

UM Western Matthews Hall Bathrooms Study





FACILITY STUDY APPROVAL

Date of Approval: 8-03-2015

Project: UM Western Matthews Hall Bathrooms Study
Location: **UM Western Campus**, Dillon, Montana
Owner: **State of Montana**
Architect: **Mosaic Architecture, P.C.**, 428 No. Last Chance Gulch, Helena, MT

Project Phase Submittal: Feasibility Study

Based on the contract for 'Matthews Hall Bathrooms Study, The University of Montana' for the architectural services designated in the 'Standard Form of Contract' between Mosaic Architecture and the The University of Montana Western, the work performed has been reviewed and found to be complete. The feasibility study phase for the Matthews Hall Bathrooms Study is acceptable and consistent with the owner's and user's functional, spatial, and aesthetic needs and desires. Furthermore, the design intent appears to meet the project goals defined by the administration and staff of the The University of Montana Western. The Date of Approval designated above shall establish the milestone beyond which major changes to the design will be considered additional work.

MOSAIC ARCHITECTURE

Architect

By: _____

Ben Tintinger, President

_____ Date

THE UNIVERSITY OF MONTANA WESTERN

Representing the Owner

By: _____

_____, The University of Montana Western

_____ Date

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Overall Level Floor Plans

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SUMMARY

Mosaic Architecture of Helena was engaged to complete a study of the bath facilities in Matthews Hall in the spring of 2015. The intent of the study was to gain an understanding of the existing conditions, identify deficiencies, and develop a workable plan and potential cost for improving the facilities.

Matthews Hall was built in 1920, and is the second oldest building on campus. As one of the primary dorms on campus, the building includes the campus dining facility as well as other campus use amenities. While some dorm rooms include a private bath, the majority share common bathing facilities located on each floor. Currently, all dorm rooms include a sink.

The current bathrooms and toilet rooms are a mix of original facilities and fixtures and some older remodeled spaces (1950' to 1970's vintage). In general, most bathrooms are in poor condition with outdated fixtures, bad venting, building code issues, substandard flooring, and lack of privacy. It should be noted that most floors are co-ed which also causes some functional issues of separating sexes and privacy at the bathroom areas of each wing/floor.

Existing Building Conditions were assessed using the following criteria - life-safety, functional, student comfort, and general material/construction conditions. These are the high level findings:

- Bath facilities do not meet many ADA (Americans with Disability Act) requirements.
 - o Door width of most restrooms
 - o Floor level changes
 - o Clear width at fixtures and turning space
 - o Height of sinks and counters
- Safety/Code: a number of primary building code and regulatory issues that should be solved with a bathroom remodel.
 - o Fire escapes through bathroom space (although this is likely not a required exit).
 - o No self-closing, fire rated doors
 - o Poor venting or venting in to adjacent spaces
 - o Direct vent 'hole' to outside with no fan, louver or control.
 - o Change of floor level
 - o Exposed lamps in many light fixtures
 - o Assume Asbestos floor tile (needs to be tested)

- General Material/Construction
 - o Lack of privacy – line of sight into bathrooms from door area
 - o Large vent holes in doors from corridor
 - o Single pane windows with varied privacy screening
 - o Small, limited janitor closets
 - o Dated materials, fixtures, and equipment
 - o Poor use of space in some areas
 - o Poor lighting in most areas

After reviewing the existing conditions with staff at UM Western, it was determined that it would be best to gut bathroom areas and rebuild new rooms and facilities. Through a review session with staff, a design direction to create individual, unisex, private bathrooms would be the best solution. This solution would help accommodate the co-ed population of floors and wings. Each bathroom would be equipped with a shower and toilet. The sink would be located outside the room but within the bath area to facilitate high-use times. (Again, each dorm room includes a sink.) Most private bathrooms also include a urinal.

