a specific project (e.g. a parking garage).
student housing).

(6) Other
   (a) Private
   (b) Federal
   (c) Use of indirect research overhead to acquire
capacity in University Research Park (NMRI)

(7) Local Government Bonds
   General Obligation bonds (property tax). For
branch campuses with local government
funding option in place. UNM has no enabling
legislation to take advantage of this option.

Potential Strategies to improve funding levels

(1) State Appropriations
   (a) Develop projects that rate high on CHE
evaluation scale.
   (b) Legislative lobbying (impact of science and
engineering on economic development)
   (c) Assist in marketing statewide bond issues.
      Increase general awareness of capital
 needs.
   (d) Lobby for additional resource allocation
      (property tax, permanent fund etc.)

(2) Building Renewal Fund
   (a) Work to change formula to bring resources
      within recommended level (1.5 to 3%)  
   (b) Work to change formula to reflect research
      equipment.
   (c) Develop policies to direct resources to
      specific areas.
   (d) Work to make sure Present Value (PV) is
      correct replacement cost.

(3) Discretionary
   (a) Lobby to direct discretionary income to
      impact Science and technology needs.
   (b) UNM to continue to maximize discretionary
(4) Other

(a) Indirect Overhead Rate
   Work to increase OH rate to accurately reflect use and depreciation of buildings.
   Additional increment to be used for capital purposes (e.g., revenue bonds or to supplement BRR funds).

(b) Continue to solicit private and federal dollars for capital projects.

(c) Examine ways for UNM to have local bonding power.

(d) Examine ways for joint public-private partnerships.
### State Capital Outlay Appropriations for Construction & Planning Compared with FTE Enrollment Distributions for New Mexico Public Four-Year Institutions 1981-1990

<table>
<thead>
<tr>
<th>Institution</th>
<th>1981-82</th>
<th>1982-83</th>
<th>1983-84</th>
<th>1984-85</th>
<th>1985-86</th>
<th>TOTAL</th>
<th>% of TOTAL</th>
<th>% of STATE</th>
<th>% of FTE CHG</th>
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<tr>
<td>UNM</td>
<td>6,400,000</td>
<td>21,000,000</td>
<td>3,000,000</td>
<td>3,800,000</td>
<td>17,500,000</td>
<td>54,305,100</td>
<td>35.6%</td>
<td>40.5%</td>
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<tr>
<td>NMSU</td>
<td>3,900,000</td>
<td>16,000,000</td>
<td>4,000,000</td>
<td>11,100,000</td>
<td>100,000</td>
<td>36,426,800</td>
<td>23.8%</td>
<td>31.5%</td>
<td>0.1%</td>
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<td>NMSU</td>
<td>2,300,000</td>
<td>7,400,000</td>
<td>521,000</td>
<td>1,500,000</td>
<td>4,100,000</td>
<td>16,000,000</td>
<td>10.0%</td>
<td>5.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>WNMU</td>
<td>3,117,000</td>
<td>600,000</td>
<td>4,000,000</td>
<td>1,140,000</td>
<td>275,000</td>
<td>6,196,800</td>
<td>4.0%</td>
<td>3.9%</td>
<td>25.6%</td>
</tr>
<tr>
<td>ENUF</td>
<td>1,600,000</td>
<td>2,100,000</td>
<td>5,205,000</td>
<td>75,000</td>
<td>8,000,000</td>
<td>18,100,000</td>
<td>12.5%</td>
<td>8.4%</td>
<td>-5.2%</td>
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<td>NMSMT</td>
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<td>4,922,000</td>
<td>100,000</td>
<td>6,200,000</td>
<td>20,200,000</td>
<td>13.2%</td>
<td>2.5%</td>
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<tr>
<td>TOTAL</td>
<td>17,517,000</td>
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<td>23,000,000</td>
<td>16,740,000</td>
<td>32,491,000</td>
<td>183,318,876</td>
<td>100.0%</td>
<td>100.0%</td>
<td>6.4%</td>
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Exhibit E35
Introduction:
This section will present information regarding two areas of the campus that affect immediate and long-range planning on the UNM campus.

1. Medical Center Issues
2. Science and Engineering
3. Other

It is expected that other information on other areas of the campus will be developed as planning continues.

Questions
1. How does the Medical Center relate to the rest of UNM?
2. How can physical planning improve functional relationships?
3. What are the Science and Engineering needs of UNM?
4. What capital improvements are needed in the future?
1. Summary
   a) The Medical Center is composed primarily of:
      (1) School of Medicine
      (2) Allied Health Sciences
      (3) Cancer Center
      (4) Carrie Tingley Hospital
      (5) Children's Psychiatric Hospital
      (6) Mental Health Center
      (7) University Hospital
      (8) Medical Center Library
   b) The mission of the UNMMC is to improve and enhance the health of New Mexicans through education, research and patient care. The pursuit of this mission is characterized by a commitment to excellence, a compassionate approach to people and the effective use of available resources. Education is the common thread that serves to tie together the several institutional responsibilities.

2. General
   a) Medical Center is different from rest of UNM. There needs to be better communication between the two campuses while acknowledging the differences and special mission in providing health services.
   b) Similarities
      North and Central campuses have the same general overall mission:
      (a) education
      (b) research
      (c) service
   c) Differences
      (1) The major emphasis of service is patient
Medical Center “Vision” Questions

a) Will the Medical Center have to attract an even larger number of primary care patients in order to maintain the current number of specialty patients? A substantial change in the patient population would have a dramatic impact on the campus.

(1) Will primary care patients be treated at the Medical Center or sites around the city?

(2) Would national health insurance change the nature of medical care within the Medical Center?

b) Will there be any significant change in the number of specialty patients seen at the Medical Center?

(1) Will the mix of patients continue to move toward outpatient vs. inpatient care or have we reached the maximum amount of patients that can be transferred to the outpatient setting?

(2) Will the typical patient be very sick and/or aged and therefore require systems that make it much easier to access the Medical Center?

(3) Will there be primarily trauma and chronic care patients at the Medical Center?

c) What educational facilities will be needed and how will they relate to patient care and research?

d) What centers of emphasis or excellence will be developed in education, patient care, and research?

e) Will the Medical Center be the “super specialty center” for New Mexico with plans like Lovelace and Health Plus referring patients? Or will Lovelace and Presbyterian be strong competitors in the super specialty areas?

f) Can the Medical Center compete in the future without more convenient patient and visitor access?

(1) What will be the approximate size of the patient population in the future? Will the number of employees per patient remain the same, grow or decrease?

h) Will the size of the student and postgraduate populations stay approximately the same or go up over the next 20 years?

i) What programs will be developed that require special facilities like MRI? How can we allow for the future development of such facilities when the technology may not be invented for another 5-10 years?

j) Will hospice and/or nursing home care be provided within the Medical Center?
care. The Medical Center has to provide patient care as an integral part of the teaching and research roles. Research and education aspects of the mission are similar to other parts of the university. However, the location of the education activities are predominantly in patient care settings, and much of the research is in a patient care setting.

(a) The uniqueness of the Medical Center involves the magnitude and the role that the delivery of patient care plays in the educational and research efforts.

i) Faculty have responsibility for delivery of an enormous amount of medical services and for the line operation of a major business enterprise.

ii) In carrying out its educational mission, the Medical Center provides unique medical services to all citizens of New Mexico, a wide range of medical services to all socioeconomic groups in Bernalillo County and medical services to patients without third party coverages.

iii) Patient care is 24-hour-per-day, 7-day-per-week responsibility which deals with life and death matters.

(b) Financial

i) Only about 15% of Medical Center budget (around $250 million) comes from State Appropriations.

ii) More than two thirds of the Medical Center budget is primarily associated with patient care components of the Medical Center which comes primarily from
patient care revenues.

iii) Patient care revenues are very 'fragile' - they could go down very quickly in today's environment.

iv) About $22 million comes from research funding.

v) Only about 20% of University Hospital's budget come from governmental subsidies.

(2) The Medical Center is an enterprise operation.

(a) Successful and high quality patient care is essential for education and research in the Medical Center.

(b) Providing high quality programs and convenient and progressive services is essential to survive in the marketplace.

(c) New managed health care systems will impact everything in the Medical Center.

(3) The Medical Center must have a very fast response time to the patient care marketplace.

(4) Synergism among patient care, education and research is key to efficient and cost effective functioning of the Medical Center.

d) The Medical Center will grow from funds it generates, but it also needs state resources.

e) The Medical Center will need to respond to state level mandates (e.g. CPH)

3. How to provide high quality care and serve patients in the future?

a) Health Care Trends

(1) Population is getting older and chronic care is increasing.
(2) There will be more managed care programs.

(3) New managed health care systems will impact everything. If there is national health insurance, then all consumers will be able to choose their provider. This will mean that the Medical Center can no longer count on the uninsured "market." All patients will have a choice of physicians and hospitals.

(4) All providers will look to improve service and quality of care aspects.

(a) convenience of access (possibly through development of satellites?)

(b) providing a nicer environment (e.g. a large single room [250 sf] where a family can visit comfortably)

b) Strategies for the Future

(1) Provide services to attract and maintain patient base which is essential for education and research.

(a) extremely high quality services and programs

(b) convenient access

(c) improved parking

(d) pleasant environment

(e) convenient locations (satellites?)

(f) more ambulatory care facilities

(g) more focus on service and one-stop diagnostic centers

(h) move toward higher intensity beds

(i) day hospitals

(j) rehabilitation

(k) more services- this will probably mean more area per function (greater square footage allocations per beds,
outpatient rooms or other functions)

(i) some growth in number of beds

(m) emphasize primary and tertiary care

(n) build relationships with primary care providers outside UNM

(o) be a superspecialty center

   i) increased superspecialty medical services

   ii) possibly provide a continuing medical education center

   iii) need for on-site hotel for patients and visitors?

(p) create a more direct relationship with employers

(q) develop collaborative relationships with other health care providers

(2) Medical Center Master Plan Concepts

(a) flexibility to adjust to the future is imperative

(b) being able to make decisions and move quickly is essential

(c) improving circulation/access

   i) Provide access to “front door”

   ii) provide circulation nodes (lobbies, concourses)

   iii) provide horizontal pathways (east-west and north-south)

   iv) provide north-south connections (from Lomas Parking Structure, to Cancer Center, to Medical Center plazas)

   v) provide convenient parking

   vi) improve pick-up/drop off

(d) collocating (centralizing) diagnostic and other facilities and eliminating
overlap when possible.

(a) improve "service" to clients

(f) separate less expensive space
   (out-patients, administration etc.)
   from expensive space (in-patient,
   diagnostic). Core remains for
   in-patients.

4. Education

In 20 years the University may be a very
different kind of organization.

(1) The technology of communication among
   faculty, students and people outside the
   University is improving.

   (a) faster

   (b) more economical

(2) Many educational elements of the
    University may possibly be
decentralized. There will be different
    ways to impart knowledge. But patient
    care aspects of medical education will tie
    education to patient care facilities.

    (a) computers

    (b) tele-education

    (c) video

    (d) classrooms need to be larger, flexible
        spaces with high quality audio-visual
        capabilities.

(3) As students get older there will be a
    greater demand for services.

