ELECTRIC LEGEND	
SYMBOL	DESCRIPTION
LUMINAIRES	
	FLUORESCENT LUMINAIRE (DIMENSIONS AS SPECIFIED IN LUMINAIRE SCHEDULE)
	SHADED LUMINAIRES DENOTE THOSE CONNECTED TO EMERGENCY POWER SOURCE (UNSWITCHED LUMINAIRES ARE "NIGHT-LIGHTS")
	RECESSED / SURFACE MOUNTED LUMINAIRE
	SINGLE / DOUBLE SIDED EXIT SIGN CONNECT AHEAD OF SWITCHING & CONFIGURE ARROWS TO INDICATE DIRECTION OF EGRESS TRAVEL
A,B,C	LUMINAIRE TYPE
LIGHTING CONTROL/SWITCHING	
a,b,c	SWITCHING DESIGNATION
$	SINGLE POLE SWITCH
$3	3-WAY SWITCH
(A) TYPE	CEILING-MOUNTED OCCUPANCY SENSOR. TYPE "IR" = INFRARED, TYPE "US" = ULTRASONIC, TYPE "DT" = DUAL TECHNOLOGY
(A) TYPE	WALL-MOUNTED OCCUPANCY SENSOR SWITCH. TYPE "IR"=INFRARED, TYPE "US"=ULTRASONIC, TYPE "DT"=DUAL TECH., "V"=VACANCY SENSOR, #= NUMBER OF CCTS. THAT MAY BE CONTROLLED
△ TYPE	WALL-MOUNTED OCCUPANCY SENSOR. TYPE "IR" = INFRARED, TYPE "US" = ULTRASONIC, TYPE "DT" = DUAL TECHNOLOGY
FIRE ALARM DEVICES	
(S)	FIRE ALARM SYSTEM SMOKE DETECTOR
(F)	FIRE ALARM SYSTEM CEILING MOUNTED AUDIO/VISUAL DEVICE
(H)	FIRE ALARM SYSTEM FIXED TEMPERATURE & RATE OF RISE HEAT DETECTOR
(F)	FIRE ALARM SYSTEM ELECTRO-MAGNETIC DOOR HOLDER (PROVIDE CONCEALED HEAVY-DUTY BLOCKING/ANCHORING IN WALL)
FACP FACP FACP FACP	FIRE ALARM CONTROL PANEL (FLUSH OR SURFACE MOUNTED AS INDICATED ON PLANS) PROVIDE CEILING SMOKE DETECTOR ABOVE PANEL
(T)	THERMOSTAT (LOW VOLTAGE) PROVIDE OUTLET BOX AND CONDUIT STUB-UP
(L)	LINE-VOLTAGE THERMOSTAT PROVIDE OUTLET BOX, CONDUIT, WIRING, INSTALLATION AND CONNECTIONS
(R)	REVERSE-ACTING (MAKE-ON-RISE) LINE-VOLTAGE THERMOSTAT PROVIDE OUTLET BOX, CONDUIT, WIRING, INSTALLATION AND CONNECTIONS
[S]	TEMPERATURE CONTROL SENSOR (LOW VOLTAGE) PROVIDE OUTLET BOX AND CONDUIT STUB-UP
■	INDICATES CONNECTION TO EQUIPMENT
$ MS	MANUAL STARTER WITH PILOT LIGHT
(M) (S)	MOTOR NUMBER DESIGNATES HORSEPOWER
	RECESSED OR SURFACE MOUNTED PANELBOARD AS INDICATED ON PLANS
SINGLE LINE DIAGRAM	
	ENCLOSED CIRCUIT BREAKER IN NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED (LEFT) CIRCUIT BREAKER (CENTER) – FUSED SWITCH IN SWITCHGEAR OR DISTRIBUTION BOARD (RIGHT)
	INDICATES GROUNDING PER NFPA 70 ARTICLE 250 MINIMUM
(M)	ELECTRIC UTILITY COMPANY METER AND ASSOCIATED CURRENT TRANSFORMER(S)
	RECESSED OR SURFACE MOUNTED PANELBOARD AS INDICATED ON PLANS TRIANGLE SYMBOL (RIGHT) INDICATES TO PROVIDE WITH FEED-THROUGH OR SUB-FEED LUGS
	SWITCHBOARD / DISTRIBUTION PANEL
	NON FUSED (LEFT) AND FUSED (RIGHT) DISCONNECT
RACEWAY/WIRE/CABLE	
1,3	HOME RUN WITH CIRCUIT NUMBER(S)
	CABLING/RACEWAY, CEILING OR WALL. SEE SPECS. FOR APPLICABLE CONDUIT/RACEWAY REQ'TS. (FULLY CONCEALED IN FINISHED AREAS, CONCEALED TO OVERHEAD STRUCTURE IN UNFIN. AREAS)
(J)	JUNCTION BOX ABOVE ACCESSIBLE CEILING OR AT OVERHEAD STRUCTURE IN AREAS W/NO CEILING
GND	GROUND
LINE TYPES	
	ELECTRICAL WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK INTENDED TO BE REMOVED AS SELECTIVE DEMOLITION BY E.C.
	ELECTRICAL WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK BY E.C.
	ELECTRICAL WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE

ELECTRICAL LEGEND

SCALE: NOT TO SCALE

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

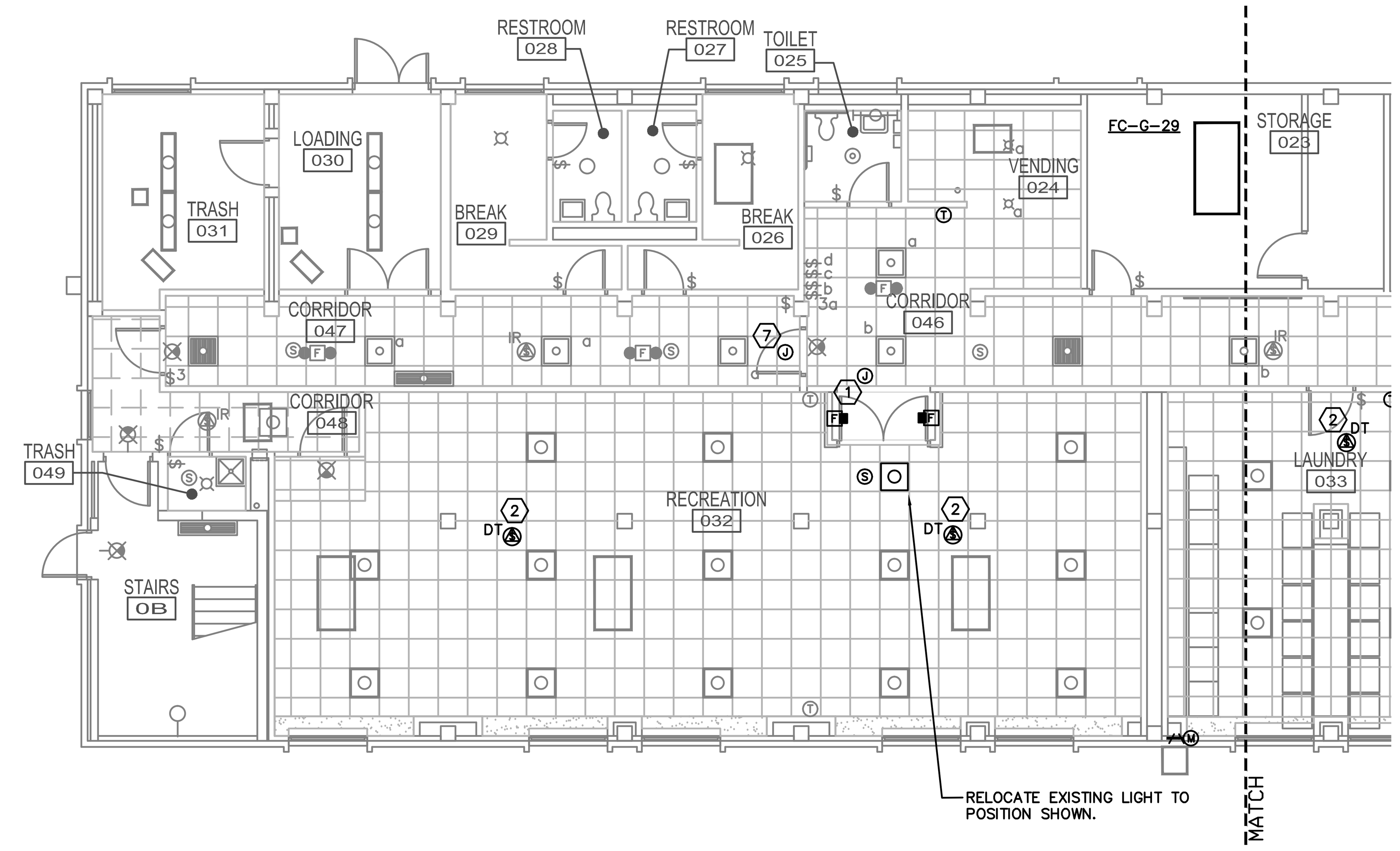
ELECTRIC LEGEND

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

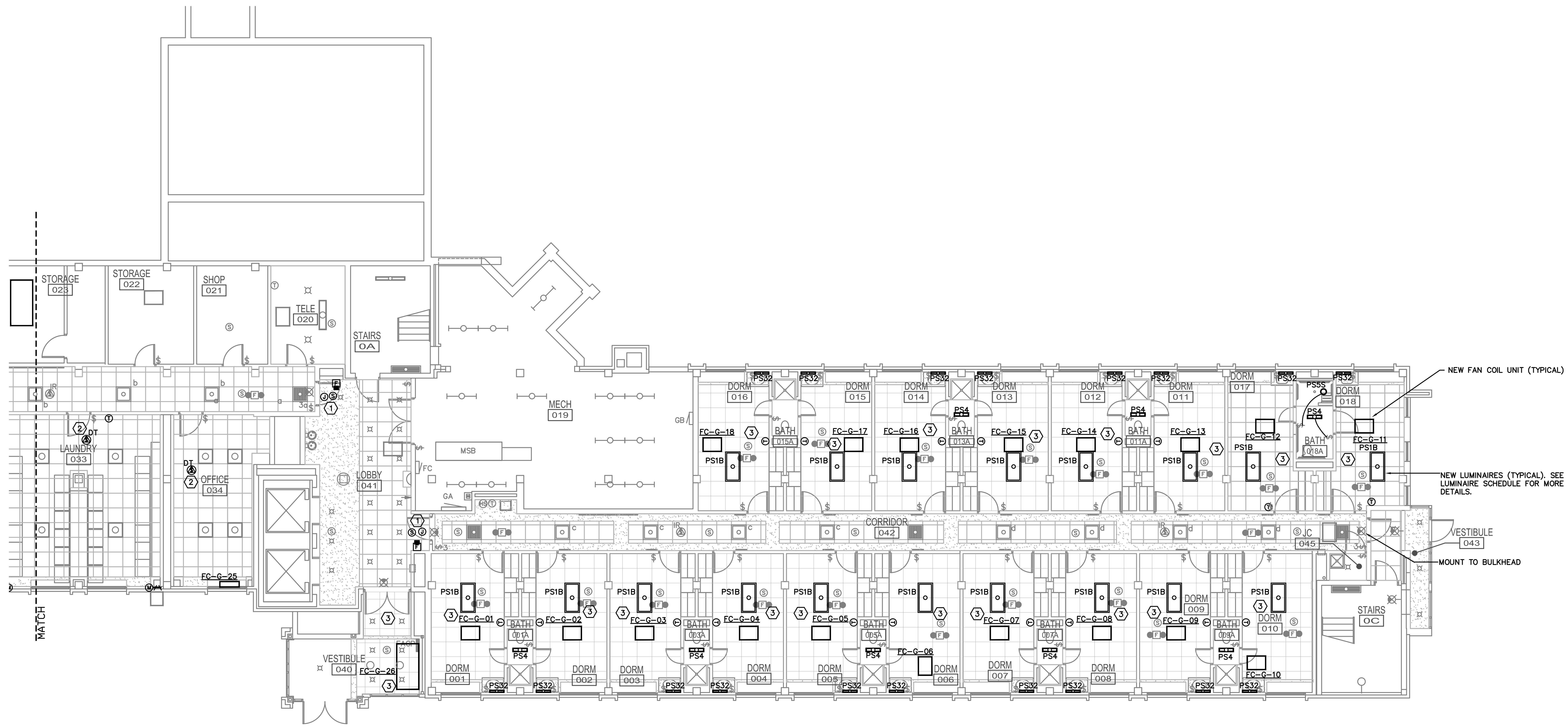
SHEET NO.
E000

15054E000.dwg



ELECTRIC - GROUND FLOOR

SCALE: 1/8" = 1' - 0"



ELECTRIC - GROUND FLOOR

SCALE: 1/8" = 1' - 0"

NEW WORK GENERAL NOTES

A. FOR ALL NEW FAN COIL UNITS SHOWN (IN BOLD). NEW FAN COIL UNIT TO REPLACE EXISTING. NEW FAN COIL UNIT LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING UNIT LOAD. VERIFY LOAD AND VOLTAGE PRIOR TO INSTALLATION . UTILIZE EXISTING 120V CIRCUIT FOR NEW FAN COIL UNIT (FED WITH (2) #10 AWG CU FROM PANEL FC). EXTEND / MODIFY EXISTING CIRCUITING AS NECESSARY TO ACCOMMODATE NEW UNIT. PROVIDE NEW NEC COMPLIANT DISCONNECT AT UNIT. NEW UNIT TO BE CONTROLLED VIA INTERNAL THERMOSTAT AND LOW VOLTAGE CONTROLS.

B. FOR ALL NEW LUMINAIRES SHOWN (IN BOLD): SWAP OUT DEMOLISHED LUMINAIRES WITH NEW ENERGY EFFICIENT EQUIVALENTS AS SPECIFIED ON THE DRAWINGS. NEW LUMINAIRE LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING LUMINIAIRE LOAD . VERIFY LOAD AND VOLTAGE IN FIELD PRIOR TO INSTALLATION .

C. PROVIDE UNIT PRICES FOR THE FOLLOWING (EXACT QUANTITIES TBD).
 C.A. REPLACE DAMAGED RECEPTACLE WITH NEW (WIRING TO REMAIN).
 C.B. REPLACE STANDARD LIGHT SWITCH WITH NEW (WIRING TO REMAIN).

D. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

E. ALL CONDUITS SHALL BE CONCEALED AS MUCH AS POSSIBLE AND WHEREVER POSSIBLE PER SPECIFICATIONS, ESPECIALLY FOR THE NEW DOOR HOLD OPENS TO THE REC. ROOM 032 ON SHEET E100.

NEW WORK KEYED NOTES

1. PROVIDE NEW MAGNETIC DOOR HOLD OPEN AT EXISTING DOOR. TIE INTO EXISTING FIRE ALARM SYSTEM WITH NEW CONTROL MODULE. PROVIDE 120V POWER FROM NEARBY GENERAL CORRIDOR RECEPTACLE CIRCUIT. PROVIDE SMOKE DETECTORS ON EACH SIDE OF THE DOOR NOT ALREADY COVERED BY AREA DETECTORS (PER NFPA). TIE NEW SMOKE DETECTORS INTO FIRE ALARM SYSTEM.
2. PROVIDE NEW CEILING MOUNTED VACANCY SENSOR IN THIS ROOM. PROVIDE QUANTITY AS NECESSARY FOR 100% COVERAGE. PROVIDE ALL NECESSARY RELAY PACKS TO CONTROL ALL LIGHTING WITHIN ROOM. TIE INTO EXISTING ROOM SWITCH FOR MANUAL ON/OFF CONTROL.
3. NEW CEILING. REINSTALL EXISTING LUMINAIRES TO REMAIN (CLEANED), AND CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) INTO NEW CEILING GRID (SAME APPROXIMATE LOCATION). EXTEND / MODIFY WIRING AS NECESSARY. SEE ABOVE FOR NEW LUMINAIRES.
4. NOT USED.
5. NOT USED.
6. NOT USED.
7. PROVIDE 120V MAGNETIC HOLD OPEN DEVICE FOR THIS DOOR (NOT TIED TO THE FIRE ALARM SYSTEM). PROVIDE 120V POWER FROM GENERAL CORRIDOR RECEPTACLE CIRCUIT.
8. NEW WALL WASH LUMINAIRE INSTALLED BY EC, FURNISHED BY OWNER. LUMINAIRE IS 48"LX5"WX4.5"D WITH (1) 28W T5 LAMP.

KUHLMAN HALL RENOVATION PHASE II

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E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC GROUND FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
E100

0'-2" REFERENCE LINE

15054E100.dwg

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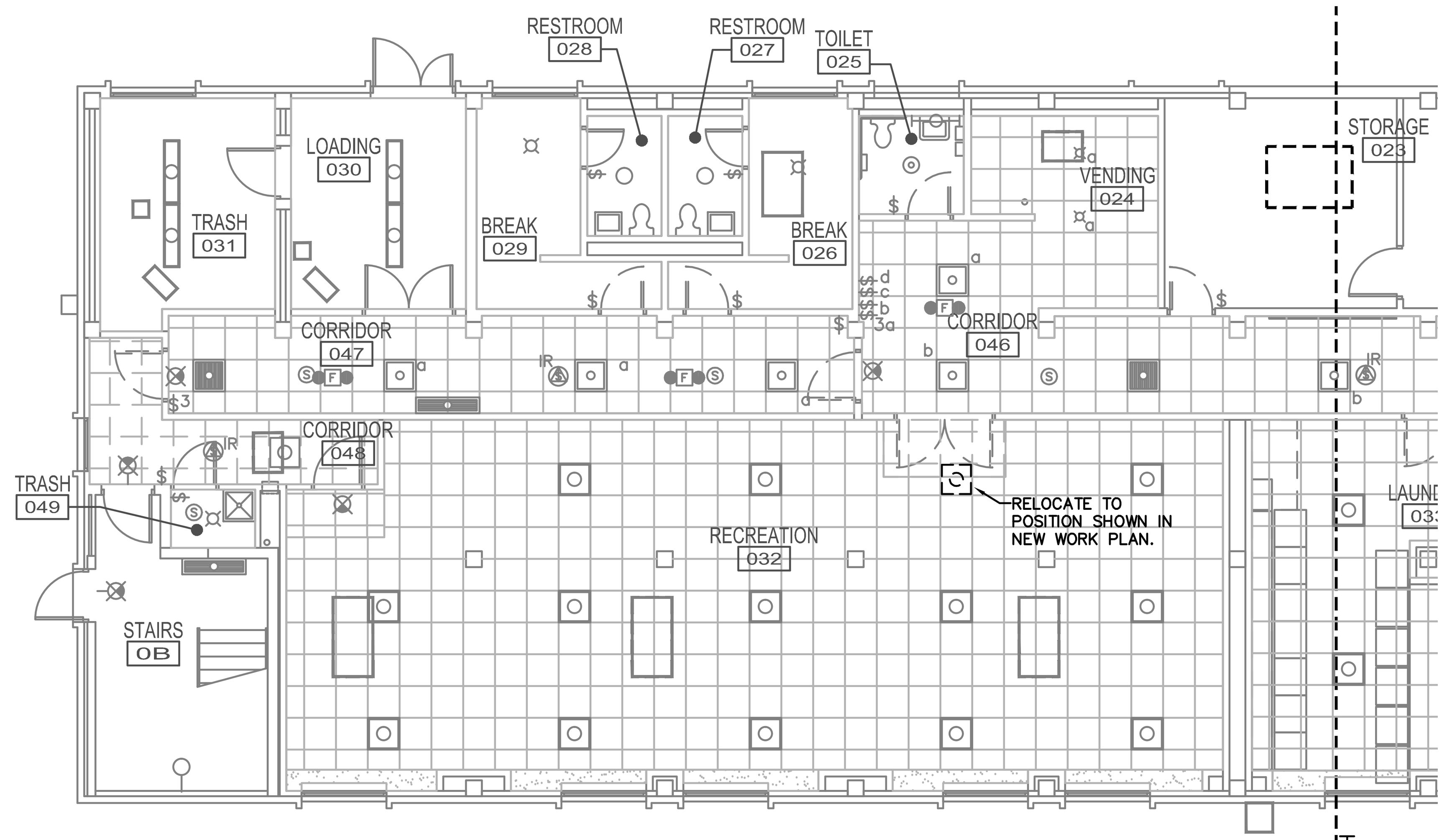
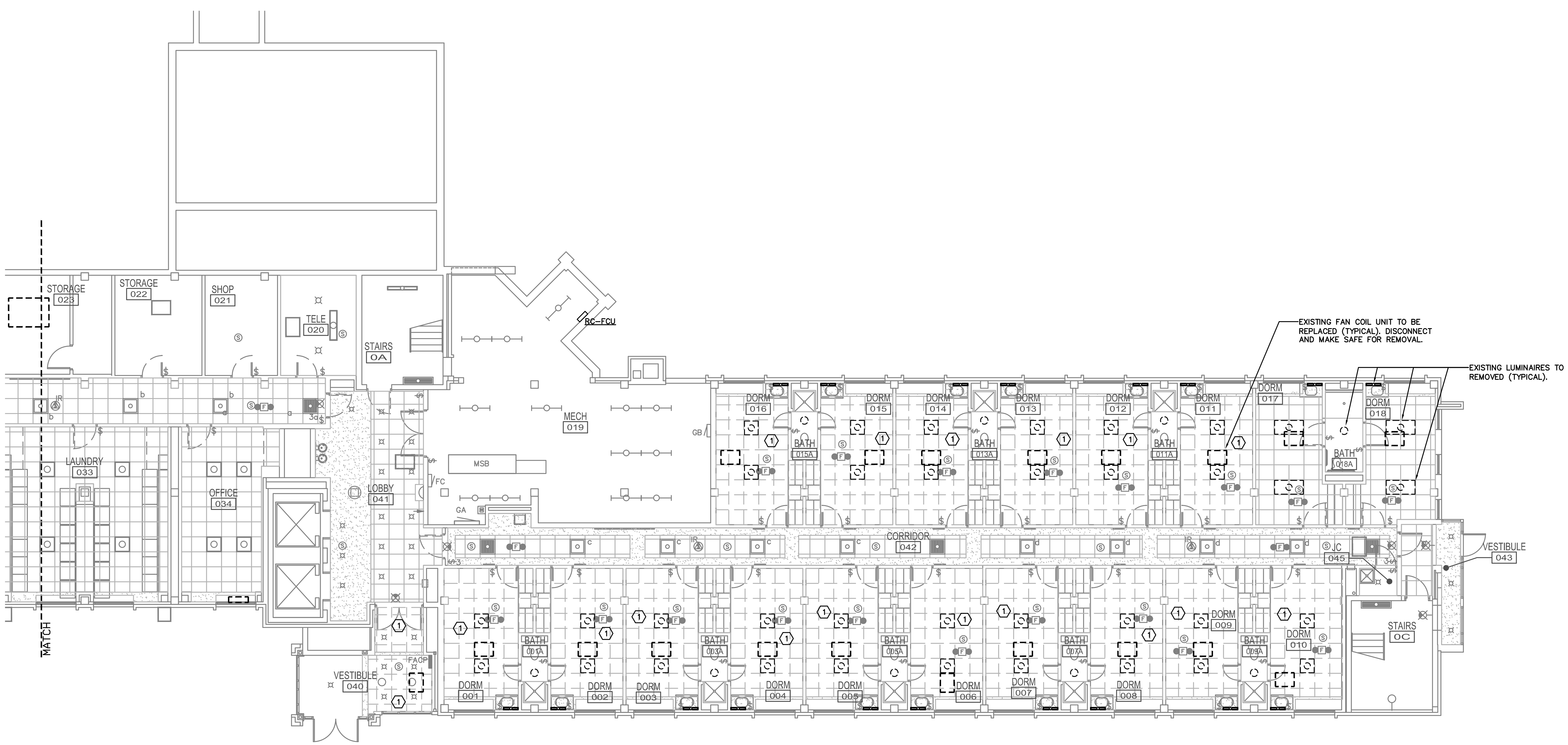


ELECTRIC DEMOLITION - GROUND FLOOR

SCALE: 1/8" = 1' - 0"



ELECTRIC DEMOLITION - GROUND FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION WORK GENERAL NOTES

A. FOR ALL EXISTING FAN COIL UNITS SHOWN TO BE REMOVED (IN BOLD AND DASHED). DISCONNECT POWER TO EXISTING UNIT AND KEEP EXISTING CIRCUITING FOR RE-USE.

B. ALL EXISITING LUMINAIRES SHOWN TO BE REMOVED (BOLD AND DASHED) SHALL BE REMOVED. DISCONNECT POWER TO LUMINAIRE AND KEEP EXISTING CIRCUITING / JUNCTION BOXES FOR RE-USE. TURN OVER EXISTING LUMINAIRES TO OWNER FOR DISPOSAL / RE-USE. SEE THE NEW ELECTRIC PLANS FOR NEW LUMINAIRE INFORMATION.

C. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

DEMOLITION WORK KEYED NOTES

1. EXISTING CEILING TO BE REMOVED AND REPLACED. REMOVE AND CLEAN EXISTING LUMINAIRES TO REMAIN. REMOVE EXISTING CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) FROM CEILING TILES AND PROVIDE TEMPORARY SUPPORT, KEEP DEVICES ACTIVE. SEE NEW ELECTRIC PLANS FOR REINSTALLATION.

KUHLMAN HALL RENOVATION PHASE II

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STATE OF OHIO
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E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC DEMOLITION GROUND FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
ED100

0'-2" REFERENCE LINE

15054ED100.dwg

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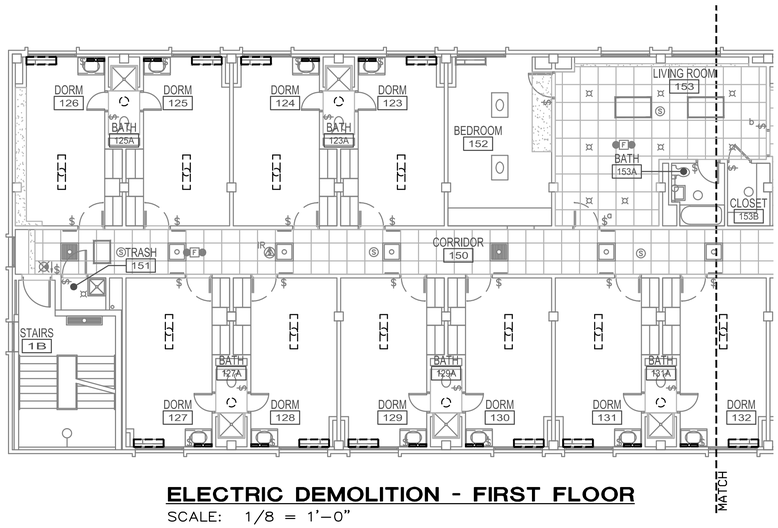
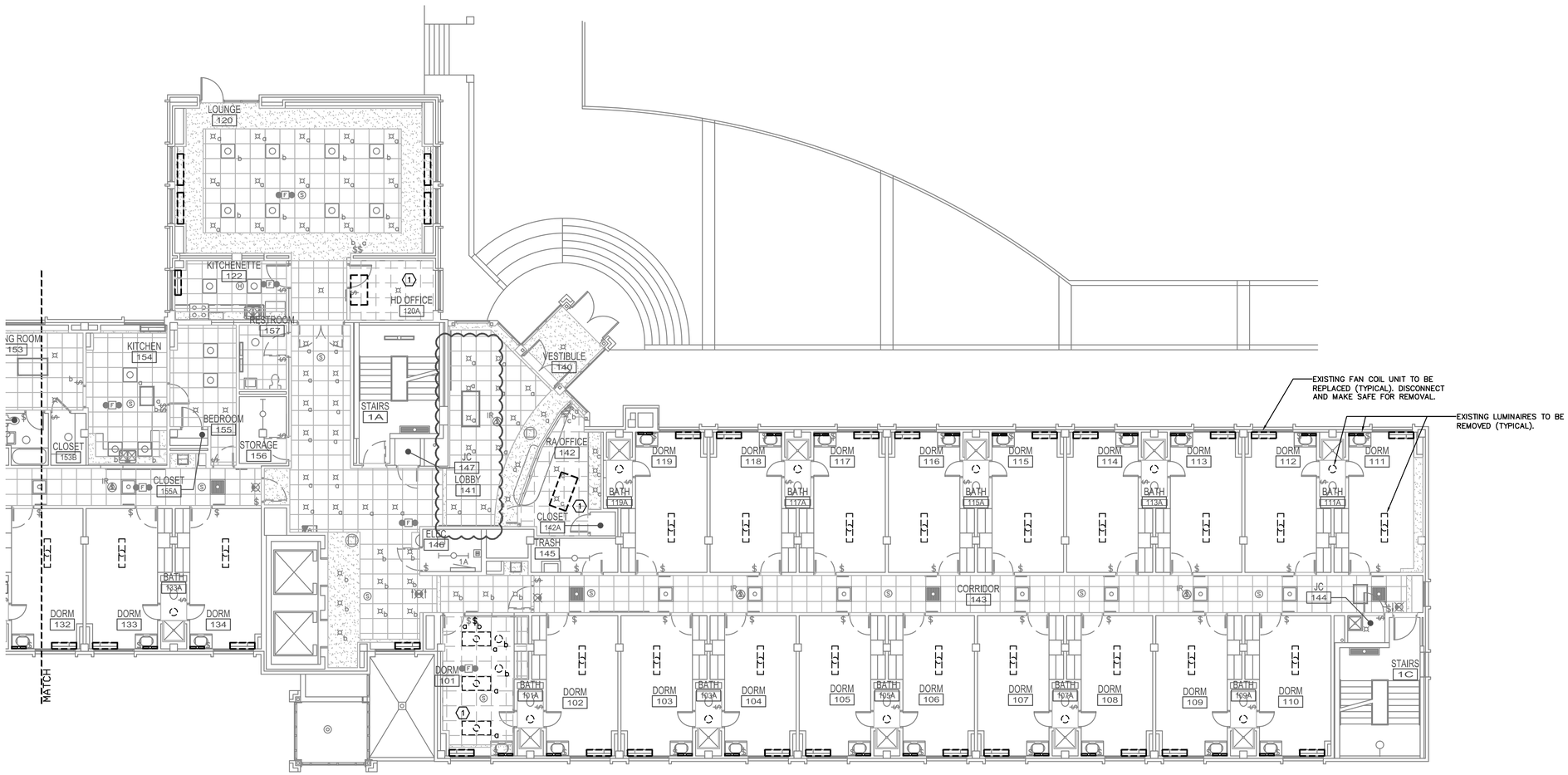


ELECTRIC DEMOLITION - FIRST FLOOR

SCALE: 1/8 = 1'-0"



ELECTRIC DEMOLITION - FIRST FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION WORK GENERAL NOTES

A. FOR ALL EXISTING FAN COIL UNITS SHOWN TO BE REMOVED (IN BOLD AND DASHED). DISCONNECT POWER TO EXISTING UNIT AND KEEP EXISTING CIRCUITING FOR RE-USE.

B. ALL EXISITING LUMINAIRES SHOWN TO BE REMOVED (BOLD AND DASHED) SHALL BE REMOVED. DISCONNECT POWER TO LUMINAIRE AND KEEP EXISTING CIRCUITING / JUNCTION BOXES FOR RE-USE. TURN OVER EXISTING LUMINAIRES TO OWNER FOR DISPOSAL / RE-USE. SEE THE NEW ELECTRIC PLANS FOR NEW LUMINAIRE INFORMATION.

C. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

DEMOLITION WORK KEYED NOTES

1. EXISTING CEILING TO BE REMOVED AND REPLACED. REMOVE AND CLEAN EXISTING LUMINAIRES TO REMAIN. REMOVE EXISTING CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) FROM CEILING TILES AND PROVIDE TEMPORARY SUPPORT, KEEP DEVICES ACTIVE. SEE NEW ELECTRIC PLANS FOR REINSTALLATION.

KUHLMAN HALL RENOVATION PHASE II

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PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC DEMOLITION FIRST FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
ED101

0'-2" REFERENCE LINE

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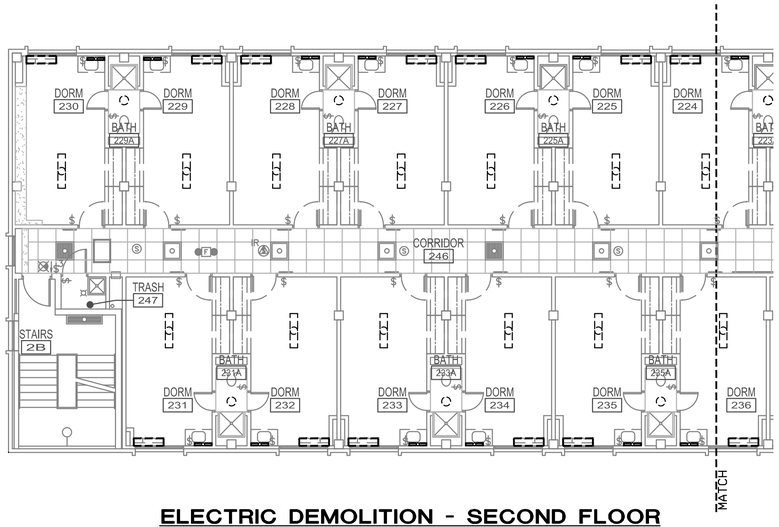
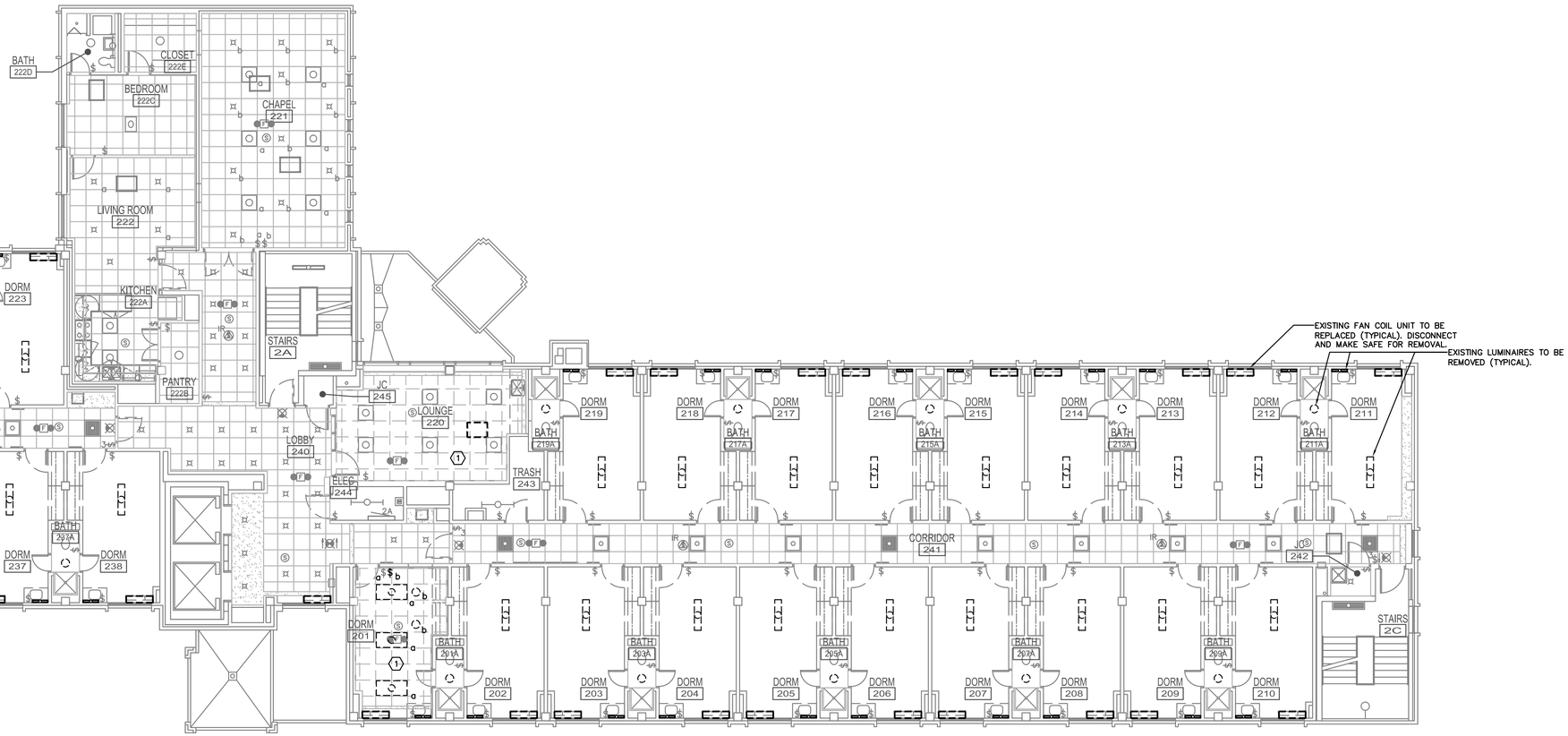


ELECTRIC DEMOLITION - SECOND FLOOR

SCALE: 1/8" = 1' – 0"



ELECTRIC DEMOLITION - SECOND FLOOR

SCALE: 1/8" = 1' – 0"

DEMOLITION WORK GENERAL NOTES

A. FOR ALL EXISTING FAN COIL UNITS SHOWN TO BE REMOVED (IN BOLD AND DASHED), DISCONNECT POWER TO EXISTING UNIT AND KEEP EXISTING CIRCUITING FOR RE-USE.