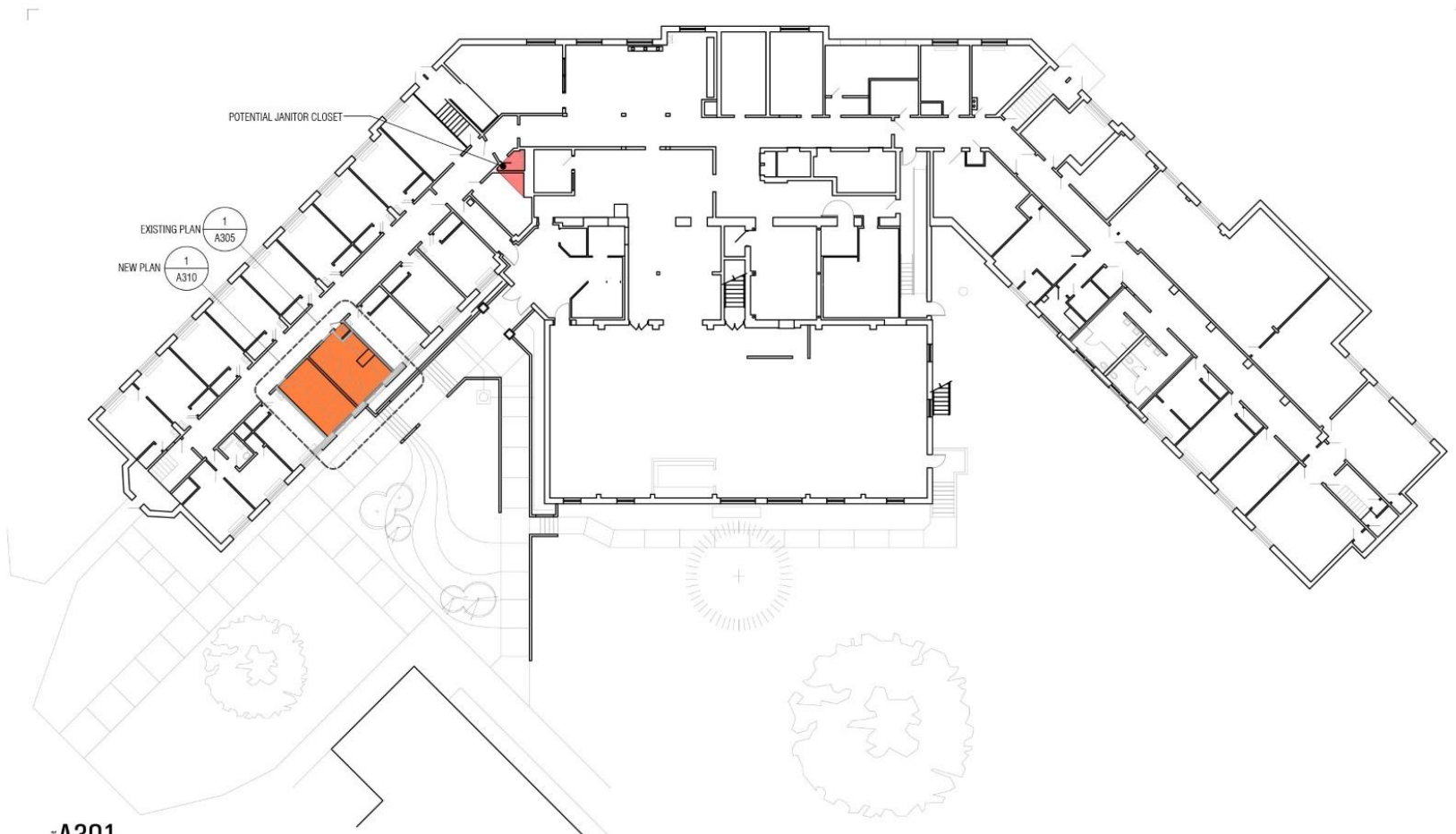
Bath areas are stacked at each floor at existing locations, minimizing new runs of plumbing. The initial discussion with staff indicates that services to the buildings and water pressure are adequate. Further investigation of utility services will be necessary.

Although not included in the project cost estimate, it is recommended that the windows be replaced at each bathroom area.

The estimated project cost is included in this report. The cost reflects the total anticipated for design and development, demolition and reconstruction. It does not include work to replace or upgrade services to the building as these are assumed to be adequate. The estimate cost is just over \$1,000,000. The cost breakdown of each bath area is shown to help provide more accuracy and to quickly identify an affordable phased approach if needed. The title of each bath area corresponds to the drawings.

In conclusion, based on observations of existing conditions, opportunity to improve the building code and ADA compliance, the functional, aesthetic, and quality of student on-campus living, we recommend fully rebuilding the bath areas as private bathrooms. The enclosed plans indicate a potential layout for bathrooms, although these may be modified as the project proceeds forward and existing conditions are more fully vetted.

