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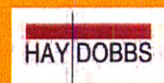
PLANNING  
& DEVELOPMENT SERVICES

South Dakota School of Mines & Technology

# Housing Master Plan 2013



05/01/13



SOUTH DAKOTA



SCHOOL OF MINES  
& TECHNOLOGY

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Housing Master Plan Consulting Firm:

HAY|DOBBS

[www.haydobbs.com](http://www.haydobbs.com)

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WILLIAM H. MOYER  
& ASSOCIATES

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OVERVIEW

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South Dakota School of Mines & Technology

# Housing Master Plan



## Study Process and Considerations

### Process

Hay Dobbs conducted both on-campus and off-campus research and analysis of existing conditions, current enrollment, enrollment projections, and University expectations for housing Freshmen and Sophomores. This study is predicated on the following considerations.

### SDSMT Strategic Plan and Vision

OUR VISION for the South Dakota School of Mines & Technology is to be recognized as a world-class technological university.

OUR MISSION is to prepare students for leadership roles in engineering and science; to advance both knowledge and its application through scholarship and research; and serve the state of South Dakota, our region and the nation through global collaborative efforts in education, research, and economic development.

OUR STRATEGIC PRIORITIES to be achieved by 2020:

PREPARE AND EDUCATE AN EXPANDING AND INCREASINGLY DIVERSE STUDENT BODY

- Increase enrollment to 3,500 students
- Sustain placement rate of graduates greater than or equal to 96 percent

REINFORCE AND INCREASE OUR RESEARCH ENTERPRISE TO ELEVATE EDUCATIONAL OUTCOMES AND ECONOMIC DEVELOPMENT

- Increase annual research awards to \$50 million
- Expand the university's infrastructure to support research as a primary enterprise of the institution, including a new research facility

INVEST IN HUMAN RESOURCES TO MOVE THE INSTITUTION FORWARD

- Recruit and retain diverse faculty and staff
- Recognize and reward employees for implementing the university's strategic priorities

DEFINE AND ACQUIRE THE CRITICAL RESOURCES TO ACCOMPLISH SHARED VISION AND STRATEGIC PRIORITIES THROUGH ENHANCED PARTNERSHIPS

- \$20 million annually to support university operations, endowed professorships, fellowships, and scholarships
- \$100 million raised from multiple sources to support the Campus Master Plan in order to accommodate student growth

ENSURE A LEGACY OF EXCELLENCE THROUGH DEDICATION TO CONTINUOUS QUALITY IMPROVEMENT

- Achieve recognition as a national and global center of excellence in engineering, science, and technology



### Housing Demand

Based on enrollment projections and current on-campus housing capacity of 605 beds, SDSMT will require approximately **524 additional beds** on, or near, campus by 2020.

This demand does not include housing for upperclassmen (Juniors and Seniors). Should the University desire to provide housing for Juniors and Seniors, more than 524 units would need to be provided by 2020.

### Constraints

There are various impediments to achieving the goal of 524 additional beds by 2020. These include, but are not limited to:

- Ability to Fund/Finance projects
- Physical Constraints on campus (buildings, parking, topo)
- Physical limits to expanding campus (roadways, topo)
- Property adjacent to the campus owned by others
- Severe topography on, and adjacent to, the campus
- Competing demands for on-campus space
- Rapid timeline for design and construction of facilities

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## Design Principles and Considerations

### Design Principles

Rapidly invest in new university housing,  
*(either all at once or phased over time).*

Build new residence hall(s) for freshmen and sophomores,  
*(75-200 beds per facility, primarily 2 bed suites).*

Campus scale should be respected,  
*(new facilities on-campus should not be taller than 3-4 floors).*

Housing locations should be guided by the Master Plan if possible, but not dictated by it.

Housing for upperclassmen is not a consideration at this time due to statutory requirements for housing freshmen and sophomores on campus.

Connecting to the surrounding context is important.

Integrate sustainable principles.