(4) education will be transformed

    (a) high tech-high touch

        i) computer assisted instruction

        ii) small group discussion

        iii) individual faculty member-student
             interactions
iv) student-to-student interactions
v) faculty-to-faculty interactions
(b) can access lectures from scholars
and authorities in the country (via TV, video)
(c) devote more personalized time to students
(d) students may spend less time on the campus
(e) likely to be a variety of campuses in Albuquerque and within the state
(f) some of the tutorial work can be done electronically (computers)
(g) in the future, it will be easier to reach somebody via electronic bulletin board than by telephone
(h) will need sophisticated AV systems

5. Research

a) Research revenues are an essential part of Medical Center operation.
b) Demands for clinical care, research and education activities are difficult to balance.
c) Groups of researchers rather than individuals doing projects in the future.
d) Need proximity to a variety of resources and interrelationships. Synergism makes it work.
e) Research technology and space needs will grow in the future.
f) Faculty are expected to support part of their salaries with research funds.
g) There will probably be more specialized research in the future
   (1) interdisciplinary
(2) multi-disciplinary
(3) basic science, clinical, human behavior, and health services research

h) Medical Center has developed foci of sophisticated technologies.

i) Growth in research activities will impact space use as well as energy and safety aspects.

j) Study unique ethnic populations of New Mexico.

6. Other

a) Long-range Capital Needs
   (1) CPH Day Hospital
   (2) Cancer Center expansion
   (3) University Hospital expansion and parking structure
   (4) Additional ambulatory facilities
   (5) Student union and educational facility
   (6) Administration and office facility
   (7) Additional large lecture hall (there is one in nursing and pharmacy that seats around 240).
   (8) Facility to house Center for Alcoholism Substance Abuse and Addiction (CASAA)
   (9) Eventually will need to expand research facilities. The Biomedical research facility was planned to be expanded to the west.
   (10) Medical library will require eventual expansion.
   (11) Impact of technology
       (a) need large amount of space for image storage.
       (b) will always need space for hard copy
storage.
(c) need more electrical power.
b) The Medical Center needs the Veterans Administration Medical Center (VA).
(1) Physicians at the VA are members of the medical school faculty.
(2) VA is a major site for teaching medical student and house officer.
(3) Physical impacts of relationship
   (a) Providing convenient parking and transportation for faculty, students and house officers going between the VA and the UNM Medical Center is a major issue.
      i) Large number of people go back and forth daily
      ii) There are no shuttles now.
   (b) Would like to upgrade the computer network between the areas.
   (c) VA facilities at one time were planned for the north campus. This will probably never happen.
   (d) There might be a need for joint projects located on the campus.
c) Specialty Hospitals
   (1) Free-standing specialty hospitals will probably be considered over the next 20-30 years (e.g. Children's, Women's, Geriatrics etc.)
   (2) Specialty Hospitals would provide opportunities for more interaction between private providers and the university.
   (3) Want to avoid a duplication of services.
   (4) Need to be directly adjacent to existing facilities.
(5) Carrie Tingley might be a component of a children's hospital (with its own unique identity).

(6) Freestanding children's hospital possible.

d) Biohazard safety and disposal is a major issue
   (1) ventilation
   (2) storage
   (3) disposal

a) Long-range site planning issues:
   (1) Size of land area reserved for the Medical Center
   (2) Indian Health Service Hospital site coordination
   (3) Traffic entrance into the Medical Center
   (4) Traffic flow within the Medical Center
   (5) Parking systems
The following is a letter by Max Bennett, Planning Officer, UNM Medical Center.

COMPARISONS AND CONTRASTS
OF THE
UNM MEDICAL CENTER

WITH OTHER PARTS OF THE
UNIVERSITY OF NEW MEXICO

A. Mission:

As a part of the University of New Mexico, the UNM Medical Center has a mission of education, research and service, with the major emphasis of service being patient care. The first two parts of the mission are similar to other components of the University.

1. Education:

Faculty within the School of Medicine are responsible for the education of about 300 medical students, 350 house officers (M.D.s who are in 3 - 7 years of post-graduate education), 125 allied health students, 60 masters and Ph.D. students and over 3,500 emergency medical technician and paramedics. UNM Colleges of Nursing and Pharmacy students, Albuquerque Technical Vocational nursing students and many other students from a variety of educational settings receive a portion of their education within the patient components of the Medical Center. The location of the educational process is predominantly in patient care settings where medical services are concurrently being provided compared with the purely educational settings for most other UNM programs. Education is impossible without a broad spectrum of patients.

Continuing medical education provides extended educational opportunity for more than 4,500 health professionals per year. Although the emphasis is upon physicians, continuing education provided by the School of Medicine touches all areas of the health field (nurses, social workers, emergency medical technicians, physical therapists, psychologists and many others).

The School of Medicine has received national and international recognition for the development of innovative education programs with an experimental "problem-based learning" curriculum.

2. Research:

Research is integral to the operation of the Medical Center. Similar to other components of the University, it sharpens and expands the skills and knowledge of the faculty and contributes to our basic knowledge. Medical research develops solutions to problems, many of which are unique to New Mexico. About $22 million of financial support comes from research which is very large compared with the School of
Medicine's instruction and general expenditures of around $33 million in FY 1990-91. Through collaboration with the Veterans' Administration Medical Center, Sandia National Laboratories and Los Alamos National Laboratories, the School of Medicine faculty have helped develop new projects such as the magnetoencephalography (MEG) technology. Many of these activities have important economic development as well as medical implications.

3. Patient Care:

The uniqueness of the Medical Center within the University involves the magnitude and role that the delivery of patient care plays in the educational and research efforts. The nature of medical education requires that students and house officers be located within and be a part of the actual delivery of medical care from the third and fourth years of medical school to the end of post-graduate education. In creating an appropriate medical educational milieu for the 300 medical students and 350 housestaff, the University Hospital and the Veterans Administration Medical Center are necessary for primary, secondary and tertiary medical experiences across a broad spectrum of medical specialties. The Cancer Center, Carie Tingley Hospital, Center for Non-Invasive Diagnosis, Children's Psychiatric Hospital and Mental Health Center are part of the critical mass and spectrum of programs which are integral to the education, research and patient care mission. Patient care is a 24-hour-per-day, seven-day-per-week responsibility. The UNM Medical Center saw over 430,000 outpatient visits and 137,000 inpatient days in FY 1990-91.

B. The Role of the Faculty in the Delivery of Patient Care:

As part of creating this medical education environment, the faculty of the School of Medicine have line responsibility for the delivery of medical services. This includes individual faculty members seeing patients and supervising the medical care provided by house officers. The quality of medical care within the Medical Center is the direct responsibility of the faculty. UNM faculty members are involved in providing public services, but most colleges and schools do not have the responsibility for the provision of services anywhere near the magnitude of the UNM Medical Center. For example, the College of Education interacts with Albuquerque Public Schools and sends UNM students as "student teachers" to APS, but the College of Education does not have the line responsibility for the teachers and administrators within APS. The patient components of the UNM Medical Center and the Veterans' Administration Medical Center cannot function without the knowledge, skills, leadership and direction of the medical school faculty. These responsibilities deal with life and death matters in a very direct and dramatic way.

C. Community Impact/Outreach:

F-14 Project Information Package
ARC 2/92

III. Resources
Synergism is the key to the operation of the UNM Medical Center. In carrying out its educational mission, the medical school faculty provides unique medical services to all citizens of New Mexico, a wide range of medical services to all socioeconomic groups in Bernalillo County and medical services to indigent patients who do not have health insurance or the ability to pay for care. Bernalillo County contributes approximately $19 million and the State of New Mexico appropriates $1.7 million to the care of Indigent patients (outside of Bernalillo County) and $0.4 million to neonatal care at University Hospital, but University Hospital covers, in addition, more than $22 million in unsponsored care. The University Physician Associates (faculty of the School of Medicine) provides almost $12 million in free care and have over $7 million in uncollected accounts each year. In other words, citizens of New Mexico have an educational institution (UNM) that makes a critical contribution of medical care to people who have no health care coverage. Resources are optimized and saved by combining patient care, education and research into one organization.

D. Financial Aspects:

The complexity of the Medical Center can be seen in a broad sense from an overview of the financial aspects. The fiscal year 1992 budget for the Medical Center is around $250 million with only about 15% coming from state appropriations. Approximately two-thirds of the budget is within the patient care components. The Medical Center's patient care components' revenues come predominately from third-party coverage (private insurance, Medicare, Medicaid and others). For example, University Hospital receives only about 20% of its revenues from governmental subsidies. Patients with third-party coverage have a choice of where to obtain medical care. Financial viability and an appropriate education environment rely upon all sources of funding from patient care, research and education. All of the knowledge, technology, organization, human resources and financial resources must be integrated for success. Convenient patient access and an aesthetically pleasing environment are essential for the Medical Center to accomplish its mission.

The stability of the Medical Center is important to New Mexico citizens who obtain medical care at the UNM Medical Center, to Bernalillo County and the State of New Mexico which have responsibilities for those who cannot pay for medical care and to the many medical students, house officers and numerous other health professional students who receive their education within the patient care system.

Friday, January 3, 1992
The adjacent preliminary concept plan illustrates some current ideas developed by the Department of Facilities Planning to address issues of access, traffic circulation and parking at the Medical Center.

It suggests the following concepts:

- Eventual expansion public-oriented and out-patient facilities of the Medical Center westward.
- Major access to the Medical Center would be from Yale to Camino del Servicio. Emergency access to the hospital would be from Lomas Boulevard.
A. Overview
There is a present and continuing need for additional science and engineering facilities.

1. Science and Engineering disciplines reflect about 20% of the credit hours of UNM and occupy about 15% of the main campus space.

2. Research will continue to be important to the University and S&E Disciplines.

3. The Science and Engineering disciplines are very active in research and generate from 40-50% of UNM's research revenues. UNM is 99th on NSF's top 100 research institutions (1988).

4. Research plays an important role in graduate education as well as providing financial incentives to Colleges and Departments.

5. Encouraging and promoting research is cited in UNM 2000 as a continuing theme.

6. UNM expects to increase enrollment by 15% by the year 2000. Longer range enrollment is expected to continue to rise.

7. In the last 10 years there has been a shift in credit hours and enrollment to upper division and graduate programs for the University as a whole and in the S&E disciplines. If this trend continues then we can expect a greater demand for graduate research space (and a decrease in general classroom space)

8. Department structure remains strong. Researchers have academic connections to Colleges and Departments.
9. Interactions between Departments reflect the nature of the discipline and the particular research projects at hand.

10. There is an increasing use of Centers/institutes/Consortium as a way to stay competitive in research efforts. These are both multi-disciplinary and sub-disciplinary efforts. Generally, Centers/Institutes are collocated with Departments. This takes advantages of faculty ties to departments, proximity to graduate students and library and existing facilities.

11. Many research efforts require access and parking for visitors which is difficult to achieve on the main campus.

12. Most S&E disciplines have a variety current space issues. Generally there is too little quality research and support areas available. These issues will tend to increase in the future. These issues are common to peer institutions and S&E disciplines in general (as indicated in recent NSF surveys).

13. UNM has a substantial investment in existing sites and facilities ($66-$83 million).

14. Most departments have various requests for major and minor capital funds (~$75 million in requests).

15. Based on California Higher Education Standards, UNM is deficient about 129,000 nasf now and about 230,000 nasf by year 2000. This equates to about a $84 million capital outlay need.

16. National studies indicate that most institutions of higher learning have a
20–25% backlog of deferred maintenance and other capital needs. This equates to about $13 million in needs for the S&E sector (20% of $63 million present value).
- 59% of the S&E facilities are 22 years old or older
- UNM has made a substantial investment in facility renewal in the last 10 years.