B. ALL EXISITING LUMINAIRES SHOWN TO BE REMOVED (BOLD AND DASHED) SHALL BE REMOVED. DISCONNECT POWER TO LUMINAIRE AND KEEP EXISTING CIRCUITING / JUNCTION BOXES FOR RE-USE. TURN OVER EXISTING LUMINAIRES TO OWNER FOR DISPOSAL / RE-USE. SEE THE NEW ELECTRIC PLANS FOR NEW LUMINAIRE INFORMATION.

C. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

DEMOLITION WORK KEYED NOTES

1. EXISTING CEILING TO BE REMOVED AND REPLACED. REMOVE AND CLEAN EXISTING LUMINAIRES TO REMAIN. REMOVE EXISTING CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) FROM CEILING TILES AND PROVIDE TEMPORARY SUPPORT, KEEP DEVICES ACTIVE. SEE NEW ELECTRIC PLANS FOR REINSTALLATION.

KUHLMAN HALL RENOVATION PHASE II

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REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC DEMOLITION SECOND FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
ED102

15054ED102.dwg

0'-2" REFERENCE LINE

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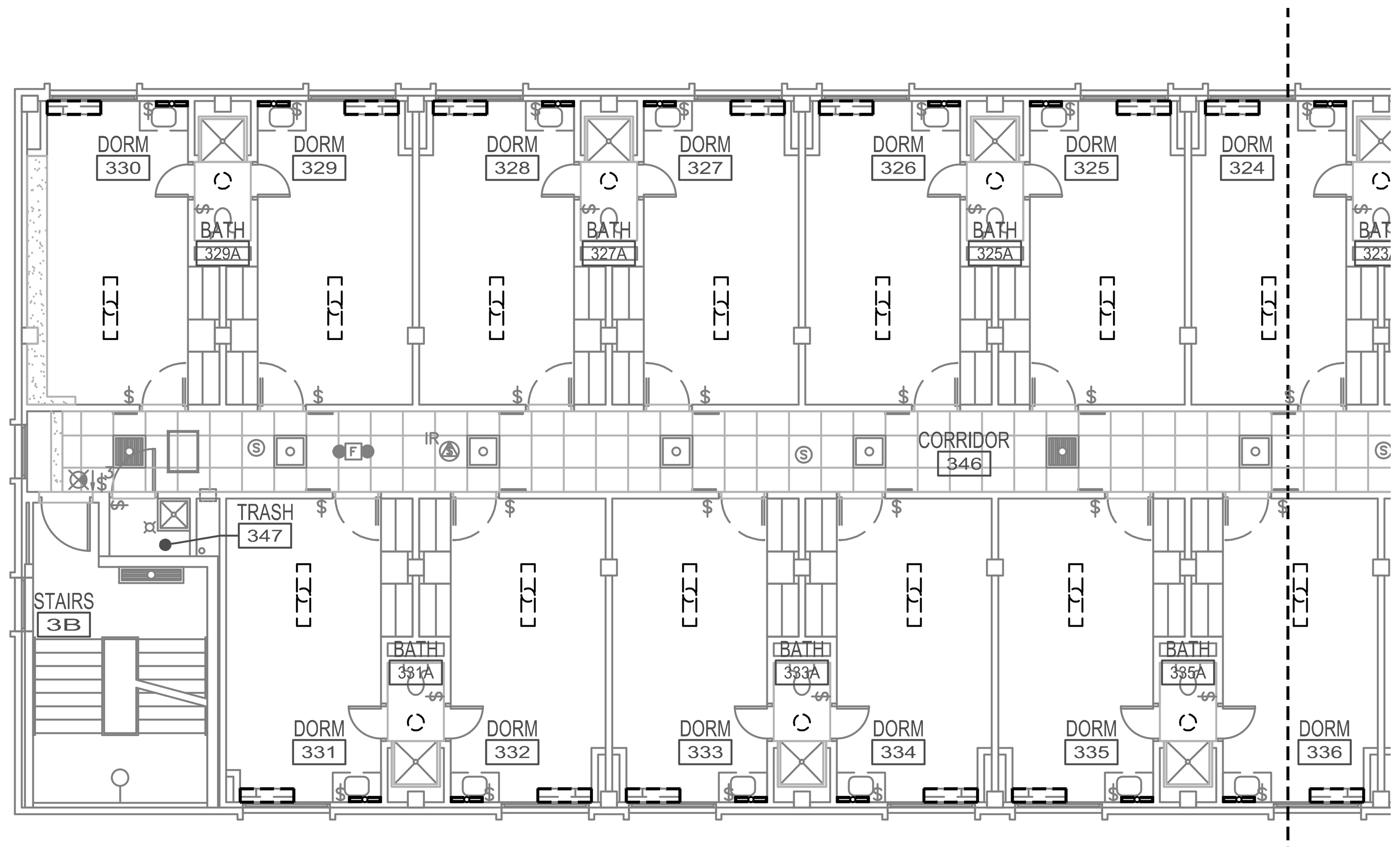

ELECTRIC DEMOLITION - THIRD FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION WORK GENERAL NOTES

A. FOR ALL EXISTING FAN COIL UNITS SHOWN TO BE REMOVED (IN BOLD AND DASHED). DISCONNECT POWER TO EXISTING UNIT AND KEEP EXISTING CIRCUITING FOR RE-USE.

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DEMOLITION WORK KEYED NOTES

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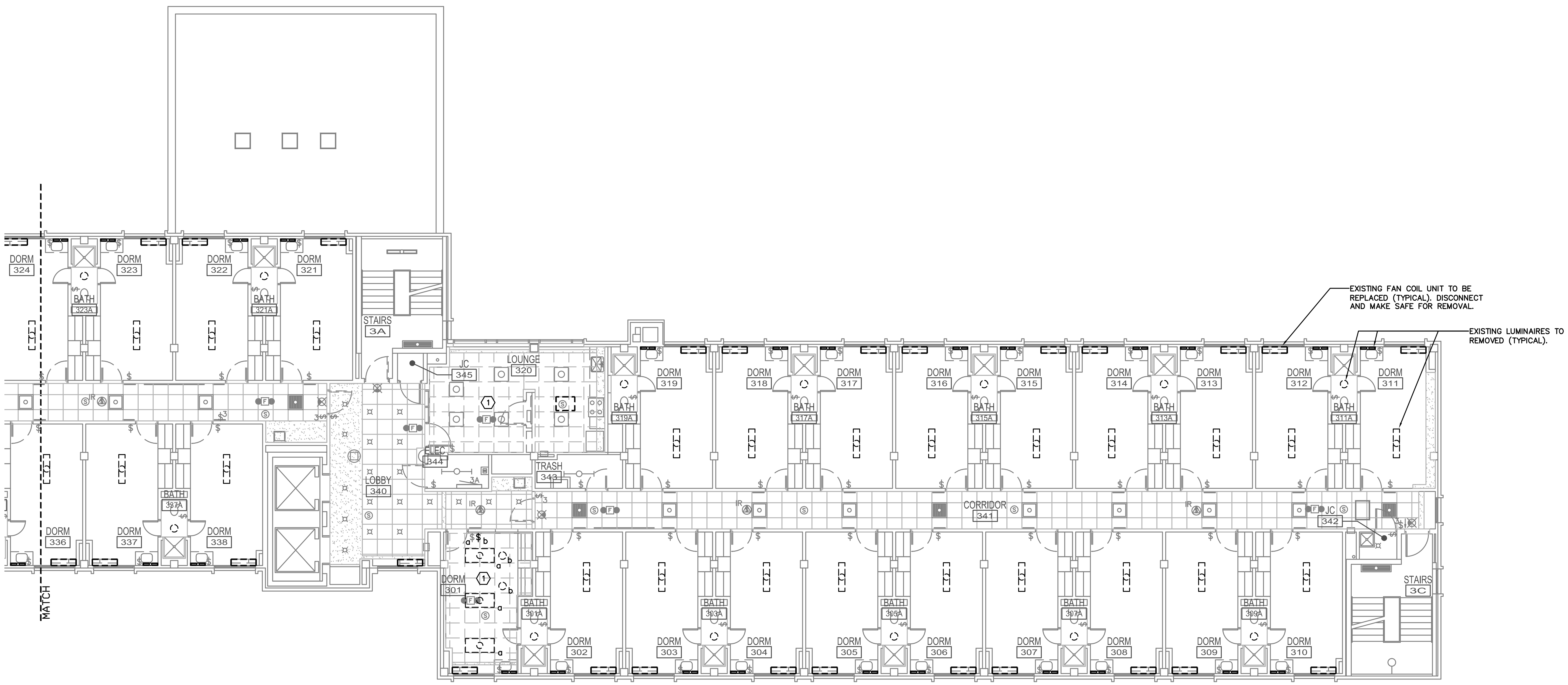

ELECTRIC DEMOLITION - THIRD FLOOR

SCALE: 1/8" = 1' - 0"

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
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STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC DEMOLITION THIRD FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
ED103

0'-2" REFERENCE LINE

15054ED103.dwg

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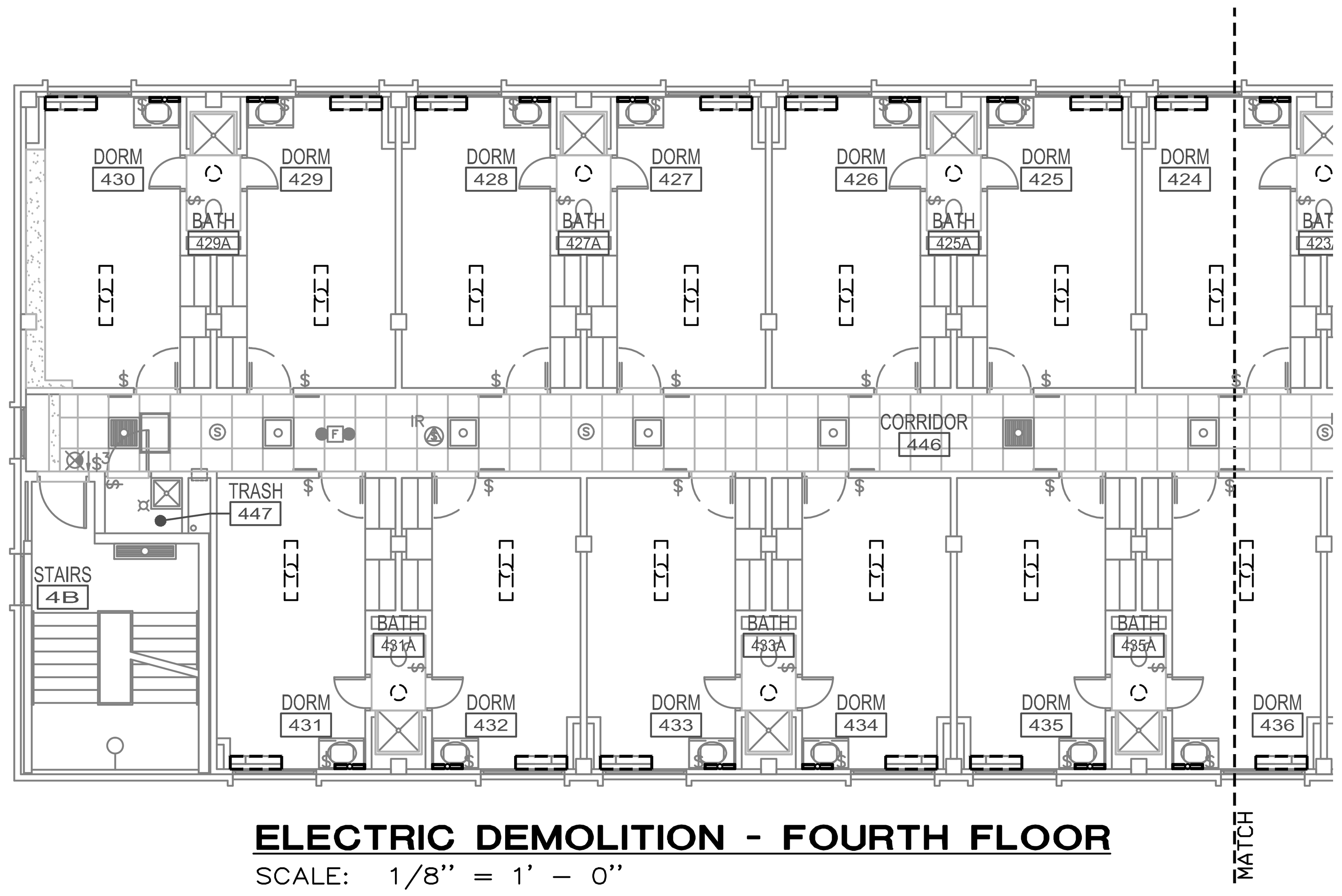


ELECTRIC DEMOLITION - FOURTH FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION WORK GENERAL NOTES

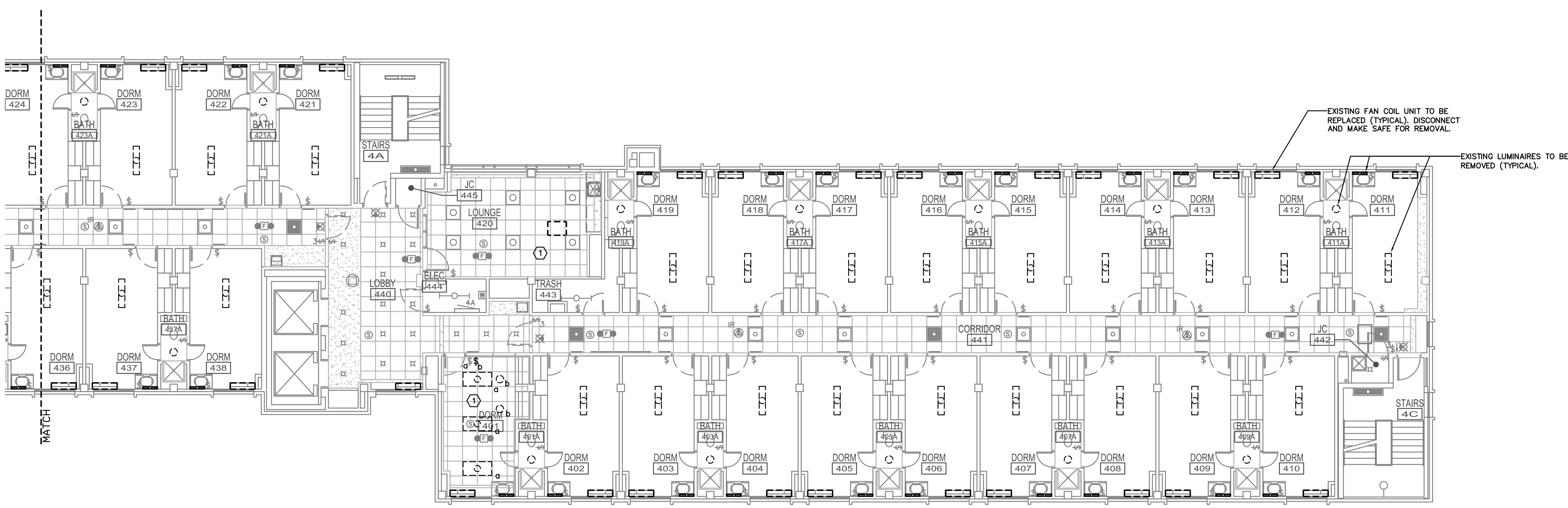
A. FOR ALL EXISTING FAN COIL UNITS SHOWN TO BE REMOVED (IN BOLD AND DASHED). DISCONNECT POWER TO EXISTING UNIT AND KEEP EXISTING CIRCUITING FOR RE-USE.

B. ALL EXISITING LUMINAIRES SHOWN TO BE REMOVED (BOLD AND DASHED) SHALL BE REMOVED. DISCONNECT POWER TO LUMINAIRE AND KEEP EXISTING CIRCUITING / JUNCTION BOXES FOR RE-USE. TURN OVER EXISTING LUMINAIRES TO OWNER FOR DISPOSAL / RE-USE. SEE THE NEW ELECTRIC PLANS FOR NEW LUMINAIRE INFORMATION.

C. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

DEMOLITION WORK KEYED NOTES

1. EXISTING CEILING TO BE REMOVED AND REPLACED. REMOVE AND CLEAN EXISTING LUMINAIRES TO REMAIN. REMOVE EXISTING CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) FROM CEILING TILES AND PROVIDE TEMPORARY SUPPORT, KEEP DEVICES ACTIVE. SEE NEW ELECTRIC PLANS FOR REINSTALLATION.



ELECTRIC DEMOLITION - FOURTH FLOOR

SCALE: 1/8" = 1' - 0"

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

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NEW YORK, NEW YORK

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CINCINNATI, OH 45207
513-745-3151

STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC DEMOLITION FOURTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
ED104

15054ED104.dwg

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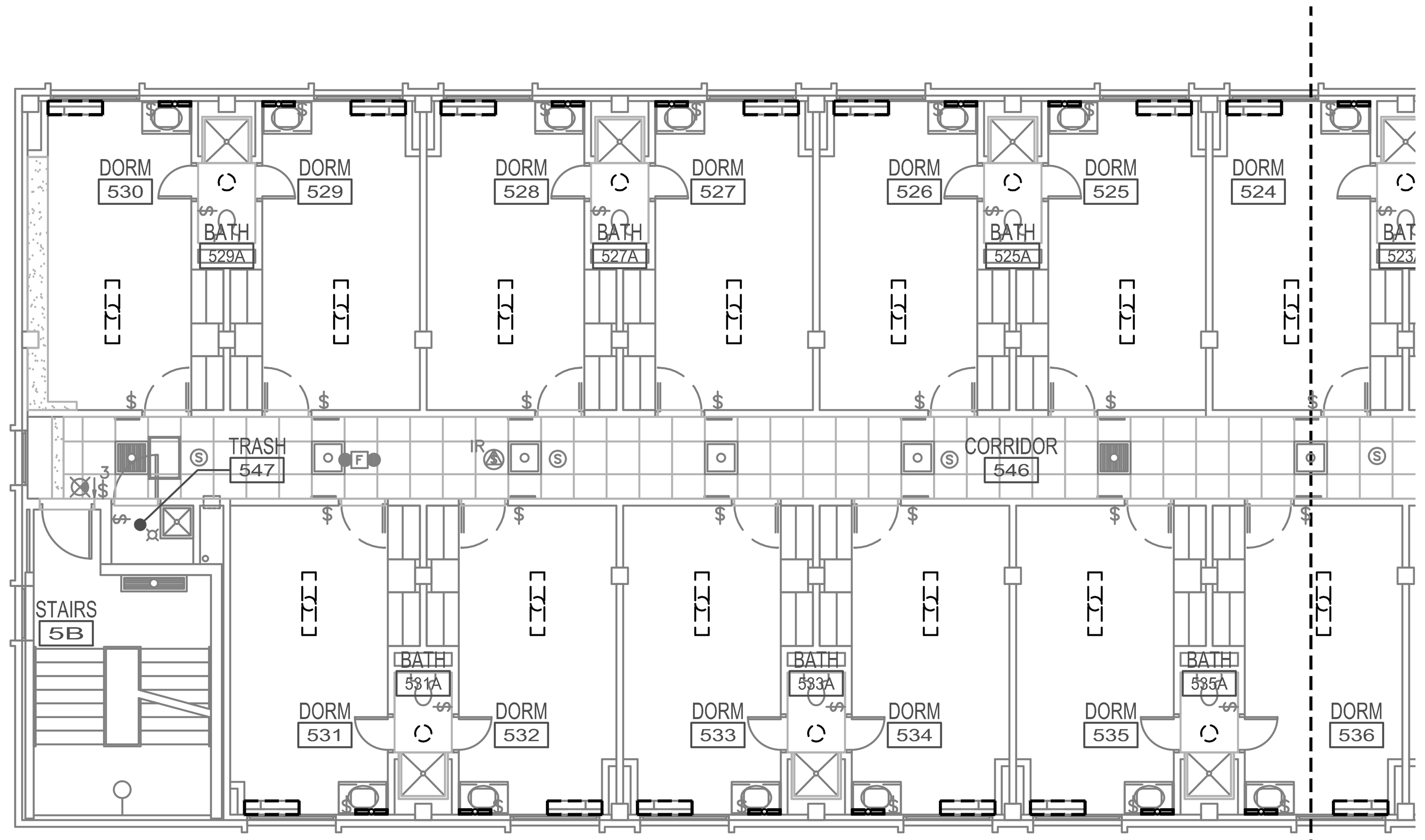


ELECTRIC DEMOLITION - FIFTH FLOOR

SCALE: 1/8 = 1'-0"

DEMOLITION WORK GENERAL NOTES

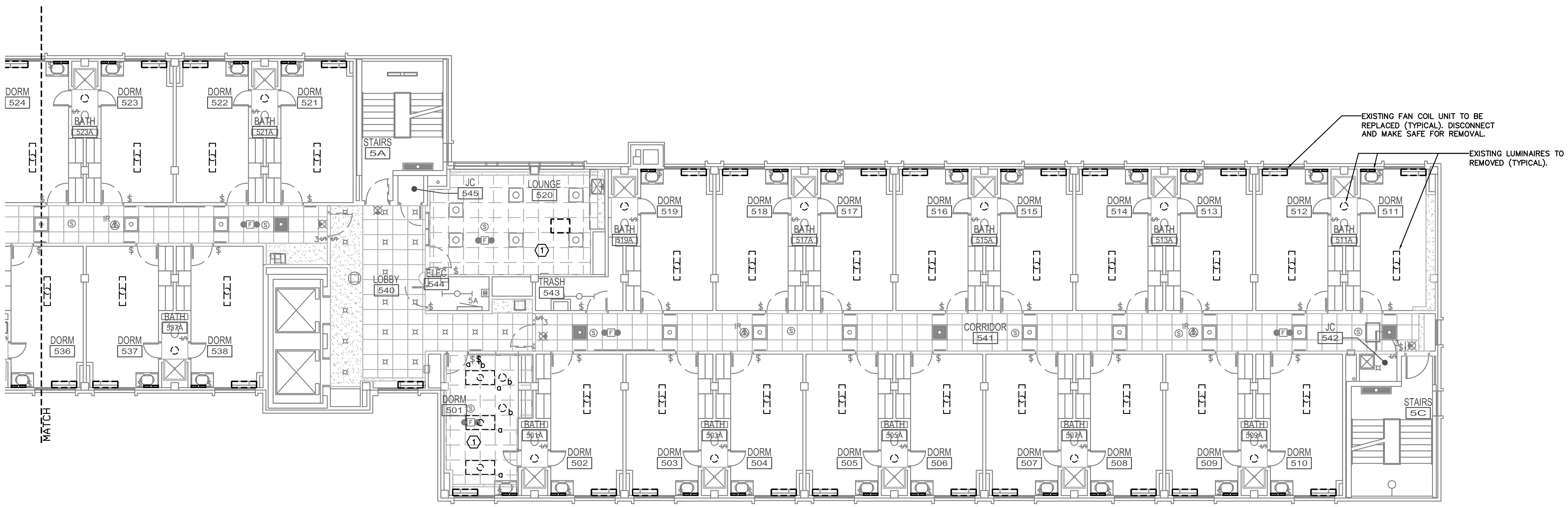
A. FOR ALL EXISTING FAN COIL UNITS SHOWN TO BE REMOVED (IN BOLD AND DASHED). DISCONNECT POWER TO EXISTING UNIT AND KEEP EXISTING CIRCUITING FOR RE-USE.

B. ALL EXISITING LUMINAIRES SHOWN TO BE REMOVED (BOLD AND DASHED) SHALL BE REMOVED. DISCONNECT POWER TO LUMINAIRE AND KEEP EXISTING CIRCUITING / JUNCTION BOXES FOR RE-USE. TURN OVER EXISTING LUMINAIRES TO OWNER FOR DISPOSAL / RE-USE. SEE THE NEW ELECTRIC PLANS FOR NEW LUMINAIRE INFORMATION.

C. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

DEMOLITION WORK KEYED NOTES

1. EXISTING CEILING TO BE REMOVED AND REPLACED. REMOVE AND CLEAN EXISTING LUMINAIRES TO REMAIN. REMOVE EXISTING CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) FROM CEILING TILES AND PROVIDE TEMPORARY SUPPORT, KEEP DEVICES ACTIVE. SEE NEW ELECTRIC PLANS FOR REINSTALLATION.



ELECTRIC DEMOLITION - FIFTH FLOOR

SCALE: 1/8" = 1' - 0"

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4/26/2014 2:33 PM

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC DEMOLITION FIFTH FLOOR

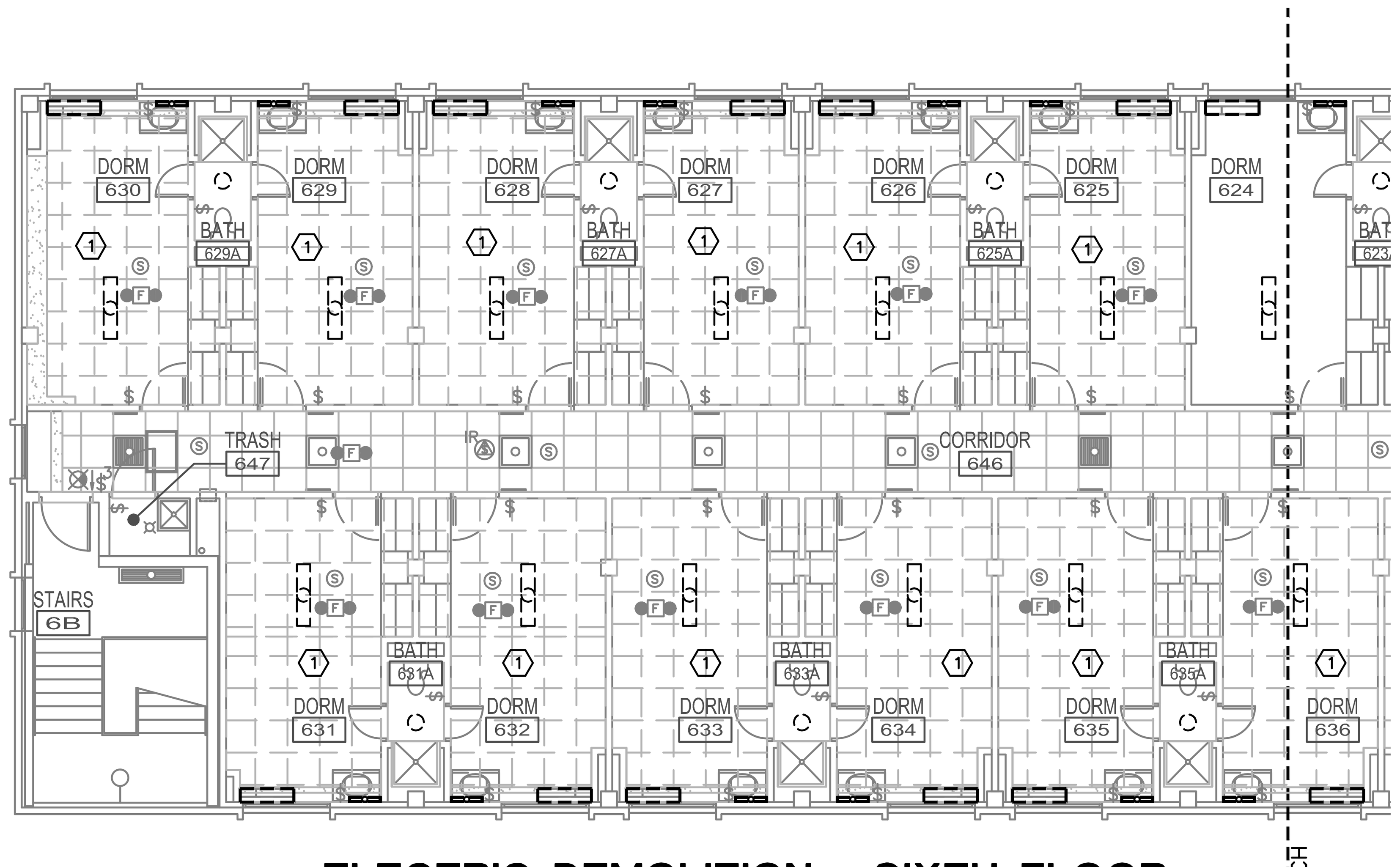
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
ED105

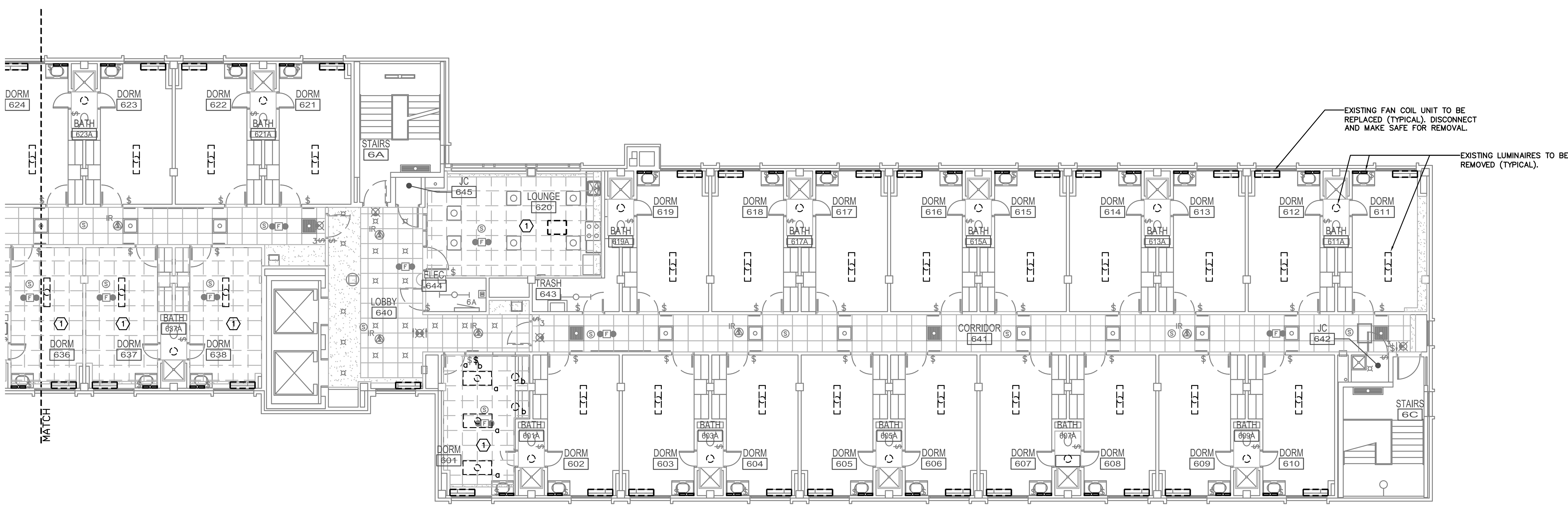
0'-2" REFERENCE LINE

15054ED105.dwg



ELECTRIC DEMOLITION - SIXTH FLOOR

SCALE: 1/8" = 1' - 0"



ELECTRIC DEMOLITION - SIXTH FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION WORK GENERAL NOTES

A. FOR ALL EXISTING FAN COIL UNITS SHOWN TO BE REMOVED (IN BOLD AND DASHED). DISCONNECT POWER TO EXISTING UNIT AND KEEP EXISTING CIRCUITING FOR RE-USE.

B. ALL EXISITING LUMINAIRES SHOWN TO BE REMOVED (BOLD AND DASHED) SHALL BE REMOVED. DISCONNECT POWER TO LUMINAIRE AND KEEP EXISTING CIRCUITING / JUNCTION BOXES FOR RE-USE. TURN OVER EXISTING LUMINAIRES TO OWNER FOR DISPOSAL / RE-USE. SEE THE NEW ELECTRIC PLANS FOR NEW LUMINAIRE INFORMATION.

C. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

DEMOLITION WORK KEYED NOTES

1. EXISTING CEILING TO BE REMOVED AND REPLACED. REMOVE AND CLEAN EXISTING LUMINAIRES TO REMAIN. REMOVE EXISTING CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) FROM CEILING TILES AND PROVIDE TEMPORARY SUPPORT, KEEP DEVICES ACTIVE. SEE NEW ELECTRIC PLANS FOR REINSTALLATION.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
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513-745-3151

STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC DEMOLITION SIXTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
ED106

0'-2" REFERENCE LINE

15054ED106.dwg

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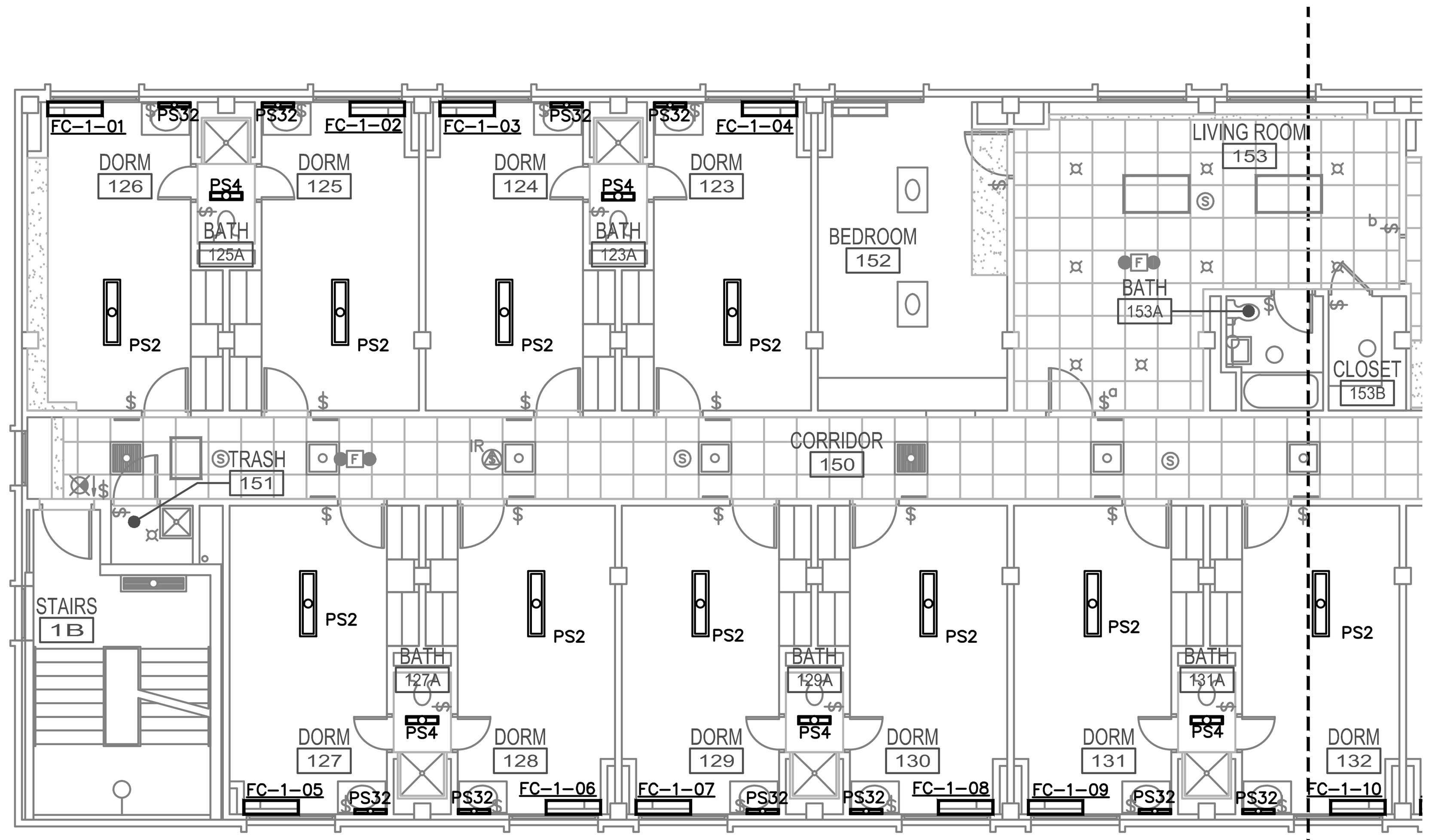
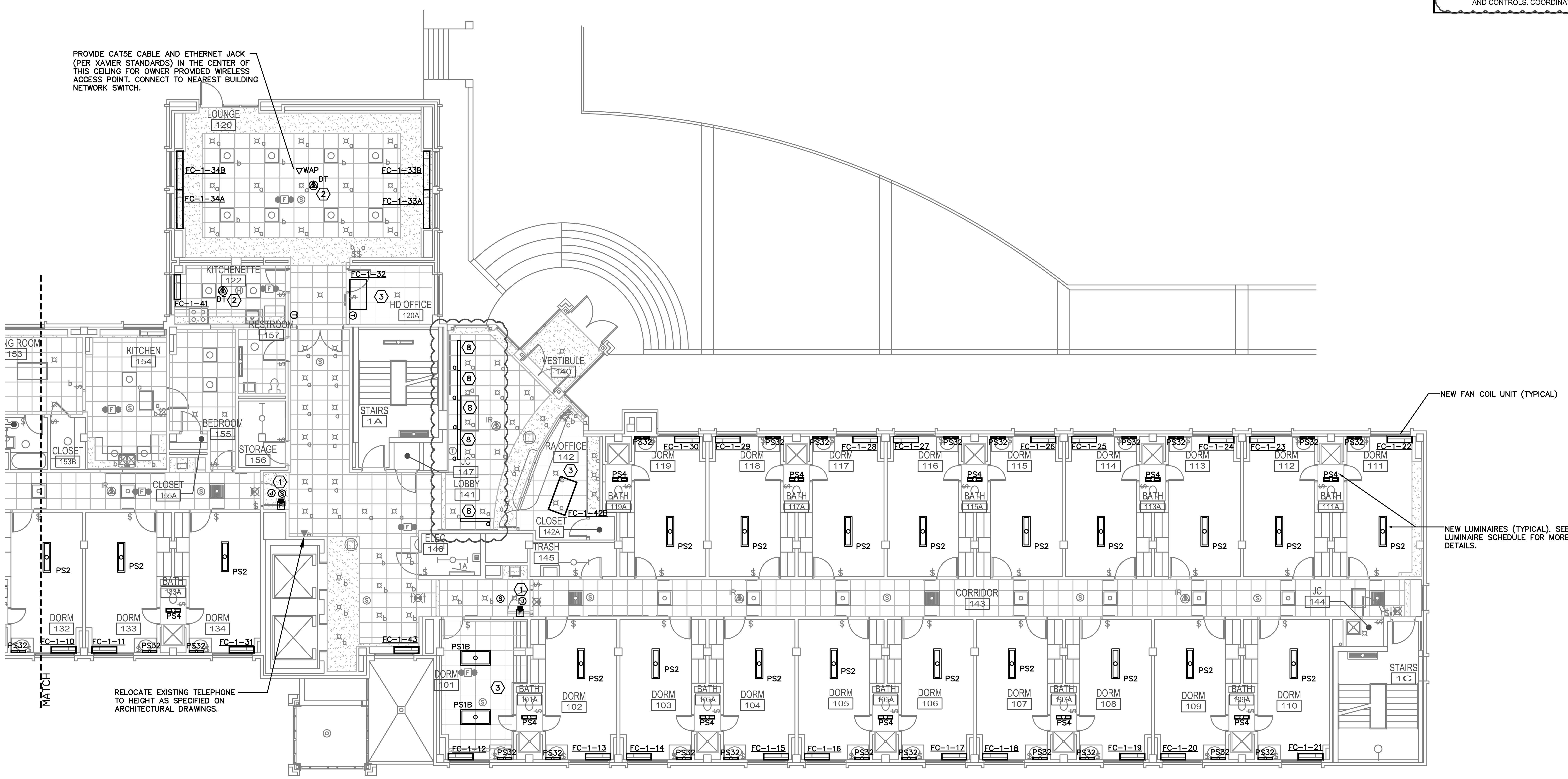


ELECTRIC - FIRST FLOOR

SCALE: 1/8 = 1'-0"



ELECTRIC - FIRST FLOOR

SCALE: 1/8" = 1' - 0"

NEW WORK GENERAL NOTES

A. FOR ALL NEW FAN COIL UNITS SHOWN (IN BOLD). NEW FAN COIL UNIT TO REPLACE EXISTING. NEW FAN COIL UNIT LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING UNIT LOAD. VERIFY LOAD AND VOLTAGE PRIOR TO INSTALLATION. UTILIZE EXISTING 120V CIRCUIT FOR NEW FAN COIL UNIT (FED WITH (2) #10 AWG CU FROM PANEL FC). EXTEND / MODIFY EXISTING CIRCUITING AS NECESSARY TO ACCOMMODATE NEW UNIT. PROVIDE NEW NEC COMPLIANT DISCONNECT AT UNIT. NEW UNIT TO BE CONTROLLED VIA INTERNAL THERMOSTAT AND LOW VOLTAGE CONTROLS.