SUMMARY



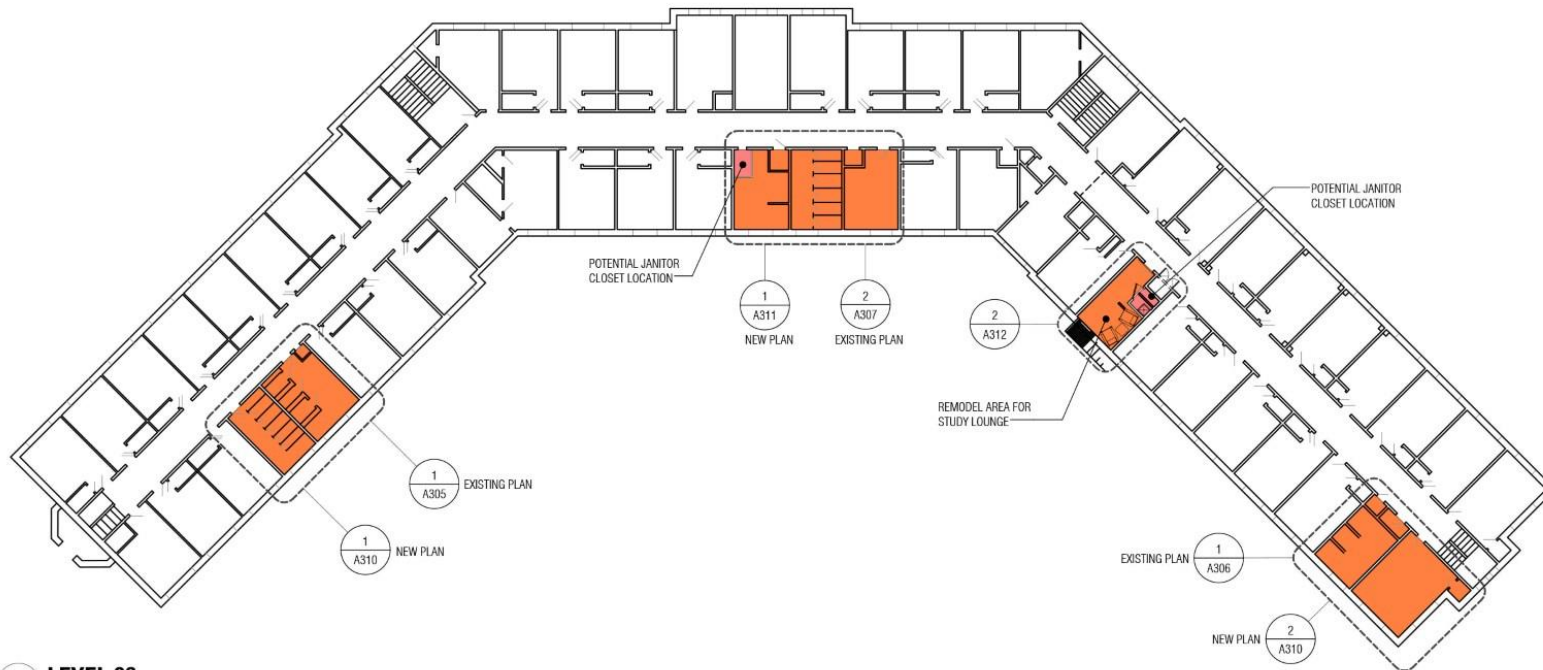
THE A301

mosaic
architecture | planning | design
428 N. Last Chance Gulch
Helena, Montana 59601

LEVEL 1
MATHEWS HALL

1 LEVEL 1
1" = 20'-0"

07/07/15



1 LEVEL 03
1" = 20'-0"



1 LEVEL 04
1" = 20'-0"



6. TUBS AND VENTING - Vents directly into the janitor closet



5. SHOWERS & FLOORING -



4. CORRIDOR DOORS - Not self closing or fire rated. In appropriate through door venting



3. BATHROOM VENTING - In appropriate through door venting



2. JANITOR CLOSET - Small space with narrow door



1. BATHROOM FLOOR ELEVATION CHANGE - Trip Hazard, not ADA compliant



7. SHOWERS



8. TUB AREA - Tubs are very infrequently used



9. WINDOWS AND VENTING - Single pane windows and inappropriate venting



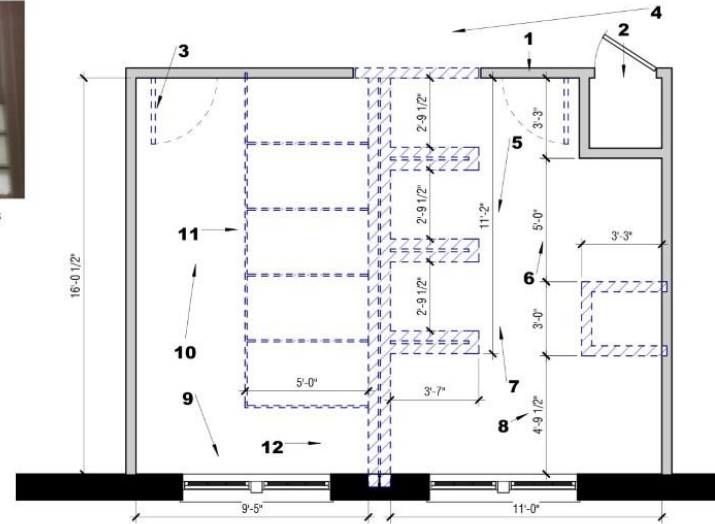
10. TOILET PARTITIONS & LIGHT FIXTURE - Exposed lamp on light fixture