17. Capital deficiencies based on California Standards and assumed backlog is about $80 million.

18. Most departments would like to have their research efforts proximate to general departmental activities.

19. There is some potential of sharing research areas, particularly in the more expensive areas or support areas.

20. Many factors are creating and increased demand and use of research and other space in the Science and Engineering disciplines.
   a) Personal computers
   b) Specialized equipment
   c) “hands-on” teaching emphasis
   d) undergraduate research emphasis
   e) health/safety concerns
   f) post-doctoral fellows
   g) visiting/emeritus faculty

21. UNM is similar to other Universities in handling interdisciplinary research issues. Generally the smaller programs used whatever existing space they could find (often in the home department of some participating faculty member) and the larger programs had their own separate space. Facilities specifically constructed for sharing, the actual sharing was much less than anticipated.
22. UNM generally ranks 5 (out of 8 peer Universities) in the allocation of space for Science and Technology research.

23. S&E disciplines are generally located in the SW quadrant of the main campus. This area is crowded. While expansion of most facilities is possible, major new facilities are limited in this area.

Tentative Recommendations

• UNM Science and Technology Complex be viewed as a combination of individual and shared facilities to further undergraduate and research opportunities at UNM.

• Recommended strategies for realizing S&E needs include:
  a) Extend Use of Existing Facilities
     (1) Make space available by sharing selected functions (common use-centralized facilities).
     (2) Build in excess capacity into new, expanded or renovated facilities when possible.
        (a) future growth
        (b) incubation space
        (c) general classrooms
     (3) Move mature, multi-disciplinary functions to a centralized but convenient location.

  b) Provide new centralized facilities
     (1) Undergraduate instructional laboratories and support facilities
     (2) Multi-disciplinary activities (centers/institutes)

  c) Provide new/enhanced decentralized (departmental) facilities as required.
     (1) Additions
(2) Renovations to individual departments
(3) New facilities

d) Make most efficient use of existing space.
(1) Maximum feasible density (above and below ground)
(2) Eventual re-development of less efficient older facilities (Mechanical, Electrical)

e) Plan for eventual expansion of science and engineering quadrant.

It is recommended that UNM develop and adopt long-range planning and siting policies regarding science and engineering facilities. UNM should recognize that siting of major science and engineering facilities will likely have long-term operational and physical consequences. Planning policies should be developed in conjunction with current UNM long-range master planning activities and acknowledge:
- current and long-range educational and research objectives.
- investment in existing facilities
- long-range expansion potential
- accessibility of students, faculty, staff and visitors
- security and safety.

- Develop and implement various strategies to improve capital funding for Science and Technology Facilities.

Workshop meetings highlighted the need to include the Medical Center in planning for UNM science and technology facilities.

The following map illustrates some potential development alternatives for UNM science and engineering facilities.
UNM Research Interactions

Please note that most departments also interact with the Medical Center. This chart is being updated to reflect these interactions.

Exhibit F1
1985 Total Credit Hours | Total Number of Students in S&T Classes
---|---
Science and Engineering | 48,988 | 19.33% | 19,965 | 20.68%
Everything Else | 204,365 | 80.67% | 76,561 | 79.32%

1990 Total Credit Hours | Total Number of Students in S&T Classes
---|---
Science and Engineering | 46,048 | 18.17% | 19,284 | 19.92%
Everything Else | 218,128 | 86.09% | 80,787 | 83.69%

Difference 1990 to 85 S&T
-2,942 | -1.16% | -581 | -0.71%

Net Assignable SF
S&T | 466,340 | 15.97% | 747,850 | 14.70%
Everything Else | 2,558,836 | 84.03% | 4,340,643 | 85.30%
Total | 3,045,176 | | 5,088,493 |

Exhibit F2

Science and Engineering Disciplines reflect about 20% of the credit hours of UNM and occupy about 15% of the amount of space (main campus).
### UNM Research FY 89 and 90

<table>
<thead>
<tr>
<th>Department/Center</th>
<th>FY 90</th>
<th>FY 89</th>
</tr>
</thead>
<tbody>
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<td>Sciences</td>
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<tr>
<td>Biology</td>
<td>$2,154,644</td>
<td>$2,015,080</td>
</tr>
<tr>
<td>Chemistry</td>
<td>$1,234,228</td>
<td>$1,444,936</td>
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<tr>
<td>Geology</td>
<td>$1,322,743</td>
<td>$937,419</td>
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<tr>
<td>Institute of Meteoritics</td>
<td>$351,972</td>
<td>$691,974</td>
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<tr>
<td>Physics and Astronomy</td>
<td>$1,508,450</td>
<td>$1,494,624</td>
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<tr>
<td>Engineering</td>
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<td></td>
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<tr>
<td>Chemical and Nuclear</td>
<td>$1,516,507</td>
<td>$747,520</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>$934,741</td>
<td>$441,583</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>$487,036</td>
<td>$294,386</td>
</tr>
<tr>
<td>Electrical and Computer</td>
<td>$2,265,526</td>
<td>$1,174,278</td>
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<tr>
<td>Mechanical</td>
<td>$656,126</td>
<td>$520,189</td>
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<tr>
<td>NMERI</td>
<td>$8,175,944</td>
<td>$10,800,495</td>
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<tr>
<td>CHTM</td>
<td>$2,881,511</td>
<td>$5,008,762</td>
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<tr>
<td>CMEC</td>
<td>$1,044,701</td>
<td>$1,340,134</td>
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<tr>
<td>Total</td>
<td>$24,834,929</td>
<td>$27,357,723</td>
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</table>

Total Main Campus (excluding branch campuses but not the Medical School):

% Science and Engineering: 37.73% 53.10%

---

<table>
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<th>FY 89</th>
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<td></td>
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<td>Chemistry</td>
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<td>$1,444,936</td>
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<td>Geology</td>
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<td>Institute of Meteoritics</td>
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<td>Chemical and Nuclear</td>
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<td>Civil Engineering</td>
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<tr>
<td>Total</td>
<td>$24,834,929</td>
<td>$27,357,723</td>
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</tbody>
</table>

Total Main Campus (excluding branch campuses and the Medical School):

% Science and Engineering: 38.63% 56.59%

---

- The Science and Engineering Disciplines are very active in research and generate from 40-50% of UNM's Research Revenues. UNM is 99th on NSF's top 100 research institutions (1988).
% Difference Enrollment (headcount) 1979 - 1990

% Difference Credit hours 1979 to 1990

Exhibit F4
UNM S&E Facilities, Square Feet Added

UNM S&E, Present Value vs. Original Cost

F-30 Project Information Package
ARC 2/92

III. Resources
Many factors are impacting the demand and use for research and other space in the Science and Technology disciplines.

Exhibit F6
Compared to Other Universities

### Ranking In Federal Obligations
for Research & Development

<table>
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<tr>
<th>University</th>
<th>Rank</th>
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<td>University of Colorado</td>
<td>17</td>
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<tr>
<td>University of Texas at Austin</td>
<td>26</td>
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<td>University of Arizona</td>
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<tr>
<td>University of Utah</td>
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<td>New Mexico State University</td>
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<tr>
<td>University of Texas Health Center / San Antonio</td>
<td>60</td>
<td>28,017</td>
</tr>
<tr>
<td>University of New Mexico</td>
<td>99</td>
<td>20,126</td>
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*Not listed in top 100*

<table>
<thead>
<tr>
<th>University</th>
<th>Enrollment</th>
<th>Full-Time-Equivalent</th>
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<tr>
<td></td>
<td>Graduate: 27,062</td>
<td>Graduate: 8,927</td>
</tr>
<tr>
<td>University of Arizona</td>
<td>Undergraduate: 10,348</td>
<td>Undergraduate: 4,243</td>
</tr>
<tr>
<td></td>
<td>Graduate: 10,348</td>
<td>Graduate: 4,243</td>
</tr>
<tr>
<td>University of Nevada</td>
<td>Undergraduate: 6,505</td>
<td>Undergraduate: 1,391</td>
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<tr>
<td></td>
<td>Graduate: 6,505</td>
<td>Graduate: 1,391</td>
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Exhibit F7-A

Project Information Package
ARC 2/92

III. Resources
## Usage Summary

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<tr>
<th>University</th>
<th>State</th>
<th>University of Arizona</th>
<th>University of Colorado Boulder</th>
<th>Univ. of Nevada Reno</th>
<th>University of Texas Austin</th>
<th>University of Texas San Antonio</th>
<th>University of Utah</th>
<th>University of New Mexico</th>
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<tbody>
<tr>
<td><strong>Total</strong></td>
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<td>3,335,575</td>
<td>1,634,996</td>
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<td>1,653,850</td>
<td>2,420,200</td>
<td>3,945,176</td>
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<tr>
<td><strong>Total Educational</strong></td>
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<td>1,653,105</td>
<td>2,564,190</td>
<td>1,653,850</td>
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Exhibit F8-A
UNM Space Assessment

UNM Science and Technology Center
UNM Departments Reporting Problems

Exhibit F8-B

ARC Questionnaire

UNM Master Plan Project Information Package ARC 2/92

III. Resources
UNM Space Assessment

UNM Science and Technology Center

% S&T Departments Willing to Share Space

- Office Areas
- Loading/Storage Areas
- Chemical/Equipment Store
- Shop Areas
- Clean Rooms
- Equipment Rooms
- Testing Laboratories
- Research Laboratories

Exhibit F8-C
ARC Questionnaire
### UNM Space Assessment

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</tbody>
</table>

### UNM Science and Technology Center

**Percent Interaction with Other S&T Departments**

- **Physics/Engineering**: 50.0%
- **Chemistry**: 45.0%
- **Computer Science**: 40.0%
- **Geology**: 35.0%
- **Economics**: 30.0%
- **Mathematics**: 25.0%
- **Economics**: 20.0%
- **Geology**: 15.0%
- **Chemistry**: 10.0%
- **Physics/Engineering**: 5.0%
- **Computer Science**: 0.0%

**Departmental structure is strong. Interactions between Departments reflect nature of discipline and particular research projects at hand.**

---

**Exhibit F8-D**

UNM Master Plan

Project Information Package
ARC 2/92

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III. Resources
### UNM Space Assessment

#### UNM S&E Space Issues

<table>
<thead>
<tr>
<th>Space Issue</th>
<th>Formal Study</th>
<th>Active Solution</th>
<th>Comment</th>
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<td>Civil Engineering</td>
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<td>Physics/Astronomy</td>
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</table>

Various projects have been studied, requested or underway.

---

**Exhibit F8-E**

Project Information Package
ARC 2/92

III. Resources
Space Needs

Surveyed space and utilization standards in other states;
Examined existing inventories and utilization studies in California universities and colleges;
Attempted to determine how various academic disciplines have changed in the past several decades and what impact those changes have had on space needs.

Various recommendations resulted:

Classroom formula: \( \text{аст/нед} = \frac{15\ \text{аст/нед}}{500\ \text{аст/нед} + 10\%} \times 42\ \text{аст/нед} \times 71.4\\% \text{СПН} \)

\( \text{аст} = \text{assignable square feet} \)
\( \text{нед} = \text{weekly contact hours} \)
\( \text{СПН} = \text{station occupancy percentage} \)

Teaching Laboratory Space = \text{Space Factor} \times \text{multiplier}

Space Factor = \text{аст/стан} = \frac{15\ \text{аст/нед}}{25\ \text{аст/нед} \times 80\ \text{аст}}

Research Space = \text{аст} \times \text{FTE} \times \text{Faculty, Graduate Student, Post Doc per intensity of research activity} \quad \text{(eg: Complex, Intensive activities: 500, 250, 250 per each FTE type)} \quad \text{This includes all service and support space}

- Faculty and Related Offices = 195 asc per FTE faculty, TA's and Post-Doc. This includes all support and related areas.