### Design Considerations

Provide “semi-private” toilet and shower facilities.

Improved kitchen facilities,  
*(ventilation/make-up air, cooktops, ovens, full size refrigerators, microwaves, cabinets/pantry for dishes).*

Air Conditioning.

Daylighting.

Flexible “movable” furniture.

Study - computer areas *(separate from lounges).*

Lounges/Gathering space on each floor.  
*(possibly separate from study areas).*

Bright well lit laundry areas.

Bike storage,  
*(exterior covered).*

Provide housing for residence life staff.

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## Housing Trends Translated to the Needs of SDSMT

### On-Campus Housing Trends

There are a wide variety of campus housing types being implemented across the country.

Key trends in campus housing include:

- More privacy in dwelling rooms and bathroom facilities
- Integration of community learning and study spaces into students' living environment. These technology infused spaces include collaboration spaces, technology labs, lounges and libraries
- A variety of amenities including recreation, gaming, theater, fitness, kitchen and retail spaces
- A variety of room types
- Furniture that allows for flexibility and collaboration
- Sustainable Building Construction
- Sustainable Systems (ventilation, lighting, etc.)
- Sustainable Processes (recycling, composting, etc.)
- Planning to allow more "sense of community" and/or "learning communities"
- Enhanced security and safety systems and protocols

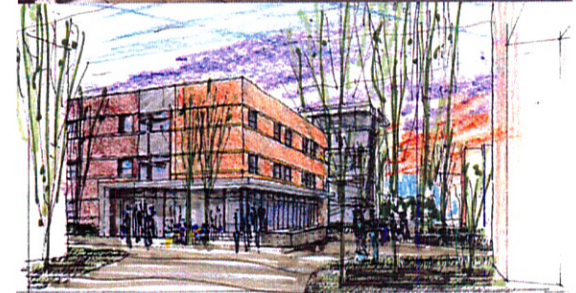
### Prototype Architectural Program and Layout

For the purposes of this study Hay Dobbs has developed a prototypical architectural program and layout. The purpose of this is to allow for a uniform comparative analysis when examining potential locations for residence halls both on and off the campus. The actual pre-design and design process of future residence halls will need to further examine the needs of the University to establish a final architectural program and building plan for each facility.

As noted herein, the primary focus of SDSMT will be on providing additional housing for freshmen and sophomores. This is a State of South Dakota statutory requirement and the University intends to provide these facilities as soon as possible.

To these ends, the prototype architectural program and layout illustrates room types that are efficient and affordable while still providing privacy through semi-private toilet and shower facilities. A variety of common areas are included that fall in line with both national best practices and student needs and desires.

The goal is to allow the University to get the most value for it's investment in housing. To provide desirable, durable housing for an affordable cost that will serve the University for decades to come.



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Prototype Building Program



Area Types	Dims	Total		S.F.	No. /Bed	No. Beds	1st Floor			2nd Floor			3rd Floor			Total S.F.
		No. Units	Unit S.F.				No. Units	Unit S.F.	No. Units	Unit S.F.	No. Units	Unit S.F.	No. Units	Unit S.F.		
<b>Residence Room Types</b>							25	31	31							
1 Bedroom Accessible Rm (AS2)	18'-6" x 13'-10"	8	260.0	1	260.0	8	2	520	3	780	3	780				2,080
1 Bedroom Standard Room (SS2)	15'-9" x 13'-3"	8	213.0	1	213.0	8	0	0	3	639	5	1,065				1,704
1 Bedroom RA (SSRA2)	15'-9" x 13'-3"	3	213.0	1	213.0	3	1	213	1	213	1	213				639
2 Bedroom Standard Room (SD4)	17'-4" x 13'-3"	66	234.0	2	117.0	132	20	4,680	24	5,616	22	5,148				15,444
2 Bedroom Convert. Room (CD4)	18'-6" x 13'-10"	0	260.0	2	130.0	0	0	0	0	0	0	0				0
2 Bedroom Hall Dir Apt (2BRA)	34'-6" x 27'-10"	1	960.0	3	320.0	4	1	960	0	0	0	0				960
Efficiency Asst Dir Apt (1BRE)	13'-0" x 27'-4"	1	355.3	1	355.3	1	1	355	0	0	0	0				355
<b>Common Areas</b>																
Kitchen								152				426				578
Vending								89								89
Study Area/Seminar Rooms								420		240		604				1,264
Lounge										360		360				720
Laundry										620						620
Recreation										400						400
Semi-Public Toilets (1 @ 82 s.f.)								84								84
<b>Building Support</b>																
Lobby									1,534							1,534
Hall Director Office and RA Resource Room								200								200
Custodial								184		128		128				440
Trash / Recycling								100		48		48				196
Mechanical & Electrical								538		476		476				1,490
Sprinkler Room								369								369
Elevator & Equipment								245		148		148				541
Technology								140		100		100				340
Resident Storage								0		0		0				0
Building Storage								250		220		325				795
Circulation & Shell								5,844		6,260		5,870				17,974
<b>Totals</b>								156		16,877		16,248		15,691		48,816