11. TOILET PARTITIONS - Narrow stalls; Lack ADA compliant stall



12. SINKS - Narrow sink space; Not ADA compliant



1 LEVEL 1, 2, & 3 - WEST
1/4" = 1'-0"



1. JANITOR CLOSET



2. ENTRY TO BATHROOM 1 - Inappropriate venting from bathroom



3. BATHROOM SINK - dated fixtures and casework: Not ADA compliant



4. TOILET/SINK AREA



5. SHOWER



6. TOILET PARTITIONS



7. ENTRY TO BATHROOM 2



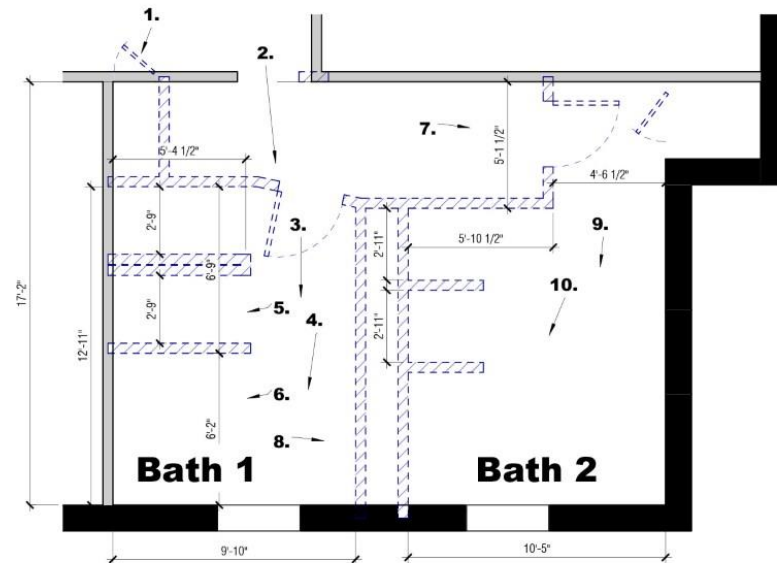
8. SINK AREA



9. BATHROOM 2



10. SHOWER AREA



1 LEVEL 2 & 3 - EAST
1/4" = 1'-0"



1. FIRE EXIT THROUGH BATHROOM AT 3RD FLOOR



2. FIRE EXIT THROUGH BATHROOM AT 3RD FLOOR



3. SHOWERS & TUB



4. DIRECT VENT TO OUTSIDE - No lower or closure



5. TOILET STALLS & LIGHT FIXTURE - Exposed lamp at light fixture



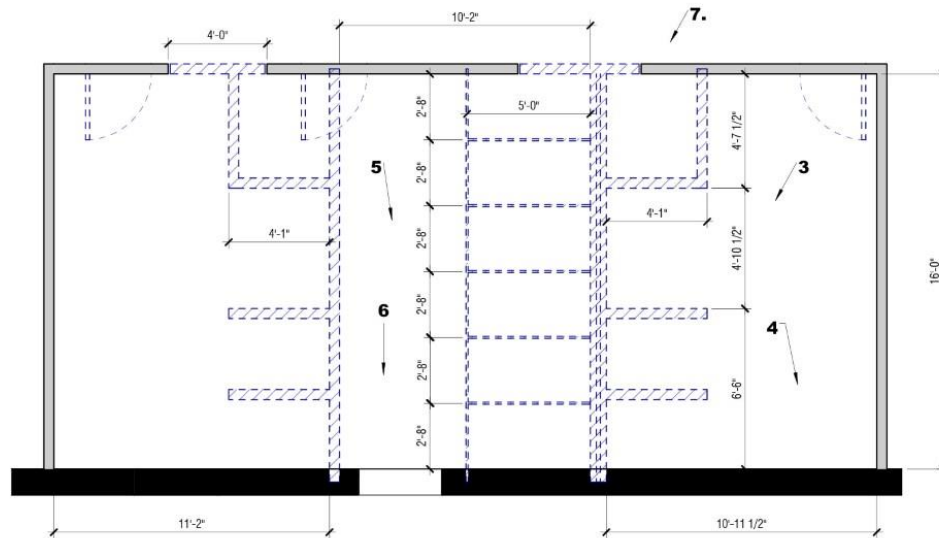
6. WINDOW AND VENTING - Single pane glazing and inappropriate venting