B. FOR ALL NEW LUMINAIRES SHOWN (IN BOLD): SWAP OUT DEMOLISHED LUMINAIRES WITH NEW ENERGY EFFICIENT EQUIVALENTS AS SPECIFIED ON THE DRAWINGS. NEW LUMINAIRE LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING LUMINIAIRE LOAD. VERIFY LOAD AND VOLTAGE IN FIELD PRIOR TO INSTALLATION.

C. PROVIDE UNIT PRICES FOR THE FOLLOWING (EXACT QUANTITIES TBD).
  C.A. REPLACE DAMAGED RECEPTACLE WITH NEW (WIRING TO REMAIN).
  C.B. REPLACE STANDARD LIGHT SWITCH WITH NEW (WIRING TO REMAIN).

D. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

E. ALL CONDUITS SHALL BE CONCEALED AS MUCH AS POSSIBLE AND WHEREVER POSSIBLE PER SPECIFICATIONS, ESPECIALLY FOR THE NEW DOOR HOLD OPENS TO THE REC. ROOM 032 ON SHEET E100.

NEW WORK KEYED NOTES

1. PROVIDE NEW MAGNETIC DOOR HOLD OPEN AT EXISTING DOOR. TIE INTO EXISTING FIRE ALARM SYSTEM WITH NEW CONTROL MODULE. PROVIDE 120V POWER FROM NEARBY GENERAL CORRIDOR RECEPTACLE CIRCUIT. PROVIDE SMOKE DETECTORS ON EACH SIDE OF THE DOOR NOT ALREADY COVERED BY AREA DETECTORS (PER NFPA). TIE NEW SMOKE DETECTORS INTO FIRE ALARM SYSTEM.
2. PROVIDE NEW CEILING MOUNTED VACANCY SENSOR IN THIS ROOM. PROVIDE QUANTITY AS NECESSARY FOR 100% COVERAGE. PROVIDE ALL NECESSARY RELAY PACKS TO CONTROL ALL LIGHTING WITHIN ROOM. TIE INTO EXISTING ROOM SWITCH FOR MANUAL ON/OFF CONTROL.
3. NEW CEILING. REINSTALL EXISTING LUMINAIRES TO REMAIN (CLEANED), AND CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) INTO NEW CEILING GRID (SAME APPROXIMATE LOCATION). EXTEND / MODIFY WIRING AS NECESSARY. SEE ABOVE FOR NEW LUMINAIRES.
4. NOT USED.
5. NOT USED.
6. NOT USED.
7. PROVIDE 120V MAGNETIC HOLD OPEN DEVICE FOR THIS DOOR (NOT TIED TO THE FIRE ALARM SYSTEM). PROVIDE 120V POWER FROM GENERAL CORRIDOR RECEPTACLE CIRCUIT.
8. NEW WALL WASH LUMINAIRE INSTALLED BY EC, FURNISHED BY OWNER. LUMINAIRE IS 48"LX5"WX4.5"D WITH (1) 28W T5 LAMP. TIE INTO EXISTING LOBBY LIGHTING CIRCUIT AND CONTROLS. COORDINATE EXACT LUMINAIRE LOCATIONS IN FIELD WITH OWNER.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

KOHRS LONNEMANN HEIL ENGINEERS, PSC
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STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC
FIRST FLOOR

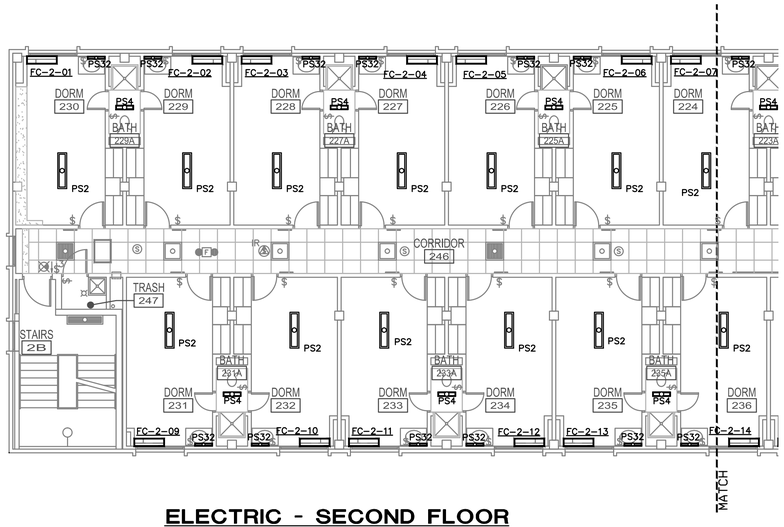
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
E101

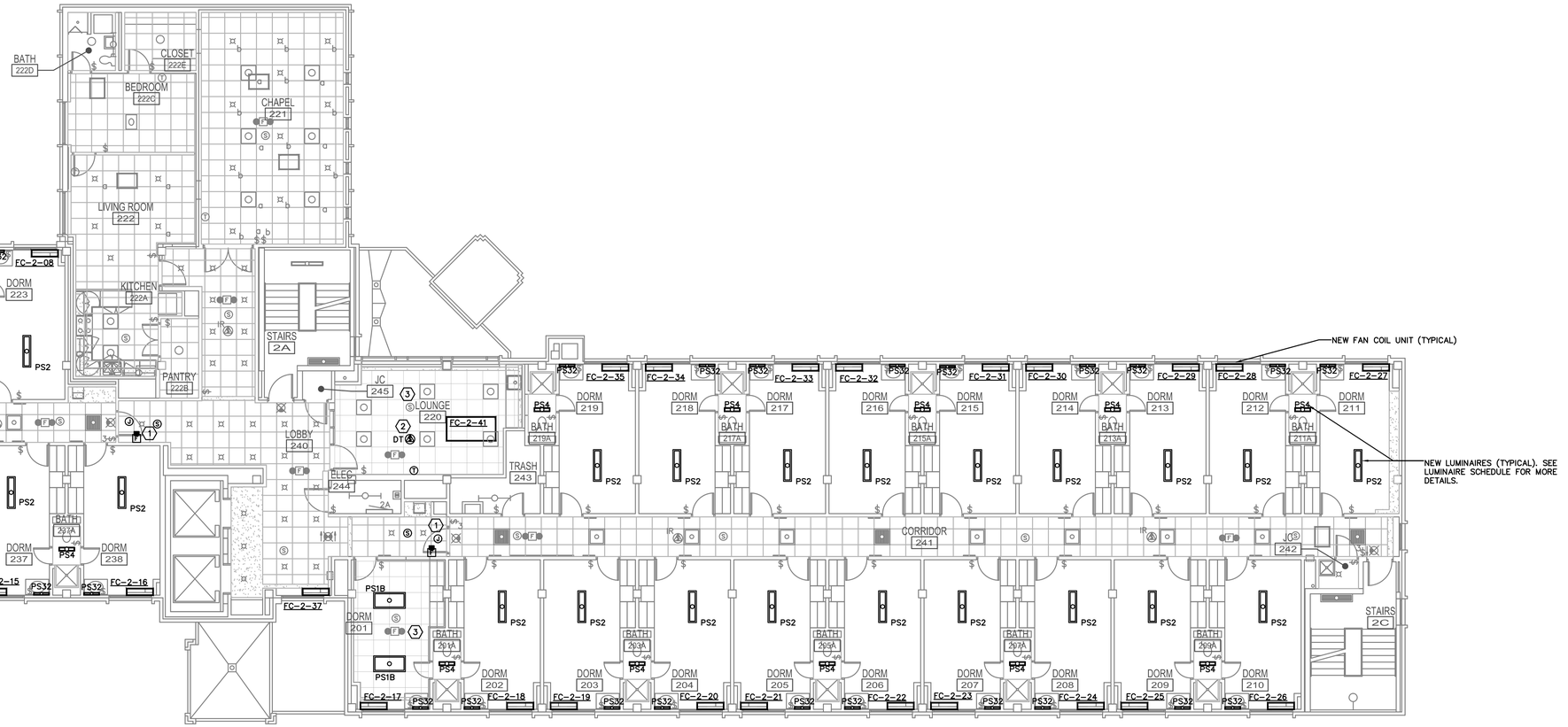
15054E101.dwg

4/30/2014 1:10 PM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054E101.DWG



ELECTRIC - SECOND FLOOR

SCALE: 1/8" = 1' – 0"



ELECTRIC - SECOND FLOOR

SCALE: 1/8" = 1' – 0"

NEW WORK GENERAL NOTES

A. FOR ALL NEW FAN COIL UNITS SHOWN (IN BOLD). NEW FAN COIL UNIT TO REPLACE EXISTING. NEW FAN COIL UNIT LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING UNIT LOAD. VERIFY LOAD AND VOLTAGE PRIOR TO INSTALLATION . UTILIZE EXISTING 120V CIRCUIT FOR NEW FAN COIL UNIT (FED WITH (2) #10 AWG CU FROM PANEL FC). EXTEND / MODIFY EXISTING CIRCUITING AS NECESSARY TO ACCOMMODATE NEW UNIT. PROVIDE NEW NEC COMPLIANT DISCONNECT AT UNIT. NEW UNIT TO BE CONTROLLED VIA INTERNAL THERMOSTAT AND LOW VOLTAGE CONTROLS.

B. FOR ALL NEW LUMINAIRES SHOWN (IN BOLD): SWAP OUT DEMOLISHED LUMINAIRES WITH NEW ENERGY EFFICIENT EQUIVALENTS AS SPECIFIED ON THE DRAWINGS. NEW LUMINAIRE LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING LUMINAIRE LOAD . VERIFY LOAD AND VOLTAGE IN FIELD PRIOR TO INSTALLATION .

C. PROVIDE UNIT PRICES FOR THE FOLLOWING (EXACT QUANTITIES TBD).
C.A. REPLACE DAMAGED RECEPTACLE WITH NEW (WIRING TO REMAIN).
C.B. REPLACE STANDARD LIGHT SWITCH WITH NEW (WIRING TO REMAIN).

D. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

E. ALL CONDUITS SHALL BE CONCEALED AS MUCH AS POSSIBLE AND WHEREVER POSSIBLE PER SPECIFICATIONS, ESPECIALLY FOR THE NEW DOOR HOLD OPENS TO THE REC. ROOM 032 ON SHEET E100.

NEW WORK KEYED NOTES

1. PROVIDE NEW MAGNETIC DOOR HOLD OPEN AT EXISTING DOOR. TIE INTO EXISTING FIRE ALARM SYSTEM WITH NEW CONTROL MODULE. PROVIDE 120V POWER FROM NEARBY GENERAL CORRIDOR RECEPTACLE CIRCUIT. PROVIDE SMOKE DETECTORS ON EACH SIDE OF THE DOOR NOT ALREADY COVERED BY AREA DETECTORS (PER NFPA). TIE NEW SMOKE DETECTORS INTO FIRE ALARM SYSTEM.
2. PROVIDE NEW CEILING MOUNTED VACANCY SENSOR IN THIS ROOM. PROVIDE QUANTITY AS NECESSARY FOR 100% COVERAGE. PROVIDE ALL NECESSARY RELAY PACKS TO CONTROL ALL LIGHTING WITHIN ROOM. TIE INTO EXISTING ROOM SWITCH FOR MANUAL ON/OFF CONTROL.
3. NEW CEILING. REINSTALL EXISTING LUMINAIRES TO REMAIN (CLEANED), AND CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) INTO NEW CEILING GRID (SAME APPROXIMATE LOCATION). EXTEND / MODIFY WIRING AS NECESSARY. SEE ABOVE FOR NEW LUMINAIRES.
4. NOT USED.
5. NOT USED.
6. NOT USED.
7. PROVIDE 120V MAGNETIC HOLD OPEN DEVICE FOR THIS DOOR (NOT TIED TO THE FIRE ALARM SYSTEM). PROVIDE 120V POWER FROM GENERAL CORRIDOR RECEPTACLE CIRCUIT.
8. NEW WALL WASH LUMINAIRE INSTALLED BY EC, FURNISHED BY OWNER. LUMINAIRE IS 48"LX5"WX4.5"D WITH (1) 28W T5 LAMP.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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CINCINNATI, OH 45207
513-745-3151

STATE OF OHIO — STEPHEN N. FEDERLE — E-76032 — REGISTERED PROFESSIONAL ENGINEER — 3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC SECOND FLOOR

PROJECT NUMBER 911717

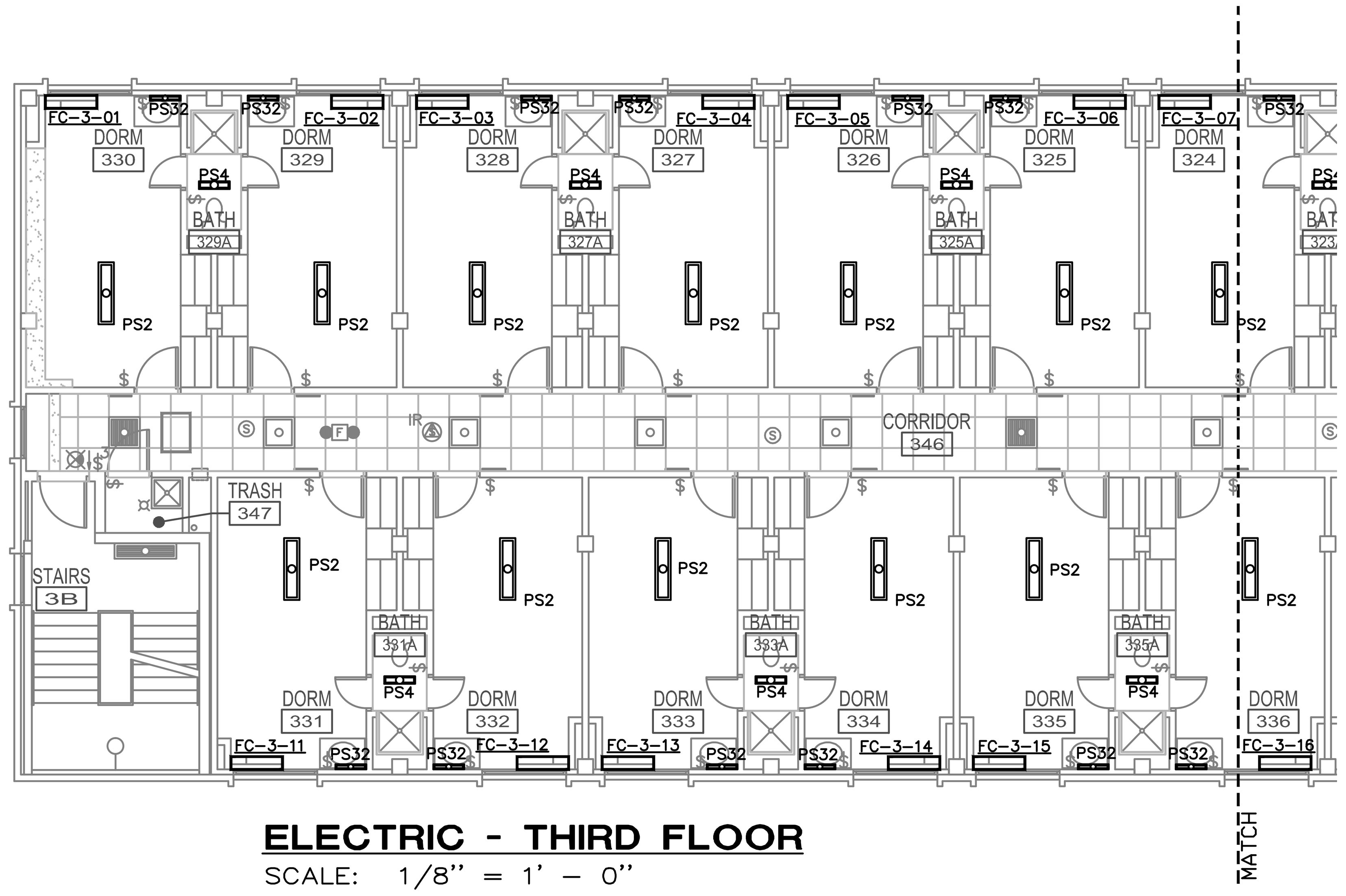
DATE APRIL 25, 2014

SHEET NO. E102

0'-2" REFERENCE LINE

15054E102.dwg

4/26/2014 2:28 PM G:\15000-15999\15000-15099\15054_ CONSTRUCTION SET\15054E102.DWG



ELECTRIC - THIRD FLOOR

SCALE: 1/8" = 1' - 0"

NEW WORK GENERAL NOTES

A. FOR ALL NEW FAN COIL UNITS SHOWN (IN BOLD). NEW FAN COIL UNIT TO REPLACE EXISTING. NEW FAN COIL UNIT LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING UNIT LOAD. VERIFY LOAD AND VOLTAGE PRIOR TO INSTALLATION. UTILIZE EXISTING 120V CIRCUIT FOR NEW FAN COIL UNIT (FED WITH (2) #10 AWG CU FROM PANEL FC). EXTEND / MODIFY EXISTING CIRCUITING AS NECESSARY TO ACCOMMODATE NEW UNIT. PROVIDE NEW NEC COMPLIANT DISCONNECT AT UNIT. NEW UNIT TO BE CONTROLLED VIA INTERNAL THERMOSTAT AND LOW VOLTAGE CONTROLS.

B. FOR ALL NEW LUMINAIRES SHOWN (IN BOLD): SWAP OUT DEMOLISHED LUMINAIRES WITH NEW ENERGY EFFICIENT EQUIVALENTS AS SPECIFIED ON THE DRAWINGS. NEW LUMINAIRE LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING LUMINIAIRE LOAD. VERIFY LOAD AND VOLTAGE IN FIELD PRIOR TO INSTALLATION.

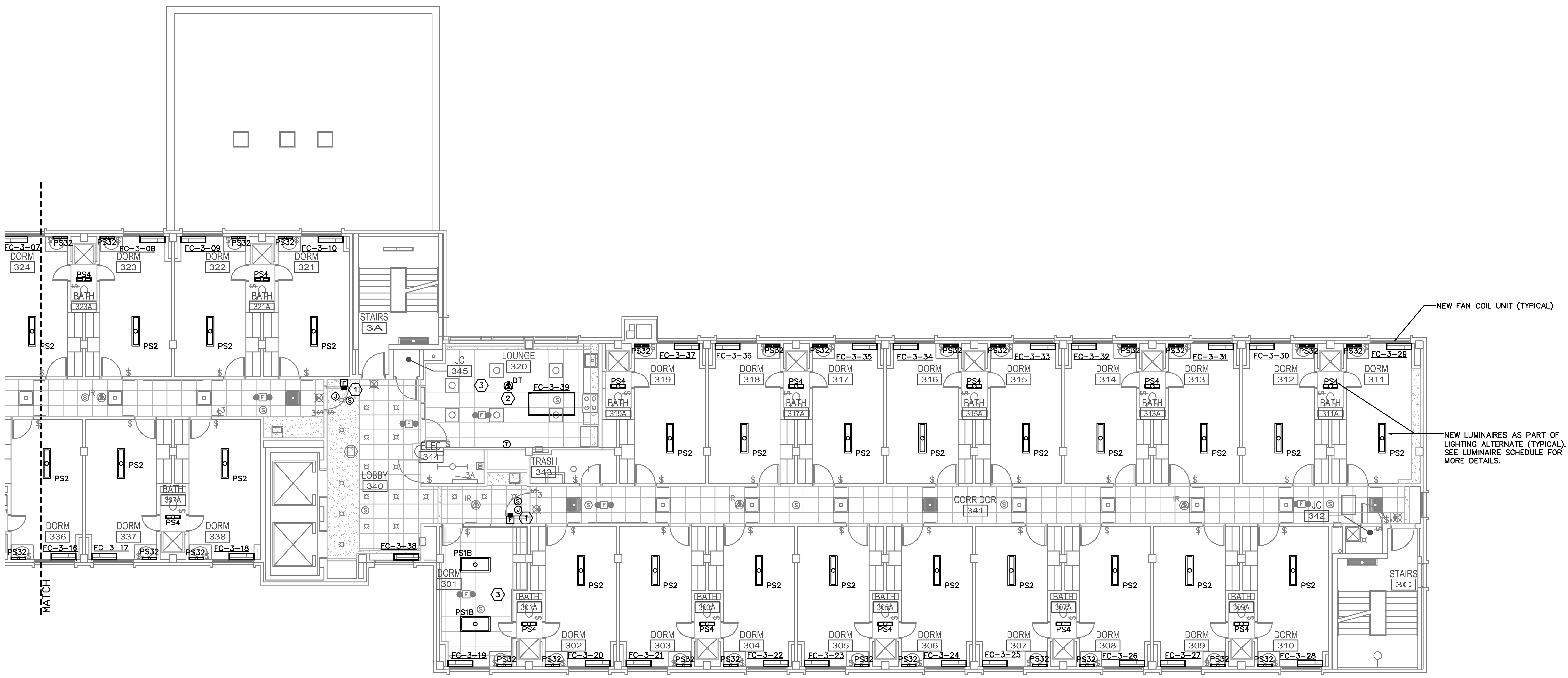
C. PROVIDE UNIT PRICES FOR THE FOLLOWING (EXACT QUANTITIES TBD).
C.A. REPLACE DAMAGED RECEPTACLE WITH NEW (WIRING TO REMAIN).
C.B. REPLACE STANDARD LIGHT SWITCH WITH NEW (WIRING TO REMAIN).

D. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

E. ALL CONDUITS SHALL BE CONCEALED AS MUCH AS POSSIBLE AND WHEREVER POSSIBLE PER SPECIFICATIONS, ESPECIALLY FOR THE NEW DOOR HOLD OPENS TO THE REC. ROOM 032 ON SHEET E100.

NEW WORK KEYED NOTES

1. PROVIDE NEW MAGNETIC DOOR HOLD OPEN AT EXISTING DOOR. TIE INTO EXISTING FIRE ALARM SYSTEM WITH NEW CONTROL MODULE. PROVIDE 120V POWER FROM NEARBY GENERAL CORRIDOR RECEPTACLE CIRCUIT. PROVIDE SMOKE DETECTORS ON EACH SIDE OF THE DOOR NOT ALREADY COVERED BY AREA DETECTORS (PER NFPA). TIE NEW SMOKE DETECTORS INTO FIRE ALARM SYSTEM.
2. PROVIDE NEW CEILING MOUNTED VACANCY SENSOR IN THIS ROOM. PROVIDE QUANTITY AS NECESSARY FOR 100% COVERAGE. PROVIDE ALL NECESSARY RELAY PACKS TO CONTROL ALL LIGHTING WITHIN ROOM. TIE INTO EXISTING ROOM SWITCH FOR MANUAL ON/OFF CONTROL.
3. NEW CEILING. REINSTALL EXISTING LUMINAIRES TO REMAIN (CLEANED), AND CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) INTO NEW CEILING GRID (SAME APPROXIMATE LOCATION). EXTEND / MODIFY WIRING AS NECESSARY. SEE ABOVE FOR NEW LUMINAIRES.
4. NOT USED.
5. NOT USED.
6. NOT USED.
7. PROVIDE 120V MAGNETIC HOLD OPEN DEVICE FOR THIS DOOR (NOT TIED TO THE FIRE ALARM SYSTEM). PROVIDE 120V POWER FROM GENERAL CORRIDOR RECEPTACLE CIRCUIT.
8. NEW WALL WASH LUMINAIRE INSTALLED BY EC, FURNISHED BY OWNER. LUMINAIRE IS 48"LX5"WX4.5"D WITH (1) 28W T5 LAMP.



ELECTRIC - THIRD FLOOR

SCALE: 1/8" = 1' - 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

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STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

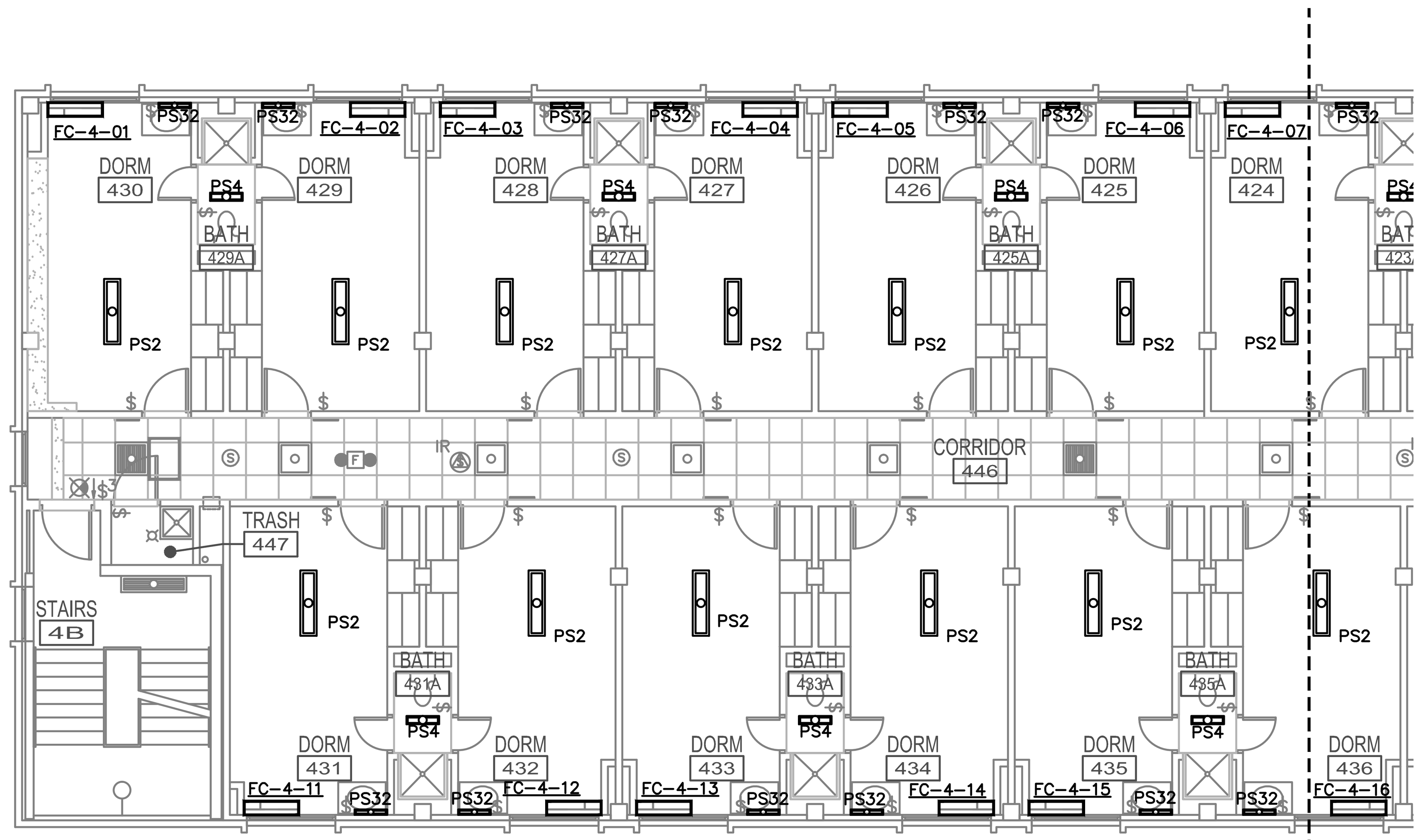
DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC
THIRD FLOOR

PROJECT NUMBER
911717

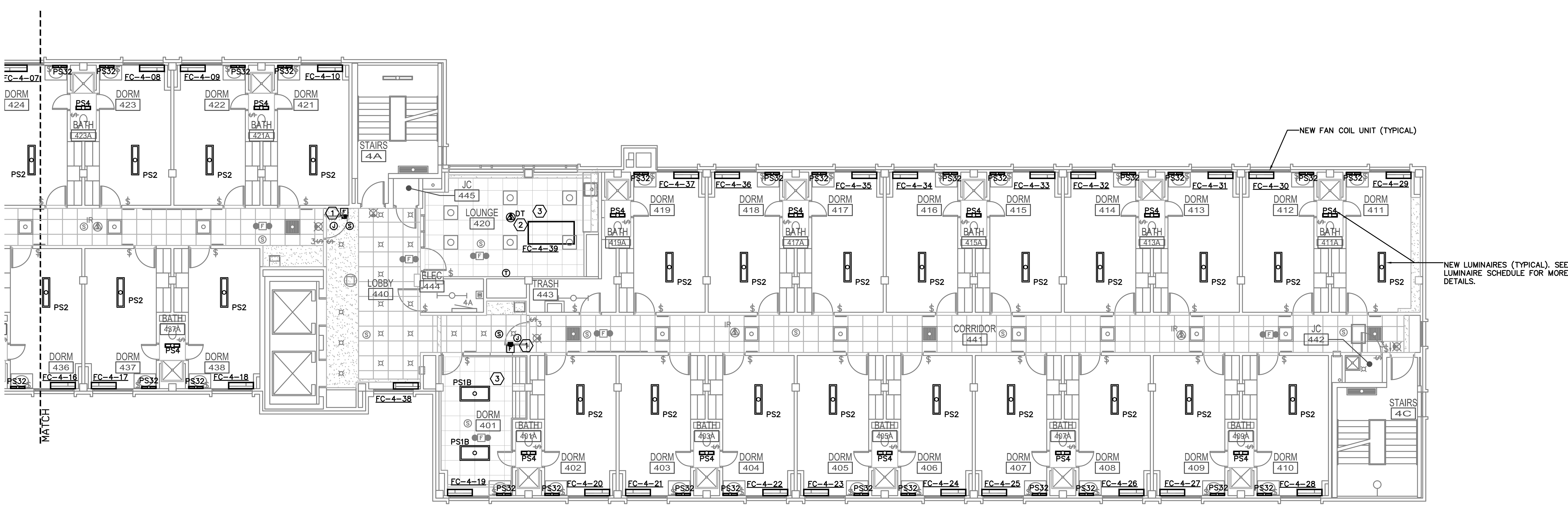
DATE
APRIL 25, 2014

SHEET NO.
E103



ELECTRIC - FOURTH FLOOR

SCALE: 1/8" = 1' - 0"



ELECTRIC - FOURTH FLOOR

SCALE: 1/8" = 1' - 0"

NEW WORK GENERAL NOTES

A. FOR ALL NEW FAN COIL UNITS SHOWN (IN BOLD). NEW FAN COIL UNIT TO REPLACE EXISTING. NEW FAN COIL UNIT LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING UNIT LOAD. VERIFY LOAD AND VOLTAGE PRIOR TO INSTALLATION. UTILIZE EXISTING 120V CIRCUIT FOR NEW FAN COIL UNIT (FED WITH (2) #10 AWG CU FROM PANEL FC). EXTEND / MODIFY EXISTING CIRCUITING AS NECESSARY TO ACCOMMODATE NEW UNIT. PROVIDE NEW NEC COMPLIANT DISCONNECT AT UNIT. NEW UNIT TO BE CONTROLLED VIA INTERNAL THERMOSTAT AND LOW VOLTAGE CONTROLS.

B. FOR ALL NEW LUMINAIRES SHOWN (IN BOLD): SWAP OUT DEMOLISHED LUMINAIRES WITH NEW ENERGY EFFICIENT EQUIVALENTS AS SPECIFIED ON THE DRAWINGS. NEW LUMINAIRE LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING LUMINIAIRE LOAD. VERIFY LOAD AND VOLTAGE IN FIELD PRIOR TO INSTALLATION.

C. PROVIDE UNIT PRICES FOR THE FOLLOWING (EXACT QUANTITIES TBD).
- C.A. REPLACE DAMAGED RECEPTACLE WITH NEW (WIRING TO REMAIN).
- C.B. REPLACE STANDARD LIGHT SWITCH WITH NEW (WIRING TO REMAIN).

D. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

E. ALL CONDUITS SHALL BE CONCEALED AS MUCH AS POSSIBLE AND WHEREVER POSSIBLE PER SPECIFICATIONS, ESPECIALLY FOR THE NEW DOOR HOLD OPENS TO THE REC. ROOM 032 ON SHEET E100.