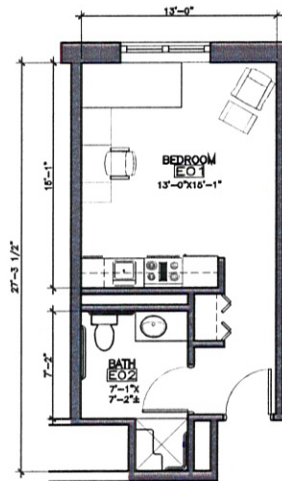


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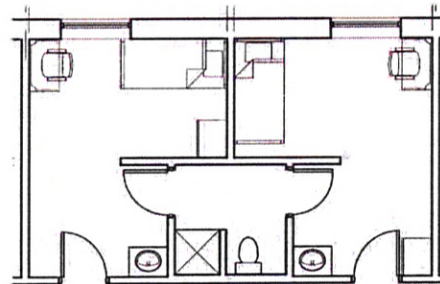
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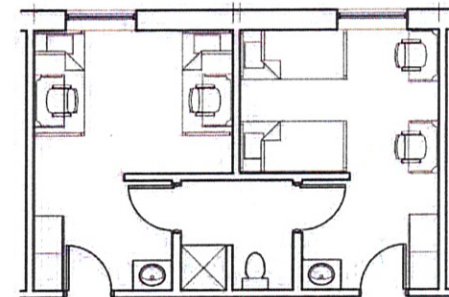
Preliminary Unit Types



Efficiency Apt.  
320 SF



SGL Occupancy Suite  
440 SF



DBL Occupancy Suite  
480 SF

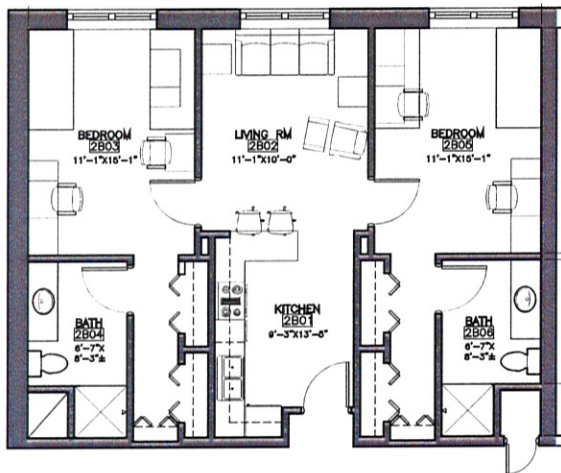


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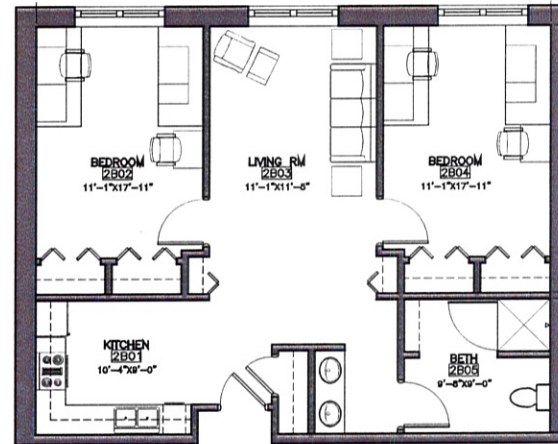
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Preliminary Unit Types