7. SMALL JANITOR CLOSET



8. SHOWER AREA



2 LEVEL 3 & 4 - MID
1/4" = 1'-0"



1. SHOWER and TOILETS UNDER SLOPE - May be code non-compliant for ceiling height



2. SHOWER



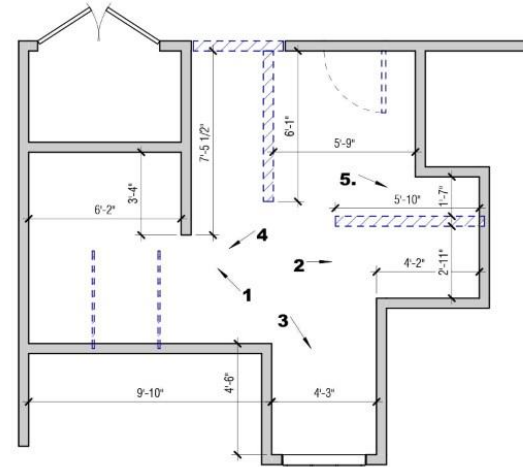
1. WINDOW DORMER



4. TOILET PARTITIONS UNDER SLOPE



5. SINK - Tight space





1. FROM BATHROOM ENTRY - Exposed lamp on light fixture; tight space at entry, dated finishes and fixtures



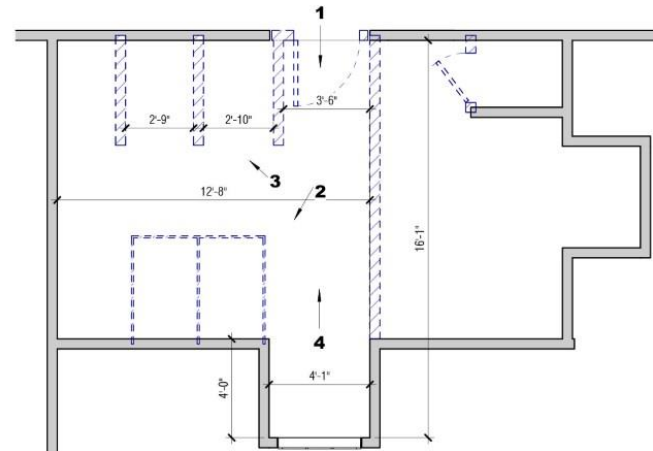
2. TOILET PARTITIONS



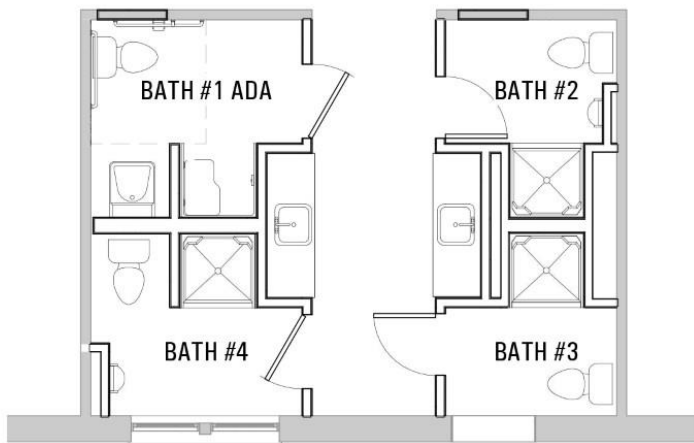
3. SHOWER AREA



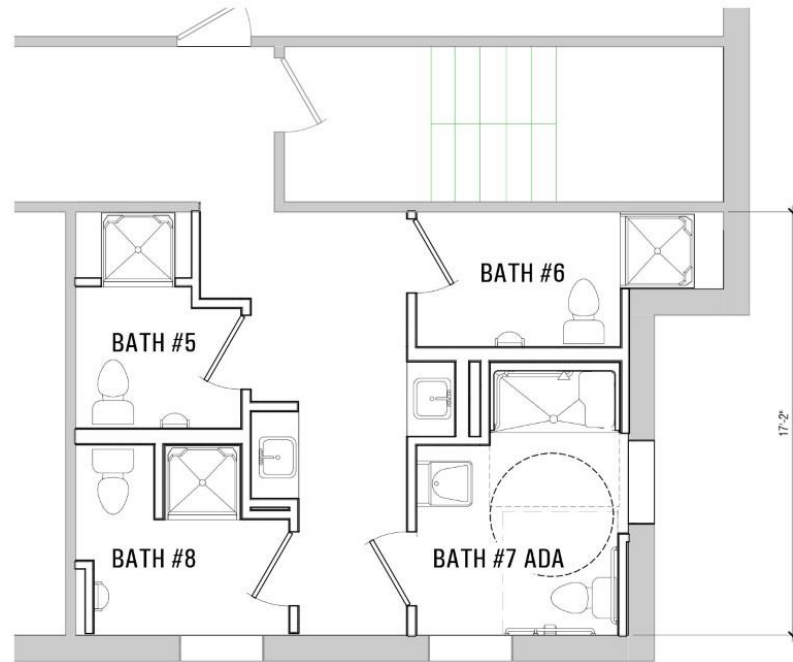
4. LOOK BACK TO ENTRY - Inappropriate venting into the hall