Based on California Higher Education Standards, UNM is deficient about 130,000 nsf in S&E facilities. This will increase to about 230,000 nsf by year 2000.

Exhibit F9-A

UNM Master Plan
Project Information Package
ARC 2/92
Space Needs

UNM Science and Technology Center
1991 Space Needs (using Ca. standards)

- Physics/Astronomy: Existing $53,357, Formula $75,085
- Geology: Existing $47,035, Formula $46,949
- Chemistry: Existing $75,011, Formula $53,031
- Biology: Existing $88,759, Formula $88,818
- Mechanical Engineering: Existing $24,278, Formula $88,068
- Chemical and Nuclear Engineering: Existing $23,567, Formula $25,719
- Civil Engineering: Existing $21,054, Formula $15,673
- Electrical and Computer Engineering: Existing $88,734, Formula $89,065
- Computer Science: Existing $7,595, Formula $10,412

UNM Science and Technology Center
Year 1991 Space Needs (using California Standards)

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<td>33,704</td>
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<td>53,371</td>
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TOTAL 347,566 476,400 128,832

Exhibit F9-B

% Increase 37.07%
### Year 2000 Space Needs (Using C. standards)

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**TOTAL** 347,568 577,589 230,021

% Increase 66.18%

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**UNM Master Plan**

Project Information Package

ARC 2/92

III. Resources
Ideal
a) Disciplines would be clustered for convenience for students and staff in a pleasant campus atmosphere.
b) Department structure would be maintained.
c) There would be room for growth at each facility and for new facilities.
d) There would be convenient parking and access for visitors, service vehicles, students and staff.
e) Each facility would grow by additions and renovations as required.
f) Disciplines would share facilities conveniently and centrally located:
   1) Library
   2) classrooms
   3) instructional laboratories
   4) chemical stores
   5) support shops
   6) specialized or expensive facilities or equipment.
g) Graduate research laboratories would be integrated into each department to maximize control and convenience to students and researchers (some sharing might be possible if conveniently located).
h) Research would have the opportunity to incubate and grow into suitable long-term facilities.

Reality
a) Science and engineering disciplines are not clustered together. They are scattered elements on the main, north and south campuses.
b) Existing visitor access and parking is limited and constrained. (New parking structures will improve the situation in the long run).
c) The main S&E area is crowded. It has almost twice the density of the rest of the campus. There are some sites for expansion and new facilities, but they have limitations.
d) Capital and operating resources are constrained. (Some improvement can be expected).
   1) It is unlikely all funding will be provided by the state.
   2) Strategies should try to maximize impact of dollars spent.
      a) Renovations and additions more likely than major new facilities.
      b) Cooperative strategies between departments and external agencies are more likely.

Exhibit F10
How much?  **$75 million +**

| Estimated Capital Requirements to Meet YR 1991 Standards | $17,157,224 |
| Estimated S&E Backlog* | $14,936,420 |
| **Total Estimated Capital Needs** | **$32,093,644** |

| Estimated Capital Requirements to Meet YR 2000 Standards | $54,175,582 |
| Estimated S&E Backlog* | $14,938,420 |
| **Total Estimated Capital Needs** | **$79,112,002** |

* Based on National Inventory (22.5% of present value)

**Requested S&E Capital Dollars**

| Major Projects (1992 Legislative Requests) | $14,500,000 |
| Optoelectronic Materials Center* | $250,000 |
| Science and Technology Planning | |

| Major Projects (Departmental Requests) | $4,500,000 |
| Engineering Classroom/Laboratory | $2,500,000 |
| Observatory | $2,000,000 |
| Pulsed Power Building | |

| Other (in planning) | $24,500,000 |
| Chemistry Renovation | $17,100,000 |
| Physics Addition | $6,750,000 |

| Minor Projects | $380,000 |
| Biology - LTER Facility | $250,000 |
| Biology - Laboratory Renovation | $250,000 |
| Chemistry - Laboratory Renovation | $750,000 |
| Geology - Storage Space Area | $175,000 |
| COE - Engineering Annex | $200,000 |
| COE - Engineering Renovation | $150,000 |
| COE - Computer POD | $200,000 |
| COE - Farms Engineering | |

| **Total Capital Requests** | **$74,455,000** |

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**UNM Master Plan**

Project Information Package

ARC 2/92
III. Resources
General Campus Issues

A Summary of general trends and their potential implications is found in Section III A.

General Campus Issues

A. General

Service should be the theme of the university. It is the common thread that runs throughout all UNM activities. UNM should identify:

a) who is the customer?

b) what service is provided?

1. to whom?
2. when?
3. how?

B. Growth/Change

1. UNM will continue to grow and needs to grow

a) CHE's Education for 2005 has identified that UNM will focus more on graduate education and research.

b) Areas of possible growth of graduate programs:

   (1) science and engineering
   Easy problems have been solved. Progress is being made in multi-disciplinary groups.

   (2) Latin American.
   (a) UNM is a natural location for a "bridge" university to Latin America.

   (b) UNM will become a regional and national hub to recruit Hispanic and native Americans.

2. Programmatic

   a) There will be more graduate than lower division undergraduate growth
b) There will be a general trend towards multi-disciplinary, group learning

c) Research

1) Groups of researchers rather than individuals doing projects in the future.

2) Need proximity to a variety of resources and interrelationships. Synergism makes it work.

3) Research technology and space needs will grow in the future.

4) There will probably be more specialized research in the future
   a) interdisciplinary
   b) multi-disciplinary
   c) basic science, clinical, human behavior, and health services research

3. UNM can accommodate some growth by using existing space more efficiently and by increasing density (but should not spoil the quality of the environment).

C. Learning Environment

1. The technology of communication among faculty, students and people outside the University is improving.

2. Two different interpretations as to impact of improving learning technologies:

   a) probably will not change much. A research university will always need direct contact and interaction.

   b) Will impact fundamentally the way we teach students

      (1) Many educational elements of the University may possibly be
decentralized. There will be different ways to impart knowledge.

(a) computers
(b) tele-education
(c) video
(d) classrooms need to be larger, flexible spaces with high quality audio-visual capabilities.
(e) As students get older there will be a greater demand for services.

(2) education will be transformed
(a) high tech-high touch
   i) computer assisted instruction
   ii) small group discussion
   iii) individual faculty member-student interactions
   iv) student-to-student interactions
   v) faculty-to-faculty interactions
(b) can access lectures from scholars and authorities in the country (via TV, video)
(c) devote more personalized time to students
(d) students may spend less time on the campus
(e) likely to be a variety of campuses in Albuquerque and within the state
(f) some of the tutorial work can
be done electronically (computers)

(g) in the future, it will be easier to reach somebody via electronic bulletin board than by telephone

(h) will need sophisticated audio-visual systems

c) Middle ground - somewhere in between

D. Quality of Life

1. Create a safe and secure environment during the day, evenings and weekends.
   a) Meld the total campus community (on-campus and commuter students, traditional, non-traditional)).
   b) Strive to keep students on-campus during the week and weekends.
   c) Provide more exterior lighting
   d) Provide convenient and accessible parking.

2. Provide (maintain) and attractive learning-living campus environment.
   a) Create an "oasis of learning".
   b) Increase the number of total student body living on campus (now at 8%, make to more like 20% or more. Nationally the average is 29%)
   c) Provide a quality image.

3. Accommodate trends in the workplace
   a) more services to faculty and staff
      (1) job sharing
      (2) childcare.
      (3) Gathering place(s) for staff and
b) Provide places for small groups to interact.

E. Physical Environment

1. General

a) UNM's central campus is unique beautiful and a major asset of UNM. The challenge is to maintain/reinforce/extend this "core":

(1) Southwest style.
(2) Human scale
(3) Landscaping
(4) Exterior environment/Open space
(5) Pedestrian environment

b) North campus' open spaces and open areas could be improved.

c) Need to improve public accommodations for greeting the public, signs, parking etc.

d) Capitalize upon UNM's rich cultural heritage in physical design

(1) emphasize more cultural aspects
(2) Provide physical manifestations of being the "university of the Americas".

2. UNM Surroundings

a) Interface with the surrounding community is not addressed in the Warner Plan.

b) Need to acknowledge impact and interrelationship UNM has on/with surrounding neighborhoods.

c) How does UNM view the periphery lands? centralized, dispersed.
d) Need to control UNM's perimeters
   (1) control space across Central Avenue.
   (2) Need to improve area between TVI and UNM. Cooperate with the city.
   (3) Need to secure both side and provide safe passage across Lomas Boulevard. (Lomas is currently a barrier)

e) UNM should relate better to the major streets (Central and Lomas)
   (1) work with the City to make streets look spectacular
       (a) medians
       (b) trees
       (c) street flowers.
   (2) Need more outreach to students on these streets

f) Need to promote better use of Sandia Foundation property.

g) There is a greater potential to generate revenues from surrounding properties

3. Access/Parking
   a) Need to identify major entrances
      (1) emphasize, create entry(s)
      (2) information areas etc.
   b) Acknowledge major corridors, nodes and focal points
      (1) Yale/Central
      (2) Yale/Lomas
      (3) Make as nice as possible.
   c) Making the UNM assessable to students, faculty, staff and students is
major issue.

(1) Convenient, affordable parking
(2) Clear and safe vehicular access
d) Pedestrian Access
   (1) Need to maintain a pedestrian campus.
   (2) Need to meet higher than minimum accessibility standards.
   (3) Eliminate the barrier of Lomas (connect the two campuses)
4. Facility Impacts (See Section 4E)
Resources

1. Resources Consulted
2. People Interviewed
UNM Master Plan, Working Resources
January 29 1992

UNM Plans Reports
General
UNM Parking/Traffic Master Plan, Executive Summary
UNM General Development Plan

State-wide Educational Plans

North Campus
UNM Medical Center - Five Year Plan 1982-87, May 1982.
UNM Medical Center - Preliminary 5 Year Plan 1981-86, August 1981.
House Memorial 42, State Purchase of Bernalillo County Medical Center State of New Mexico, Legislative and Finance, and State Auditor, October 1977.

North Campus
University Center, Lease Master Plan Document, University Center Joint Venture, 1988

Higher Education Standards
Western Interstate Commission for Higher Education
Higher Educational Facilities Planning and Management Manuals
California
Calculation of base Factors for Comparison Institutions and Study Survey Instruments

G-2 Project Information Package
ARC 2/92

III. Resources

Trends Resources Consulted


Jones, Dionne J. and Betsey Collier Watson, "High Risk* Students and Higher Education: Future Trends. ERIC Digest, George Washington University, September 1990.