2 Bedroom Apt.  
960 SF



2 Bedroom Apt.  
960 SF

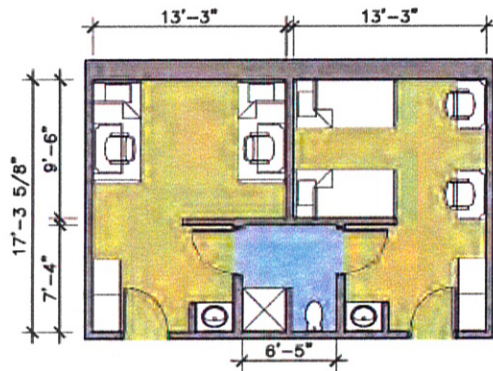


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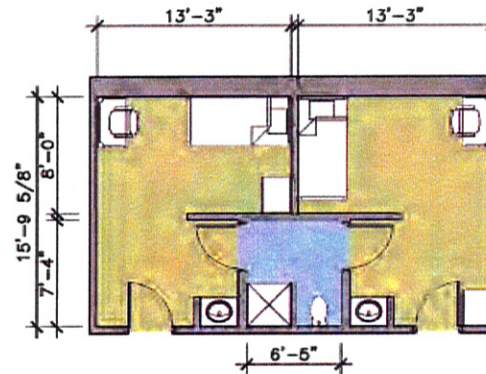
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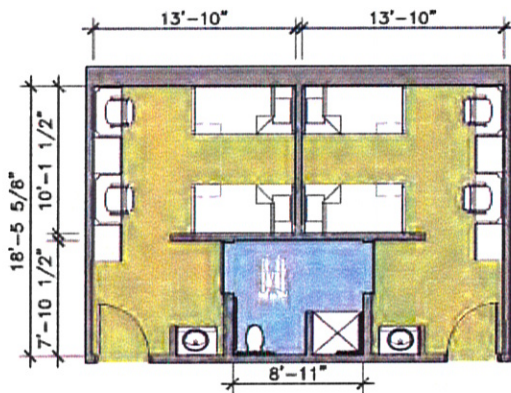
Preliminary Unit Types



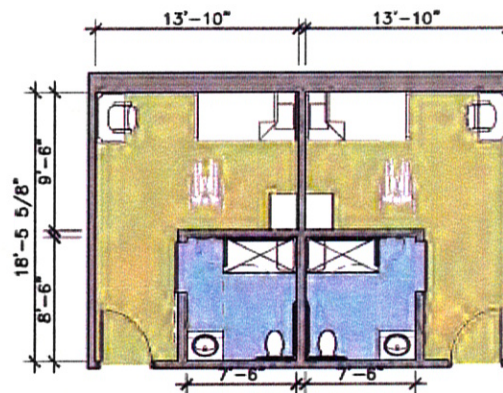
- UNIT TYPE: SD4 (STANDARD DOUBLE)**
- 2 DOUBLE ROOMS
  - SHARED RESTROOM
  - 467 SQUARE FEET
  - 117 SF PER BED