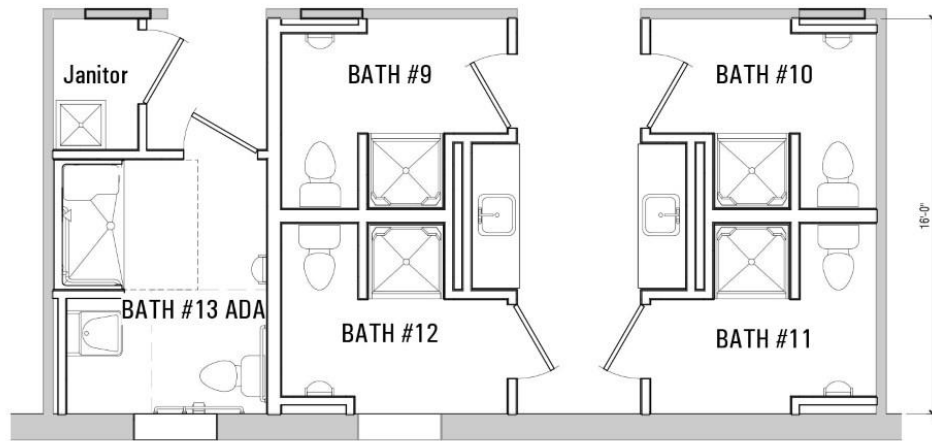
1 EXISTING EAST BATHROOM - LEVEL 4
1/4" = 1'-0"



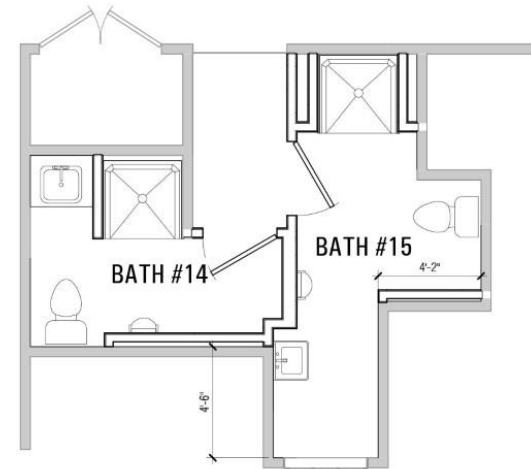
1 LEVEL 1, 2, & 3 - WEST - NEW RESTROOMS
1/4" = 1'-0"



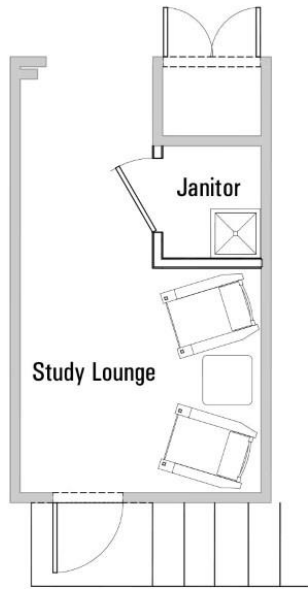
2 LEVEL 2 & 3 - EAST - NEW RESTROOMS
1/4" = 1'-0"



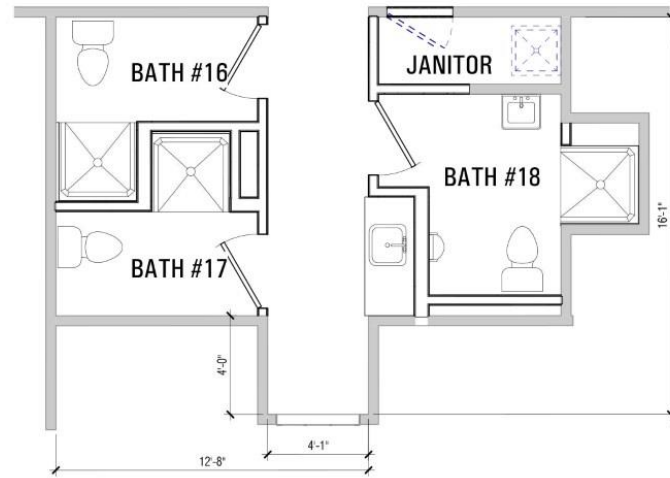
1 LEVEL 3 & 4 - MID NEW RESTROOMS 1
 1/4" = 1'-0"