NEW WORK KEYED NOTES

1. PROVIDE NEW MAGNETIC DOOR HOLD OPEN AT EXISTING DOOR. TIE INTO EXISTING FIRE ALARM SYSTEM WITH NEW CONTROL MODULE. PROVIDE 120V POWER FROM NEARBY GENERAL CORRIDOR RECEPTACLE CIRCUIT. PROVIDE SMOKE DETECTORS ON EACH SIDE OF THE DOOR NOT ALREADY COVERED BY AREA DETECTORS (PER NFPA). TIE NEW SMOKE DETECTORS INTO FIRE ALARM SYSTEM.
2. PROVIDE NEW CEILING MOUNTED VACANCY SENSOR IN THIS ROOM. PROVIDE QUANTITY AS NECESSARY FOR 100% COVERAGE. PROVIDE ALL NECESSARY RELAY PACKS TO CONTROL ALL LIGHTING WITHIN ROOM. TIE INTO EXISTING ROOM SWITCH FOR MANUAL ON/OFF CONTROL.
3. NEW CEILING. REINSTALL EXISTING LUMINAIRES TO REMAIN (CLEANED), AND CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) INTO NEW CEILING GRID (SAME APPROXIMATE LOCATION). EXTEND / MODIFY WIRING AS NECESSARY. SEE ABOVE FOR NEW LUMINAIRES.
4. NOT USED.
5. NOT USED.
6. NOT USED.
7. PROVIDE 120V MAGNETIC HOLD OPEN DEVICE FOR THIS DOOR (NOT TIED TO THE FIRE ALARM SYSTEM). PROVIDE 120V POWER FROM GENERAL CORRIDOR RECEPTACLE CIRCUIT.
8. NEW WALL WASH LUMINAIRE INSTALLED BY EC, FURNISHED BY OWNER. LUMINAIRE IS 48"LX5"WX4.5"D WITH (1) 28W T5 LAMP.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

KOHRS LONNEMANN HEIL ENGINEERS, PSC
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
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COLUMBUS, OHIO
DAYTON, OHIO
NEW YORK, NEW YORK

OFFICE OF PHYSICAL PLANT
XAVIER UNIVERSITY
3800 VICTORY PARKWAY
CINCINNATI, OH 45207
513-745-3151

STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC FOURTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
E104

0'-2" REFERENCE LINE

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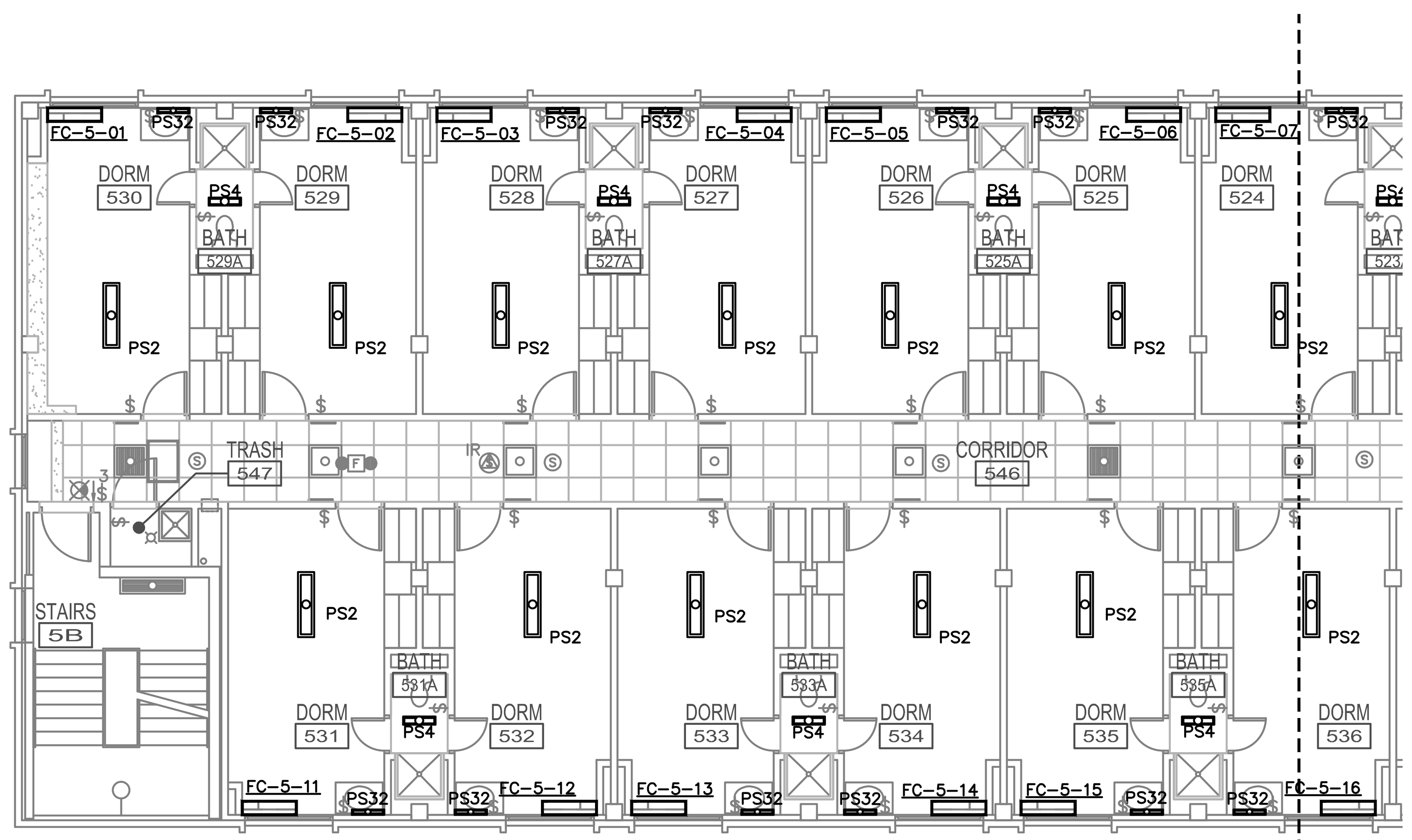

ELECTRIC - FIFTH FLOOR

SCALE: 1/8 = 1'-0"

NEW WORK GENERAL NOTES

A. FOR ALL NEW FAN COIL UNITS SHOWN (IN BOLD). NEW FAN COIL UNIT TO REPLACE EXISTING. NEW FAN COIL UNIT LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING UNIT LOAD. VERIFY LOAD AND VOLTAGE PRIOR TO INSTALLATION. UTILIZE EXISTING 120V CIRCUIT FOR NEW FAN COIL UNIT (FED WITH (2) #10 AWG CU FROM PANEL FC). EXTEND / MODIFY EXISTING CIRCUITING AS NECESSARY TO ACCOMMODATE NEW UNIT. PROVIDE NEW NEC COMPLIANT DISCONNECT AT UNIT. NEW UNIT TO BE CONTROLLED VIA INTERNAL THERMOSTAT AND LOW VOLTAGE CONTROLS.

B. FOR ALL NEW LUMINAIRES SHOWN (IN BOLD): SWAP OUT DEMOLISHED LUMINAIRES WITH NEW ENERGY EFFICIENT EQUIVALENTS AS SPECIFIED ON THE DRAWINGS. NEW LUMINAIRE LOAD MUST BE LESS THAN OR EQUAL TO THE EXISTING LUMINIAIRE LOAD. VERIFY LOAD AND VOLTAGE IN FIELD PRIOR TO INSTALLATION.

C. PROVIDE UNIT PRICES FOR THE FOLLOWING (EXACT QUANTITIES TBD).
- C.A. REPLACE DAMAGED RECEPTACLE WITH NEW (WIRING TO REMAIN).
- C.B. REPLACE STANDARD LIGHT SWITCH WITH NEW (WIRING TO REMAIN).

D. NOT ALL FIRE ALARM, COMMUNICATION, OR POWER DEVICES ARE SHOWN ON THIS DRAWING. THIS DRAWING ONLY INDICATES DEVICES THAT PERTAIN TO THIS PROJECT.

E. ALL CONDUITS SHALL BE CONCEALED AS MUCH AS POSSIBLE AND WHEREVER POSSIBLE PER SPECIFICATIONS, ESPECIALLY FOR THE NEW DOOR HOLD OPENS TO THE REC. ROOM 032 ON SHEET E100.

NEW WORK KEYED NOTES

1. PROVIDE NEW MAGNETIC DOOR HOLD OPEN AT EXISTING DOOR. TIE INTO EXISTING FIRE ALARM SYSTEM WITH NEW CONTROL MODULE. PROVIDE 120V POWER FROM NEARBY GENERAL CORRIDOR RECEPTACLE CIRCUIT. PROVIDE SMOKE DETECTORS ON EACH SIDE OF THE DOOR NOT ALREADY COVERED BY AREA DETECTORS (PER NFPA). TIE NEW SMOKE DETECTORS INTO FIRE ALARM SYSTEM.
2. PROVIDE NEW CEILING MOUNTED VACANCY SENSOR IN THIS ROOM. PROVIDE QUANTITY AS NECESSARY FOR 100% COVERAGE. PROVIDE ALL NECESSARY RELAY PACKS TO CONTROL ALL LIGHTING WITHIN ROOM. TIE INTO EXISTING ROOM SWITCH FOR MANUAL ON/OFF CONTROL.
3. NEW CEILING. REINSTALL EXISTING LUMINAIRES TO REMAIN (CLEANED), AND CEILING DEVICES (FIRE ALARM, SPEAKERS, ETC.) INTO NEW CEILING GRID (SAME APPROXIMATE LOCATION). EXTEND / MODIFY WIRING AS NECESSARY. SEE ABOVE FOR NEW LUMINAIRES.
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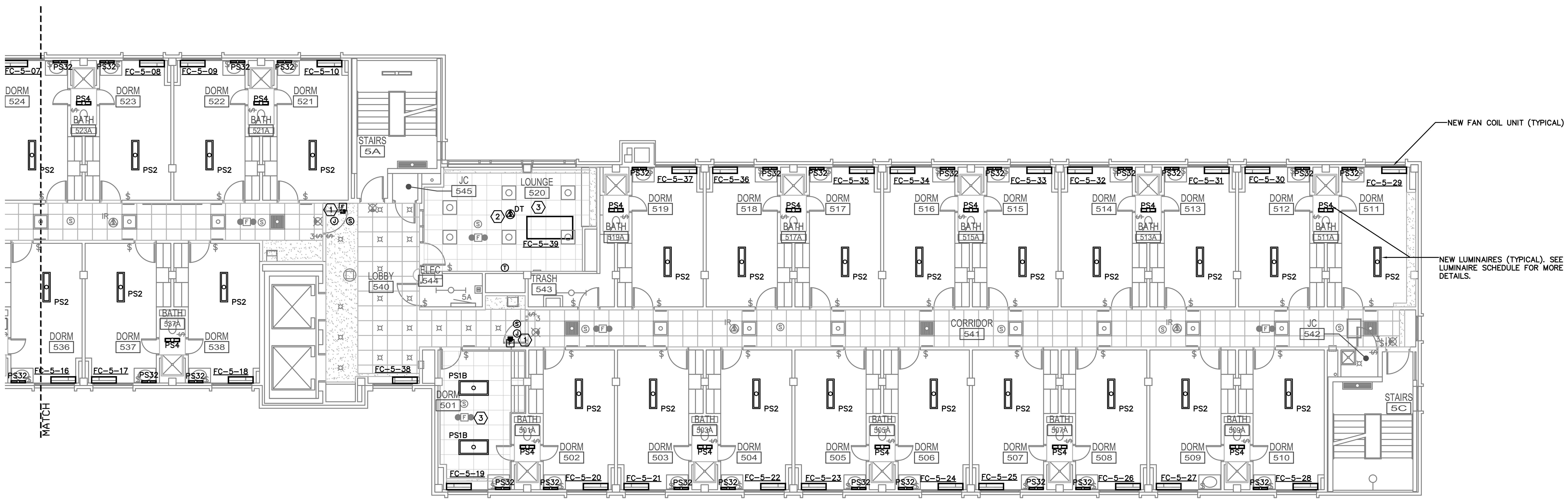

ELECTRIC - FIFTH FLOOR

SCALE: 1/8" = 1' - 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

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STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC
FIFTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
E105

15054E105.dwg

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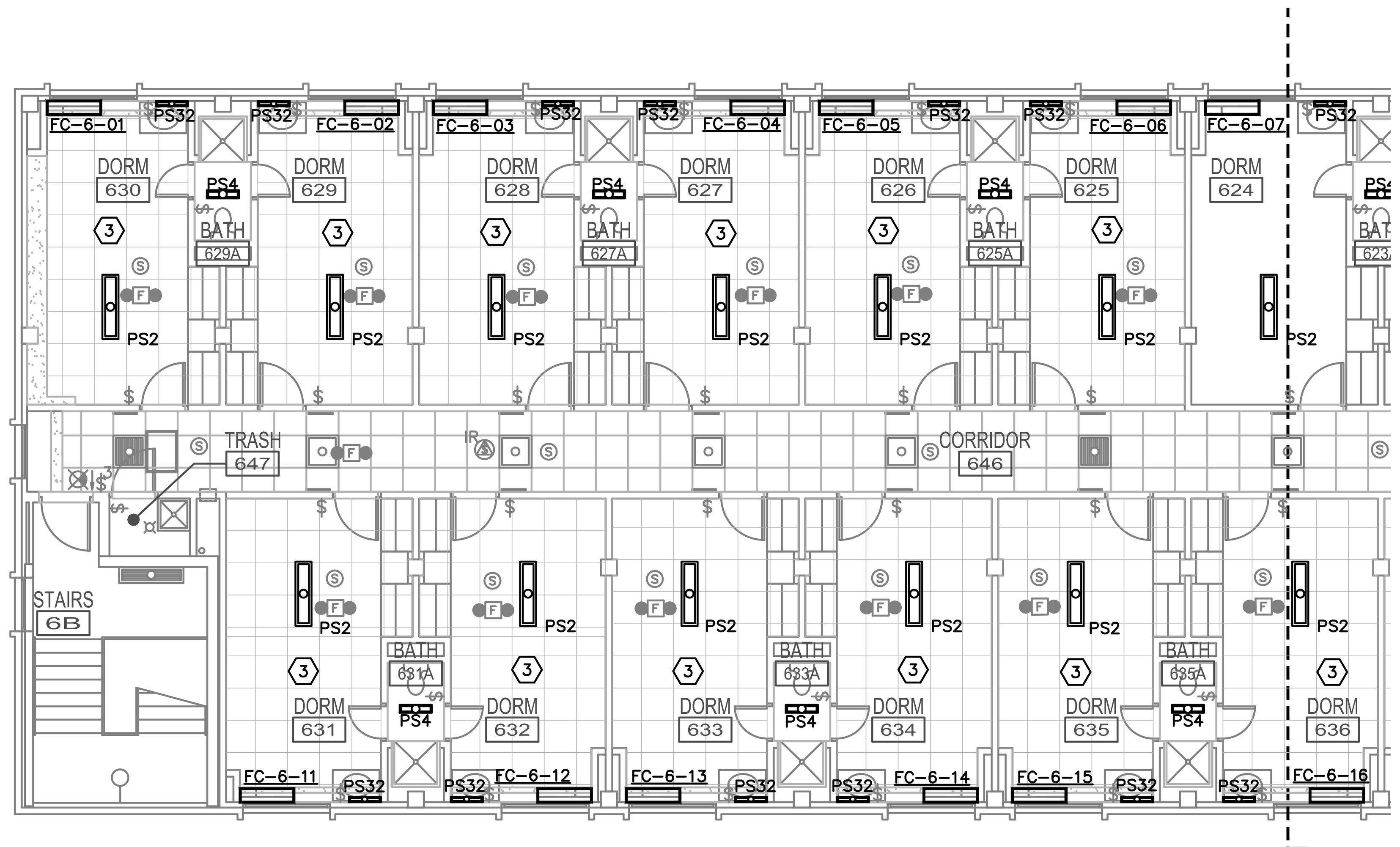
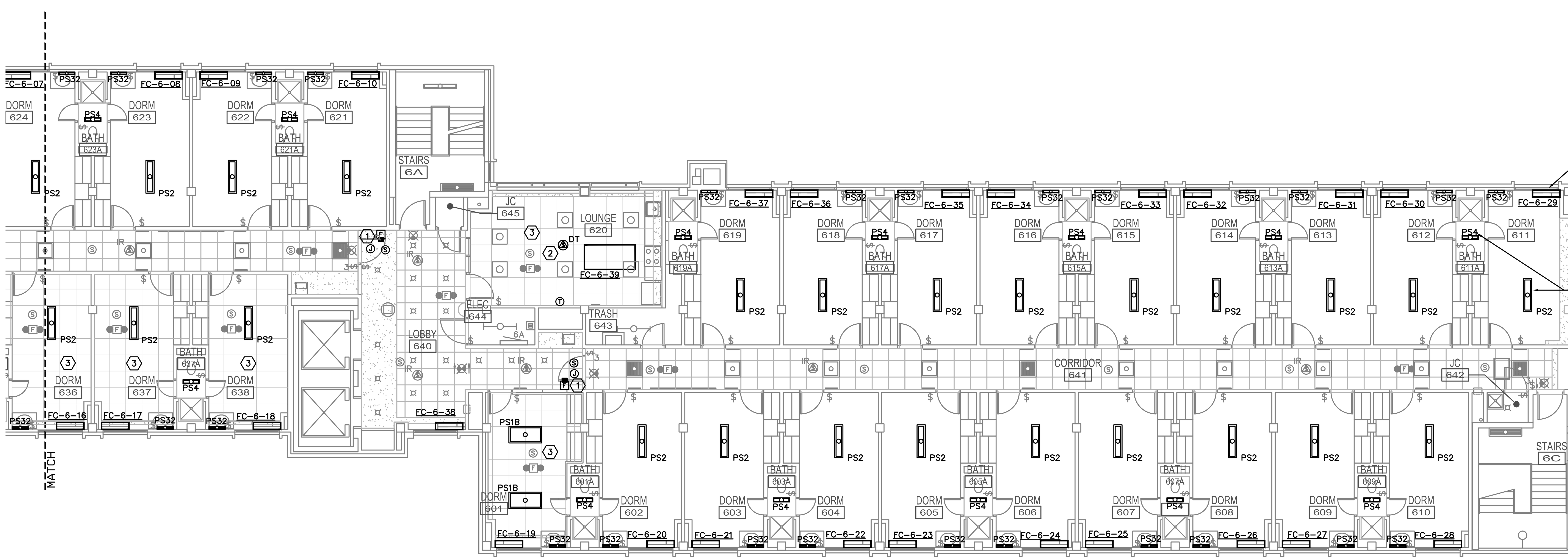


ELECTRIC - SIXTH FLOOR

SCALE: 1/8" = 1' - 0"



NEW FAN COIL UNIT (TYPICAL)

NEW LUMINAIRES (TYPICAL). SEE LUMINAIRE SCHEDULE FOR MORE DETAILS.

ELECTRIC - SIXTH FLOOR

SCALE: 1/8" = 1' - 0"

NEW WORK GENERAL NOTES

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NEW WORK KEYED NOTES

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STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC
SIXTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
E106

HVAC ELECTRICAL COORDINATION SCHEDULE (HECS)-1

ABBREVIATIONS		CONTRACTOR TYPE		MOTOR CONTROL TYPE		CONTROL TYPE	
DC	LOCAL DISCONNECT	EC	ELECTRICAL CONTRACTOR	CS	COMBINATION STARTER	TC	TIMECLOCK
MC	MOTOR CONTROL (POWER)	EX	EXISTING	MCC	MOTOR CONTROL CENTER	CPT	CONTROL POWER TRANSFORMER
SD	DUCT SMOKE DETECTOR	FC	FIRE PROTECTION CONTRACTOR	MG	MAGNETIC STARTER OR CONTACT	BAS	BUILDING AUTOMATION SYSTEM
CN	CONTROLS	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS
TS	TOGGLE SWITCH	HC	HVAC CONTRACTOR	VFD	VARIABLE FREQUENCY DRIVE	LINE	LINE VOLTAGE CONTROLS
C/B	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD	MFR	MANUFACTURER	MSR	MANUAL STARTER W/CONTROL RELAY	RLINE	REVERSE ACTING LINE VOLTAGE STAT
FUSE	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)	PC	PLUMBING CONTRACTOR	OV	OVERCURRENT PROTECTION	MAN	MANUAL
FLA	OPERATING FULL LOAD AMPS	OR	OWNER OR OTHERS			FA	FIRE ALARM
MCA	MINIMUM CIRCUIT AMPACITY					CO	CARBON MONOXIDE SENSOR
CP	CORD AND PLUG CONNECTION					INT	INTEGRAL TO EQUIPMENT

MARK	DESCRIPTION	STATUS	VOLTS	PHASE	EMERG	BHP	HP	HTG KW	WATTS	FLA	MCA	OCP	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SD QUAN
FC-1-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
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FC-1-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-1-33A	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-33B	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
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FC-1-34B	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-41	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-42B	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
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FC-2-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
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FC-2-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
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FC-2-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
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FC-2-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
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FC-2-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
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FC-2-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-37	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-41	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-3-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-36	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-37	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0

HVAC ELECTRICAL COORDINATION SCHEDULE (HECS)-2

MARK	DESCRIPTION	STATUS	VOLTS	PHASE	EMERG	BHP	HP	HTG KW	WATTS	FLA	MCA	OCP	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SD QUAN
FC-3-38	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-39	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-4-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-36	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-37	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-38	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-39	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-5-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-36	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-37	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-38	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-39	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-6-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-36	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-37	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-38	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0

SEE CONTINUATION OF
HECS ON SHEET E201

ELECTRIC - SCHEDULES

KUHLMAN HALL RENOVATION
PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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STEPHEN N. FEDERLE
E-76032
3/14/2014

DRAWN BY: DTJ
CHECKED BY: SNF

ELECTRIC
SCHEDULES

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
E200

0'-2" REFERENCE LINE

G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054E200.DWG

4/26/2014 2:30 PM

LUMINAIRE SCHEDULE

ALL SHADED LUMINAIRES ON DRAWINGS SHALL BE PROVIDED WITH A 1400 LUMEN BATTERY OR SHALL BE CIRCUITED THROUGH AN UL924 LISTED EQUIVALENT INVERTER SYSTEM

TYPE	DESCRIPTION	MANUFACTURER / SERIES	SIZE	HOUSING / MOUNTING	MATERIAL	LAMP	LENS DESCRIPTION	BALLAST / DRIVER	COMMENTS	FINISH	VOLTS	INPUT WATTS
PS1A	RECESSED VOLUMETRIC	LITHONIA 2VTL OR APPROVED EQUAL	24"X24"X3-3/4"	RECESSED	STEEL	(1) 41.5W LED, 3500K, 82+ CRI, 4000 LUMENS	ACRYLIC LINEAR PRISMATIC DIFFUSER	INTEGRAL ELECTRONIC DRIVER	EXTEND / MODIFY EXISTING CIRCUITING TO ACCOMMODATE NEW LUMINAIRE.	WHITE	MULTIPLE	41.5
PS1B	RECESSED VOLUMETRIC	LITHONIA 2VTL4 OR APPROVED EQUAL	24"X48"X3-3/4"	RECESSED	STEEL	(1) 47W LED, 3000K, 82+ CRI, 4800 LUMENS	ACRYLIC LINEAR PRISMATIC DIFFUSER	INTEGRAL ELECTRONIC DRIVER	EXTEND / MODIFY EXISTING CIRCUITING TO ACCOMMODATE NEW LUMINAIRE.	WHITE	MULTIPLE	47
PS2	SURFACE VOLUMETRIC	LITHONIA STL OR APPROVED EQUAL	48"X12-1/4"X4-3/4"	WALL/SURFACE	STEEL	(1) 50W LED, 3000K, 82+ CRI, 4800 LUMENS	LINEAR FACETED REFRACTOR	INTEGRAL ELECTRONIC DRIVER	COORDINATE EXACT MOUNTING IN FIELD. UTILIZE EXISTING JUNCTION BOX AND CIRCUITING.	WHITE	120V 1P 2W	50
PS4	BATHROOM LIGHT	MILLENIUM STRETCH MLHA5 OR EQUAL BY NEWSTAR LIGHTING OR APPROVED EQUAL	5"X24"	CEILING	MARINE GRADE ALUMINUM	(1) 25W LED, 3000K, 80+ CRI, 2000 LUMENS	PEARLESCENT POLYCARBONATE LENS. PROVIDE LENS THAT CLEANS EASILY (TO BE LOCATED IN SHOWER / BATHROOM).	INTEGRAL ELECTRONIC DRIVER	WET LISTED. FLAT END CAP. COORDINATE EXACT MOUNTING IN FIELD WITH OWNER. UTILIZE EXISTING JUNCTION BOX AND CIRCUITING.	MATTE WHITE	MULTIPLE	25
PS5	DOWNLIGHT	PRESCOLITE LITEFRAME LC6LED OR APPROVED EQUAL	14"X9-1/8"X5-3/4"	CEILING	STEEL	(1) 25W LED, 3500K, 80+ CRI, 1000 LUMENS	CLEAR ALZACK SEMI-DIFFUSE REFLECTOR	INTEGRAL ELECTRONIC DRIVER	EXTEND / MODIFY EXISTING CIRCUITING TO ACCOMMODATE NEW LUMINAIRE.	WHITE	120V 1P 2W	25
PS5S	SHOWER DOWNLIGHT	PRESCOLITE LITEFRAME LC6LED OR APPROVED EQUAL	14"X9-1/8"X5-3/4"	CEILING	STEEL	(1) 25W LED, 3500K, 80+ CRI, 1000 LUMENS	PROVIDE LENS AND GASKETING FOR USE IN SHOWER.	INTEGRAL ELECTRONIC DRIVER	EXTEND / MODIFY EXISTING CIRCUITING TO ACCOMMODATE NEW LUMINAIRE.	WHITE	120V 1P 2W	25
PS6	LENSED STRIP LIGHT	LITHONIA ZL2N OR APPROVED EQUAL	48"X3-3/8"X3-1/4"	CEILING	STEEL	(1) 32W LED, 3500K, 80+ CRI, 2,000 LUMENS	MEDIUM DIFFUSE LENS	INTEGRAL ELECTRONIC DRIVER	EXTEND / MODIFY EXISTING CIRCUITING TO ACCOMMODATE NEW LUMINAIRE.	WHITE	120V 1P 2W	32
PS8	WALL BRACKET & SURFACE MOUNT	LITHONIA WL OR APPROVED EQUAL	51"X3-7/8"X4-3/4"	WALL/SURFACE	STEEL	(1) 43W LED, 3500K, 82+ CRI, 4100 LUMENS	HIGH IMPACT ACRYLIC DIFFUSER WITH LIGHT DIFFUSING FILM	INTEGRAL ELECTRONIC DRIVER	DUAL TECHNOLOGY INTEGRAL OCCUPANCY CONTROL, COORDINATE EXACT MOUNTING IN FIELD. UTILIZE EXISTING JUNCTION BOX AND CIRCUITING.	WHITE	120V 1P 2W	43
PS32	OVER MIRROR	DECO DIGITAL DWB-LED UD OR APPROVED EQUAL	24"X3-1/32"X7-13/16"	WALL/SURFACE	STEEL	(1) 22W LED, 3000K, 82+ CRI, 2175 LUMENS	INJECTION MOLDED REFRACTOR	INTEGRAL ELECTRONIC DRIVER	UL LISTED FOR DAMP LOCATIONS. COORDINATE EXACT MOUNTING IN FIELD. UTILIZE EXISTING JUNCTION BOX AND CIRCUITING.	WHITE	MULTIPLE	22

GENERAL NOTES
A. DETAILS IN COMMENTS SECTION OF LUMINAIRE SCHEDULE SHALL APPLY IN ADDITION TO CATALOG SERIES.
B. LAMP, BALLAST AND TRANSFORMER INFORMATION IN SPECIFICATION SHALL APPLY IN ADDITION TO INFORMATION IN LUMINAIRE SCHEDULE.
E. ALL RECESSED TROFFER HOUSINGS CONSTRUCTED WITHOUT ROLLED EDGES SHALL BE POST PAINTED.
F. ALL RECESSED TROFFER DOOR FRAMES SHALL BE SECURED WITH SPRING LATCHES.
G. VERIFY LUMINAIRE, LAMP AND VOLTAGE COMPATIBILITY.
I. LENS DIMENSION REFERS TO OVERALL THICKNESS, MAXIMUM PENETRATION OF PRISM TO BE .080".
J. PROVIDE PLASTER FRAMES, WALL BRACKETS, SUPPORTS, OR OTHER APPURTENANCES AS REQUIRED FOR PROPER INSTALLATION. PLASTIC SHIPPING BAGS SHALL REMAIN ON THE LUMINAIRES UNTIL INTERIOR WORK HAS BEEN COMPLETED.
K. ALL LUMINAIRES HAVE A STATIC AIR FUNCTION, UNLESS OTHERWISE NOTED.
L. ALL LUMINAIRES ARE NON-IC, UNLESS OTHERWISE NOTED.
M. ALL LUMINAIRES ARE U.L. DAMP LISTED, UNLESS OTHERWISE NOTED.
N. MOUNTING HEIGHTS INDICATED ARE TO THE BOTTOM OF THE LUMINAIRE, UNLESS OTHERWISE NOTED.
P. REFER TO DIVISION 26 LUMINAIRE SPECIFICATIONS FOR BATTERY BALLAST SPECIFICATIONS.

CONTINUATION OF HECS FROM SHEET E200

HVAC ELECTRICAL COORDINATION SCHEDULE (HECS)-3

MARK	DESCRIPTION	STATUS	VOLTS	PHASE	EMERG	BHP	HP	HTG KW	WATTS	FLA	MCA	OCP	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SD QUAN
FC-6-39	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-11	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-G-26	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-29	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0

MSB LOAD SUMMARY

EXISTING CALCULATED DEMAND: 378KVA
REMOVED DEMAND FROM FAN COIL UNITS: 2.2KVA
REMOVED LIGHTING LOAD: 31.4KVA
ADDED LIGHTING LOAD: 28.1KVA

NEW TOTAL CALCULATED DEMAND: 372.5KVA
NEW TOTAL CALCULATED DEMAND AMPS: 1035A @ 208V 3 PHASE

THEREFORE THE EXISTING MSB IS ADEQUATE.

FC

ROOM ROOM G23 — VOLTS 208Y/120V 3P 4W — AIC REFER TO SINGLE-LINE DIAGRAM
MOUNTING REFER TO SINGLE-LINE DIAGRAM — BUS AMPS REFER TO SINGLE-LINE DIAGRAM — MAIN REFER TO SINGLE-LINE DIAGRAM
FED FROM MSB — NEUTRAL REFER TO SINGLE-LINE DIAGRAM — LUGS REFER TO SINGLE-LINE DIAGRAM
NOTE

CKT #	CKT BKR	CIRCUIT DESCRIPTION	KVA LOAD A	KVA LOAD B	KVA LOAD C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	KVA LOAD A	KVA LOAD B	KVA LOAD C
1	20/1	FC-1-22, 1-23, 1-24, 2-27, 2-28, 2-29, 3-29, 3-30, 3-31, 4-29, 5-29, 6-19, 6-29, G-01	1.3			2	20/1	FC-1-04, 2-38, 2-39, 2-40A, 2-40B, 3-08, 3-09, 3-10, 4-09, 4-10, 5-10, 6-10	1.68		
3	20/1	FC-4-30, 4-31, 5-30, 5-31, 6-30, 6-31		0.558		4	20/1	FC-4-08, 5-08, 5-09, 6-08, 6-09		0.465	
5	20/1	FC-1-25, 1-26, 2-30, 2-31, 3-32, 3-33, 4-32, 4-33, 5-32, 5-33, 6-32, 6-33			1.12	6	20/1	FC-1-32, 1-33A, 1-33B, 1-34, 1-34B, 1-41, 2-08, 3-06, 3-07, 4-06, 4-07, 5-06, 5-07, 6-06, 6-07			1.77
7	20/1	FC-1-27, 1-28, 2-32, 2-33, 3-34, 3-35, 4-22, 4-34, 4-35, 5-34, 5-35, 6-34, 6-35	1.21			8	20/1	FC-1-02, 1-03, 1-39A, 1-39B, 1-40, 1-46, 1-47, 2-06, 2-07, 3-04, 3-05, 4-04, 4-05, 5-04, 5-05, 6-04, 6-05, G-23	1.86		
9	20/1	FC-1-29, 1-30, 2-34, 2-35, 3-36, 3-37, 4-36, 4-37, 5-36, 5-37, 6-36, 6-37, G-06		1.21		10	20/1	FC-1-01, 1-05, 2-04, 2-05, 3-02, 3-03, 4-02, 4-03, 5-02, 5-03, 6-02, 6-03, G-24		1.3	
11	20/1	FC-1-21, 2-26, 3-28, 4-28, 5-28, 6-28			0.558	12	20/1	FC-1-06, 2-03, 3-01, 4-01, 5-01, 6-01			0.558
13	20/1	FC-1-19, 1-20, 2-24, 2-25, 3-26, 3-27, 4-26, 4-27, 5-26, 5-27, 6-26, 6-27, G-07, G-08	1.3			14	20/1	FC-1-07, 2-02, 3-11, 4-11, 5-11, 6-11	0.558		
15	20/1	FC-1-17, 1-18, 2-22, 2-23, 3-24, 3-25, 4-24, 4-25, 5-24, 5-25, 6-24, 6-25, G-09, G-10		1.3		16	20/1	FC-1-08, 1-09, 2-01, 2-09, 3-12, 3-13, 4-12, 4-13, 5-12, 5-13, 6-12, 6-13		1.12	
17	20/1	FC-1-15, 1-16, 2-20, 2-21, 3-22, 3-23, 4-23, 5-22, 5-23, 6-22, 6-23, G-04, G-05			1.21	18	20/1	FC-1-10, 1-11, 2-10, 2-11, 3-14, 3-15, 4-14, 4-15, 5-14, 5-15, 6-14, 6-15			1.12
19	20/1	FC-1-12, 1-13, 1-14, 2-17, 2-18, 2-19, 3-19, 3-20, 3-21, 4-19, 4-20, 4-21, 5-19, 5-20, 5-21, 6-20, 6-21, G-02, G-03	1.77			20	20/1	FC-1-31, 2-12, 2-13, 2-15, 3-16, 3-17, 4-16, 4-17, 5-16, 5-17, 6-16, 6-17	1.12		
21	20/1	SPARE		0		22	20/1	FC-2-14, 2-16, 3-18, 4-18, 5-18, 6-18		0.558	
23	20/1	FC-1-42A, 1-42B, 1-43, 2-37, 3-38, 4-38, 5-38, 6-38, G-19			1.5	24	20/1	FC-1-45, 3-41, 4-41, 5-41, 6-41, G-28			0.652
25	20/1	FC-2-41, 3-39, 4-39, 5-39, 6-39	1.87			26	20/1	SPARE	0		
27	20/1	FC-G-25, G-27A, G-27B, G-27C		1.22		28	20/1	SPARE		0	
29	20/1	FC-1-44, 2-36, 3-40, 4-40, 5-40, 6-40, G-11, G-12, G-13, G-14, G-15, G-16, G-17, G-18, G-20			1.49	30	20/1	SPARE			0
31	20/1	FC-G-21, G-22, G-26, G-29	0.934			32	20/1	SPARE	0		
33	20/1	SPARE		0		34	20/1	SPARE		0	
35	20/1	SPARE			0	36	20/1	SPARE			0
37	20/1	SPARE	0			38	20/1	SPARE	0		
39	20/1	SPARE		0		40	20/1	SPARE		0	
41	20/1	SPARE			0	42	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	13.6	7.73	9.96
								TOTAL CONNECTED AMPS BY PHASE	113	64.4	83

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0	0	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	31.3	31.3	(100%)
RECEPTACLES	0	0	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
				NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	31.3	31.3	

THE EXISTING CALCULATED LOAD FOR PANEL FC WAS 33.5KVA, THEREFORE THE NEW LOAD IS LESS THAN THE EXISTING LOAD

BALANCED THREE PHASE AMPS 86.8

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
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STATE OF OHIO
STEPHEN N. FEDERLE
E-76032
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY: DTJ | CHECKED BY: SNF

ELECTRIC SCHEDULES

PROJECT NUMBER 911717

DATE APRIL 25, 2014

SHEET NO. E201

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

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	FOR BIDDING AND PERMIT	14 MAR 14
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STATE OF OHIO — STEPHEN N. FEDERLE — E-76032 — REGISTERED PROFESSIONAL ENGINEER — 3/14/2014

DRAWN BY:	CHECKED BY:
DTJ	SNF

ELECTRIC SINGLE LINE DIAGRAM

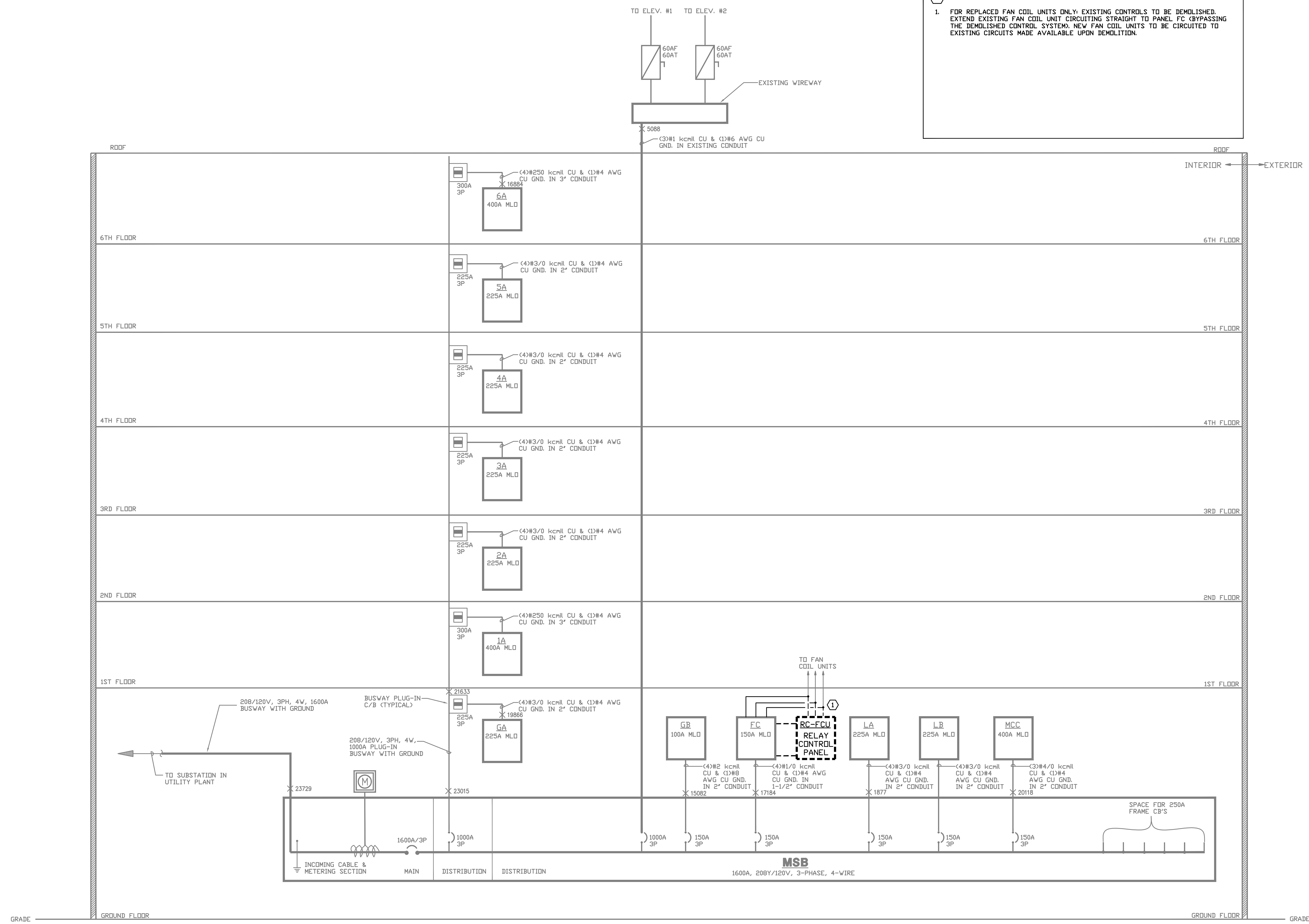
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
E300

KEYED SINGLE-LINE DIAGRAM NOTES

1. FOR REPLACED FAN COIL UNITS ONLY: EXISTING CONTROLS TO BE DEMOLISHED. EXTEND EXISTING FAN COIL UNIT CIRCUITING STRAIGHT TO PANEL FC (BYPASSING THE DEMOLISHED CONTROL SYSTEM). NEW FAN COIL UNITS TO BE CIRCUITED TO EXISTING CIRCUITS MADE AVAILABLE UPON DEMOLITION.