- UNIT TYPE: SS2 (STANDARD SINGLE)**
- 2 SINGLE ROOMS
  - SHARED RESTROOM
  - 426 SQUARE FEET
  - 213 SF PER BED



- UNIT TYPE: CD4 (CONVERTIBLE DOUBLE)**
- 2 DOUBLE ROOMS
  - SHARED RESTROOM
  - 520 SQUARE FEET
  - 130 SF PER BED



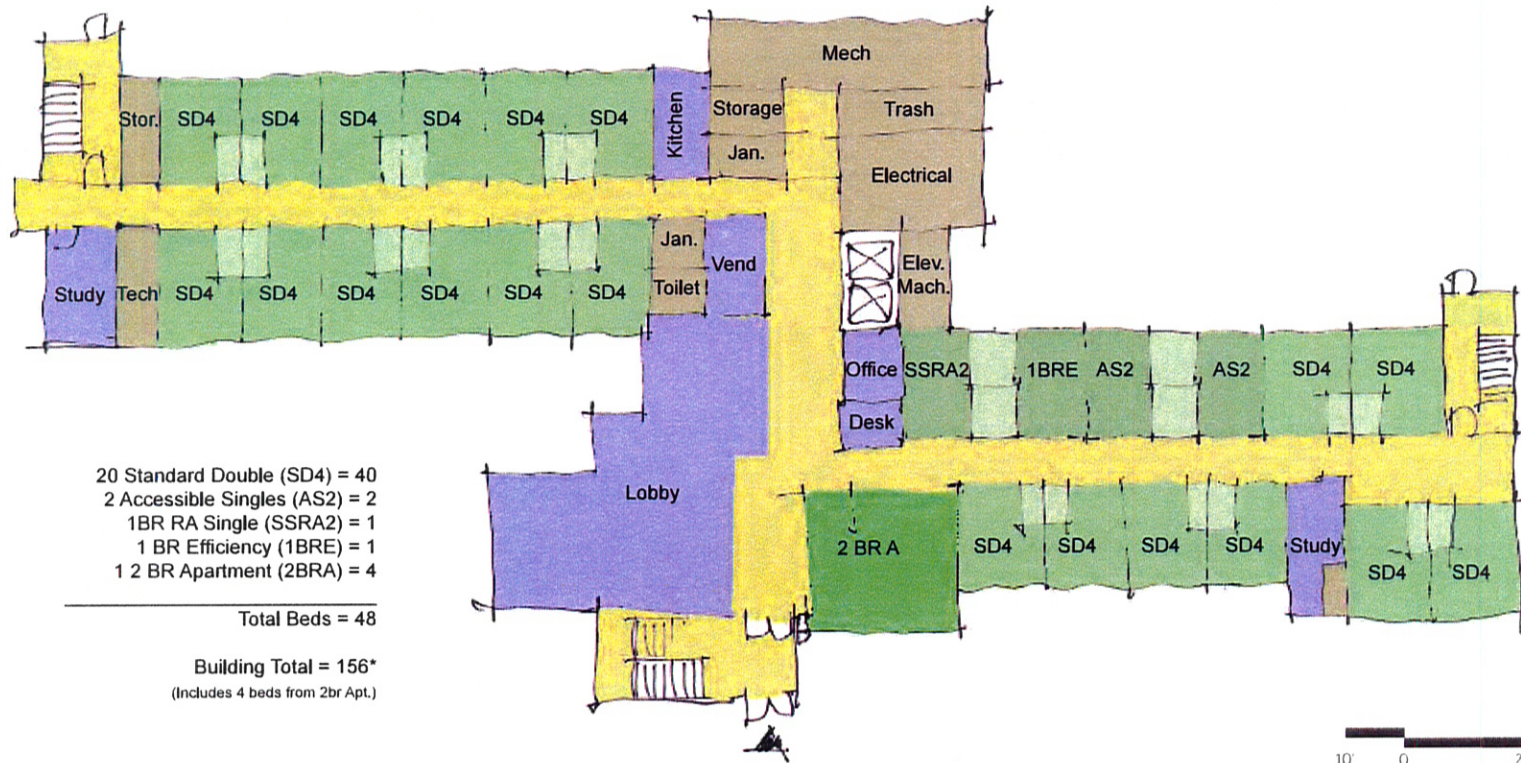
- UNIT TYPE: AS2 (ACCESSIBLE SINGLE)**
- 2 ACCESSIBLE SINGLE ROOMS
  - PRIVATE RESTROOMS
  - 620 SQUARE FEET
  - 260 SF PER BED