Persons Interviewed To Date:

1. General
   - George Anselvicios, Dean, College of Architecture and Planning
   - Peggy Blackwell, Dean, College of Education
   - Karen Brownfield, President, ASUNM
   - Dr. Richard Cady, Director of Planning and Policy Studies
   - Jean Civikly, Associate Dean, College of Arts and Sciences
   - Thomas Dedson, Dean of College of Fine Arts
   - Carla Espinoza, Director of Human Resources
   - Nick Estes, University Counsel
   - Orcilla Zuniga Forbes, Vice President for Student Affairs
   - Tony Franklin, Graduate Student Representative, Planning Council
   - Richard W. Holder, Interim Dean of Graduate Studies, Associate VP, Provost, Vice President for Academic Affairs
   - Damacio Lopez, Undergraduate Student Representative, Planning Council
   - Gil Marix, Director of Latin American Institute, Member Campus Planning Committee.
   - Robert Migneault, Dean - General Library - Administrative Services and Stephen Rollins, Associate Dean
   - Gary Ness, Athletic Director, Intercollegiate Athletics
   - Paul Rissar, Interim Provost, Vice President for Research, Vice President for Academic Affairs
   - Sharon Scalrito, Representative of the Staff Council (to the Planning Council)/ Director Managed Care
   - Dean James Elton Thompson, College of Engineering
   - Rupert A. Trujillo, Dean, Continuing Education
- Peter Walch, Director FA Museum
- Ken Walters, Dean-Anderson Schools of Management (also Doyle Kimbrough, Administrator)
- Dean Bryan Hobson Wildenthal, College of Arts and Sciences
- Maurice Wildin, Professor, Mechanical Engineering, Planning Council

II. Medical Center
- Warren Baur, Associate VP Finance & Admin, Office of the Director, Medical Center
- Max Bennett, Planning Officer, UNM Medical Center
- Dr. Jim Carlin, Medical Director, UNM Mental Health Center
- Dr. James Drennan, Medical Director, CEO, Carrie Tingley Hospital, David Dryden, Administrator, Carrie Tingley
- Dr. Ellen Goldberg, Chairman, Department of Microbiology, Graduate Education
- Christina Gunn, CEO Psychiatric Hospitals
- Dr. Martin Hickey, Executive Director of Managed Care Services
- Bill Johnson, CEO University Hospital
- Dr. John D. Johnson, Chairman and Professor Pediatrics
- Dr. Bob Kelley, Chairperson, Department of Anatomy
- Dean Leonard Napolitano, Director, UNM Medical Center, Dean, School of Medicine
- Scott Obershain, Assistant Dean, Undergraduate Medical Education
- Dr. Paul Roth, Chairman, Department of Emergency Medicine
- Thorn Sloan, Executive Director, Planning Administration UNMH
- Dr. Robert Strickland, Chair Department of Medicine
- Dr. Albert Vogel, Acting Chairman, Department of Psychiatry, Acting Director of
Mental Health Programs

UNM Infrastructure Interviews/Meetings
- Anne Apicella, Manager, Telecommunications
- Gary Bauerschmidt, Associate Director, Application & Communication Support, Communication and Information Research and Technology (CIRT)
- Bill Carroll, Manager, General Campus Safety
- Ray B. Counsellor, Assistant Director, Occupational Safety
- Larry Schuster, Staff Engineer, Physical Plant, Bill Tryens, Staff Engineer, Ford Utilities
- David Stuart, Assistant Vice President, Academic Affairs; Interim Director Media Technology Services
- Allen Taylor, Architect, Facilities Planning
- Pat Theuer, Bio/Chemical Safety Manager
University of New Mexico
Long Range Master Plan

"Vision" Workshop

April 1992

The University of New Mexico
UNM Department of Facilities Planning
Architectural Research Consultants, Incorporated
UNM Planning Council
MEMBERS
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Karen Brownfield, President, ASUNM
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Joe McKinney, Campus Planner, Department of Facilities Planning
Kim Murphy, Director, Real Estate Office
Larry Schuster, Staff Engineer
Thom Sloan, Executive Director, Planning and Marketing, UNMH
Bill Tryens, Staff Engineer

John P. Patronis, Facilitator
Architectural Research Consultants, Incorporated.
# Table of Contents

Executive Summary .................................................................................................................. i

1. Introduction ......................................................................................................................... 1

2. Workshop Sessions
   2.1 Day 1 .......................................................................................................................... 3
   2.2 Day 2 .......................................................................................................................... 9
   2.3 Day 3 .......................................................................................................................... 33

3. Appendix ............................................................................................................................ 43
Introduction/Purpose
This report documents the activities and results of a three-day workshop that took place on February 25th, 26th and 27th, 1992, hosted by the UNM Core Planning Committee.

The purpose of this workshop was to provide a structured opportunity to define a collective long-range development “vision” for the University of New Mexico. The workshop sessions were designed to inform the University community regarding present and projected planning conditions, to solicit comments and concerns and to reach consensus regarding physical planning directions for UNM’s Albuquerque Campus.

Major Themes:
The workshop sessions served to expand the perspective of UNM’s physical planners regarding the concerns of the University community. Workshop sessions affirmed many current planning practices and also identified many opportunities for improvements, as well as highlighting issues for more detailed consideration. Major themes that emerged include:

- Affirmation of the planning principles that have guided the development of UNM’s Central Campus. The physical character of the Central Campus, with its southwest regional style of architecture, pedestrian-oriented campus and excellent landscaping, was recognized as a continuing community asset. Most attendees agreed that these existing characteristics need to be maintained and extended northward and to other developing areas of the campus. Specific ideas discussed include:
  - reinforce the “unity” of the campus.
  - preserve the open space on the Central Campus.
  - maintain the pedestrian scale and current building density of the Central Campus.
  - maintain the architectural character, especially
within the historically significant areas of the Central Campus.

- **Recognition that growth and change will impact all aspects of the University.**
  UNM will continue to be the "flagship" educational institution of the state. UNM will need to respond to a growing enrollment, changing programmatic requirements and technological advances in a controlled manner that preserves the quality of the environment and that fosters interaction among University units. Other ideas discussed include:

  - trade-offs exist between quality and quantity.
  - upgrading and maintenance of existing facilities and infrastructure must be taken into account when planning for growth.
  - enrollment growth will impact support and auxiliary services facilities (libraries, housing, student services).
  - advances in technology may fundamentally change the education process. This will impact the types of facilities needed and their location.
  - future student populations will likely be older and culturally diverse.
  - the needs of commuter and returning students must be taken into account.
  - UNM needs to promote a diversity of housing opportunities.
  - the Medical Center will respond to the needs of an aging population by decentralizing services and focusing on elderly care, long-term managed care, and acute care.
  - flexibility of facilities is required.

- **Recognition that UNM exists within a context of a larger community.**
  UNM exists within a context of inter-linking relationships that influence transportation, access, utilities, land use, provision of goods and services, safety and security. Long-range planning should recognize that a stable and healthy residential and business community surrounding UNM is to everyone's benefit and should be nurtured. UNM
should continue to work in cooperative ways with local planners and community members to discuss mutual concerns to:

- recognize the impact of the university on surrounding areas.
- provide programs and facilities that will be used by the community.
- recognize and encourage the sharing of facilities wherever feasible.
- create pedestrian and bicycle linkages to the surrounding communities.
- encourage alternatives to the private automobile.
- maintain access of Central Campus to the public.

- **Recognition that UNM can be more service-oriented to its “customers”**.
  To successfully compete for the highest quality faculty and students, UNM will need to become more service-oriented and "user-friendly" by:

  - providing convenient and safe access and parking
  - anticipating and providing for needs of students, staff, faculty and visitors.
  - fostering a safe, secure and healthful environment.
A. Introduction

This report documents the activities and results of a three-day workshop taking place on February 25th, 26th and 27th, 1992, hosted by the UNM Core Planning Committee. The purpose of this workshop was to provide a structured opportunity to define a collective long-range development "vision" for the University of New Mexico. The workshop sessions were designed to inform the university community regarding present and projected planning conditions, solicit comments and concerns and reach consensus regarding physical planning directions for UNM's Albuquerque Campus.

This report will document the results of those workshops. Much of the information builds upon ideas provided in the Planning Information Package issued by the Core Planning Committee in mid-February 1992.

B. Structure of Workshop Sessions

The schedule of workshop sessions was as follows:

- **Day One: February 25, 1992**
  Presentations and sessions of factual information and trends concerning student enrollment, facilities and projections for change that will impact the university over the long term.

- **Day Two: February 26, 1992: Workshops**
  Break-out sessions on the following broad topic areas:
  A. Academic Programs, Research and Service
  B. Quality of Life
  C. Growth and Change
  D. Environment for Learning

- **Day Three: February 27, 1992**
  Summary of Issues and Opportunities and
Round Table Discussion regarding key issue areas.

The workshop proved to be an exciting three days, filled with many creative ideas that served to enlarge the perspectives of all participants.

The information contained in this report should be viewed as a resource for future planning. While all the ideas voiced are not equally valid, a careful reading will indicate a broad consensus on a number of big ideas that emerged during the workshop session.
Welcome - President Richard Peck

"We need to know what we are so we can determine where we are going."

President Peck welcomed workshop participants and reminded the group that we are in the middle of a big spiderweb. Change will impact every aspect of university life.

Assumptions about the future development of the university must be understood during the planning process. For example if the student population is going to increase to 35,000....

- what percentage will live in dormitories?
- what will be the demand for Saturday classes?
- what will be the infrastructure requirements?

Before the university can be expanded or the distance that the utilities have to travel is increased, the limitations must be understood.

Master Planning is an applied process that will have a real outcome. The Regents, as well as others are looking forward to the results of this process. The University of New Mexico should take advantage of this opportunity to collect a broad range of ideas and should be commended for this effort.
Key Note Address -
Perry Chapman

UNM is one of the great regional campuses in the United States. It has succeeded at protecting its sense of place, and if this is to be maintained it must be reaffirmed in the future planning documents of the university.

Over the last few years new trends have emerged for American universities. These changes have been termed the "Age of Limits*. They are:

I. **Financing is decreasing** - State financing is not as strong and the budgets for higher education are decreasing.

II. **Demographics are changing** - Projections show that the minority student population will be increasing, the overall 18-21 year old population will be decreasing, and the overall age of the student is expected to increase. With the decrease in overall student population, it is expected universities will become more competitive. In New Mexico projections suggest that the student population will continue to grow. Nevertheless, the trend that suggests that schools are becoming more competitive in attracting students should not be overlooked.

III. **Age of facilities** - As facilities on campuses have been aging, they have not been maintained or renovated. Currently there is an estimated $70 million cost in deferred maintenance nationwide.
IV. Community expectations are growing

1. Communities have become more involved in the way in which universities develop and grow. These concerns include traffic, parking, and student behavior.

2. Communities have come to demand more from their universities in local areas. Specifically:
   - Economic Development
   - Extension Courses, etc.

There has been a call to return to tradition on campuses. The premise is to restore a "sense of place" to the American campus, to create an environment that is attractive, welcoming, comfortable, consistent, and cohesive. The environment should be coherent, human-scaled, with its own distinct spatial order, texture, and focus.

Recurrent themes that have emerged on campuses throughout the United States include the following:

- **Need to reinforce the unity of the campus environment.** This is partially a reaction to the type of explosive growth of the '60's and '70's.
- **Desire for collegiality, and the maintaining of an environment that allows for the discourse and exchange among all participants.**
- **Expression of a need for a stronger feeling of the physical center of the campus.**
- **A desire to connect the campus to the larger environment through the use of landscaping, architecture, materials, and texture.**
- **Quest to return to or maintain a human-scaled environment.**
- **Revised quest for the campus as part of the community.**
- **Recognition for the need for cross-disciplinary exchange, and the need for proximity of facilities.**
Recognition that quality of place is disappearing throughout world, and there is a desire to reverse this trend.