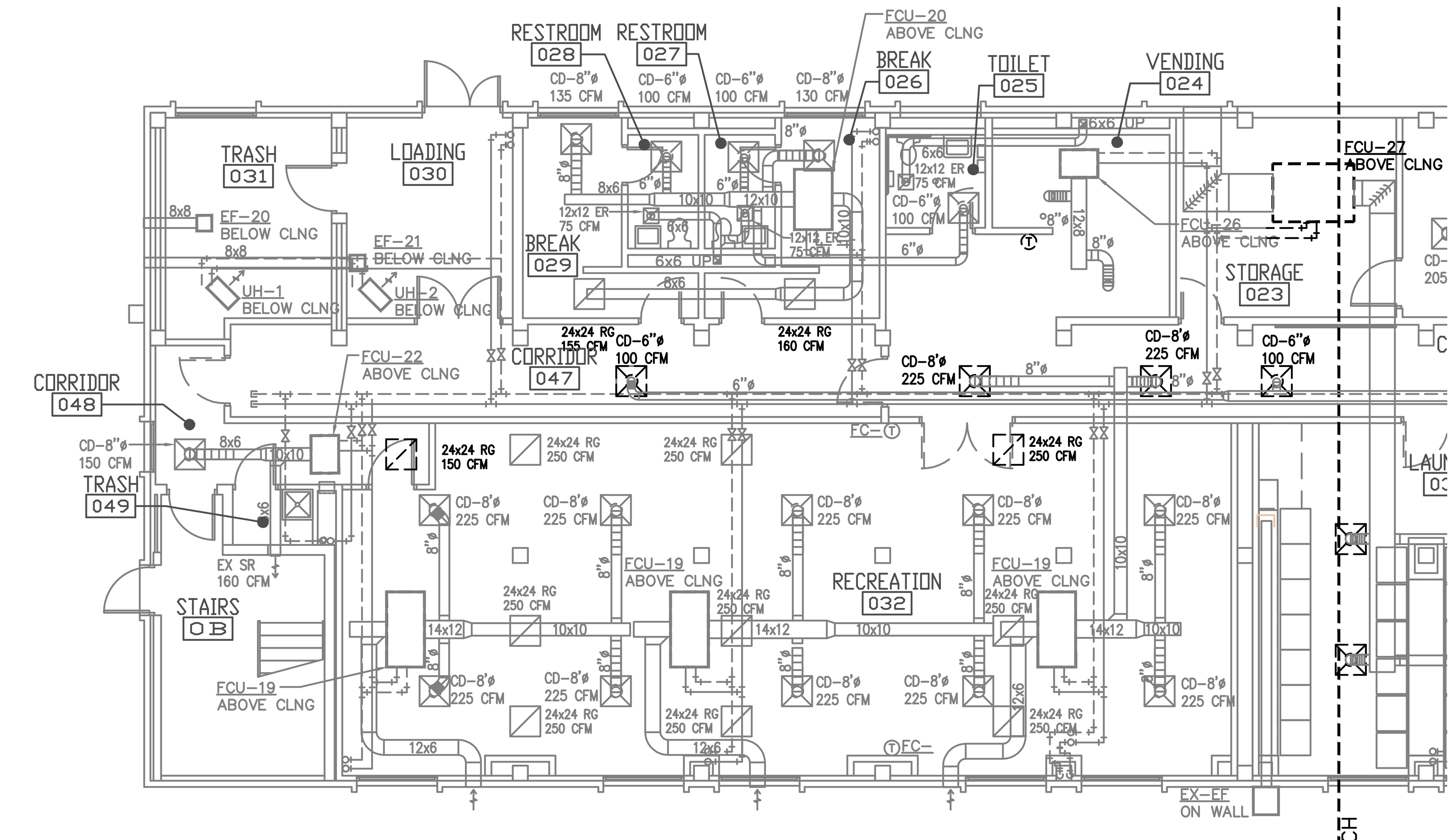
ELECTRIC - SINGLE LINE DIAGRAM

SCALE: NOT TO SCALE

0'-2" REFERENCE LINE

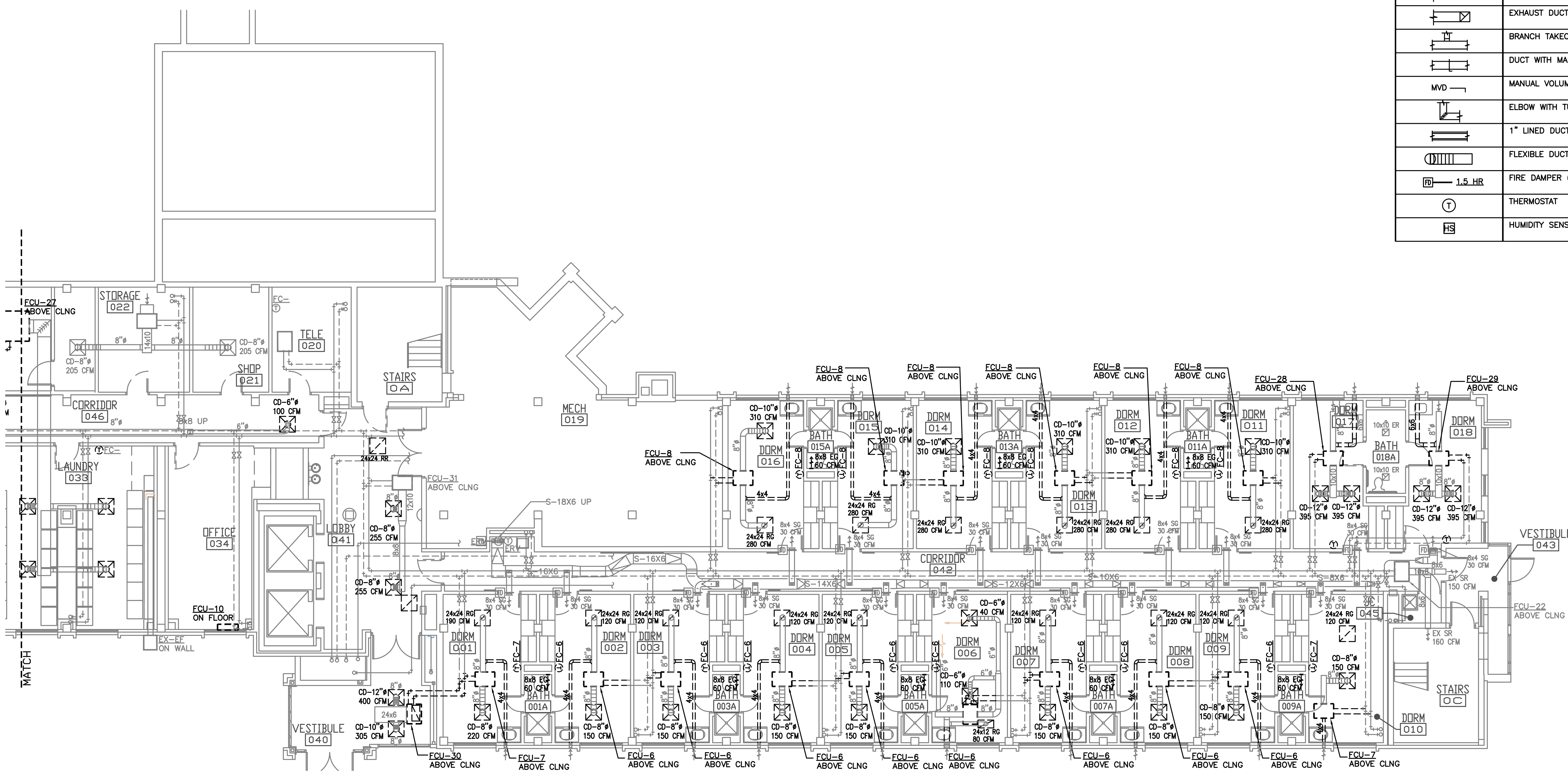
4/26/2014 2:26 PM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054E300.DWG

15054E300.dwg



H.V.A.C. - DEMOLITION - GROUND FLOOR

SCALE: 1/8" = 1' - 0"



H.V.A.C. - DEMOLITION - GROUND FLOOR

SCALE: 1/8" = 1' - 0"

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
CD	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
	PIPE ELBOW TURNED DOWN
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	DUCT WITH MANUAL DAMPER
MVD	MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	1" LINED DUCTWORK
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	THERMOSTAT
HS	HUMIDITY SENSOR

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
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XAVIER UNIVERSITY

ISSUE	REVISION	DATE
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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

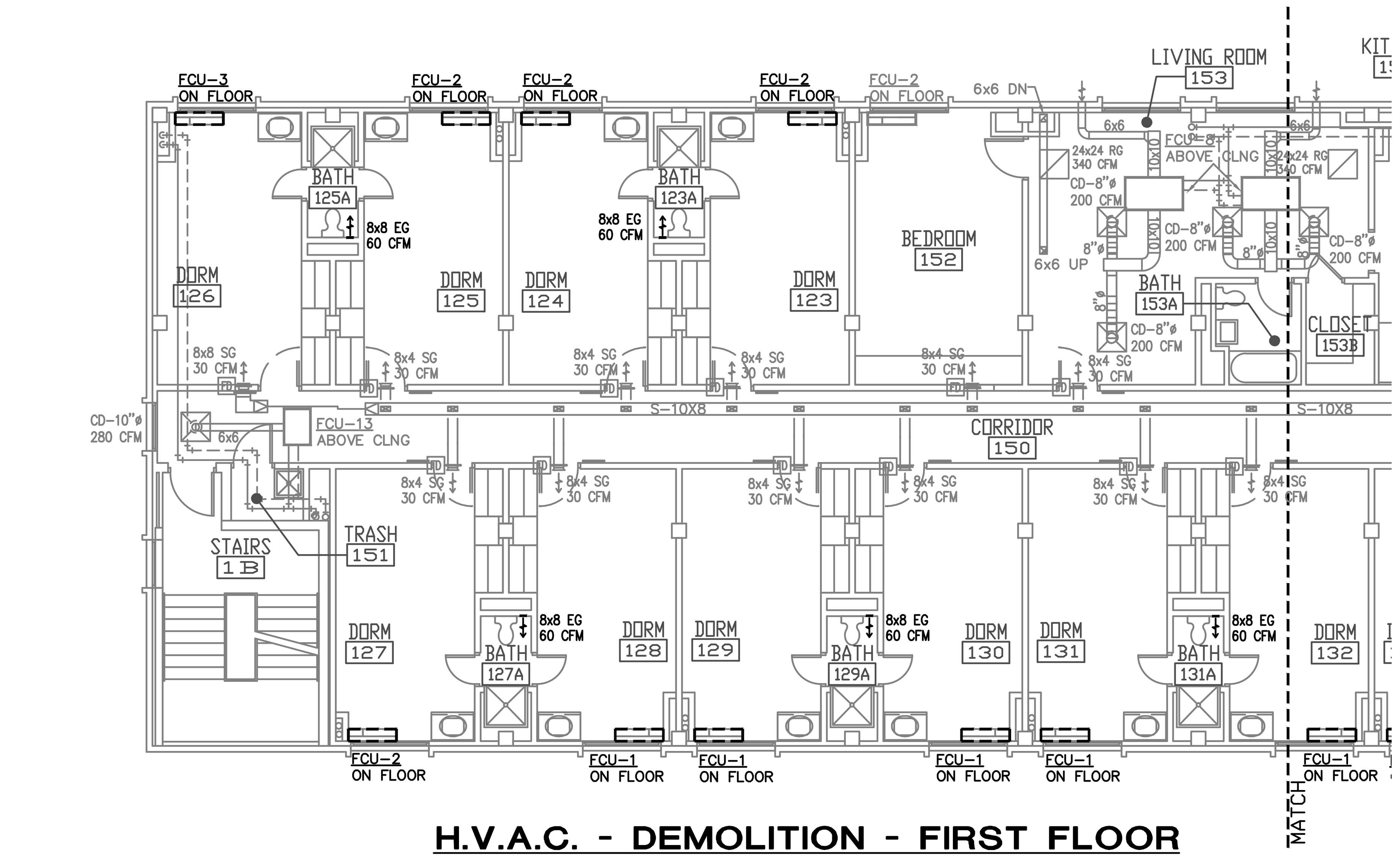
H.V.A.C. DEMOLITION GROUND FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

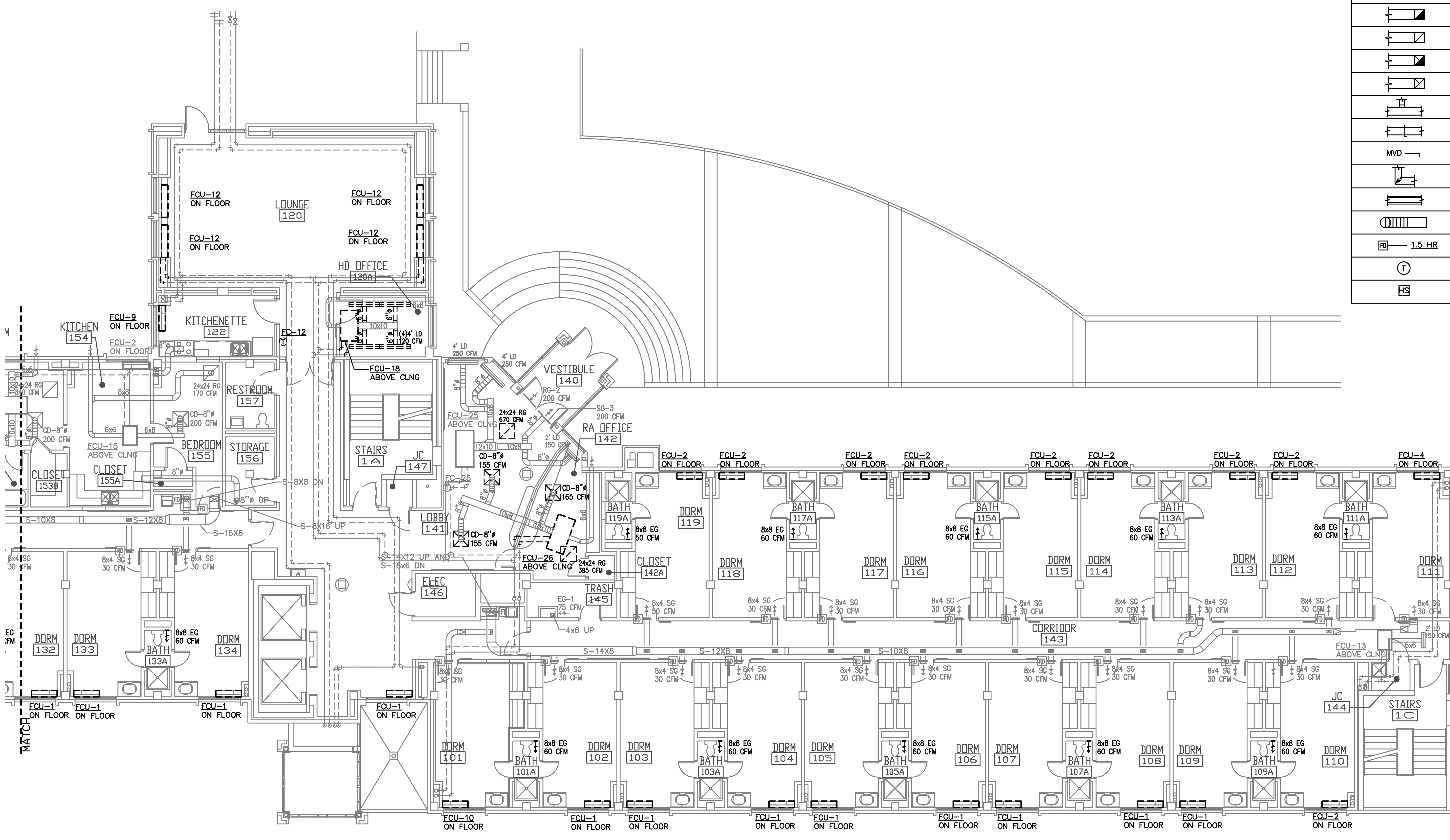
SHEET NO.
HD100

15054HD100.dwg
4/24/2014 10:18 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HD100.DWG



H.V.A.C. - DEMOLITION - FIRST FLOOR

SCALE: 1/8" = 1' – 0"



H.V.A.C. - DEMOLITION - FIRST FLOOR

SCALE: 1/8" = 1' – 0"

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
—CD—	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
	PIPE ELBOW TURNED DOWN
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	DUCT WITH MANUAL DAMPER
MVD	MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	1" LINED DUCTWORK
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	THERMOSTAT
HS	HUMIDITY SENSOR

KUHLMAN HALL RENOVATION PHASE II

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3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
DEMOLITION
FIRST FLOOR

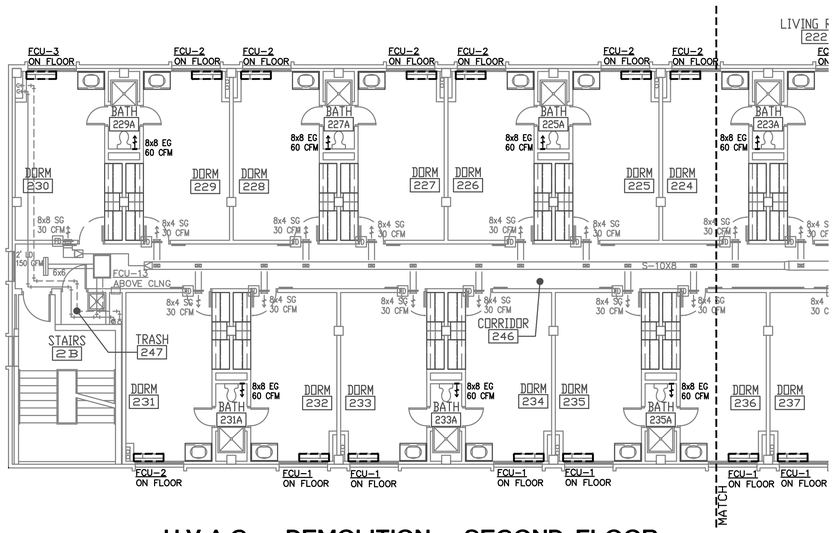
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HD101

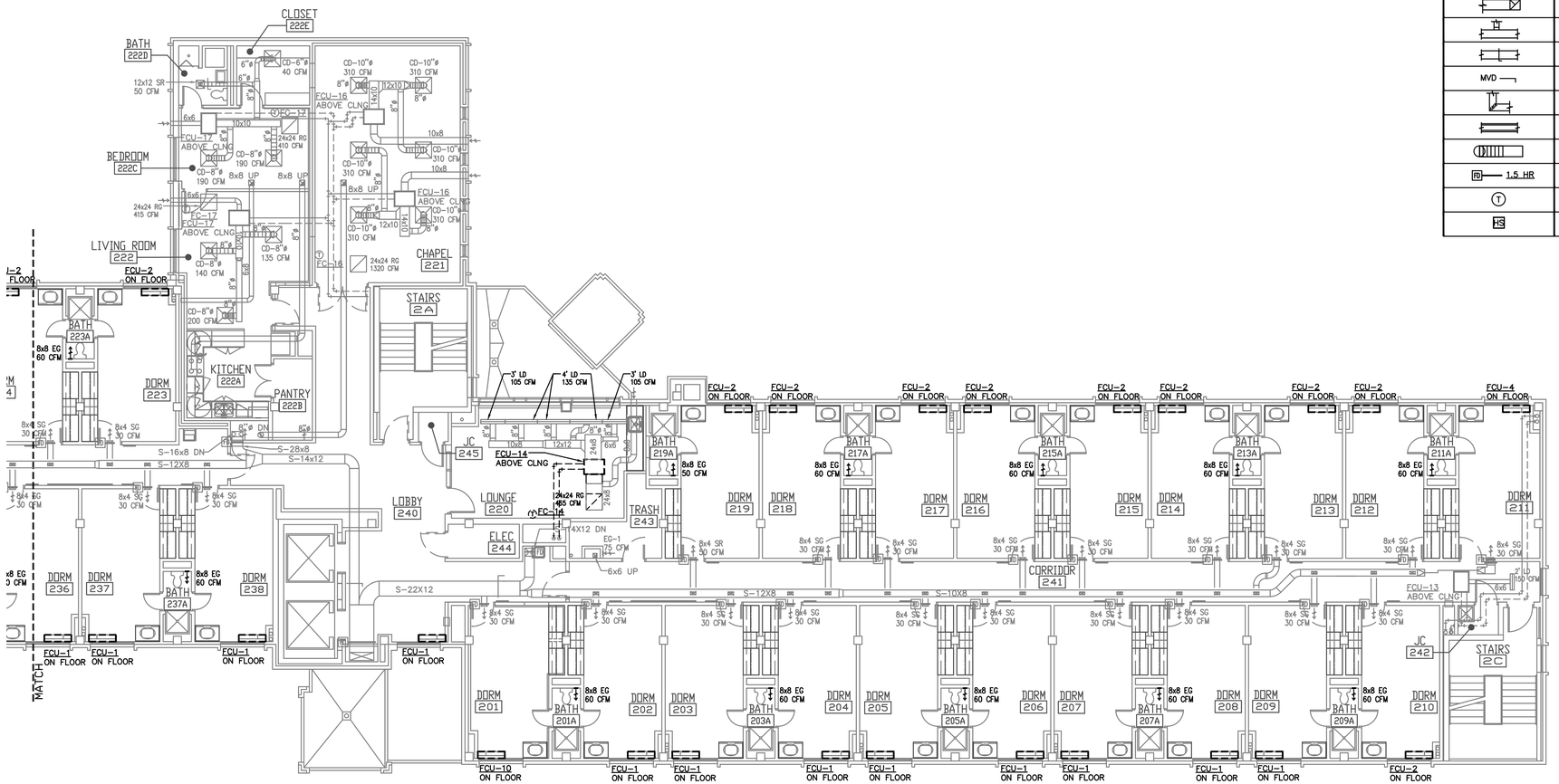
15054HD101.dwg

4/24/2014 10:27 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HD101.DWG



H.V.A.C. - DEMOLITION - SECOND FLOOR

SCALE: 1/8" = 1' - 0"



H.V.A.C. - DEMOLITION - SECOND FLOOR

SCALE: 1/8" = 1' - 0"

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
CD	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
	PIPE ELBOW TURNED DOWN
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	DUCT WITH MANUAL DAMPER
MVD	MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	1" LINED DUCTWORK
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	THERMOSTAT
HS	HUMIDITY SENSOR

KUHLMAN HALL RENOVATION PHASE II

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JOSEPH RICHARD KOHRS
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REGISTERED PROFESSIONAL ENGINEER
3/14/2014

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CJS	KTW

H.V.A.C. DEMOLITION SECOND FLOOR

PROJECT NUMBER
911717

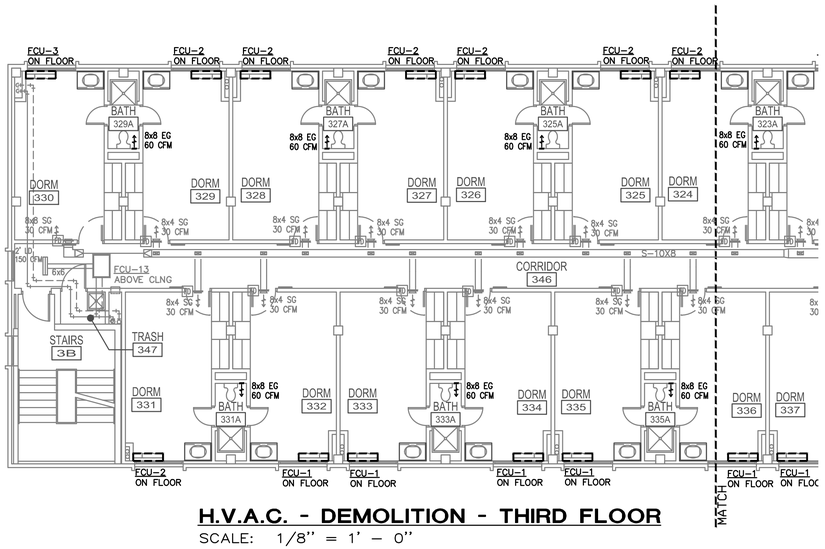
DATE
APRIL 25, 2014

SHEET NO.
HD102

15054HD102.dwg

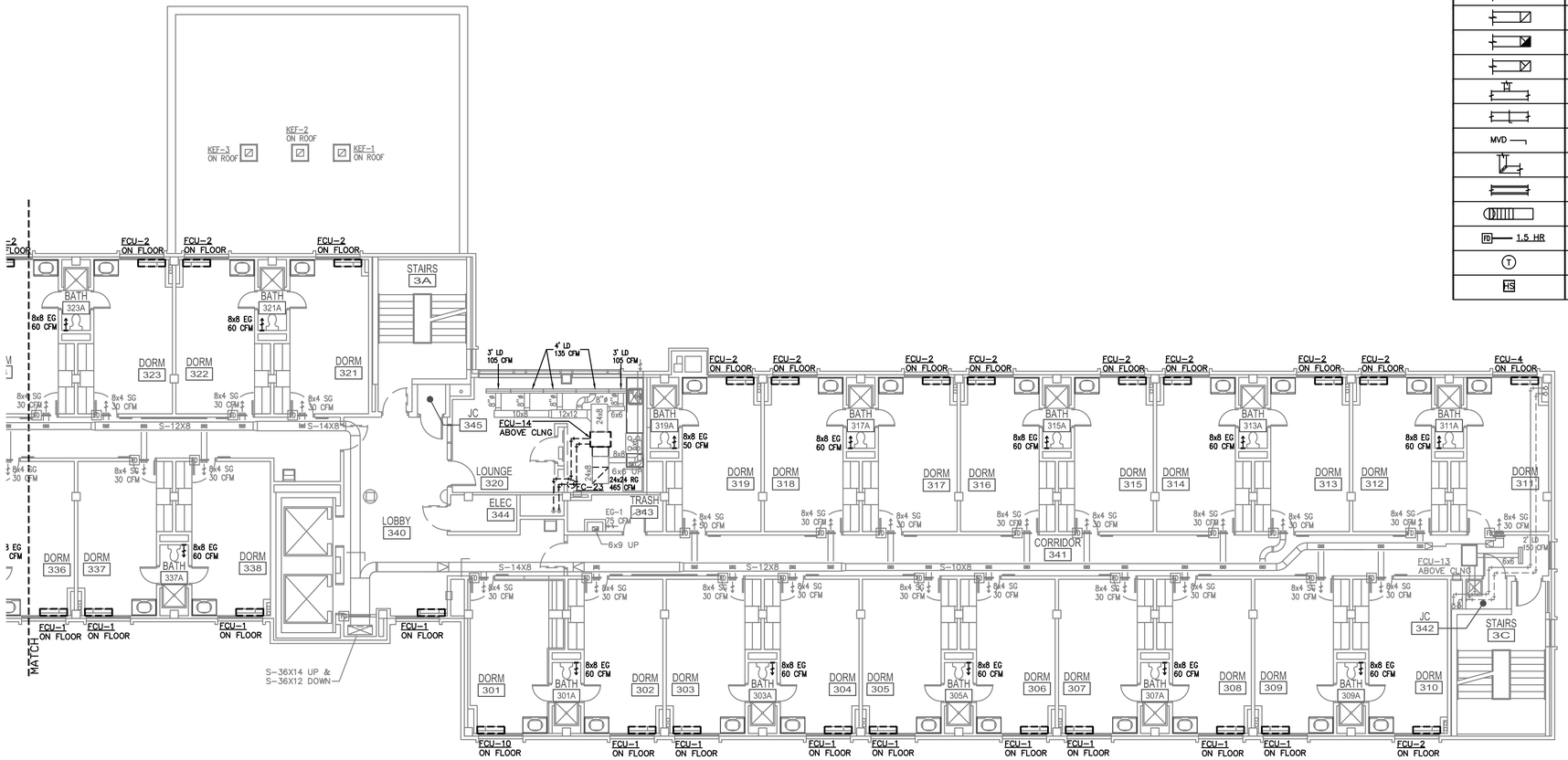
4/24/2014 10:18 AM G:\15000-15999\15000-15099\15054_ CONSTRUCTION SET\15054HD102.DWG

0'-2" REFERENCE LINE



H.V.A.C. - DEMOLITION - THIRD FLOOR

SCALE: 1/8" = 1' – 0"



H.V.A.C. - DEMOLITION - THIRD FLOOR

SCALE: 1/8" = 1' – 0"

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
CD	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
	PIPE ELBOW TURNED DOWN
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	DUCT WITH MANUAL DAMPER
MVD	MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	1" LINED DUCTWORK
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	THERMOSTAT
HS	HUMIDITY SENSOR

KUHLMAN HALL RENOVATION PHASE II

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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

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H.V.A.C. DEMOLITION THIRD FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HD103

15054HD103.dwg

0'-2" REFERENCE LINE

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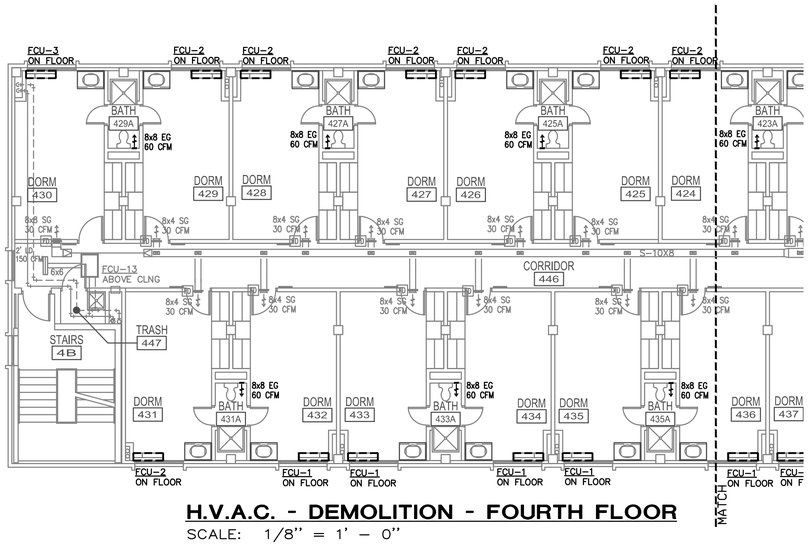
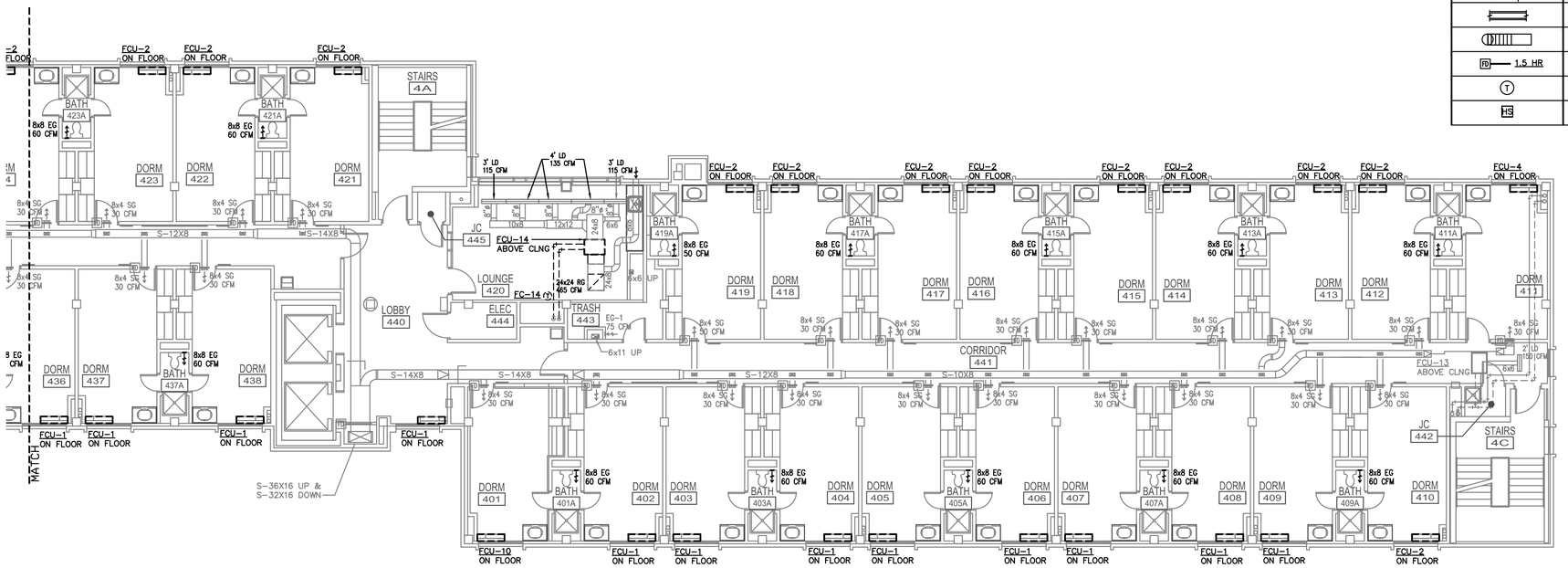


H.V.A.C. - DEMOLITION - FOURTH FLOOR

SCALE: 1/8" = 1' – 0"

HVAC SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
CD	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
	PIPE ELBOW TURNED DOWN
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	DUCT WITH MANUAL DAMPER
MVD	MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	1" LINED DUCTWORK
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	THERMOSTAT
HS	HUMIDITY SENSOR



H.V.A.C. - DEMOLITION - FOURTH FLOOR

SCALE: 1/8" = 1' – 0"

KUHLMAN HALL RENOVATION PHASE II

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STATE OF OHIO
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REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. DEMOLITION FOURTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HD104