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1st Floor Prototype Diagram

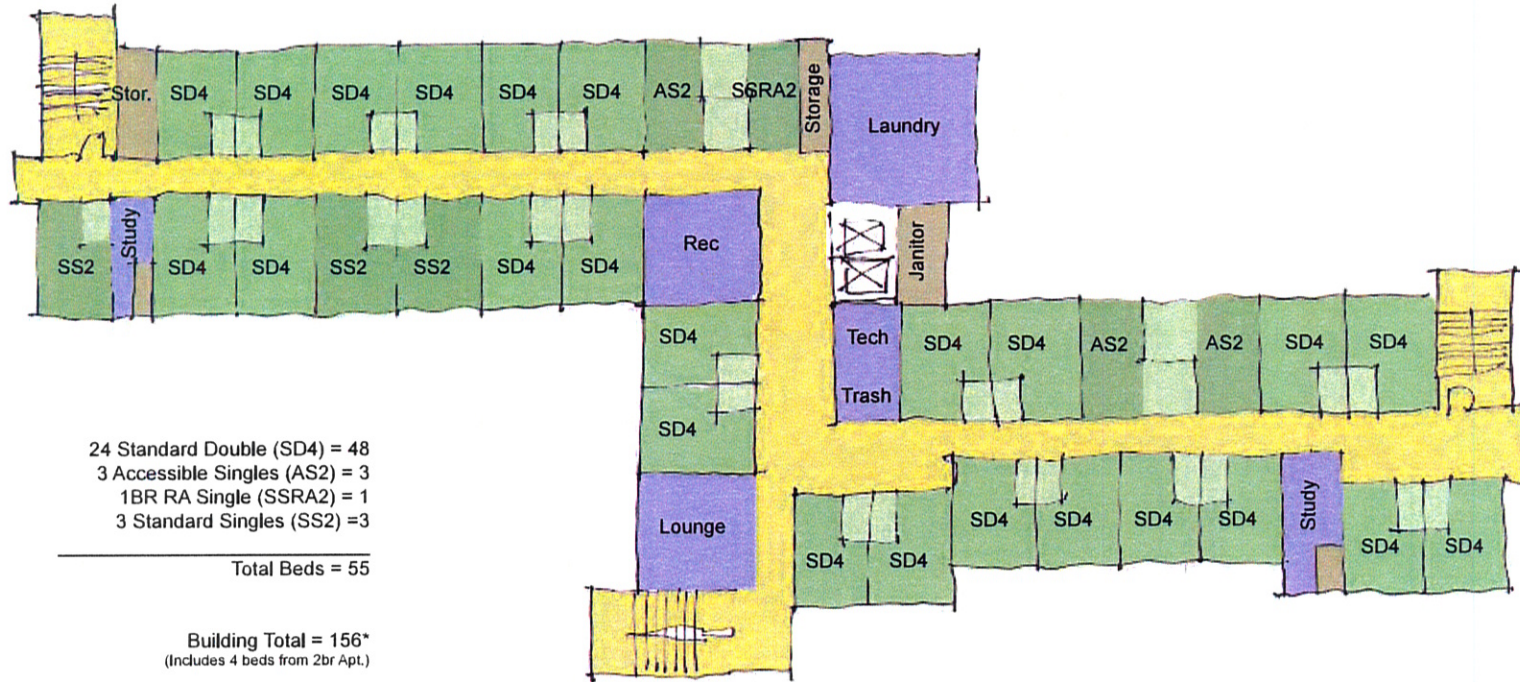


- 20 Standard Double (SD4) = 40
- 2 Accessible Singles (AS2) = 2
- 1BR RA Single (SSRA2) = 1
- 1 BR Efficiency (1BRE) = 1
- 1 2 BR Apartment (2BRA) = 4

Total Beds = 48

Building Total = 156\*  
(Includes 4 beds from 2br Apt.)