What led to the emergence of these trends?

- The '60's brought an explosion of growth on campuses because of an increased student population, leading to larger-scaled buildings and architectural experimentation.
- Increased use of the automobile was intrusive on campus and took away open space that once had been designated for the pedestrian.
- Maintenance has not kept pace with needs and there was an increased perception that the level of quality was going down.

Mr. Chapman presented three case studies of new higher education master plans.

i. University of Virginia
University of Virginia was modeled on Jefferson’s idea of the academic village. There was a focus on texture, scale and a formal sense of centrality around the rotunda. In developing a growth plan, the issue was how to maintain this centrality, how to build on the quality of the environment and how to link the campus together. The solution was to visually connect the major axis and make the focal points visible throughout the campus.

ii. Carnegie Mellon
Carnegie Mellon is a campus with a classical quality from its original plans from the beginning of the 20th century. The new plan sought to reaffirm elements of the original plan by uniting the established axis on campus, and to reflect the classic architectural style and forms in new facilities.
III. Stanford University

The new plan for Stanford reflects the character of the original part of the campus, by maintaining the scale and architectural style in new development.

Conclusions

Mr. Chapman's conclusions are that UNM’s planning process should:

- Establish a planning framework that provides flexibility to accommodate many unanticipated changes over the next 30 years.
- Try to understand how academic programming is going to change in the next 30 years.
- Assess the impact of accommodating the planned growth.
- Establish design guidelines that relate to the systems of open space.
Introduction
Day Two's agenda included a variety of workshop sessions about topics relevant to planning UNM's physical environment. The workshop facilitator introduced group leaders and questions to be presented. Each session had a facilitator.

- Attendees then broke out into topic-specific groups to discuss, summarize, and document issues.
- The groups came back together to merge their findings through a consensus process.

Attendance varied during the day. Some workshop sessions considered more than one question, depending upon the number of attendees. The following section identifies the questions discussed and the summary outcomes of each session.

8 AM - 10 AM
A. Academic Programs, Research and Service

Questions Discussed
- Over the next twenty years, UNM's enrollments will grow and student demographics will change. What impact will this have on the campus?
- A growing, changing faculty and staff will impact facilities. How can facilities be designed to better support user needs?

Summary Results/Issues
- Planning should include day-to-day involvement of the University community.
  - There should be less "top down" planning.
  - User involvement should be encouraged: input from faculty, staff and students should be taken into account during planning activities.
  - Planners should find people on campus who have successfully created open lines of
communication and learn from their experience.

- **Health /Safety**
  Health/safety issues include:
  - Building environments ventilation/chemical uses research hazard, grounds/maintenance
  - Staff, personnel safety.

- **Facilities**
  - UNM should be active in securing space for academic activities.
  - There will be an increasing proportion of women attending UNM. Sufficient day care facilities are required to accommodate present and future users. The location of the current facility is not as convenient as it could be.
  - UNM needs to make best use of the new facility.
  - Keep costs reasonable to students.
- Need for additional facilities:
  - A new classroom building will be in planning soon.
  - Additional offices are needed for faculty/staff/graduate students.
  - As UNM grows support requirements will also increase.

- Accessibility
  - Handicap Access
    - Future planning needs to make campus accessible to the handicapped. All sites and facilities need to conform to the requirements of the Americans with Disabilities Act (ADA).
    - The recent state legislative package contains $750,000 for accessibility retrofit.
    - More handicap parking is needed on the campus.
  - Make sure remote parking is safe and has proper levels of lighting.
  - Community accessibility is an issue (e.g., Popejoy Hall and museums should be considered as community facilities).
  - UNM needs to consider park and ride systems combined with an interna. "people-mover" transportation system.

- Maintaining physical plant
  - UNM needs to look at new ways to maintain present facilities (e.g., choice of materials is important, types of carpet, tiles).
  - Cost and energy efficiency of infrastructure needs to be considered.
  - UNM needs to provide adequate staff to maintain sites and facilities.
  - UNM needs to promote water conservation through use of native plants and landscaping.

- Impact of Scarce Capital and Operating Resources
- UNM needs to identify a comprehensive list of capital needs and set priorities about what is most important.
- It is important to consider the cost of infrastructure development and maintenance when doing capital budgeting.

• Growth
  - Branch campuses in the Albuquerque area should be considered as a strategy to limit the impact of physical growth of the UNM campus.
  - Growth planning should consider the impact of UNM growth and development on residential areas surrounding the campus.

• Housing
  UNM is a commuter campus. More varied housing is required to meet student needs and keep students on campus.

Questions Discussed
• Classes, programs and research will respond to changes in society and technology. What directions are they going to take over the next twenty years?

• General academics and academic support (sports, institutes, etc.) fields may change over the next twenty years. How should academic facilities relate to each other as the heart of the campus? How should academic support facilities relate?

Summary Results/Issues
• Growth Options
  - UNM does not necessarily have to grow to meet all demands. UNM could limit growth by capping enrollment or raising admission standards.
  - Development planning should acknowledge
that existing infrastructure and facilities may limit growth opportunities.

- There is a potential to cooperate with Albuquerque Technical Vocational Institute (TVI) by allowing TVI to accommodate growth in lower division courses.
- No recommendation on ideal size of UNM emerged from this workshop session.
- UNM is studying how to strengthen UNM presence in northern New Mexico.
- UNM needs to make most efficient use of existing facilities (maximize classroom and laboratory utilization).
- Science and engineering programs are expected to grow. UNM should consider the potential of expanding science and engineering programs in the northwest quadrant of the Central Campus.
- Land is a non-renewable resource. UNM should consider how to maximize the most efficient use of existing land area. Existing
building density can be increased by:
- going higher (additional floors).
- going deeper (more floors underground).

- **Growth of Centers and Institutes**
  - The workshop participants anticipate that centers and institutes will be more inter-disciplinary and less departmentally-based in the future.
  - Expect a shift in research toward medicine, away from defense.

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**Question**
- *The* Medical Center *will grow and change over the next twenty years. What needs and issues does it face in order to accommodate health needs?*

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**Summary Results/Issues**
- **Changing responsibilities of the Medical Center**
  - The medical center will have to respond to additional needs in the future:
    - Health requirements of an aging population
      - Nursing Homes
      - Geriatrics
    - Providing more services and increased level of service
      - Hospice
      - Long-term rehabilitation
      - Possibility of a children’s hospital
      - Possibility of decentralized ambulatory care sites
    - Long-term managed care contracts.

- **Future expansion possibilities of the Medical Center**
  - Westward expansion (Physics Building)
  - Northward expansion (into existing parking lot)
  - Elks Club site?
- Potential of increasing densities (Use of high-rise structures?)
- Remember that surrounding neighborhoods can be impacted by Medical Center development.

- **Transportation issues at the Medical Center**
  - Need for convenient access for patient-care activities
  - Parking for patients and staff
  - Need to improve pedestrian routes between North and Central campus
  - Need to provide safe, convenient and pleasant movement of pedestrians within the Medical Center
    - unpleasant walking conditions
    - unsafe crossings
    - need for pedestrian malls/open spaces
    - need for additional landscaping
  - Need to improve bicycle access routes between campuses.

- **Opportunities for Centralizing services**
  - Information management systems
  - Contracts and grants
  - Legal services
  - Internal managed care
  - Personnel/human resources
  - Medical records
  - Billing
  - State-wide referral service.

- **Growth and changes [25 year perspective]**
  - Hospitals are changing as a place to practice medicine and provide for patient care. Hospital care is changing from a curing center to a preventive care center
    - Hospitals will be a center for specialized acute care
    - Less acute patient care will be decentralized to a variety of out-patient settings.
  - The Medical Center needs to maintain
sufficient market share to fulfill mission requirements.

- New types of facilities will be required for educational purposes:
  - Performance-based teaching
  - Computer laboratories (computer-aided instruction)
  - Small groups discussion rooms and teaching laboratories
  - Technological changes.
- Increased computer expansion and networking capabilities will be required (external and internal).
- Research:
  - Changing nature of research
    - Basic medical research
    - Clinical research
  - Increased emphasis for instrumental research laboratories in addition to chemical/wet laboratories.
- Education
- The Medical Center can provide a link between physicians in the state
- Continuing education/lifelong learning
- Dependence on lecture methodology should change
- Skills laboratory for upgrading nursing staff and possible applications for residents
- Faculty/staff support services including:
  - wellness center
  - exercise facilities.

Second Session - 10AM to Noon
Quality of Life

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**Question**
- Medical patient care delivery is changing. What trends are occurring and how will they affect facilities?

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**Summary Results/Issues**
- General Patient Care Trends. increased emphasis on:
  - Technology
  - Care for an aging population
  - Out-patient care
  - Chronic care
  - Wellness and prevention
  - Provision of consumer-oriented services
  - Diagnostics
  - Community outreach
  - Decentralization of services

- Specific Site Issues
  - Need to plan for land acquisition
  - Plan for growth at the Medical Center
  - Plan for new or replacement hospital site location within 20-25 years (need to reserve a site location).
  - Consider "service" aspects in future site development
  - Access
- aethetics.
- Establish cooperative relationship with neighbors:
  - Solve traffic flow issues without negative impacts on neighborhood.

Questions
- UNM provides a unique setting for education. What type of learning environment should UNM strive for? How can the physical environment enhance this ambience?

- Technology is changing many aspects of people's lives. How will changes in technology affect learning methods and campus facilities?

Summary Results/Issues
- Allow student enrollment to grow via "distance learning"
  - Create "video walls" that allow interactive education in a variety of remote locations.
  - Increase access to modern databases and libraries.

- Balance human contact with technological development
  - Human values must be preserved.
  - Maintain open space.
  - Maintain student centers.
  - Maintain quality time.
  - Provide a sense of belonging for commuter students.

- Provide multi-purpose buildings.
  - Do not isolate disciplines.
  - Provide opportunities for interaction.
Questions Discussed
- UNM faces issues of campus ecology (clean air, hazardous wastes, climatic impacts, etc.). How should they be addressed?
- UNM's infrastructure and services have varying capability to handle growth. What are the most pressing elements?

Summary Results/Issues
- Existing Infrastructure Issues
  - Antiquated and depreciated major systems
  - Domestic water
  - Chlorofluorocarbon (CFC) issues
  - Boilers, electric, cable
  - Need to link upgrading of infrastructure to facility capital outlay planning.
  - Need to account and budget for the depreciation of infrastructure systems.
  - Need to promote energy conservation in planning and building design.
- Recognize the need to add additional physical plant capacity as the University grows.
- Need to educate decision-makers regarding building and infrastructure requirements. This includes state legislators, governor, regents and administration.
- UNM needs to become the "flagship" state institution for:
  - energy conservation efforts
  - maintenance (maintainability)
  - life cycle costing.

- **Hazardous Waste:**
  - Expect a 35% increase in toxic waste generation at UNM.
  - Increased regulations will mean increased costs to UNM.
  - Need to improve the monitoring system of chemicals entering UNM.
  - UNM should consider establishing a central monitoring point for chemicals entering the university.

C. Growth and Change
1 PM to 3 PM

**Question**
- A cooperative relationship between the City of Albuquerque and UNM is beneficial to both entities. How can cooperation concerning facility issues be enhanced? e.g., landscaping, public rights-of-way, street/traffic improvements, bikeways/trails, cooperative facilities (performing arts?)