2 LEVEL 04 - MID EAST - NEW
 1/4" = 1'-0"



2 LEVEL 03 - BATH CHANGE TO STUDY LOUNGE
1/4" = 1'-0"



1 LEVEL 04 - EAST - NEW
1/4" = 1'-0"

UM Western - Mathews Hall Bathrooms Renovation Facilities Study

Project Budget Estimate

A. Administrative

			Cost/Unit		Total
UM Western Facilities PM Costs	1 LS	@	\$20,000.00	PER LS	= \$20,000
Trade Support Costs	1 LS	@	\$5,000.00	PER LS	= \$5,000
Printing/fees/ads/etc.	1 SF	@	2,500.00	PER SF	= \$2,500
Data Systems	0 LS	@		PER LS	= \$0
Phone Systems	0 LS	@		PER LS	= \$0
Security Systems	0 ST	@		PER ST	= \$0
SUB TOTAL (A.)					\$27,500

B. General Work

			Cost/SF		Total
Bathroom Area Remodel	3680 SF				
Demolition					
West Bathrooms; Levels 1-3	1020 SF	@	\$7.50	PER SF	= \$7,850
East Bathrooms; Levels 2-3	780 SF	@	\$7.50	PER SF	= \$5,850
Middle Bathrooms; Levels 3-4	1080 SF	@	\$7.50	PER SF	= \$8,100
Mid-East Bathroom; Levels 4	200 SF	@	\$7.50	PER SF	= \$1,500
Mid-East Bathroom; Levels 3 (chg to study lo	175 SF	@	\$7.50	PER SF	= \$1,313
East Bathrooms; Levels 4	285 SF	@	\$7.50	PER SF	= \$2,138
Janitor Closet Spaces	140 SF	@	\$7.50	PER SF	= \$1,050
Utilities					
Water System Improvements	1 LS	@	\$30,000.00	PER LS	= \$30,000
Sewer System Improvements	1 LS	@	\$30,000.00	PER LS	= \$30,000
Fire Water System	LS	@		PER LS	= \$0
Patch and Repair	1,000 SF	@	5.00	PER SF	= \$5,000
Corridor Painting	6,000 SF	@	1.50	PER SF	= \$9,000
Other Work outside bathrooms	1 LS	@	10,000.00	PER LS	= \$10,000
SUB TOTAL (B.)					\$111,600

C. Building Remodel

			Cost/SF		Total
West Bathrooms - Levels 1, 2, 3	3680 SF				
1020 SF	@	\$200.82	PER SF		\$204,833
Floor/Wall prep	1040 SF	@	\$2.00	PER SF	\$2,080
Walls	2322 SF	@	\$5.50	PER SF	\$12,771
Ceilings	1020 SF	@	\$3.50	PER SF	\$3,570
Plumbing	42 CT	@	\$2,500.00	PER CT	\$105,000
Electrical	1030 SF	@	\$12.50	PER SF	\$12,875
Flooring	1030 SF	@	\$20.00	PER SF	\$20,600
Doors/Hardware	12 CT	@	\$1,500.00	PER CT	\$18,000
Heat Panel	12 SF	@	\$1,500.00	PER SF	\$18,000
Painting	4503 SF	@	\$1.50	PER SF	\$6,755
General/Accessories/Cleaning	1030 SF	@	\$5.00	PER SF	\$5,150
East Bathrooms - Levels 2 & 3	780 SF	@	\$187.57	PER SF	\$146,302
Floor/Wall prep	938 SF	@	\$2.00	PER SF	\$1,876
Walls	1594 SF	@	\$5.50	PER SF	\$8,712
Ceilings	780 SF	@	\$3.50	PER SF	\$2,730
Plumbing	30 CT	@	\$2,500.00	PER CT	\$75,000
Electrical	780 SF	@	\$12.50	PER SF	\$9,750
Flooring	780 SF	@	\$20.00	PER SF	\$15,600
Doors/Hardware	8 CT	@	\$1,500.00	PER CT	\$12,000
Heat Panel	8 SF	@	\$1,500.00	PER SF	\$12,000
Painting	3150 SF	@	\$1.50	PER SF	\$4,725
General/Accessories/Cleaning	780 SF	@	\$5.00	PER SF	\$3,900
Middle Bathrooms - Levels 3 & 4	1080 SF	@	\$180.69	PER SF	\$195,149
Floor/Wall prep	1278 SF	@	\$2.00	PER SF	\$2,556
Walls	2412 SF	@	\$5.50	PER SF	\$13,266
Ceilings	1080 SF	@	\$3.50	PER SF	\$3,780
Plumbing	38 CT	@	\$2,500.00	PER CT	\$95,000
Electrical	1080 SF	@	\$12.50	PER SF	\$13,500
Flooring	1080 SF	@	\$20.00	PER SF	\$21,600
Doors/Hardware	12 CT	@	\$1,500.00	PER CT	\$18,000
Heat Panel	10 SF	@	\$1,500.00	PER SF	\$15,000
Painting	4060 SF	@	\$1.50	PER SF	\$6,090
General/Accessories/Cleaning	1080 SF	@	\$5.00	PER SF	\$5,400
Mid-East Bathrooms - Levels 4	280 SF	@	\$196.15	PER SF	\$39,229
Floor/Wall prep	330 SF	@	\$2.00	PER SF	\$660
Walls	306 SF	@	\$5.50	PER SF	\$1,683
Ceilings	200 SF	@	\$3.50	PER SF	\$700
Plumbing	8 CT	@	\$2,500.00	PER CT	\$20,000
Electrical	200 SF	@	\$12.50	PER SF	\$2,500
Flooring	200 SF	@	\$20.00	PER SF	\$4,000
Doors/Hardware	2 CT	@	\$1,500.00	PER CT	\$3,000
Heat Panel	2 SF	@	\$1,500.00	PER SF	\$3,000
Painting	794 SF	@	\$1.50	PER SF	\$1,191
General/Accessories/Cleaning	200 SF	@	\$5.00	PER SF	\$1,000