2nd Floor Prototype Diagram



- 24 Standard Double (SD4) = 48
- 3 Accessible Singles (AS2) = 3
- 1BR RA Single (SSRA2) = 1
- 3 Standard Singles (SS2) = 3

Total Beds = 55

Building Total = 156\*  
(Includes 4 beds from 2br Apt.)

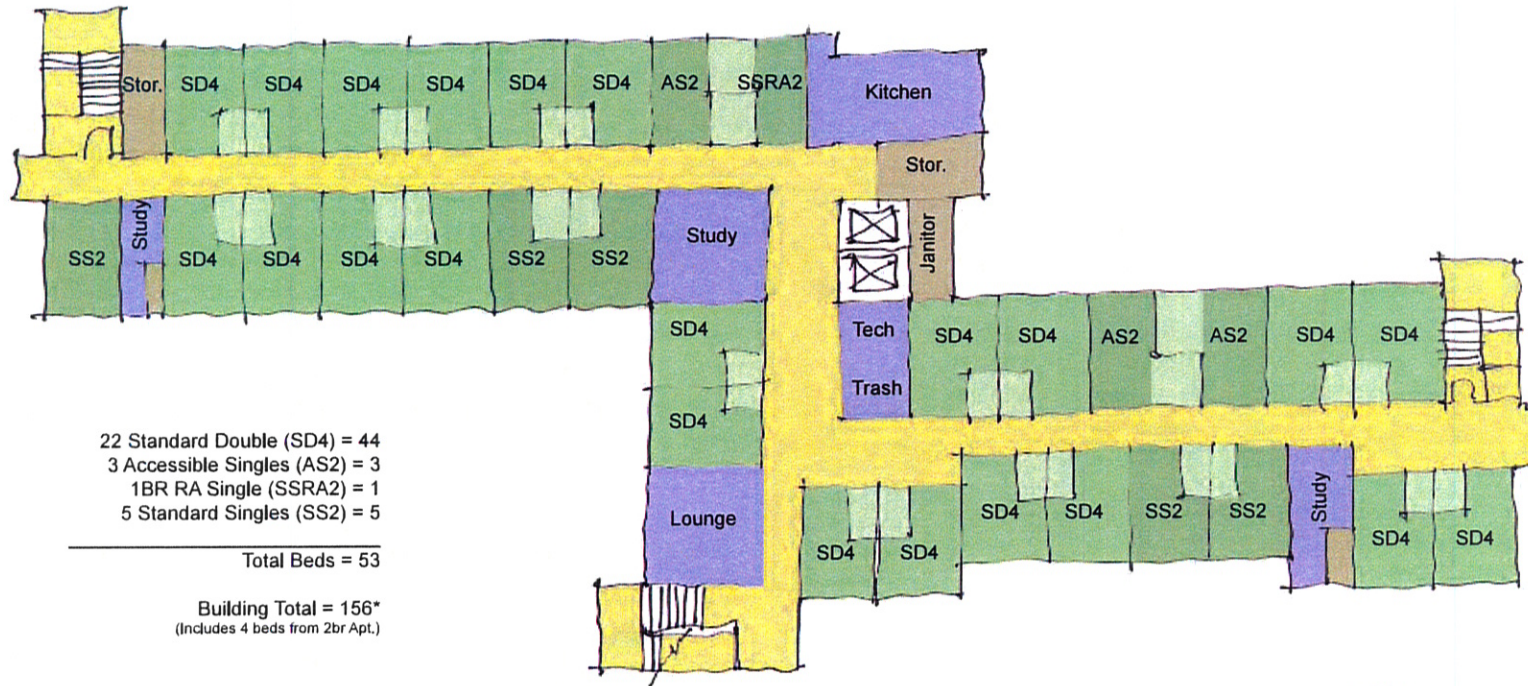


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3rd Floor Prototype Diagram

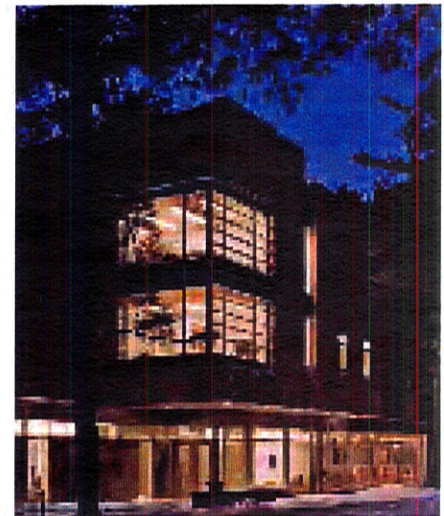
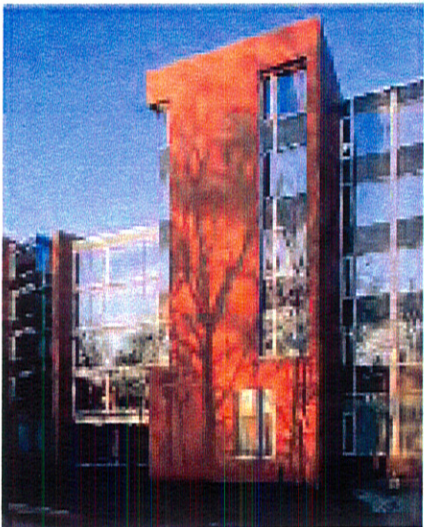