**Summary Results/Issues**
- **Existing Formal Process**
  - Allows for structured input before issues become problems
- Involves surrounding neighborhoods in the planning process
  - Campus Planning Committee
  - Volunteer committees including bicycle trails, open space, and Sun Tran.

- Informal Process
  - Encourage administrative ties - administrative-to-administrative level.
  - Promote town meetings to exchange information and ideas.
  - Host forums and workshops to discuss issues and follow-up sessions.

- Seek opportunities to share facilities
  - classrooms
  - examine possibility of a downtown campus
  - use law school for public meetings
    - retain golf course including paths for community use.

- Seek more cooperation
  - There is a history of cooperation by neighborhoods, the city and UNM.
  - Bus bays on Central Avenue and Yale Boulevard
  - City expenditures to enhance edges.
  - Goals and objectives need to be determined.
  - Neighborhoods need to be included in the planning process.
  - Campus Planning Committee is not always part of planning process.

- Planning Issues
  - Developing gateways into the university area.
  - Design and planning of new parking structure and bookstore.
  - Need to enhance pedestrian access to campus.
- Lomas Boulevard is a barrier ("Lomas Canyon").
- There is a conflict between the building of public parking structures and the encouragement to use public transit.

Questions Discussed
- A large institution like UNM impacts its surrounding neighborhoods. How can the relationship between UNM and its neighborhoods be improved? What are facility issue areas?

- Lomas Boulevard is a major barrier between Central and North campuses. How can the relationship of the Medical Center and North Campus be strengthened internally, to Central Campus and to its neighbors?

Summary Results/Issues
- Transportation Issues
  - Commuters to the campus and the impact of off-campus parking on the surrounding neighborhoods.
  - Development of cultural and public facilities.
  - Development on UNM edges, including...
scale of buildings, i.e.:
- New parking structure across from the Frontier Restaurant, and
- The size of the new art center.
- Surrounding community desire to keep the north golf course for recreation and open space use:
  - Value to community
  - Nature experience.
- Impact of access roads
  - Idea of Constitution Avenue extension
  - Widening Yale Boulevard from Gibson to Central Avenue to four lanes will have negative impact on neighborhoods and businesses.
- Maintaining a university/village concept.
- Return Sycamore Street back to residential use?

- Accomplishments of Federation of University Neighborhoods
  - Median beautification along University Boulevard and Central Avenue.
  - Bike patrol for area south of Central.
  - Stopped adult entertainment establishments in area, testified to stop legislation.

- Expansion of UNM at University Boulevard and Central Avenue (Galles Site)
  - Fine art center concept with Tamarind Institute is acceptable.
  - Large parking structure would be a detriment to the community.

Questions Discussed
- There are many alternatives for the future physical shape of UNM. What should be the campus size and shape? Where should facilities be located?

- External and internal influences can affect the future size of a campus. What elements will
contribute to or hinder growth? At what pace should/can UNM grow?

- UNM has properties that provide potential for future development. How should lands such as the Research Park, Sandia Foundation properties, and others be developed?

Summary Results/Issues

- **Growth Options**
  Recognize that UNM can control growth programmatically by:
  - Capping enrollment (raising standards)
  - Decentralizing some services to remote sites.

- **Growth Issues**
  - Expect growth of Science/Engineering and Medical Center growth because of increased research opportunities.
  - Growth of the University will impact support/auxiliary facility needs
    - additional student housing
    - student services
    - libraries etc.
  - Recognize that there are major impacts on UNM edges. There is an opportunity to develop policy to better deal with this issue.

- **Northern growth of UNM is seen as a major opportunity:**
  - Medical Center growth toward west.
  - Eventual growth onto Sandia Foundation land west of the University of New Mexico
    - Housing and
    - Auxiliary services.
Environment for Learning
3 PM to 5 PM

Question Discussed
• Future students will want a growing variety of housing alternatives. How can UNM serve these housing needs on and off-campus?

Summary Results/Issues
• Residence halls requirements
  - There is a need to increase housing on campus.
  - Housing must be economically attractive to user.
  - Need to create sense of community, proximity of housing to the center of campus.
  - Need to develop additional support services.
  - Need to increase funding of capital projects.
  - Need to assess demand for student housing...
and recommend a reasonable expectation of how much housing to provide in the future.

- **Possible residential hall growth locations**
  - Lomas corridor growth.
  - Faculty housing area.

- **Off-campus housing needs**
  - Forge neighborhood relations
  - Improve “student ghetto”
  - Encourage development of residential areas
  - “Suitcase students” can live in areas further from campus center.

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**Questions Discussed**

- **UNM has major issues of transportation. Parking, bicycle, and the pedestrian environments. UNM has looked at a variety of solutions. How can these issues best be addressed? What alternatives exist that can be implemented through physical planning and design?**

- **Implementation of the Americans for Disabilities Act will affect all types of UNM facilities. What are the campus impacts?**

- **Safety and security are large campus concerns. How can physical planning and design improve safety and security?**

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**Summary Results/issues**

- **General Issues**
  The campus serves as a “park” for the city of Albuquerque residents. Planning in the future should seek to maintain access for the public to this community asset.

- **Safety issues**
  - Surfaces
  - Building access
  - Parking-pedestrian safety.
Public comments were solicited during the workshop. The following were gathered from maps that had been provided.

Open Space:
- Johnson Field should be maintained.
- Constitution Avenue should not be continued across North Golf Course.
- A road along the ditch through North Golf Course would be harmful to the regrowing of that area.
- Maintain Golf Course (perhaps increase it to 18 holes) and surrounding pedestrian path.

Access:
- Transportation
  - Public transportation needs to be addressed.
  - There should be a monorail/train system to serve the central and north campuses.
  - Bike paths should be included in the planning.

Traffic:
- The continuation of Constitution Avenue would be harmful to the surrounding neighborhoods.
- Stanford Drive traffic on the North Campus should be limited.
- Stanford Drive should access the Law School but not the Medical Center.
- Extending Marble Avenue to connect with Tucker Road is not great but better than increasing traffic along Constitution Avenue.
- Why continue the loop road on the Central Campus and encourage the use of the car?
- A loop road should be created on the North Campus.
- A loop road should be created on the South Campus (road connecting University Boulevard and Stadium Boulevard, to the northeast of Albuquerque baseball stadium).
- Drop Lomas Boulevard below grade at Yale Boulevard, or elevate it.

Parking:
- There is inadequate handicap parking in the Science and Engineering area of campus.
- There is inadequate parking everywhere.
- The suggested parking structure at University Boulevard and Central Avenue would be intrusive into the surrounding neighborhood and be in conflict with the Sycamore Plan.

Entry:
- A major identifying feature is needed at Central Avenue and Grand Boulevard.
- Landscaping issues.
- Building properly and maintaining.
- Inadequate campus water system creates a potential fire hazard for facilities over three stories.

- **Student housing**
  - Security.
  - Windows are too low to the ground.
  - There are safety concerns with new dormitory design.

- **ADA Safety Issues**
  - Recommend two paths of exit for people with disabilities, same as codes for others.
  - Need to raise level of awareness of architects and planners.
  - Regulations are only minimums and UNM can provide more than code requirements.
  - Design a checklist of standards and criteria for handicapped accessibility for facility equity.
  - Needs of the disabled should be an input into the planning process.
  - Need to consider long-term maintenance.

- **Parking Issues**
  - Provide incentives to reduce vehicle use.
  - Encourage bicycle use by
    - providing safe bicycle routes
    - consider security of bicycles at campus buildings
    - reducing conflicts with auto use and parking.
  - Parking structure issues:
    - encourages increased vehicular traffic
    - large impact on neighborhood.

- **Public access to Popejoy Hall**
  - There are conflicts with other events.
  - A possible solution is the formation of a master event calendar so parking issues are addressed.
Questions Discussed
- UNM has a unique outdoor environment. What landscape elements contribute most? How can they be further incorporated into planning as defining elements of design?

- UNM is considered an outstanding American campus. What campus design and style elements make UNM unique? How can they be incorporated into planning for growth?

Summary Results/Issues
- Landscape
  - Yale park design
    - Design for renewal of the park is in progress
    - Seek to increase activity on Central Avenue
    - Provides places to eat
    - Art shows
    - Needs better lighting
    - Incorporate Cornell Mall and Yale entry into park design
    - Consider a possible amphitheater.
  - Water conservation techniques UNM is using or considering:
    - Less “thirsty” plants
    - Low water usage hardware
    - Recycling of cooling water
    - Moisture-smart: computerized sprinkler controls with “weather stations”.
  - Campus will officially become an arboretum.
  - Need for preservation of open spaces.
  - Need to enhance the edges of the campus.
  - Improve pedestrian and vehicle separation.

- Architecture
  - Architecture provides a unique “sense of place”.
  - Architecture style should evolve but should not shift radically.
- Need to maintain pedestrian scale.
- Keep present density on main campus.
- North Campus will have to be denser but do not go too far.
- Transition from North to Central Campus must be addressed and an image for North Campus must be developed. The image of the North Campus does not necessarily have to be the same as Central Campus
  • North will be different, with its own identity architecturally
  • Boundary and area of transition will have to be carefully designed: must think about their image.
- Impact of more competitive capital budgets:
  • Projects must accomplish more than one objective: plan for multi-purpose facilities
  • Vertical vs. horizontal growth
  • Density issues.

How far can the campus spread out? - want to keep the scale and sense of place so UNM may have to limit the function of this campus. Some areas could be regulated to higher density.
Public comments were solicited during the workshop. These are the written comments that were made:

Access:
- Better Medical Center/Hospital access. Pedestrian-friendly environment. Walkways, landscaping, etc.
- Improve access at service areas of buildings and parking lots front on major streets.
- Increase use of remote parking with efficient shuttle service and security in tact day and night.
- Decrease traffic speed at U.S. Boulevard - fast lane (safety)
- Pedestrian safety at crosswalks at street level. Visibility to north and central campuses coupled with landscape, signs, etc.
- It is the desire to make UNM a walking campus, bicycle storage must be addressed.
- More centralized handicap parking is needed.
- Prioritize expenditures to benefit greatest number of handicapped students.
- Make library books in the building accessible.
- Curb cuts for wheelchairs are needed.
- Realize that handicap access also gives easier access to maintenance staff.

Landscaping:
- Native plants should be returned to plaza.
- U.S. Boulevard should be landscaped with median - not a repeat of Indian School.
- Road mistakes. UNM should work with the City.

Infrastructure:
- A chilled water research loop is needed.
- Major infrastructure remodeling is needed.
- What priority will be given to existing buildings for maintenance and correction of environmental problems, while impacting staff and equipment?

Other:
- (Person) agrees with increasing density in campus core.
- Revitalize married student housing.
- Work with surrounding neighborhoods.
- How and what are the reactions of inhabitants of surrounding neighborhoods?
- Under third category: be a leader in development... why not existing opportunity into motion such as actually organizing a graduate degree program and undergraduate degree in environmental studies, to include ethical issues as well as hazardous waste or environmental justice degree?
- UNM needs to be more of this - interacting publicly with the community at large prior to final decisions being made. Community participation on all levels is necessary to gain broad support for the university's many functions. (UNM) budget will decrease as consensus building increases.
- Discourage political pressure.

Plan UNM

"Vision" Workshop
ARC 4/09/92
Introduction
The purpose of this session was to try to reach consensus about the "big ideas" that emerged from the previous session. The Core Planning Team spent several hours the previous evening organizing their thoughts to form the basis for a round table discussion.