15054HD104.dwg

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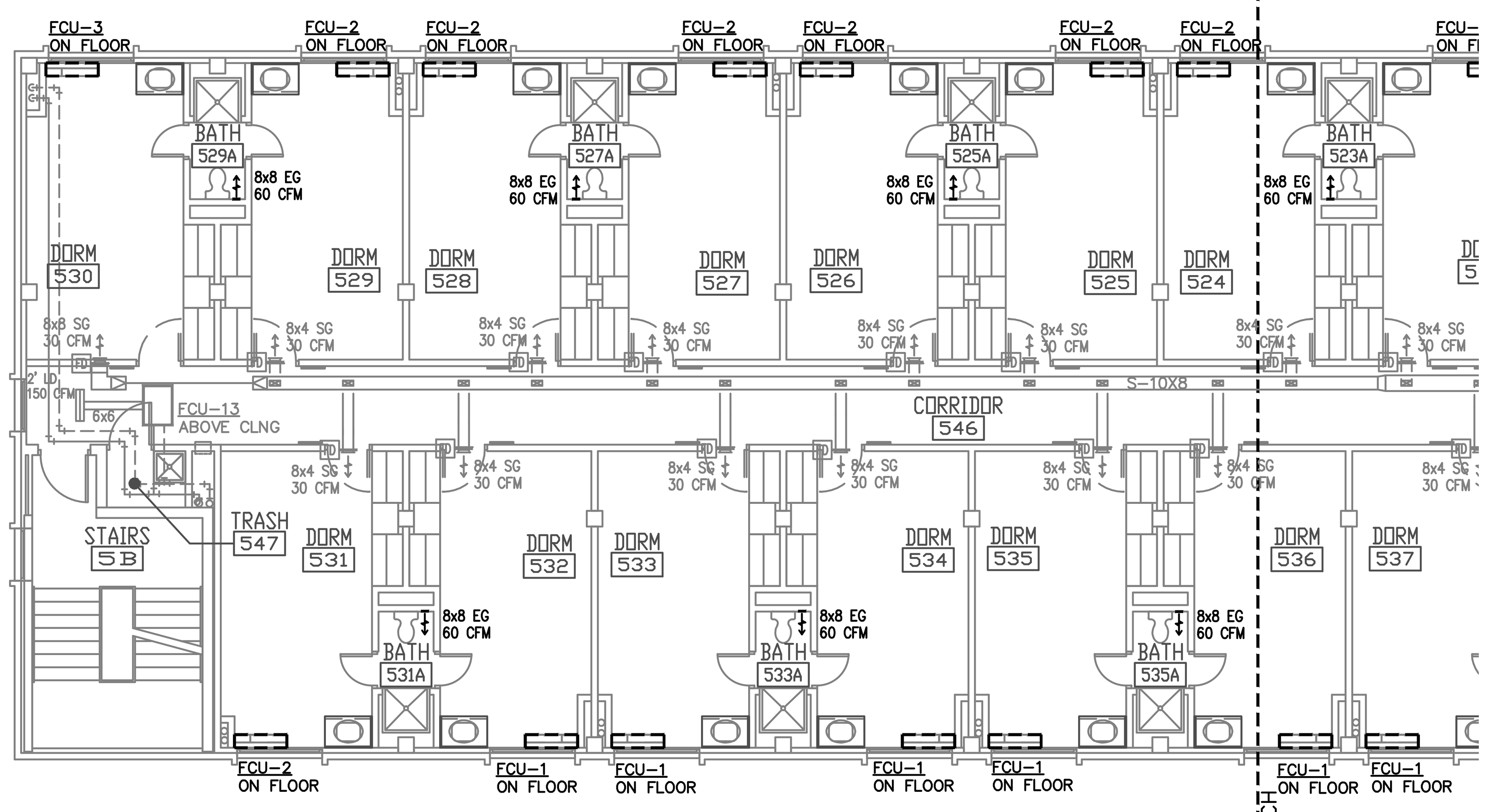
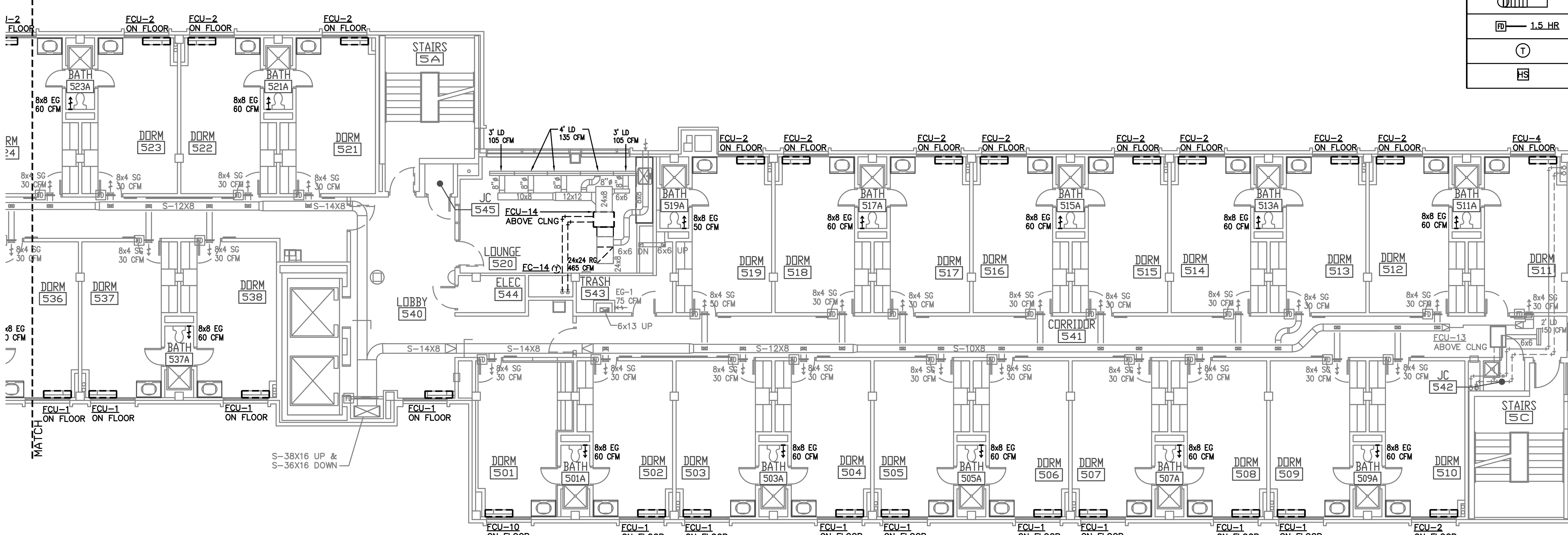


H.V.A.C. - DEMOLITION - FIFTH FLOOR

SCALE: 1/8" = 1' - 0"



H.V.A.C. - DEMOLITION - FIFTH FLOOR

SCALE: 1/8" = 1' - 0"

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
—CD—	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
	PIPE ELBOW TURNED DOWN
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	DUCT WITH MANUAL DAMPER
MVD	MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	1" LINED DUCTWORK
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	THERMOSTAT
HS	HUMIDITY SENSOR

KUHLMAN HALL RENOVATION PHASE II

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STATE OF OHIO — JOSEPH RICHARD KOHRS — E-54242 — REGISTERED PROFESSIONAL ENGINEER — 3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. DEMOLITION FIFTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HD105

15054HD105.dwg

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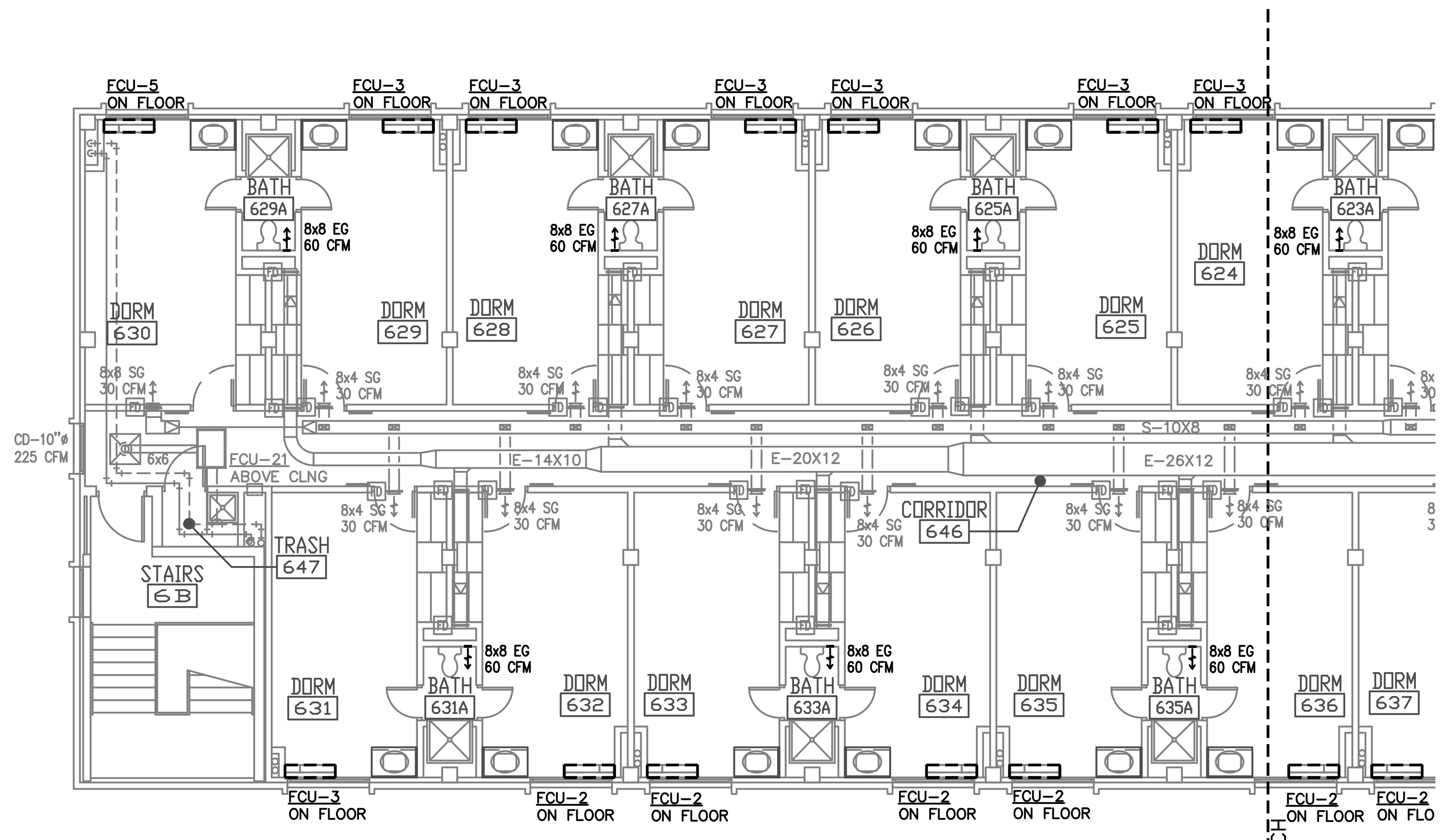
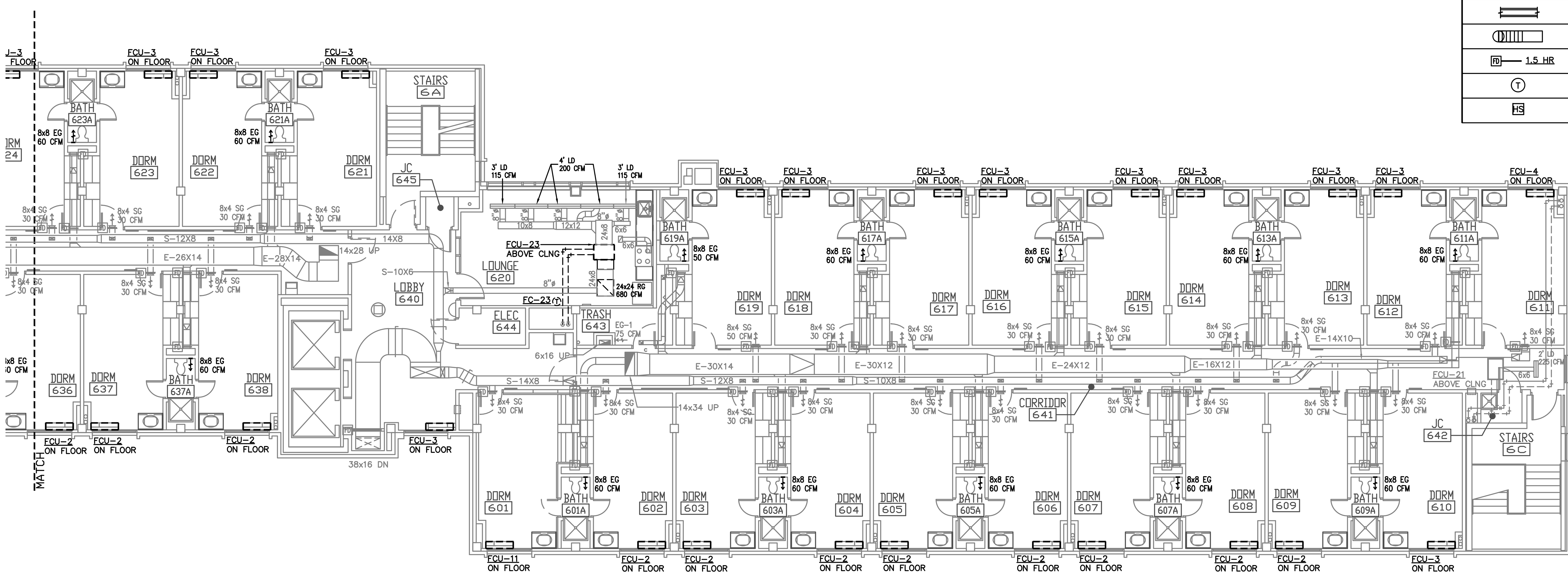


H.V.A.C. - DEMOLITION - SIXTH FLOOR

SCALE: 1/8" = 1' - 0"

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
—CD—	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
	PIPE ELBOW TURNED DOWN
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	DUCT WITH MANUAL DAMPER
MVD	MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	1" LINED DUCTWORK
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	THERMOSTAT
HS	HUMIDITY SENSOR



H.V.A.C. - DEMOLITION - SIXTH FLOOR

SCALE: 1/8" = 1' - 0"

KUHLMAN HALL RENOVATION PHASE II

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KOHRS LONNEMANN HEIL ENGINEERS, PSC
MECHANICAL/ELECTRICAL ENGINEERS

OFFICE OF PHYSICAL PLANT
XAVIER UNIVERSITY
3800 VICTORY PARKWAY
CINCINNATI, OH 45207
513-745-3151

STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
DEMOLITION
SIXTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HD106

15054HD106.dwg

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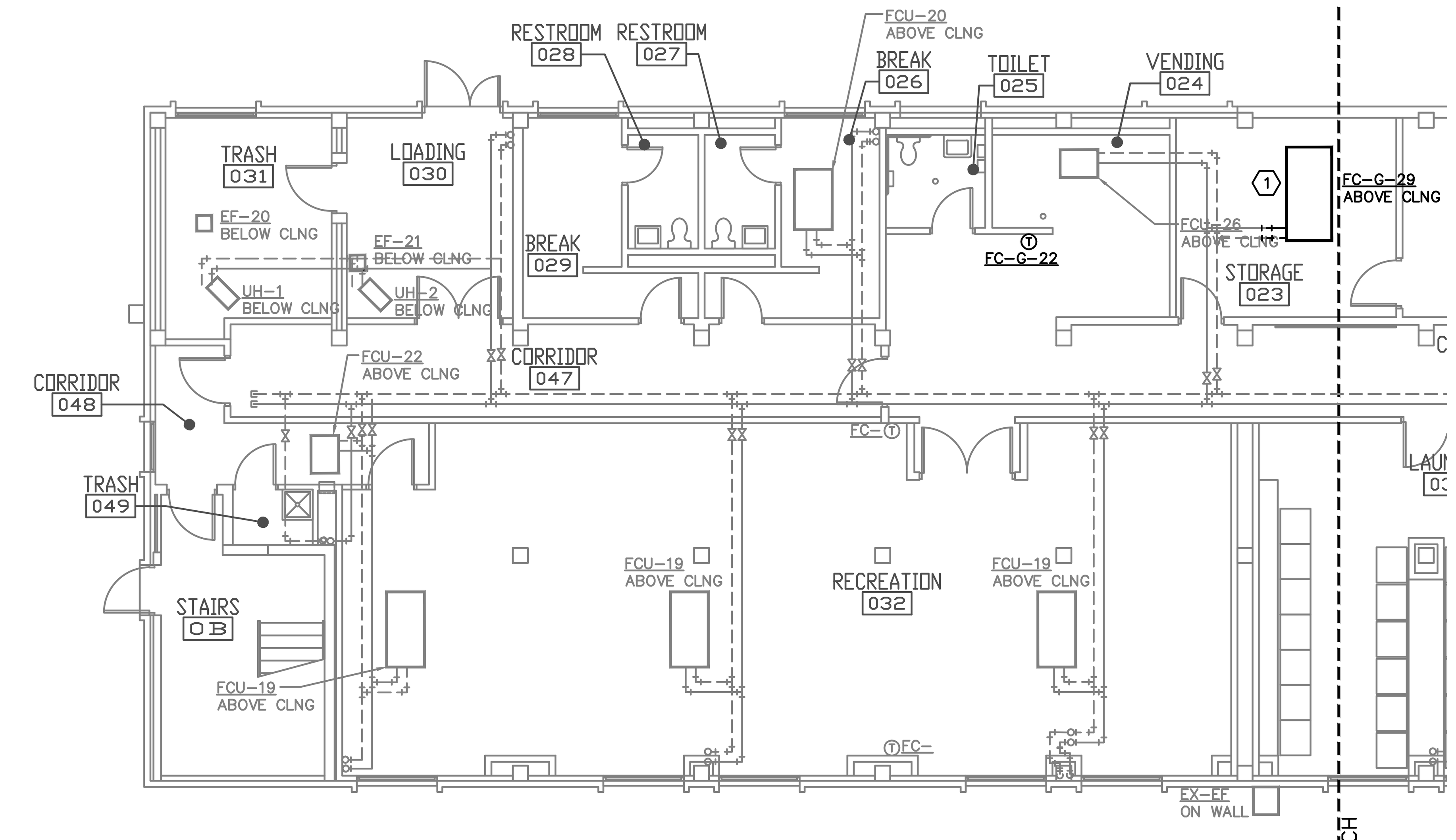


H.V.A.C. - NEW PIPING - GROUND FLOOR

SCALE: 1/8" = 1' – 0"

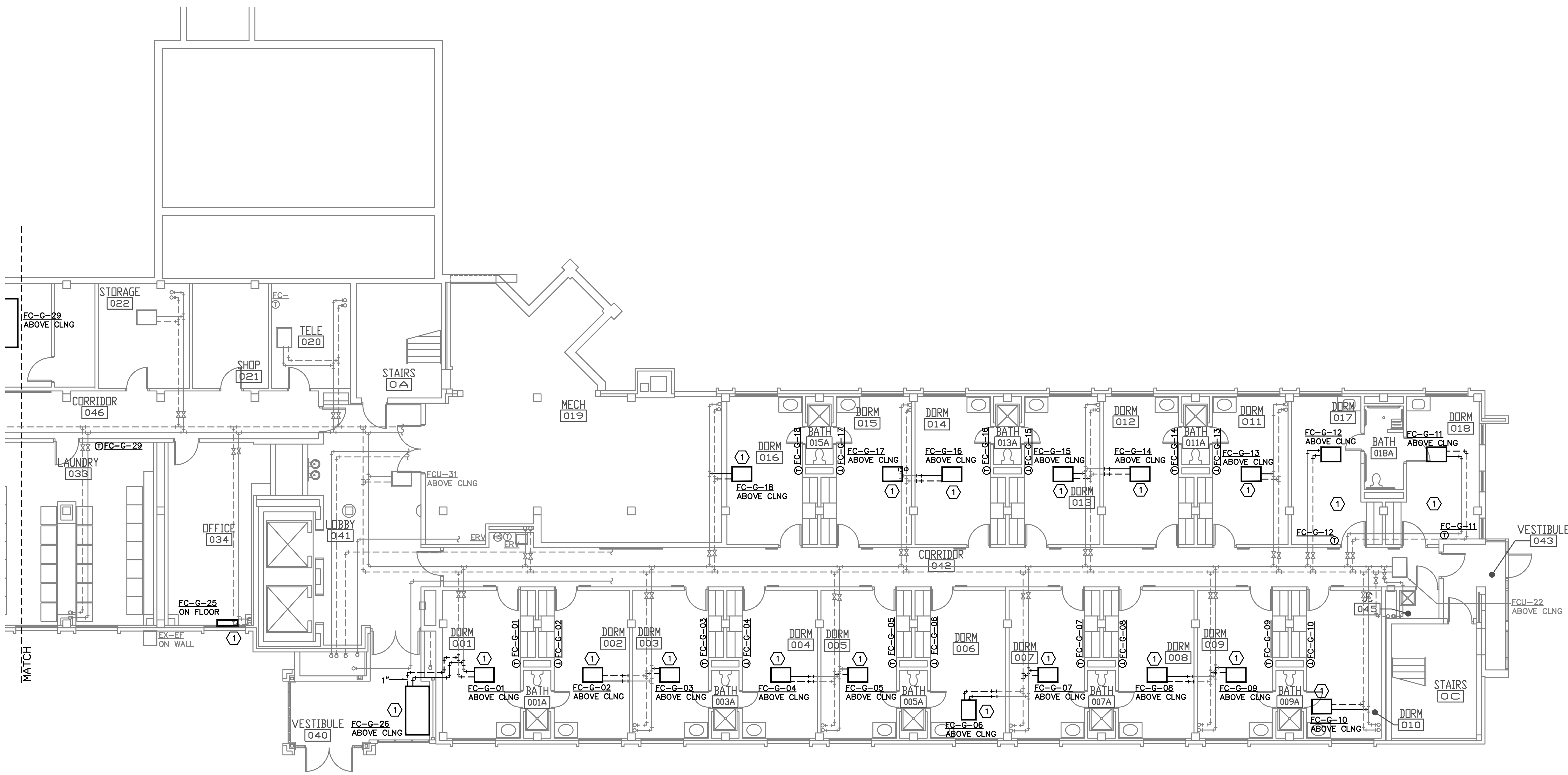
NEW WORK GENERAL NOTES	
A.	PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
B.	REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.
C.	DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.
D.	COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.
E.	PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.
F.	PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.
G.	PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.
H.	SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.
I.	RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.
J.	INSTALL ALL EQUIPMENT WITH CODE REQUIRED AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.
K.	MAINTAIN A MINIMUM OF 10 FEET BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.

NEW WORK KEYED NOTES

1. CONNECT NEW FAN COIL VALVE PACKAGE PIPING TO EXISTING PIPING. CONNECT NEW FAN COIL CONDENSATE CONNECTION TO EXISTING CONDENSATE LINE. PRIOR TO NEW INSTALL, ALL CONDENSATE LINES SHALL BE FLUSHED.
2. UNIT HEATERS SHALL HAVE NEW 2-WAY OPEN/CLOSE CONTROL VALVES THAT SHALL BE OPEN DURING HEATING AND CLOSED DURING COOLING.

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
	NEW WORK
—CD—	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
	PIPE ELBOW TURNED DOWN
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
T	THERMOSTAT



H.V.A.C. - NEW PIPING - GROUND FLOOR

SCALE: 1/8" = 1' – 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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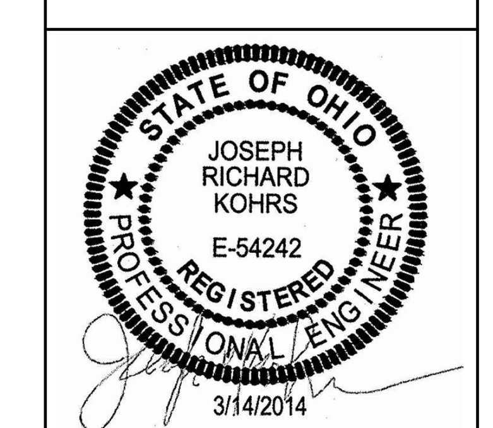


DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
NEW PIPING
GROUND FLOOR

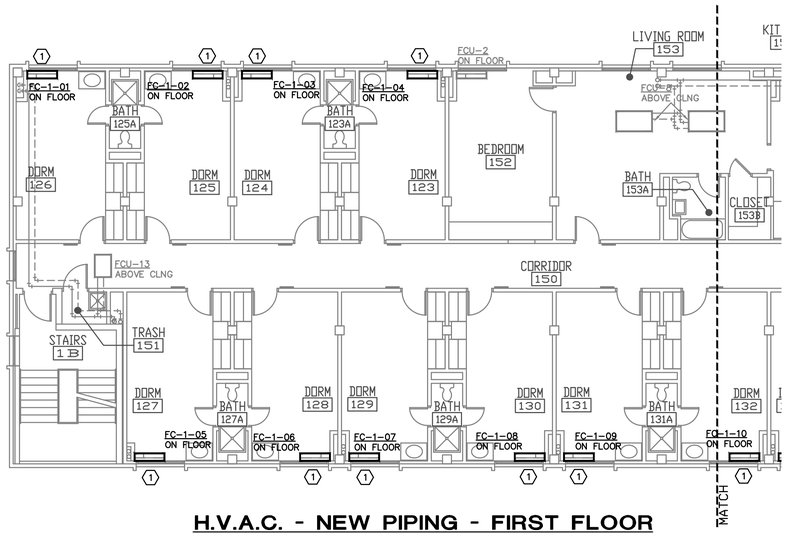
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HP100

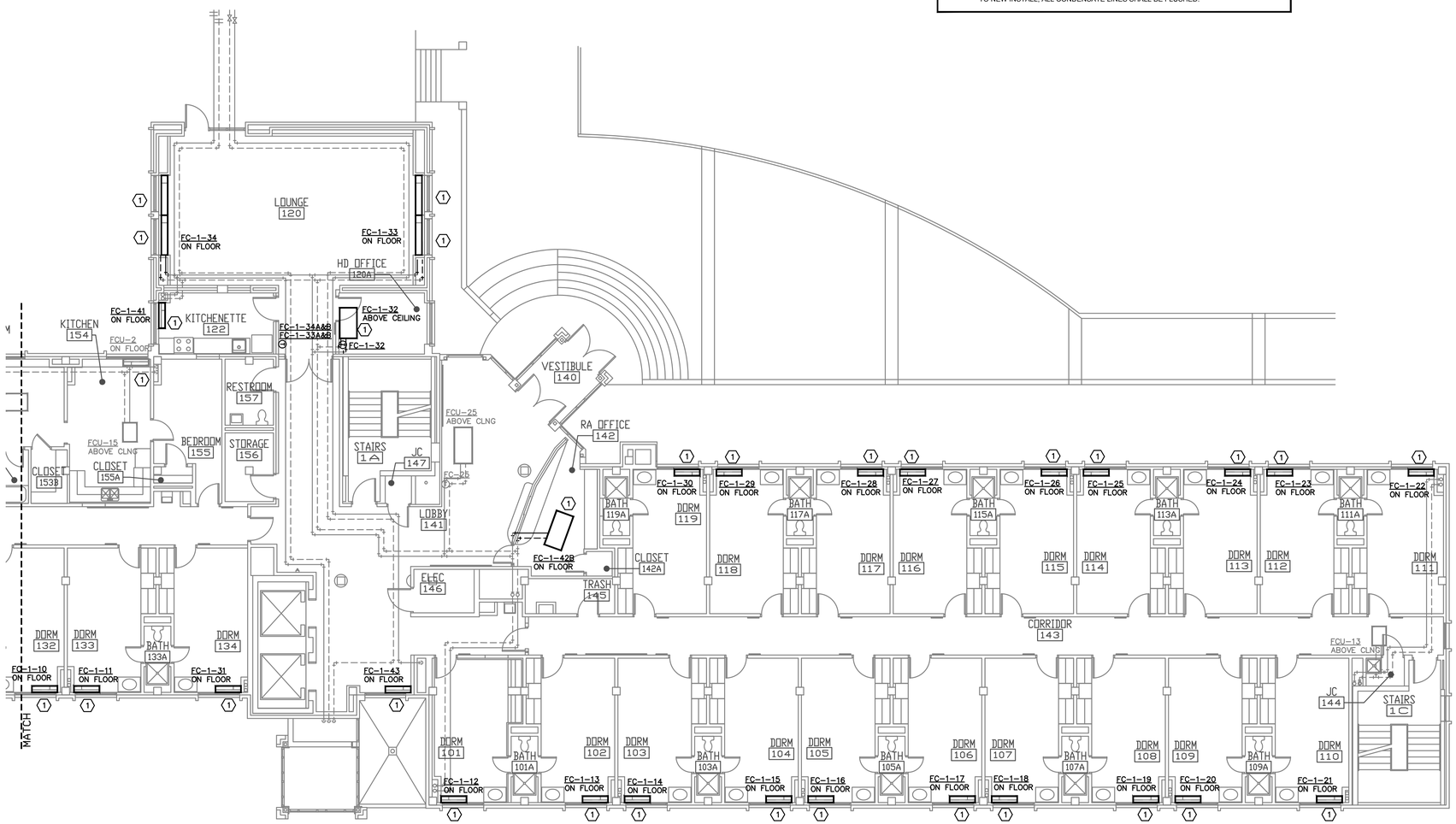
15054HP100.dwg

4/24/2014 10:19 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HP100.DWG



H.V.A.C. - NEW PIPING - FIRST FLOOR

SCALE: 1/8" = 1' – 0"



H.V.A.C. - NEW PIPING - FIRST FLOOR

SCALE: 1/8" = 1' – 0"

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C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.

D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.

E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

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HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
———	EXISTING WORK TO REMAIN
– – – – –	EXISTING WORK TO BE REMOVED
———	NEW WORK
—CD—	CONDENSATE DRAIN
———	SUPPLY MAIN OR BRANCH
– – – –	RETURN MAIN OR BRANCH
———o	PIPE ELBOW TURNED DOWN
———o	PIPE ELBOW TURNED UP
———⊕	PIPE TEE WITH BRANCH OPENING TURNED DOWN
———⊕	PIPE TEE WITH BRANCH OPENING TURNED UP
(T)	THERMOSTAT

KUHLMAN HALL RENOVATION PHASE II

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REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
NEW PIPING
FIRST FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HP101

15054HP101.dwg

0'-2" REFERENCE LINE

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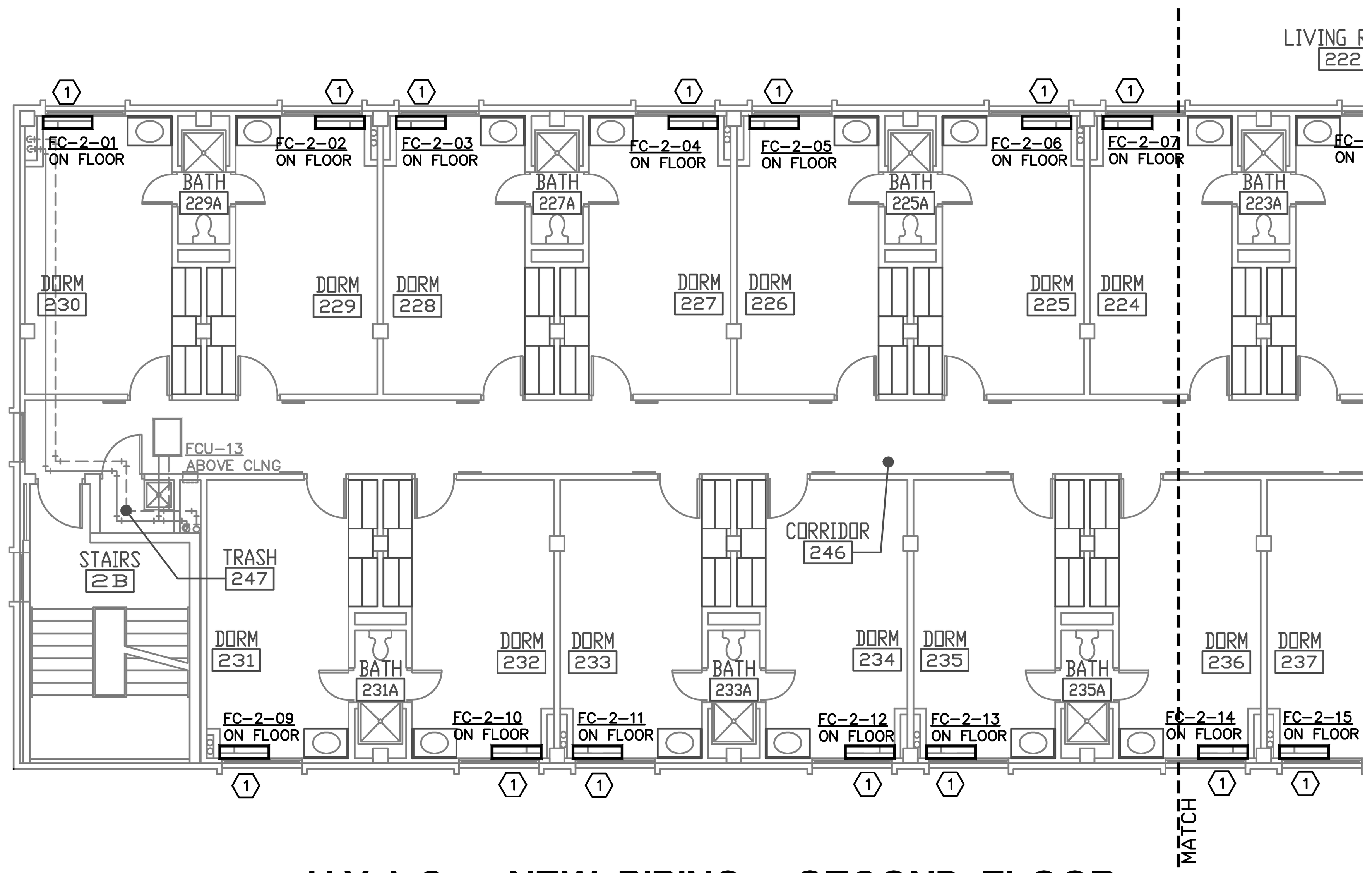

H.V.A.C. - NEW PIPING - SECOND FLOOR

SCALE: 1/8" = 1' – 0"

NEW WORK GENERAL NOTES

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.

C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.

D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.

E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

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HVAC SYMBOLS LEGEND

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	RETURN MAIN OR BRANCH
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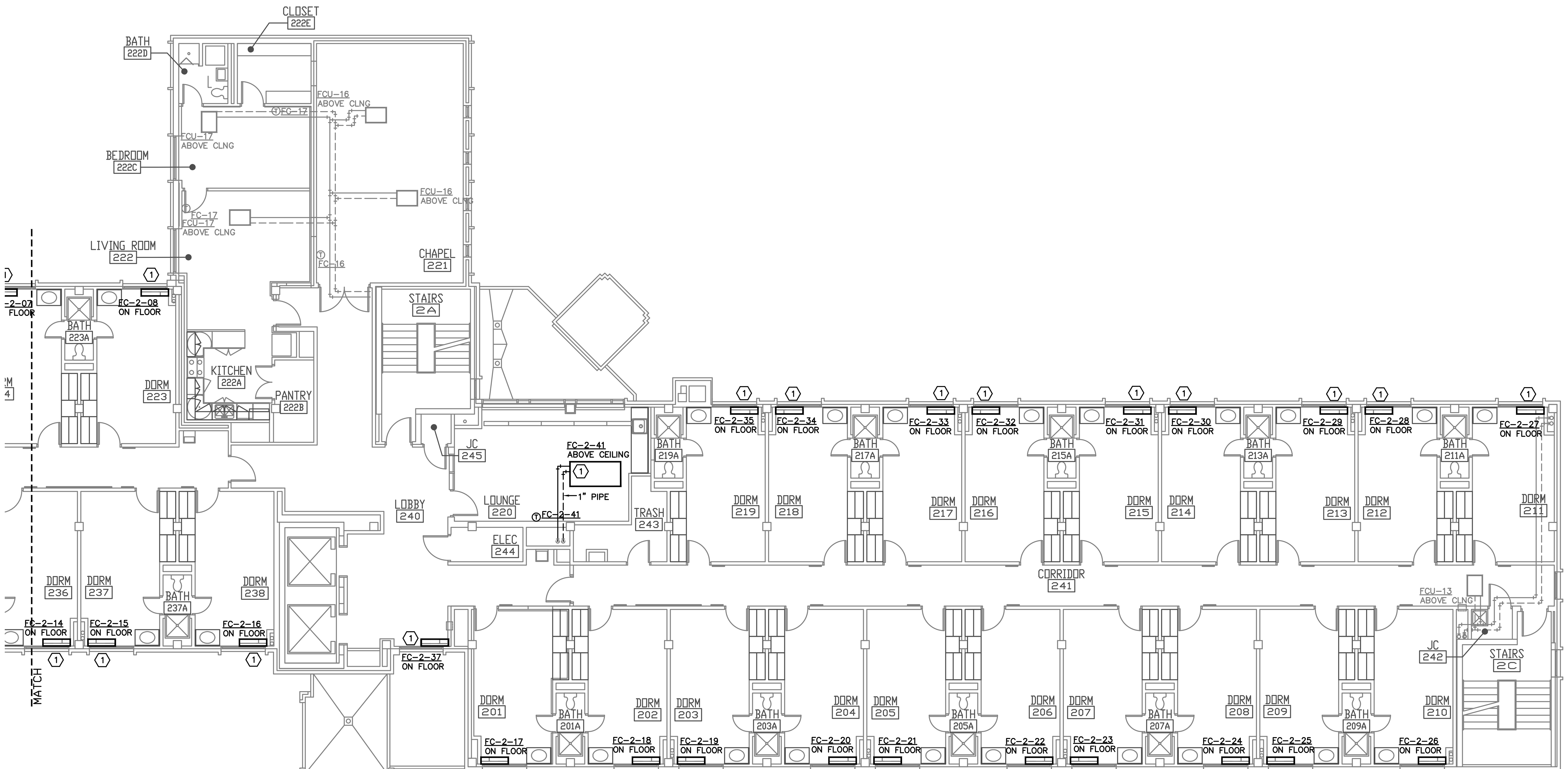
	PIPE ELBOW TURNED UP
	PIPE TEE WITH BRANCH OPENING TURNED DOWN
	PIPE TEE WITH BRANCH OPENING TURNED UP
T	THERMOSTAT



H.V.A.C. - NEW PIPING - SECOND FLOOR

SCALE: 1/8" = 1' – 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
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XAVIER UNIVERSITY

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REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
NEW PIPING
SECOND FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HP102