- 22 Standard Double (SD4) = 44
- 3 Accessible Singles (AS2) = 3
- 1BR RA Single (SSRA2) = 1
- 5 Standard Singles (SS2) = 5

Total Beds = 53

Building Total = 156\*  
(Includes 4 beds from 2br Apt.)

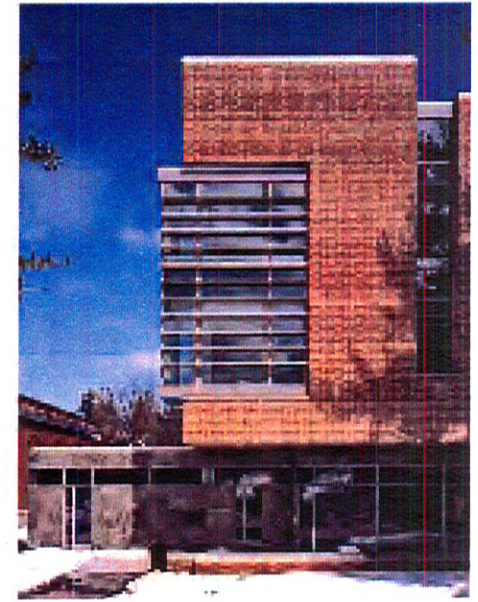
Precedent Images



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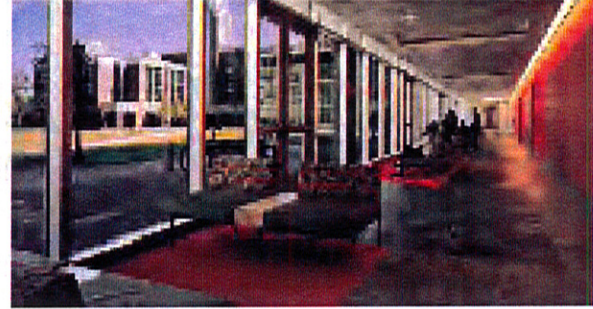
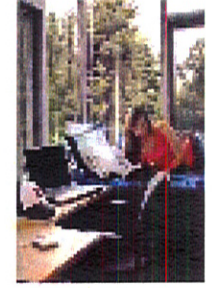
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