Existing Planning
The first part of the session reviewed the Warnecke Plan, defining what is still relevant, and pointing out issues that had not been addressed.

The principles from the Warnecke Plan that the participants felt should be reaffirmed include:
- The scale and architectural quality of the Central Campus
- Exterior landscaping and exterior plazas.

Areas not addressed in the Warnecke plan include:
- The North Campus/Medical Center
- Limited discussion of the south campus
- Growth beyond 25,000 students.
- Treatment and impact upon the "edges" of the university.

These areas need to be addressed in current master planning.

Density and Growth Issues
Since the current headcount is around 25,000 students and UNM projections anticipate that enrollment increases will continue, the question arose as to how growth can be achieved while still maintaining the density standards set forth in the Warnecke plan. Density and growth issues include:

- How should density be calculated?
  Footprint vs. total square footage are the two means to determine density. While footprint/ground coverage was felt to be the important issue by some, others felt that heights
of buildings could greatly affect the quality of the space.

- What is the impact of growth on surrounding neighborhoods? UNM must look at the impact on surrounding neighborhoods. The Central Campus serves as a park for the surrounding areas and the city, and should not be damaged or lost.
- How could satellite campuses help eliminate the problems of growth on the Central Campus?
- How will technology affect facility growth?
- How much more growth can occur on the Central Campus?

The human scale of the main campus should not be lost; therefore, the growth of the Central Campus is limited. The character of the science complex, the most dense area on the Central Campus, is the least attractive part of this campus.

- What are the density implications for the Medical Center?

The Medical Center density must be greater than that of the Central Campus because of the functional requirements.
Student Characteristics

What types of students will the university serve in the future? Student characteristics will include:

- More students will be night time students; this will allow an increase in student population without an increase in facility growth.
- Students will be older, and more diverse in terms of gender and minorities.
- Since there is no way to define the exact character of the future student body, the facility plan must be flexible to meet the needs of the student body (also applies to future of programs and technology).

The question of convenience vs. quality was raised: What kind of campus do people want; an easy access campus with lots of parking, or a pleasant pedestrian campus?

Models/Alternatives for Campus Facilities Organization

It was suggested that there had been four models/alternatives described in the course of the workshops. These included:

- Maintaining the status quo - departmental divisions
- Creating a university with multi-disciplinary centers
- Creating a university with separate graduate schools (different campuses?)
- Creating a university with satellite campuses.

Responses to these models/alternatives were:

- The function of a university is research, teaching and service. Therefore, there is a need to provide an environment in which faculty can easily communicate and interact with each other. Separate undergraduate and graduate or separate satellite campuses would hinder this process. In creating those types of campuses, faculty would lose the corridor conversations
and office discussions.

- There is a need for laboratory space that is located in proximity to other laboratory spaces at the Medical Center because researchers are interested in close contact with their colleagues.
- UNM size may reach a point of diminishing returns. What are the reasonable operational limits? i.e., When will the interaction among faculty become strained?
- Certain programs that do not fit into the research/academic category could be shifted to TVI.
- If the university cannot absorb the increase in student population, it could further raise the academic standards to create a cap on the student enrollment.
- Since the Medical Center is divided between the North Campus and VA hospital, there is a commuting problem and a need for convenient parking. Patients require convenient parking, as do the students, faculty, and staff that use the medical facilities. This will make creating a pedestrian campus on North Campus difficult.
- High tech/high touch—must humanize/maintain the human aspects of education

Functional Zoning
How important is functional zoning and what kind of guide should it provide?

- While some people felt the density of the university is such that the functional zones are at capacity, others felt that with efficient expansion, the functional zones could be maintained to allow for faculty interaction without sacrificing the quality of the space.
- Certain functions definitely need close proximity, while others can be remote.

- The Warnecke plan did not anticipate growth of engineering facilities.
  - Will the expansion of Science and Engineering to the northwest quadrant of the
Central Campus be close enough to the rest of Science and Engineering?

- The greater the distance, the less interaction of faculty. Quality and quantity must be balanced: as demand increases, popularity of the university increases and increases the entrance standards. The quality of this university is special and needs to be maintained.

- Has the location of the division of Physics and Astronomy been a problem? While it has been difficult to be away from other sciences and the liberal arts, the expected shift of research from defense to bio-technology makes it logical that Science and Engineering shift to the North Campus.

- It is important to maintain the architectural character within the historic core of the university.

Basic principles that need to be addressed:

- Unite Central and North Campuses. There is a need to physically and functionally unite the Central and North campuses. How can they be functionally joined?

- Create "gateways" at major University entrances. These include:
  - Lomas and University Boulevards
  - Girard and Lomas Boulevards
  - Central Avenue and University Boulevard
  - Central Avenue and Yale Boulevard
  - University Boulevard and Grand Avenue seen as one of the poorest entryways.

- Acknowledge impact UNM has on neighbors.
  - UNM is interested in encouraging and strengthening this relationship with surrounding neighborhoods. UNM is not interested in acquiring residential properties.
- UNM is interested in strengthening/interfacing with established uses along the Central Avenue corridor.

- **Improve parking and circulation.**
  - **Access**
    - UNM must create and encourage alternate modes of transportation.
    - There is an opportunity to create a major entrance to the University Boulevard at Lomas and Yale Boulevards.
  - **Improve access to Medical Center and patient care activities:**
    - Reorient Medical Center entry to Yale and Lomas Boulevards and create a new entrance to the Central Campus at the same location.
    - Reorient Tucker Road entrance to make it a safe entrance. Create loop situation and discourage movement through the neighborhoods.

- **Parking**
  - At this time, there are an adequate number of parking spaces, although they are not all conveniently located.
  - Convenient linkages between parking lots and UNM functional areas need to be provided.

- Parking concepts:
  - Central campus parking should be used for short-term student/faculty/visitors. Parking on the Central Campus should be more expensive than at remote locations.
  - North Campus needs to accommodate patient care and staff needs, as well as general university needs.
  - South Campus needs to provide for athletic event parking, and Research Park functional needs, as well as remote lots for the general university needs.

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*Should UNM grow? What are the marginal costs of 25,000-30,000 - 35,000 students?*

*What are the impacts/limitations/implications of growth?*

*Questions of Optoelectronic Materials Center: is this going to change the focus from education to research?*
community.

- **Develop a growth plan.**
  - If UNM is going to maintain its current density, growth will require an increased efficiency of use.
  - Adaptive reuse of structures is a must.
  - What are expansion options?
    - Basic expansion direction is north, with concentration on Lomas/University corridor.
    - South campus: existing and possible future uses
      - Athletics
      - Research
      - Married student housing.
    - North campus: should provide enough land to expand.
      - Sandia Foundation: holds large tracts in trust for UNM and Dickinson College. UNM has an option to buy some of the vacant land, 120 acres.
which has revenue-generating possibilities.
- Golf course is 90 acres--there are no current plans to develop this land.
- How are functions going to change?
- How is technology going to affect education?
  - Ease of communications will decrease need of student to be on campus
  - Need for face-to-face communications will be maintained.

- Enhance Quality of Life
  - Safety: lighting and public accommodations.

Physical Relationships and Linkages
What makes the larger community function?
Identify the positive aspects, reinforce and build on those aspects. What are the opportunities?
- UNM has the opportunity to shape the environs cooperatively with surrounding neighborhoods and the city.
- Lomas Boulevard is a barrier that must be dealt with in cooperation with the city.
- UNM can be considered a district-urban village area with its own identity. Some issues to think about include linkages, pollution reduction and consumption reduction.
- The University is part of Albuquerque's cultural corridor.
- UNM has connections to the local scientific communities (also national and international).
- Maintain safe, accessible, educational exterior spaces.
- Historical open space systems: plazas, walks, courtyards, should define our buildings for the future, and be used as design guidelines.
- The golf course is precious open space and should not be divided by the extension of Constitution Avenue.
- We must look at the synergy of a campus environment and explore how we move from
Programmatic Impacts on Campus Form

- Education consists of two parts: the sharing of information and the process of thinking. While the transaction of information can easily be achieved via computer, the development of thinking requires face-to-face interaction. Is it necessary to promote one means of education for the future or is it better to recognize that both types of education will exist?

- The notion of a campus is a 19th century concept. By 2025, the old notion may be dead and the way we teach may be dead. The methods of education and the network of information will not necessarily be a physical element of a university. The campus may be irrelevant.

- Availability of high-tech information sources increases the use of libraries, electronic databases, etc.

- Programmatic needs of the Medical Center require facilities that allow for the easy access of patients to the hospital and easy access of the medical students to the hospital. With the development of technology and the growth of the Medical Center, it is important that facility plans offer flexibility in land use.

Changes in Facility Needs

- Design new buildings for adaptive reuse.

- Adapt to demands for high technology.

- If plans include dislocation of certain facilities on campus, the plans should also include the relocation of these facilities.

- The evaluation of student population changes should address the student as a commuter with multiple responsibilities: student, worker, parent, spouse. Currently, many of students are mature adults, and this is likely to remain true. Their convenience should be considered in terms of facility location and ease of parking. Remote campus and satellite campus.
alternatives should not be abandoned.

Financial Issues

- It is important to undertake a financial analysis of the growth of UNM to see whether state funds will support the growth of UNM, and to see what types of growth are most likely to be funded. Options must include issues such as: How will planning differ if state funding will not support a student body of 30,000? Will the state support separate graduate and undergraduate programs?
- Capital resources for transportation should include plans for modes of transportation other than the car.
- Facilities planning and funding for the future should address the need to maintain and improve the infrastructure of the University.
- Recognize the pool of existing expertise and experience available to Facility Planning.
Credits

Speakers
Perry Chapman, Sasaki Associates, Inc.
Richard Peck, President University of New Mexico

Workshop Organizers
Steve Borbas, UNM Facility Planning
Ingrid Vigil, Architectural Research Consultants, Inc.

Workshop Recorders
Miki Holmes, Architectural Research Consultants, Inc.
Dory Wagzyzn, Architectural Research Consultants, Inc.

Facilitators
Max Bennett, UNM Medical Center
Gil Berry, UNM Facility Planning
Nick Estes, University Council
Kim Murphy, UNM Real Estate
Larry Schuster, UNM Physical Plant

Group Leaders/Roundtable Participants
Martha Blevins, Federation of University Neighborhoods
Richard Carey, UNM Planning and Policy Studies
Bill Carroll, UNM Occupational Safety
Edie Cherry, UNM School of Architecture and Planning
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Laura White, UNM Staff Council
# Participants

## Campus Participants

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"Vision" Workshop  
ARC 4/09/92

3. Appendix
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Medical Center Library, Librarian Specialist II
Vice President for Student Affairs, Planning Council

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Board of Directors-Sycamore Neighborhood Assoc.
City of Albuquerque, Planning Department
Facility Master Plan Coordinator, Abq. Public Schools
Greater Albuquerque Bicycle Advisory Committee
City Planning
City of Albuquerque Trails
Channel 4
Federation of University Neighborhoods
City of Albuquerque, Transit
Neighborhood
City Planning
Consensus Planning
Netherwood Park Neighborhood Assoc.
Sycamore Assoc./Federal Neighborhood Association
Greater Albuquerque Bicycle Advisory Committee
Netherwood Park Neighborhood Assoc.
State Representative
Resident North Campus Area Association
Frontier Restaurant
Frontier Restaurant
City of Albuquerque, Sun Tran
Neighborhood
City of Albuquerque-Planning
Friends of the North Golf Course
Consensus Planning
Tribune