East Bathrooms - Levels 4

285 SF	@	\$180.03	PER SF		\$51,308
Floor/Wall prep	1008 SF	@	\$2.00	PER SF	\$2,016
Walls	540 SF	@	\$5.50	PER SF	\$2,970
Ceilings	285 SF	@	\$3.50	PER SF	\$998
Plumbing	9 CT	@	\$2,500.00	PER CT	\$22,500
Electrical	285 SF	@	\$12.50	PER SF	\$3,563
Flooring	285 SF	@	\$20.00	PER SF	\$5,700
Doors/Hardware	4 CT	@	\$1,500.00	PER CT	\$6,000
Heat Panel	4 SF	@	\$1,500.00	PER SF	\$6,000
Painting	1096 SF	@	\$1.50	PER SF	\$1,643
General/Accessories/Cleaning	285 SF	@	\$5.00	PER SF	\$1,425

East Janitor Closet/Study Lounge - Level 3

175 SF	@	\$80.68	PER SF		\$14,119
Floor/Wall prep	643 SF	@	\$2.00	PER SF	\$1,286
Walls	180 SF	@	\$5.50	PER SF	\$990
Ceilings	175 SF	@	\$3.50	PER SF	\$613
Plumbing	1 CT	@	\$2,500.00	PER CT	\$2,500
Electrical	175 SF	@	\$12.50	PER SF	\$2,188
Flooring	175 SF	@	\$20.00	PER SF	\$3,500
Doors/Hardware	1 CT	@	\$1,500.00	PER CT	\$1,500
Heat Panel	0 SF	@	\$1,500.00	PER SF	\$0
Painting	448 SF	@	\$1.50	PER SF	\$668
General/Accessories/Cleaning	175 SF	@	\$5.00	PER SF	\$875

New Janitor Closets - Level 1,2,3 & 4

140 SF	@	\$210.99	PER SF		\$29,538
Floor/Wall prep	1004 SF	@	\$2.00	PER SF	\$2,008
Walls	720 SF	@	\$5.50	PER SF	\$3,960
Ceilings	140 SF	@	\$3.50	PER SF	\$490
Plumbing	4 CT	@	\$2,500.00	PER CT	\$10,000
Electrical	140 SF	@	\$12.50	PER SF	\$1,750
Flooring	140 SF	@	\$20.00	PER SF	\$2,800
Doors/Hardware	4 CT	@	\$1,500.00	PER CT	\$6,000
Heat Panel	0 SF	@	\$1,500.00	PER SF	\$0
Painting	1220 SF	@	\$1.50	PER SF	\$1,830
General/Accessories/Cleaning	140 SF	@	\$5.00	PER SF	\$700
SUB TOTAL C.					\$680,477

PROJECT BUDGET	#REF!	PER SF	SUB TOTAL BUILDING CONSTRUCTION	\$819,577
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D. Development Costs

estimated	PROFESSIONAL FEES	12.0%	\$98,349
	LEED CERTIFICATION	N/A	
	Hazardous Materials Investigation		\$10,000
	Site Survey (interior model)		\$10,000
	Geotech Investigation	N/A	
	Civil Engineering	N/A	\$35,000
	Fire Protection Design		\$12,000
	LEED Documentation (hourly not-to-exceed)	N/A	
	Fundamental Commissioning Services	N/A	
	Interior Design/Furnishings procurement	N/A	
	BUILDING CONTINGENCY @	12.0%	\$98,349
	CONSTRUCTION TESTING @	0.50%	\$4,098
SUB TOTAL D.			\$267,796

TOTAL INCLUDING CONTINGENCY			\$1,087,374
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COST