15054HP102.dwg

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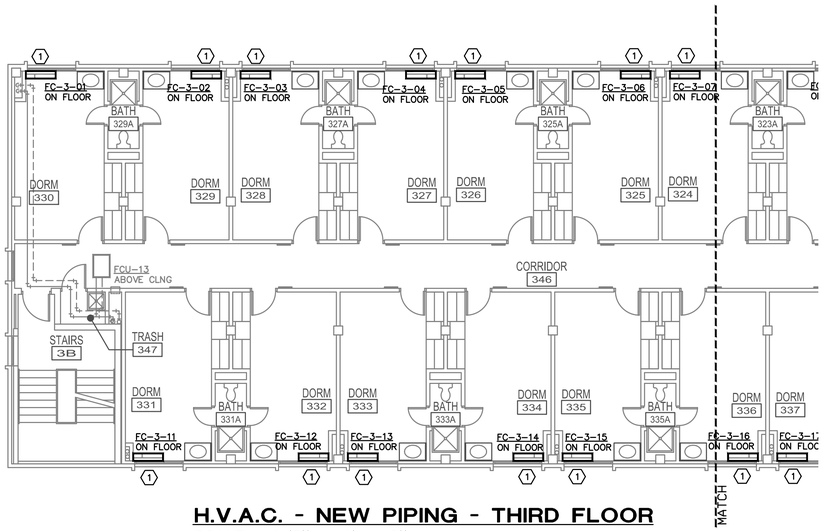
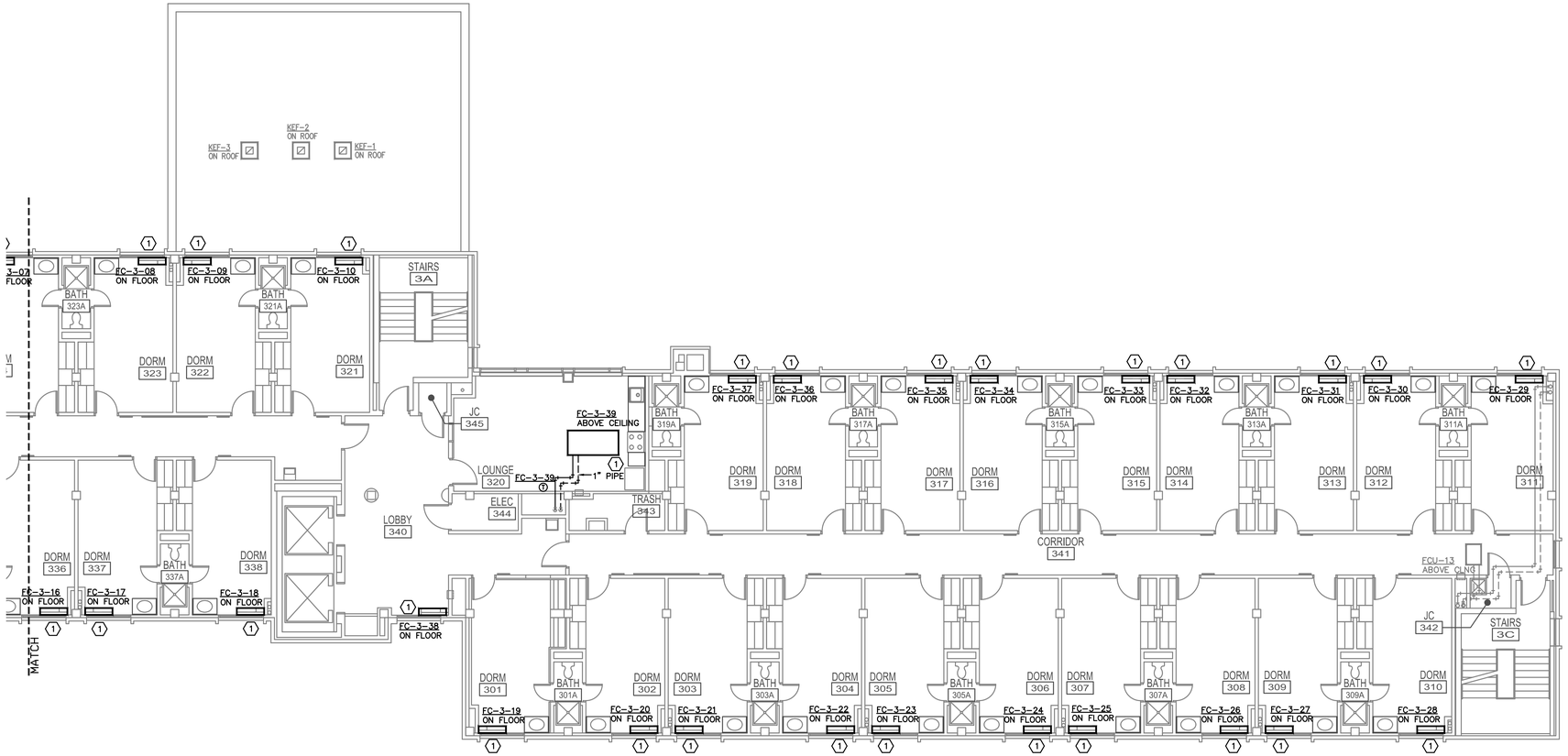


H.V.A.C. - NEW PIPING - THIRD FLOOR

SCALE: 1/8" = 1' - 0"



H.V.A.C. - NEW PIPING - THIRD FLOOR

SCALE: 1/8" = 1' - 0"

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KUHLMAN HALL RENOVATION PHASE II

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3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
NEW PIPING
THIRD FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HP103

0'-2" REFERENCE LINE

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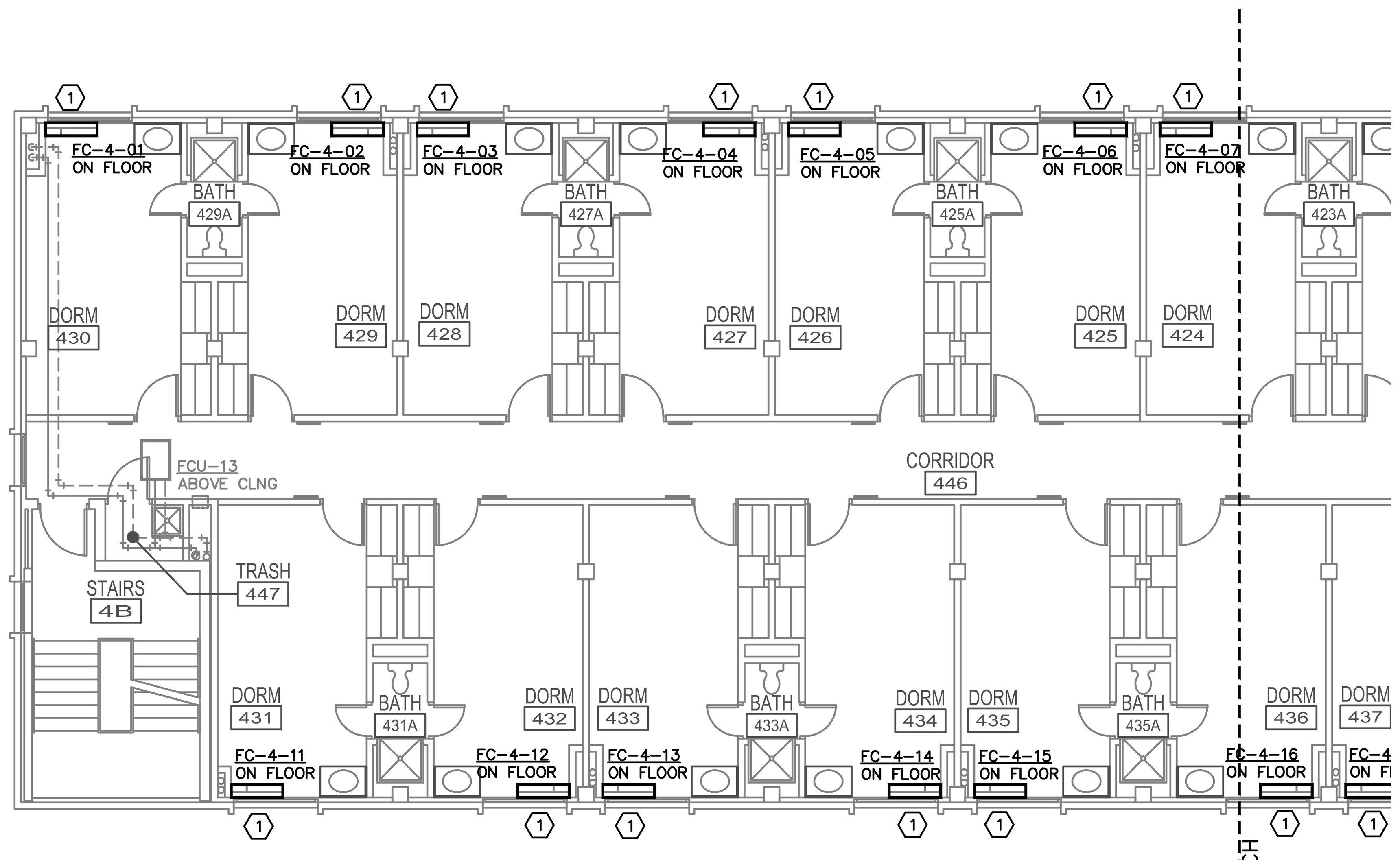
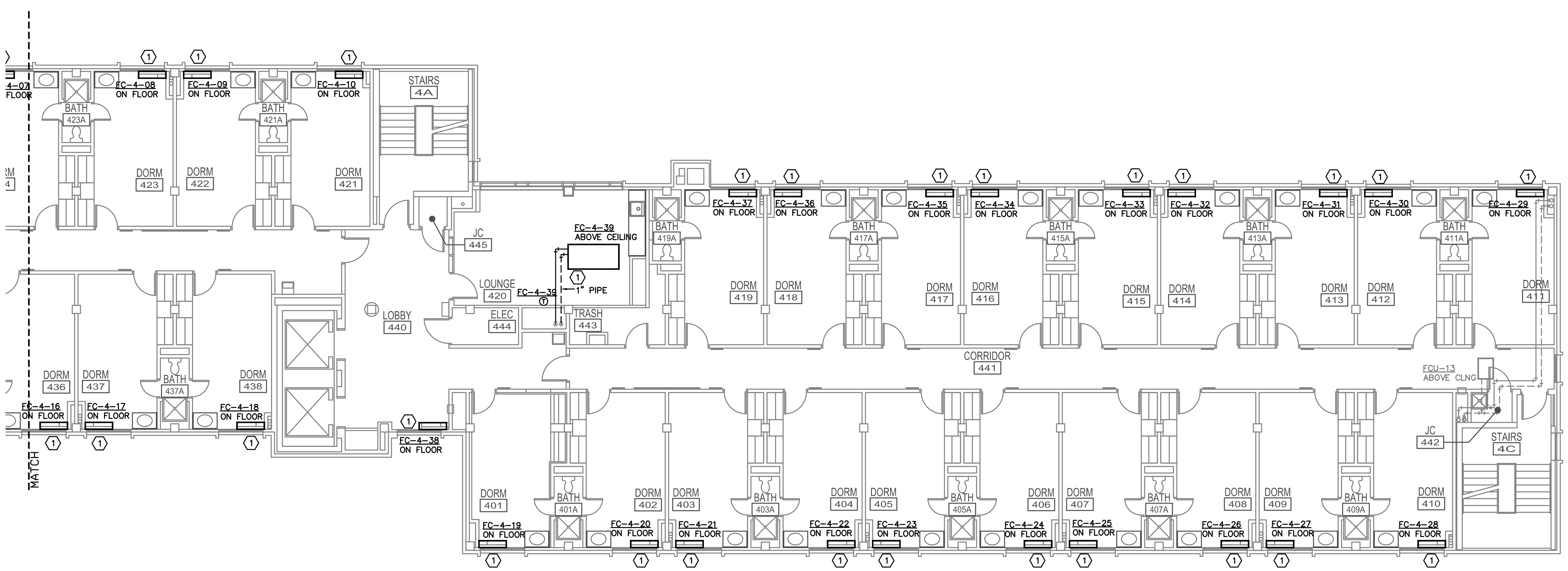


H.V.A.C. - NEW PIPING - FOURTH FLOOR

SCALE: 1/8" = 1' – 0"



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3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. NEW PIPING FOURTH FLOOR

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0'-2" REFERENCE LINE

15054HP104.dwg

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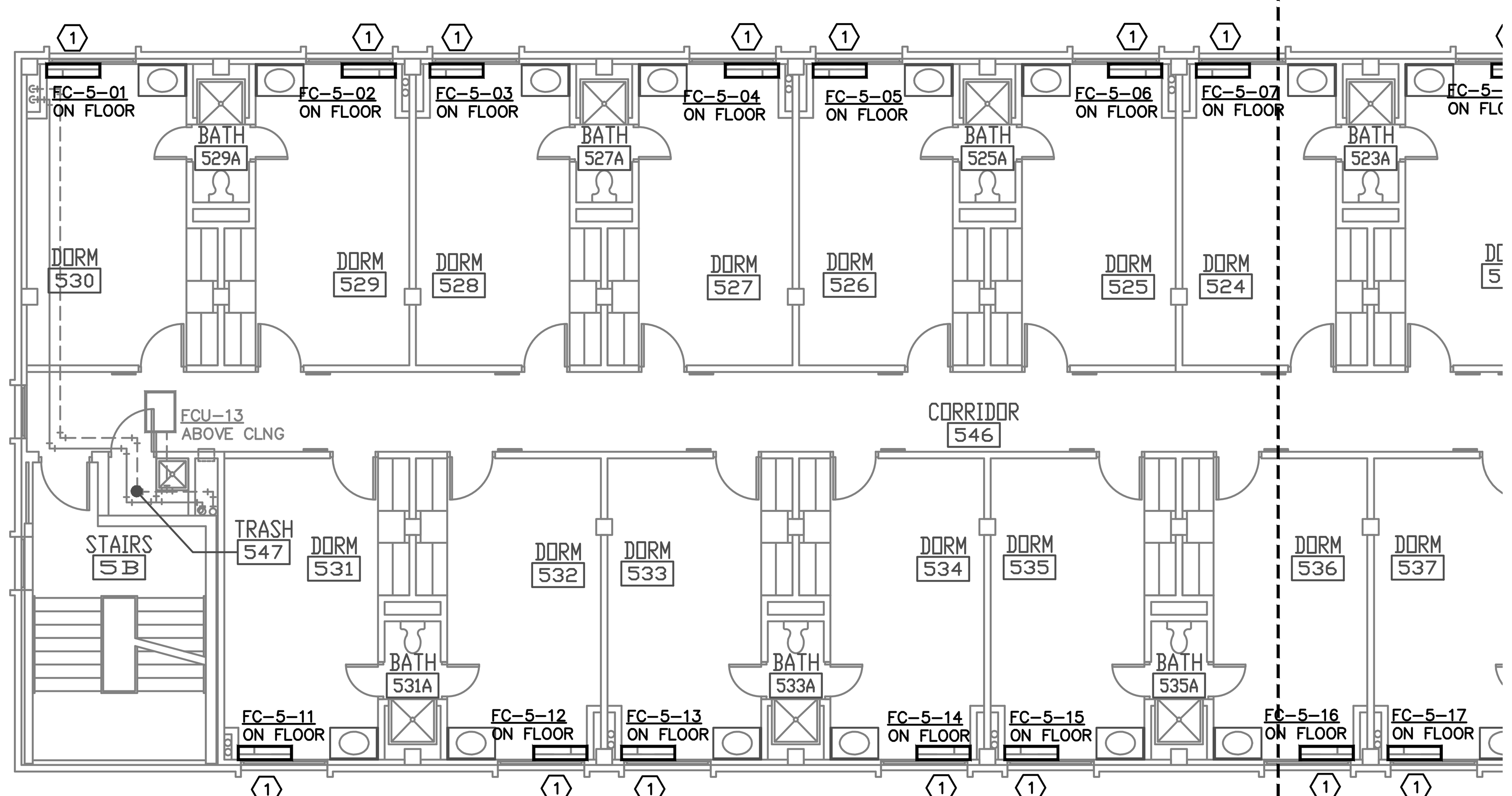


H.V.A.C. - NEW PIPING - FIFTH FLOOR

SCALE: 1/8" = 1' – 0"

NEW WORK GENERAL NOTES

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.

C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.

D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.

E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

H. SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.

I. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.

J. INSTALL ALL EQUIPMENT WITH CODE REQUIRED AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.

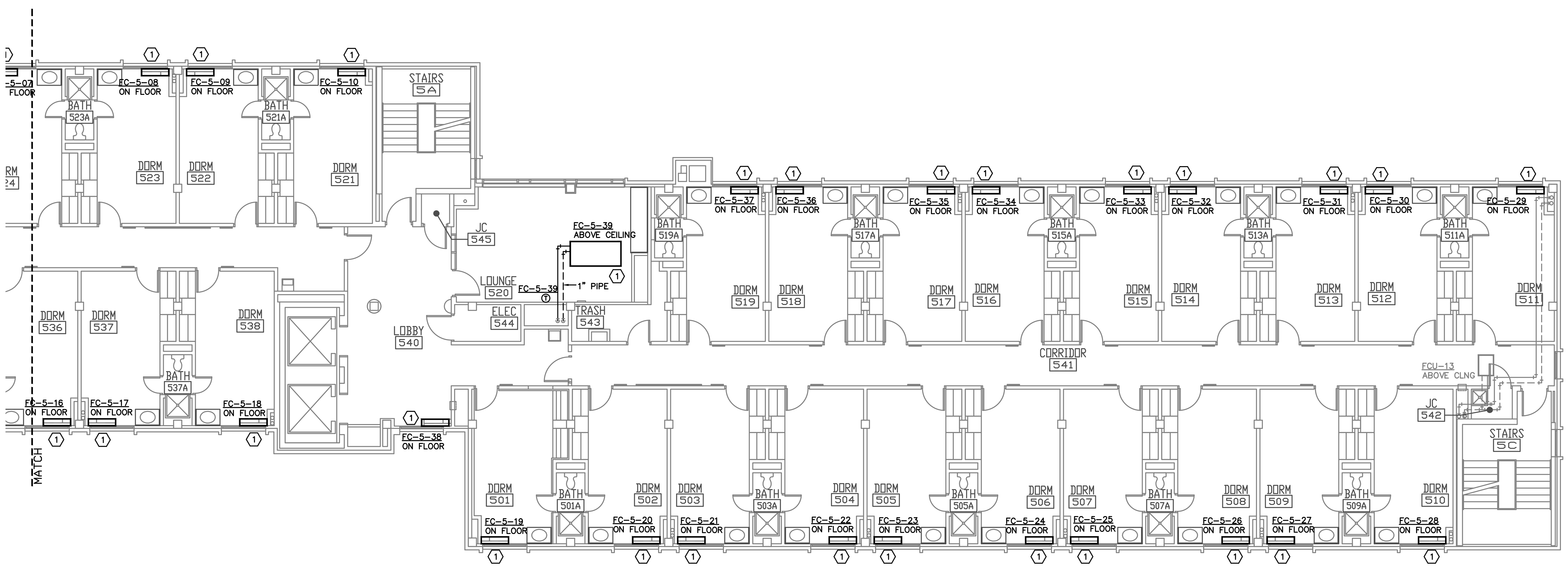
K. MAINTAIN A MINIMUM OF 10 FEET BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.

NEW WORK KEYED NOTES

1. CONNECT NEW FAN COIL VALVE PACKAGE PIPING TO EXISTING PIPING. CONNECT NEW FAN COIL CONDENSATE CONNECTION TO EXISTING CONDENSATE LINE. PRIOR TO NEW INSTALL, ALL CONDENSATE LINES SHALL BE FLUSHED.

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
———	EXISTING WORK TO REMAIN
- - - -	EXISTING WORK TO BE REMOVED
———	NEW WORK
—CD—	CONDENSATE DRAIN
———	SUPPLY MAIN OR BRANCH
- - - -	RETURN MAIN OR BRANCH
———o	PIPE ELBOW TURNED DOWN
———o	PIPE ELBOW TURNED UP
——o——	PIPE TEE WITH BRANCH OPENING TURNED DOWN
——o——	PIPE TEE WITH BRANCH OPENING TURNED UP
(T)	THERMOSTAT



H.V.A.C. - NEW PIPING - FIFTH FLOOR

SCALE: 1/8" = 1' – 0"

0 - 2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

KOHRS LONNEMANN HEIL ENGINEERS, PSC
MECHANICAL/ELECTRICAL ENGINEERS
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NEW YORK, NEW YORK

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513-745-3151

STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
NEW PIPING
FIFTH FLOOR

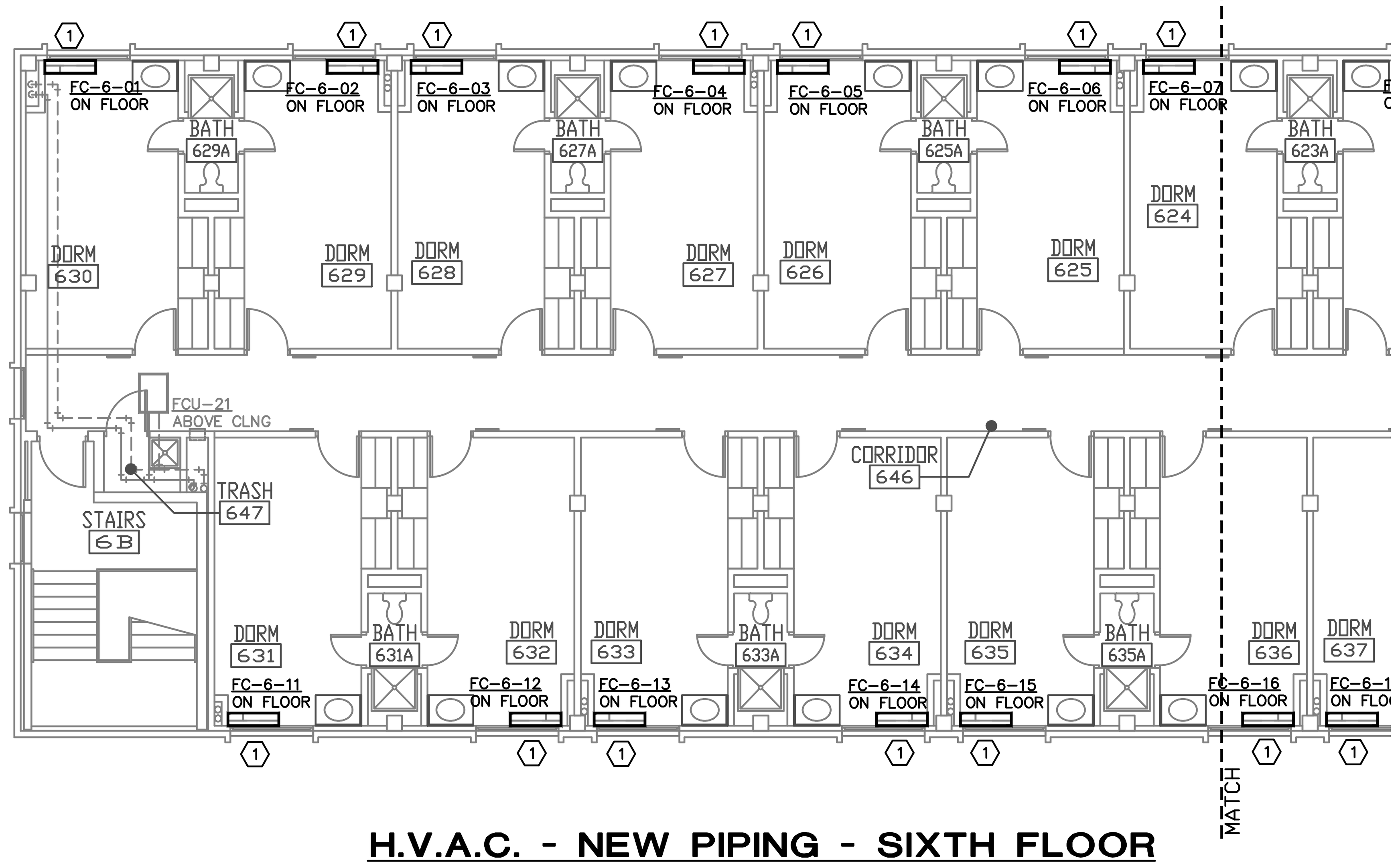
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HP105

15054HP105.dwg

4/24/2014 10:20 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HP105.DWG



H.V.A.C. - NEW PIPING - SIXTH FLOOR
SCALE: 1/8" = 1' - 0"

NEW WORK GENERAL NOTES

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.

C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.

D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.

E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

H. SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.

I. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.

J. INSTALL ALL EQUIPMENT WITH CODE REQUIRED AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.

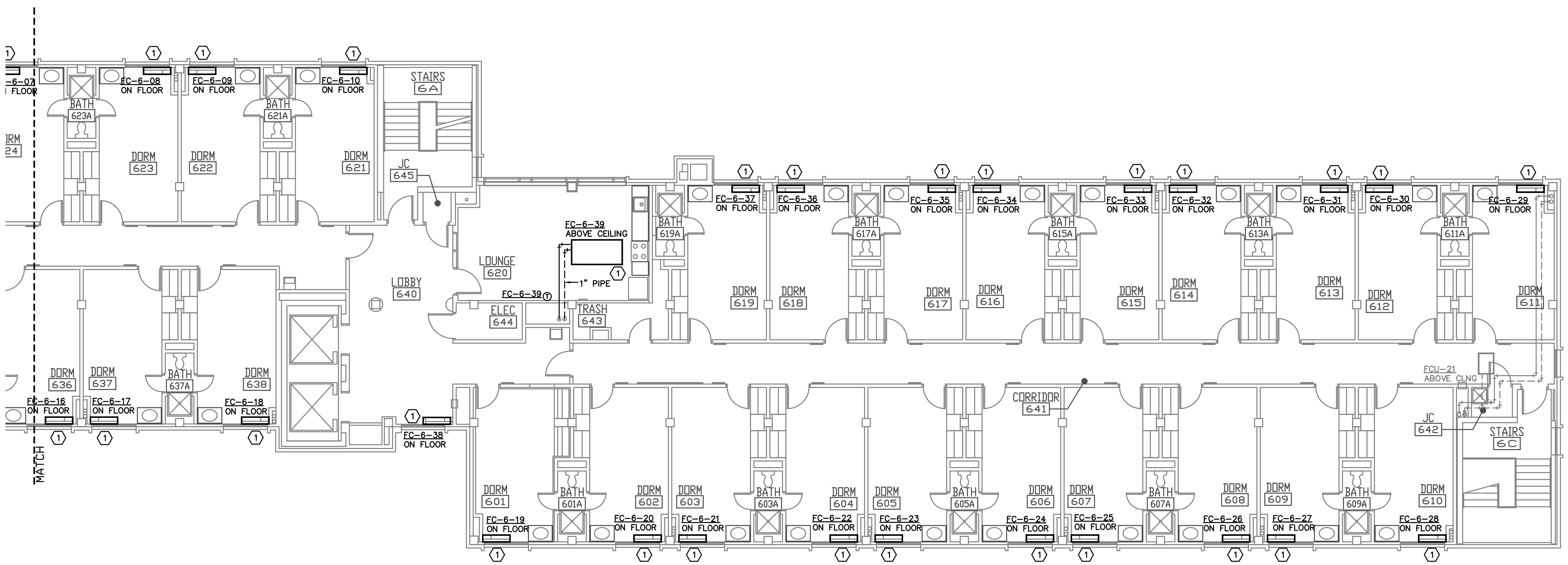
K. MAINTAIN A MINIMUM OF 10 FEET BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.

NEW WORK KEYED NOTES

1. CONNECT NEW FAN COIL VALVE PACKAGE PIPING TO EXISTING PIPING. CONNECT NEW FAN COIL CONDENSATE CONNECTION TO EXISTING CONDENSATE LINE. PRIOR TO NEW INSTALL, ALL CONDENSATE LINES SHALL BE FLUSHED.

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
———	EXISTING WORK TO REMAIN
- - - - -	EXISTING WORK TO BE REMOVED
———	NEW WORK
—CD—	CONDENSATE DRAIN
———	SUPPLY MAIN OR BRANCH
- - - -	RETURN MAIN OR BRANCH
———o	PIPE ELBOW TURNED DOWN
———o	PIPE ELBOW TURNED UP
—o—	PIPE TEE WITH BRANCH OPENING TURNED DOWN
—o—	PIPE TEE WITH BRANCH OPENING TURNED UP
(T)	THERMOSTAT



H.V.A.C. - NEW PIPING - SIXTH FLOOR
SCALE: 1/8" = 1' - 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
NEW PIPING
SIXTH FLOOR

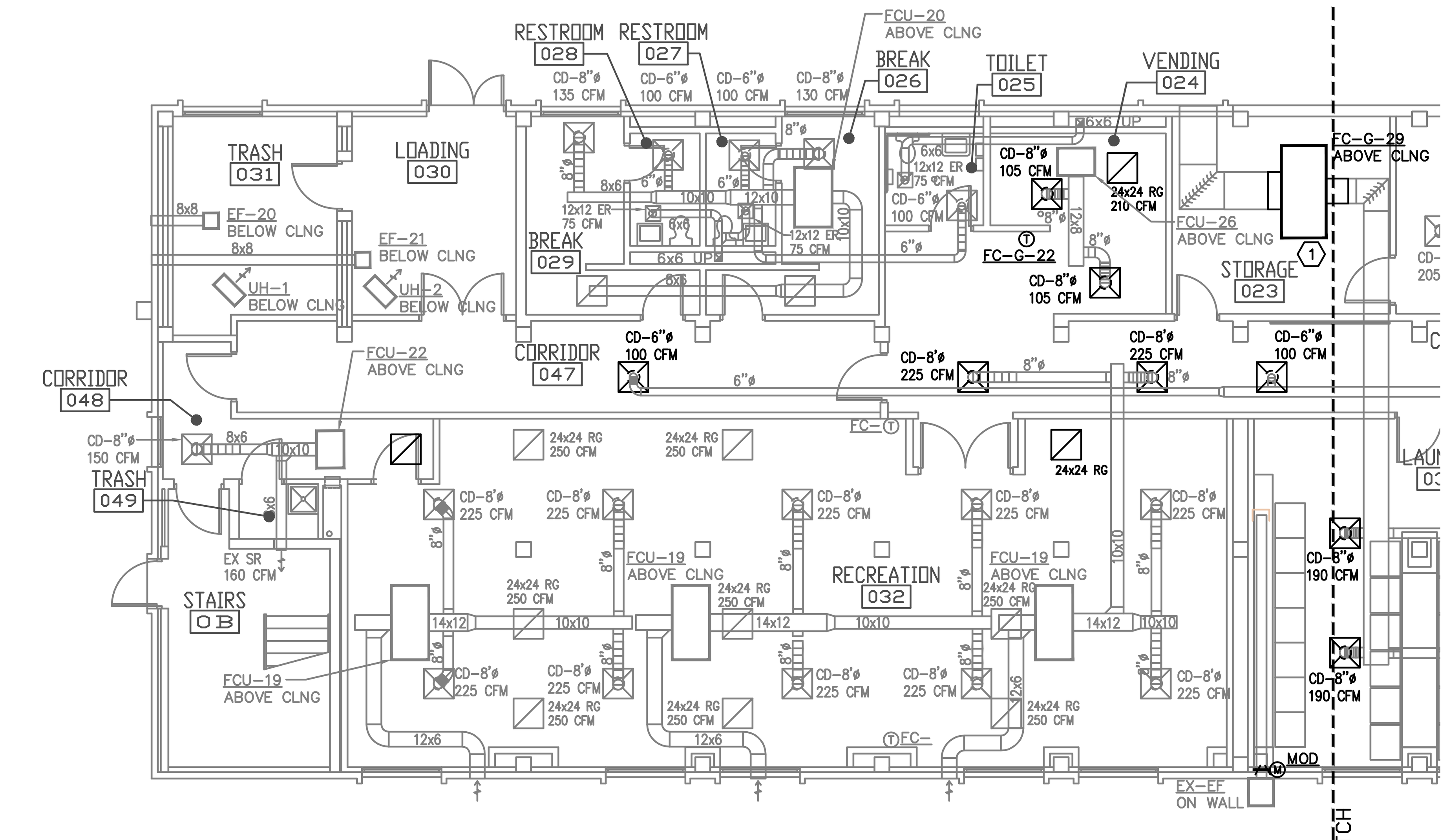
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HP106

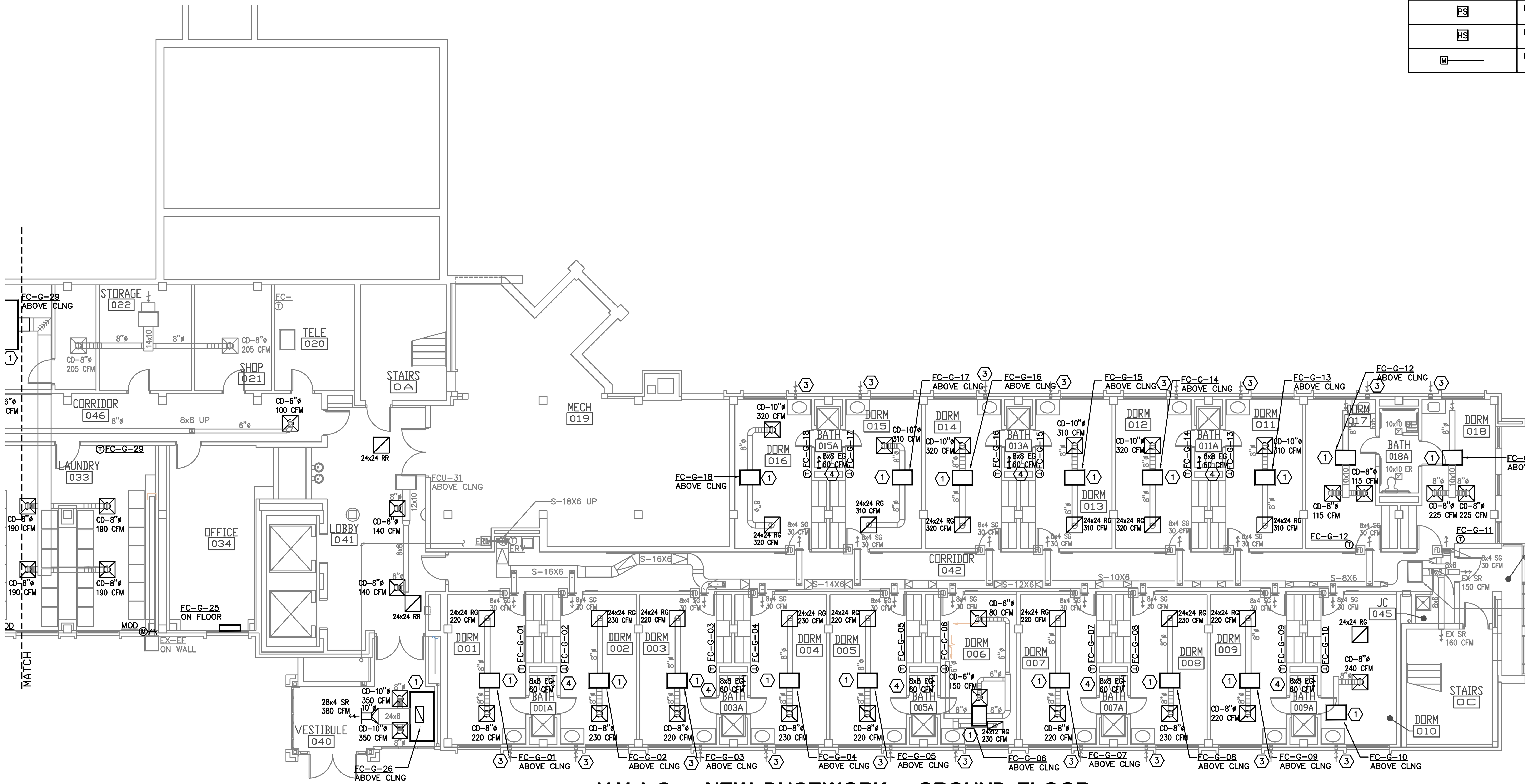
15054HP106.dwg

4/24/2014 10:20 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HP106.DWG



H.V.A.C. - NEW DUCTWORK - GROUND FLOOR

SCALE: 1/8" = 1' – 0"



H.V.A.C. - NEW DUCTWORK - GROUND FLOOR

SCALE: 1/8" = 1' – 0"

NEW WORK GENERAL NOTES

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.

C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.

D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.

E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

H. SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.

I. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.

J. INSTALL ALL EQUIPMENT WITH CODE REQUIRED AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.

K. MAINTAIN A MINIMUM OF 10 FEET BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.

NEW WORK KEYED NOTES

1. CONNECT NEW FAN COIL TO EXISTING DUCTWORK. CUT AND PATCH AS NECESSARY.
2. PROVIDE DUAL ENTHALPY ECONOMIZER FUNCTION ON FAN COIL FOR COOLING IN THE WINTER. DURING THE SUMMER THE DAMPER SHALL BE CLOSED.
3. REFER TO DETAIL 233713.00-12 ON HV200 FOR SEALING OF EXISTING LOUVER.
4. PROVIDE NEW EXHAUST GRILLE EQUAL TO PRICE 635DAL. EXPAND EXISTING OPENING AS REQUIRED TO FIT NEW GRILLE.

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
(thin line)	EXISTING WORK TO REMAIN
(heavy line)	NEW WORK
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ϕ	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	ELBOW WITH TURNING VANES
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	TEMPERATURE SENSOR
T (circle)	THERMOSTAT
PS	PRESSURE SENSOR
HS	HUMIDITY SENSOR
M	MOTOR OPERATED DAMPER – LOW VOLTAGE

GENERAL DDC CONTROL NOTES

A. ALL DORM ROOM FANCOILS ON THE GROUND FLOOR SHALL HAVE WIRELESS THERMOSTATS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

B. ALL DORM ROOM UNIT VENTILATORS SHALL HAVE INTEGRAL CONTROLS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

C. ALL COMMON AND BACK OF HOUSE AREAS THROUGHOUT THE BUILDING SHALL HAVE FACTORY CONTROLS WITH A BACNET CARD FOR INTEGRATION INTO THE EXISTING SIEMENS CAMPUS SERVER. SIEMENS WILL BE RESPONSIBLE FOR ALL INTEGRATION INTO THE EXISTING SERVER INCLUDING ALL GRAPHICS, ALARMS AND POINT BY POINT INTEGRATION. THE SIEMENS INTEGRATION SHALL BE PART OF THE PROJECT SCOPE & SHALL BE CARRIED BY THE CONTRACTOR.

D. ALL COMMON AREAS SHALL BE EQUIPPED WITH A FACTORY PROVIDED DUAL ENTHALPY ECONOMIZER THAT WILL PROVIDE COOLING IN THE WINTER AS REQUIRE. AS PART OF THE PROJECT SCOPE, DAMPERS SHALL BE ADDED TO THE RETURN DUCTWORK THAT MODULATE INVERSELY WITH THE OUTSIDE AIR DAMPERS TO ASSURE PROPER OUTSIDE AIRFLOW. IN THE SUMMER THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AT ALL TIMES. ALL UNITS THAT UTILIZE AN ECONOMIZER SHALL ALSO HAVE A FREEZE STAT INSTALLED THAT WILL ALARM THE SYSTEM IF THE COIL SENSES TEMPERATURES BELOW FREEZING. IN THE EVENT OF AN ALARM, THE OUTSIDE AIR DAMPER SHALL CLOSE, AND THE HEATING VALVE SHALL GO TO THE FULL OPEN POSITION.

WINDOW CONTROL CONTACTS

1. ALL UNITS SHALL HAVE DRY CONTACTS FOR FUTURE WINDOW SENSORS FOR SHUTTING THE UNIT DOWN WHEN WINDOWS ARE OPEN. ALL WIRING FOR SENSORS SHALL BE PROVIDED, BUT NOT CONNECTED TO EXISTING WINDOWS. FUTURE PLANS INCLUDE REPLACING THE WINDOWS & THIS OPTION SHALL BE AVAILABLE FOR FUTURE SENSORS.

UNIT PRICE

1. PROVIDE A $/LINEAL FOOT FOR PROVIDING & INSTALLING PIPING INSULATION ON EXISTING PIPING.
2. PROVIDE A $/LINEAL FOOT FOR PROVIDING & INSTALLING DUCTWORK INSULATION ON EXISTING DUCTWORK.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. NEW DUCTWORK GROUND FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

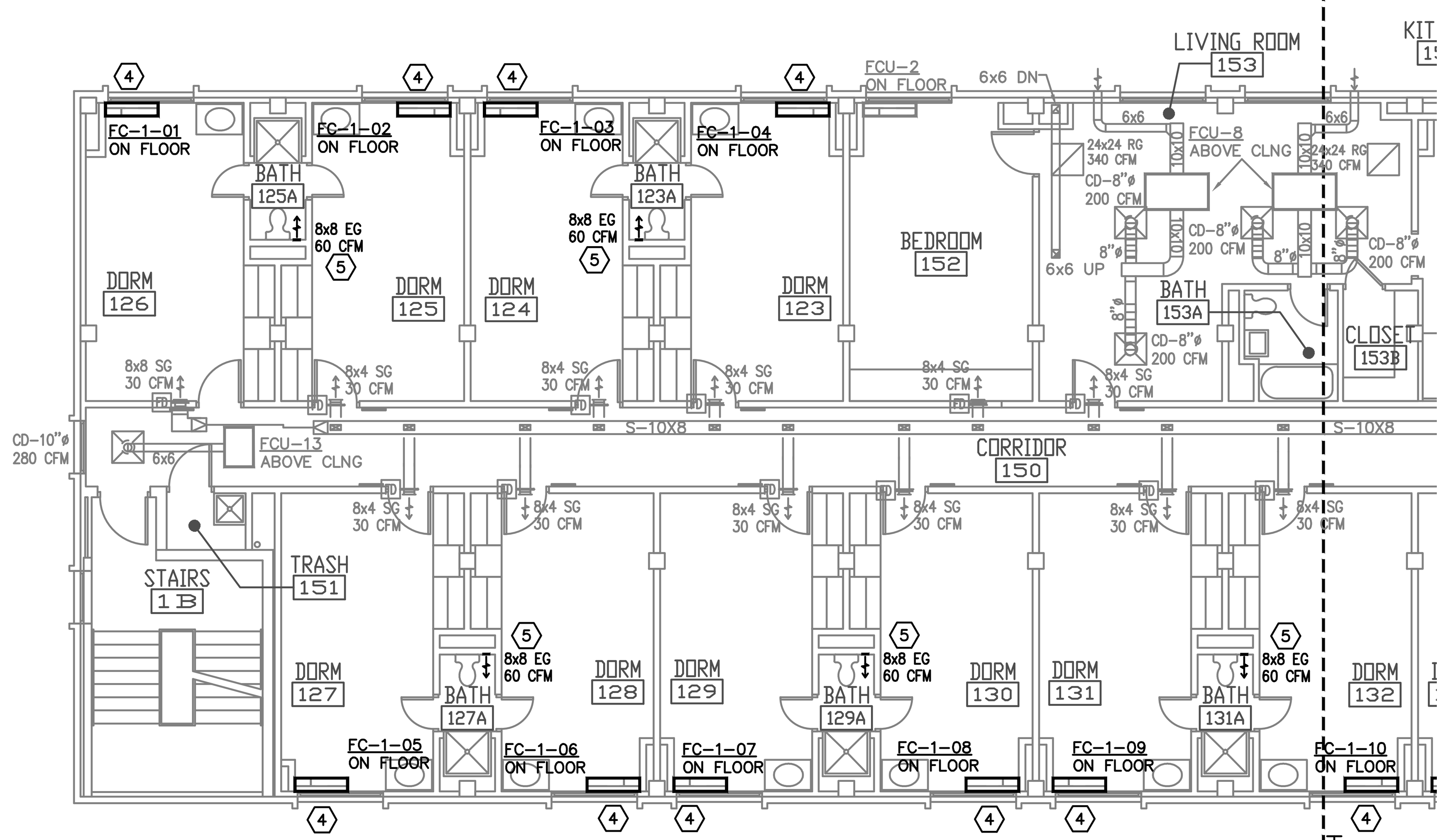
SHEET NO.
HV100

15054HV100.dwg

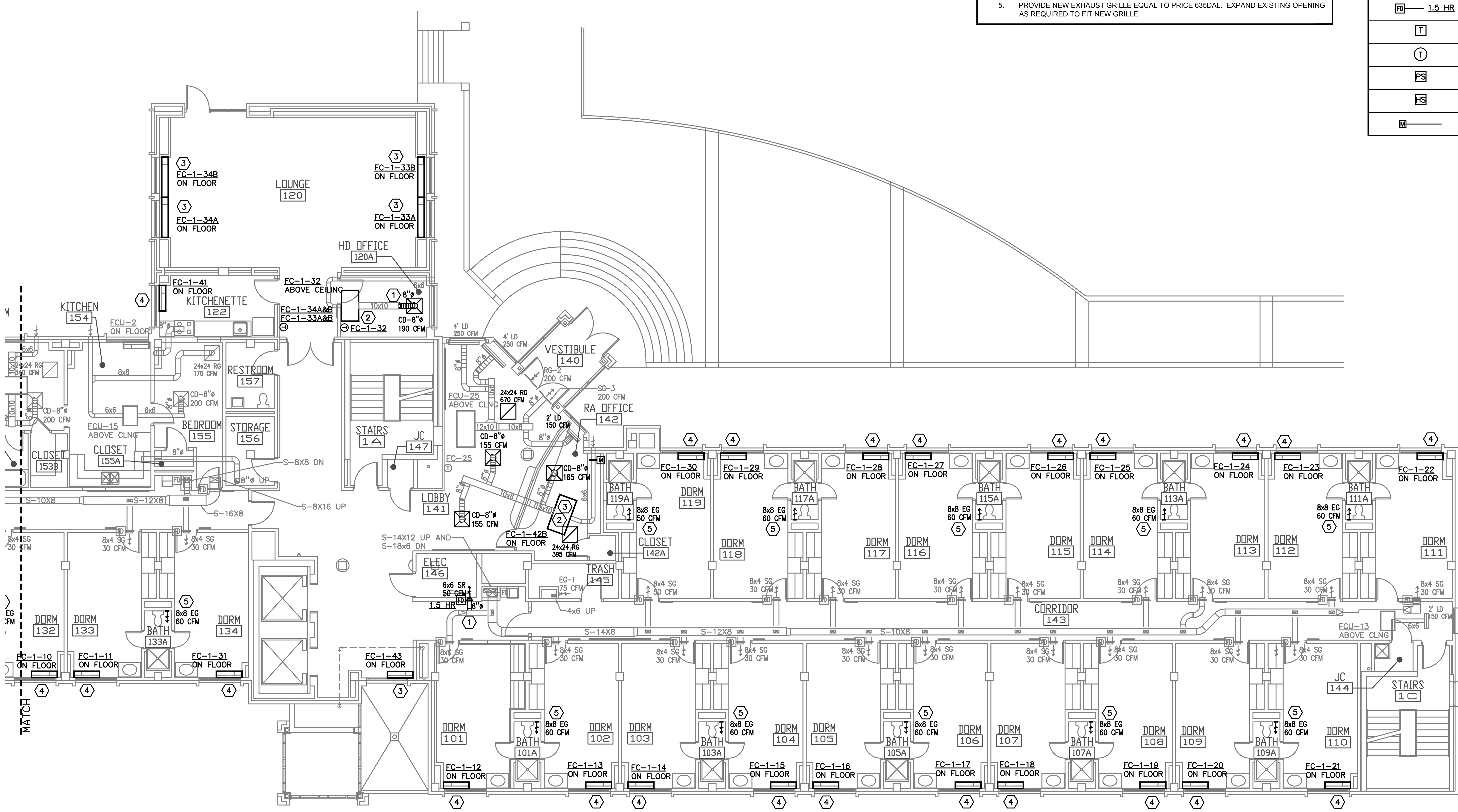
4/24/2014 10:20 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HV100.DWG

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207



H.V.A.C. - NEW DUCTWORK - FIRST FLOOR
SCALE: 1/8" = 1' - 0"



H.V.A.C. - NEW DUCTWORK - FIRST FLOOR
SCALE: 1/8" = 1' - 0"

NEW WORK GENERAL NOTES

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.

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E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

H. SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.

I. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.

J. INSTALL ALL EQUIPMENT WITH CODE REQUIRED AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.

K. MAINTAIN A MINIMUM OF 10 FEET BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.

NEW WORK KEYED NOTES

1. CONNECT NEW DUCTWORK TO EXISTING.
2. CONNECT NEW FAN COIL TO EXISTING DUCTWORK. CUT AND PATCH AS NECESSARY.
3. PROVIDE DUAL ENTHALPY ECONOMIZER FUNCTION ON FAN COIL FOR COOLING IN THE WINTER. DURING THE SUMMER THE DAMPER SHALL BE CLOSED.
4. REFER TO DETAIL 233713.00-11 ON HV200 FOR SEALING OF EXISTING LOUVER.
5. PROVIDE NEW EXHAUST GRILLE EQUAL TO PRICE 635DAL. EXPAND EXISTING OPENING AS REQUIRED TO FIT NEW GRILLE.

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	NEW WORK
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	ELBOW WITH TURNING VANES
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	TEMPERATURE SENSOR
T	THERMOSTAT
PS	PRESSURE SENSOR
HS	HUMIDITY SENSOR
M	MOTOR OPERATED DAMPER – LOW VOLTAGE

GENERAL DDC CONTROL NOTES

A. ALL DORM ROOM FANCOILS ON THE GROUND FLOOR SHALL HAVE WIRELESS THERMOSTATS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

B. ALL DORM ROOM UNIT VENTILATORS SHALL HAVE INTEGRAL CONTROLS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

C. ALL COMMON AND BACK OF HOUSE AREAS THROUGHOUT THE BUILDING SHALL HAVE FACTORY CONTROLS WITH A BACNET CARD FOR INTEGRATION INTO THE EXISTING SIEMENS CAMPUS SERVER. SIEMENS WILL BE RESPONSIBLE FOR ALL INTEGRATION INTO THE EXISTING SERVER INCLUDING ALL GRAPHICS, ALARMS AND POINT BY POINT INTEGRATION. THE SIEMENS INTEGRATION SHALL BE PART OF THE PROJECT SCOPE & SHALL BE CARRIED BY THE CONTRACTOR.

D. ALL COMMON AREAS SHALL BE EQUIPPED WITH A FACTORY PROVIDED DUAL ENTHALPY ECONOMIZER THAT WILL PROVIDE COOLING IN THE WINTER AS REQUIRE. AS PART OF THE PROJECT SCOPE, DAMPERS SHALL BE ADDED TO THE RETURN DUCTWORK THAT MODULATE INVERSELY WITH THE OUTSIDE AIR DAMPERS TO ASSURE PROPER OUTSIDE AIRFLOW. IN THE SUMMER THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AT ALL TIMES. ALL UNITS THAT UTILIZE AN ECONOMIZER SHALL ALSO HAVE A FREEZE STAT INSTALLED THAT WILL ALARM THE SYSTEM IF THE COIL SENSES TEMPERATURES BELOW FREEZING. IN THE EVENT OF AN ALARM, THE OUTSIDE AIR DAMPER SHALL CLOSE, AND THE HEATING VALVE SHALL GO TO THE FULL OPEN POSITION.

WINDOW CONTROL CONTACTS

1. ALL UNITS SHALL HAVE DRY CONTACTS FOR FUTURE WINDOW SENSORS FOR SHUTTING THE UNIT DOWN WHEN WINDOWS ARE OPEN. ALL WIRING FOR SENSORS SHALL BE PROVIDED, BUT NOT CONNECTED TO EXISTING WINDOWS. FUTURE PLANS INCLUDE REPLACING THE WINDOWS & THIS OPTION SHALL BE AVAILABLE FOR FUTURE SENSORS.

UNIT PRICE

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2. PROVIDE A $/LINEAL FOOT FOR PROVIDING & INSTALLING DUCTWORK INSULATION ON EXISTING DUCTWORK.

XAVIER UNIVERSITY

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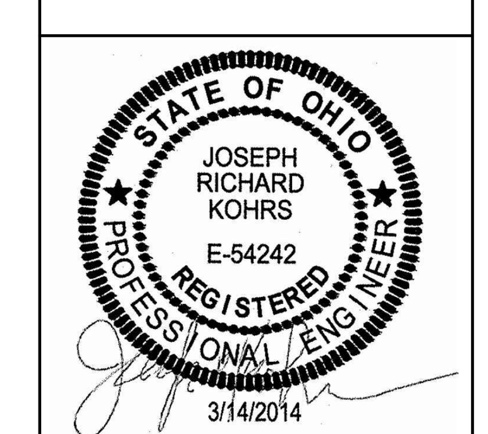


DRAWN BY:	CHECKED BY:
CJS	KTW

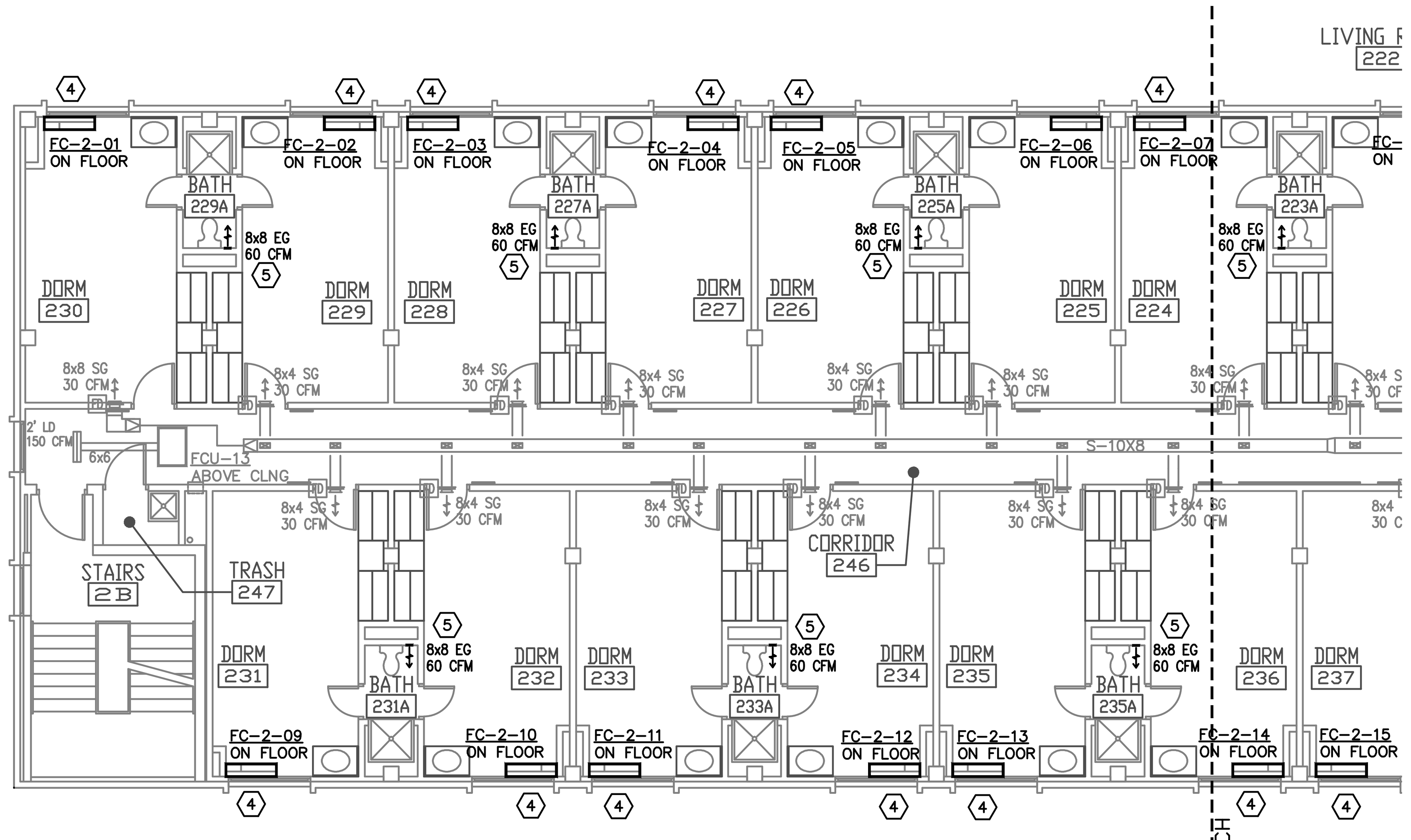
H.V.A.C. NEW DUCTWORK FIRST FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV101

0'-2" REFERENCE LINE



H.V.A.C. - NEW DUCTWORK - SECOND FLOOR

SCALE: 1/8" = 1' - 0"

NEW WORK GENERAL NOTES

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.

C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.

D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.

E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

H. SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.

I. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.

J. INSTALL ALL EQUIPMENT WITH CODE REQUIRED AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.

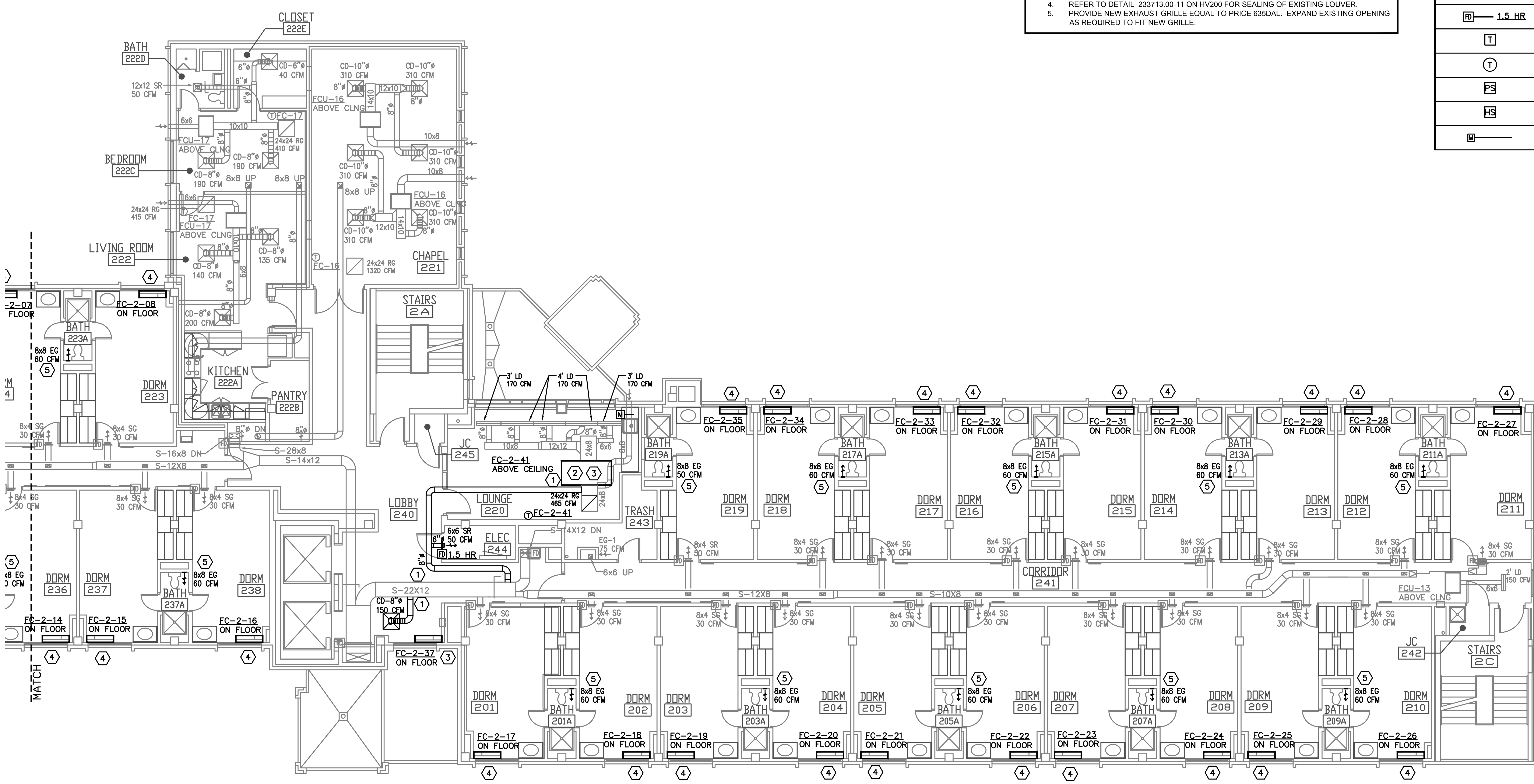
K. MAINTAIN A MINIMUM OF 10 FEET BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.

NEW WORK KEYED NOTES

1. CONNECT NEW DUCTWORK TO EXISTING.
2. CONNECT NEW FAN COIL TO EXISTING DUCTWORK. CUT AND PATCH AS NECESSARY.
3. PROVIDE DUAL ENTHALPY ECONOMIZER FUNCTION ON FAN COIL FOR COOLING IN THE WINTER. DURING THE SUMMER THE DAMPER SHALL BE CLOSED.
4. REFER TO DETAIL 233713.00-11 ON HV200 FOR SEALING OF EXISTING LOUVER.
5. PROVIDE NEW EXHAUST GRILLE EQUAL TO PRICE 635DAL. EXPAND EXISTING OPENING AS REQUIRED TO FIT NEW GRILLE.

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	NEW WORK
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD—10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	ELBOW WITH TURNING VANES
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	TEMPERATURE SENSOR
T	THERMOSTAT
PS	PRESSURE SENSOR
HS	HUMIDITY SENSOR
M	MOTOR OPERATED DAMPER — LOW VOLTAGE



H.V.A.C. - NEW DUCTWORK - SECOND FLOOR

SCALE: 1/8" = 1' - 0"

GENERAL DDC CONTROL NOTES

A. ALL DORM ROOM FANCOILS ON THE GROUND FLOOR SHALL HAVE WIRELESS THERMOSTATS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

B. ALL DORM ROOM UNIT VENTILATORS SHALL HAVE INTEGRAL CONTROLS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

C. ALL COMMON AND BACK OF HOUSE AREAS THROUGHOUT THE BUILDING SHALL HAVE FACTORY CONTROLS WITH A BACNET CARD FOR INTEGRATION INTO THE EXISTING SIEMENS CAMPUS SERVER. SIEMENS WILL BE RESPONSIBLE FOR ALL INTEGRATION INTO THE EXISTING SERVER INCLUDING ALL GRAPHICS, ALARMS AND POINT BY POINT INTEGRATION. THE SIEMENS INTEGRATION SHALL BE PART OF THE PROJECT SCOPE & SHALL BE CARRIED BY THE CONTRACTOR.

D. ALL COMMON AREAS SHALL BE EQUIPPED WITH A FACTORY PROVIDED DUAL ENTHALPY ECONOMIZER THAT WILL PROVIDE COOLING IN THE WINTER AS REQUIRE. AS PART OF THE PROJECT SCOPE, DAMPERS SHALL BE ADDED TO THE RETURN DUCTWORK THAT MODULATE INVERSELY WITH THE OUTSIDE AIR DAMPERS TO ASSURE PROPER OUTSIDE AIRFLOW. IN THE SUMMER THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AT ALL TIMES. ALL UNITS THAT UTILIZE AN ECONOMIZER SHALL ALSO HAVE A FREEZE STAT INSTALLED THAT WILL ALARM THE SYSTEM IF THE COIL SENSES TEMPERATURES BELOW FREEZING. IN THE EVENT OF AN ALARM, THE OUTSIDE AIR DAMPER SHALL CLOSE, AND THE HEATING VALVE SHALL GO TO THE FULL OPEN POSITION.

WINDOW CONTROL CONTACTS

1. ALL UNITS SHALL HAVE DRY CONTACTS FOR FUTURE WINDOW SENSORS FOR SHUTTING THE UNIT DOWN WHEN WINDOWS ARE OPEN. ALL WIRING FOR SENSORS SHALL BE PROVIDED, BUT NOT CONNECTED TO EXISTING WINDOWS. FUTURE PLANS INCLUDE REPLACING THE WINDOWS & THIS OPTION SHALL BE AVAILABLE FOR FUTURE SENSORS.

UNIT PRICE

1. PROVIDE A $/LINEAL FOOT FOR PROVIDING & INSTALLING PIPING INSULATION ON EXISTING PIPING.
2. PROVIDE A $/LINEAL FOOT FOR PROVIDING & INSTALLING DUCTWORK INSULATION ON EXISTING DUCTWORK.

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

KOHRS LONNEMANN HEIL ENGINEERS, PSC
MECHANICAL/ELECTRICAL ENGINEERS
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CINCINNATI, OH 45207
513-745-3151

STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. NEW DUCTWORK SECOND FLOOR

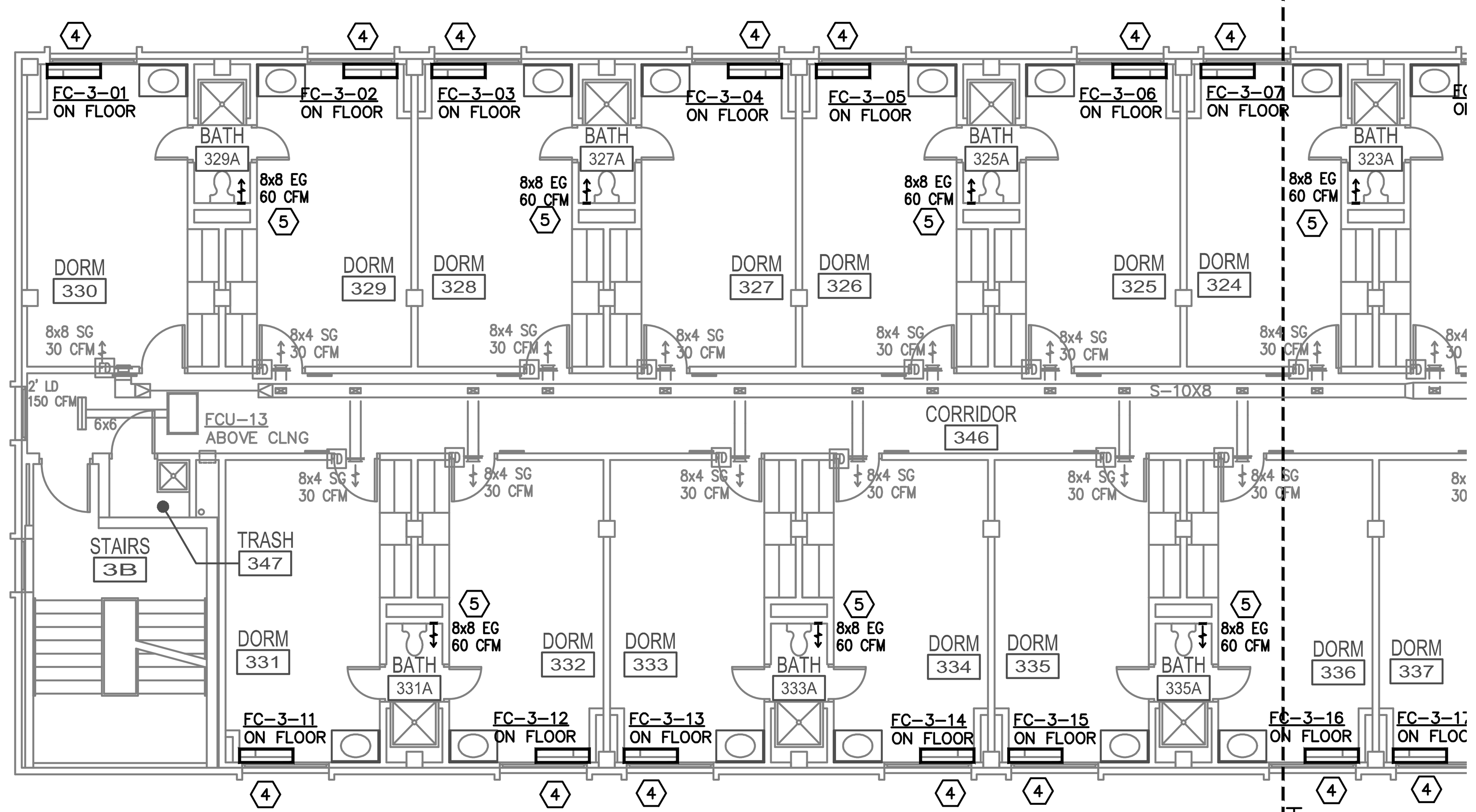
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV102

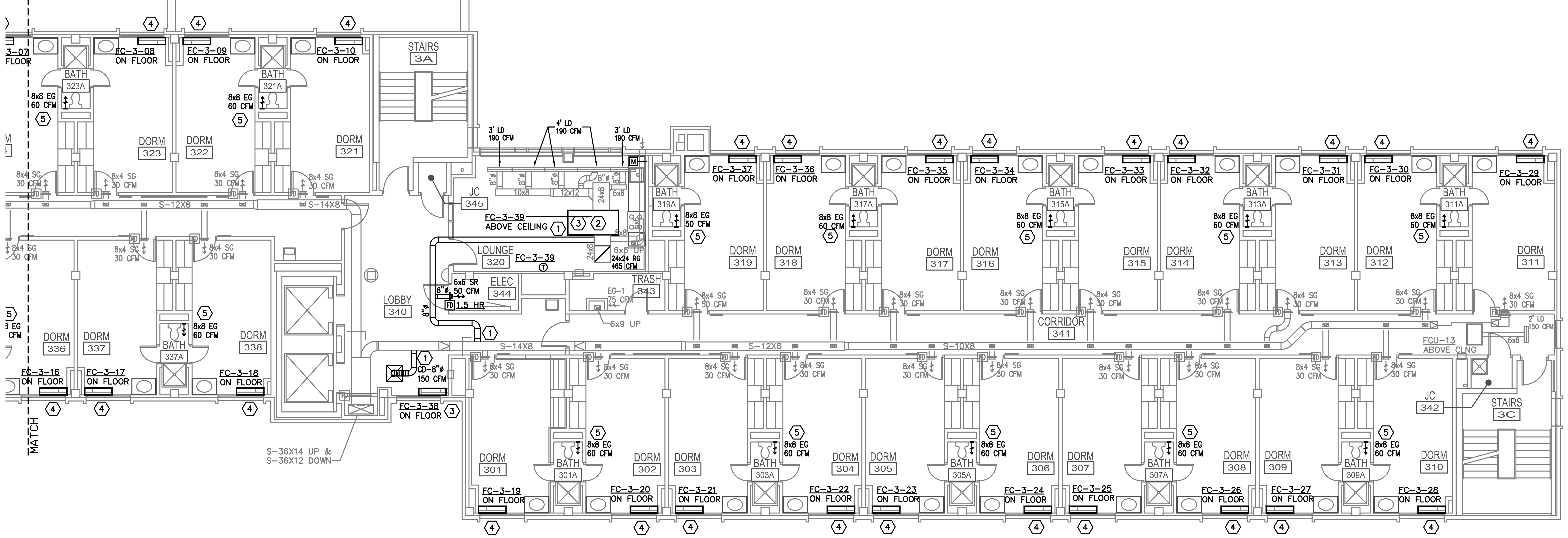
15054HV102.dwg

4/24/2014 10:19 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HV102.DWG



H.V.A.C. - NEW DUCTWORK - THIRD FLOOR

SCALE: 1/8" = 1' – 0"



H.V.A.C. - NEW DUCTWORK - THIRD FLOOR

SCALE: 1/8" = 1' – 0"

NEW WORK GENERAL NOTES

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C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.

D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.

E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

H. SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.

I. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.

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NEW WORK KEYED NOTES

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HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	NEW WORK
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
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RG	RETURN GRILLE
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CD–10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
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	SUPPLY DUCT WITH ELBOW TURNED UP
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	ELBOW WITH TURNING VANES
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	TEMPERATURE SENSOR
T	THERMOSTAT
PS	PRESSURE SENSOR
HS	HUMIDITY SENSOR
M	MOTOR OPERATED DAMPER – LOW VOLTAGE

GENERAL DDC CONTROL NOTES

A. ALL DORM ROOM FANCOILS ON THE GROUND FLOOR SHALL HAVE WIRELESS THERMOSTATS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

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KUHLMAN HALL RENOVATION PHASE II

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513-745-3151

STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. NEW DUCTWORK THIRD FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV103

0'-2" REFERENCE LINE

15054HV103.dwg

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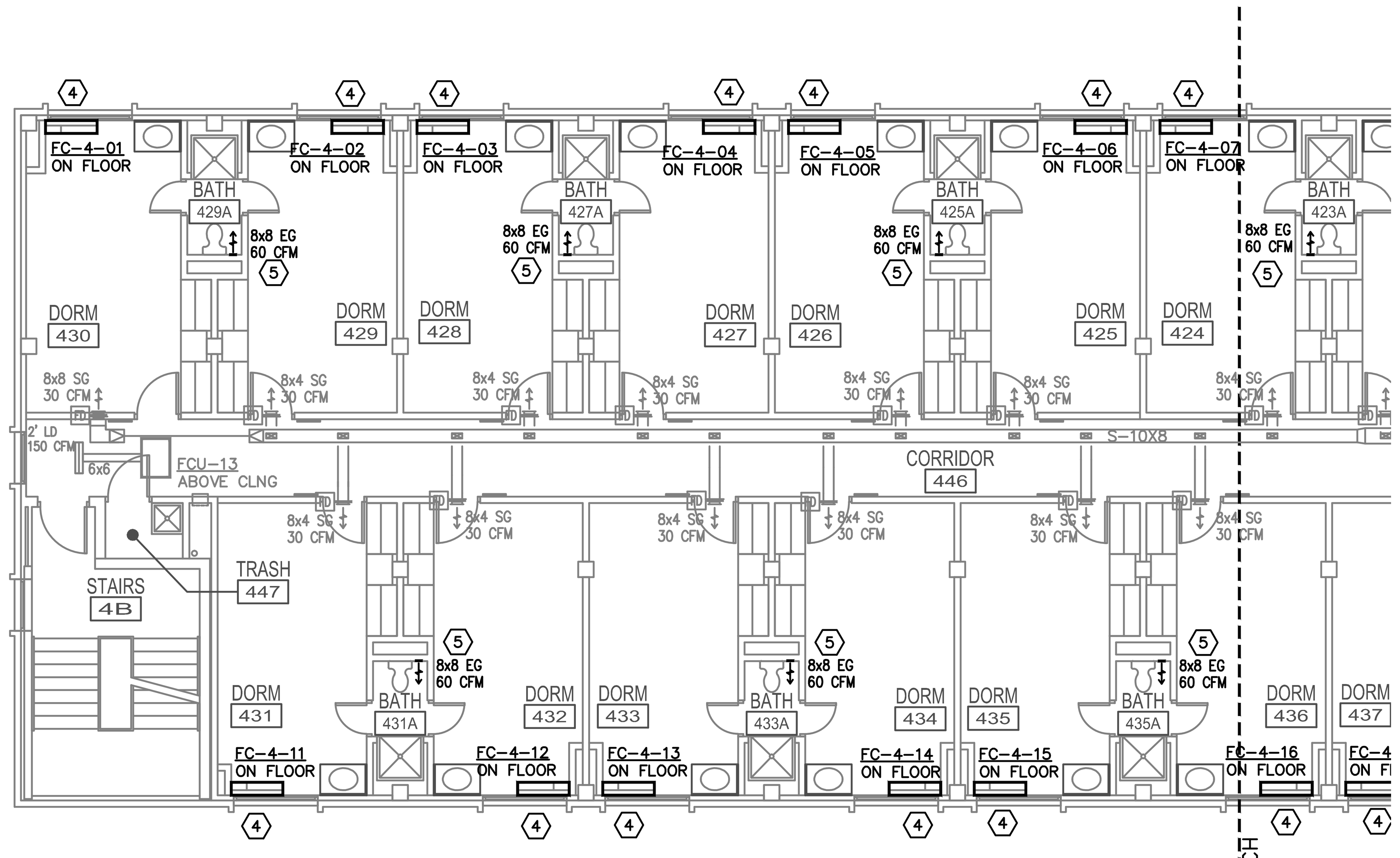

H.V.A.C. - NEW DUCTWORK - FOURTH FLOOR

SCALE: 1/8" = 1' - 0"

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	NEW WORK
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
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	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	ELBOW WITH TURNING VANES
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	TEMPERATURE SENSOR
T	THERMOSTAT
PS	PRESSURE SENSOR
HS	HUMIDITY SENSOR
M	MOTOR OPERATED DAMPER – LOW VOLTAGE

NEW WORK GENERAL NOTES

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

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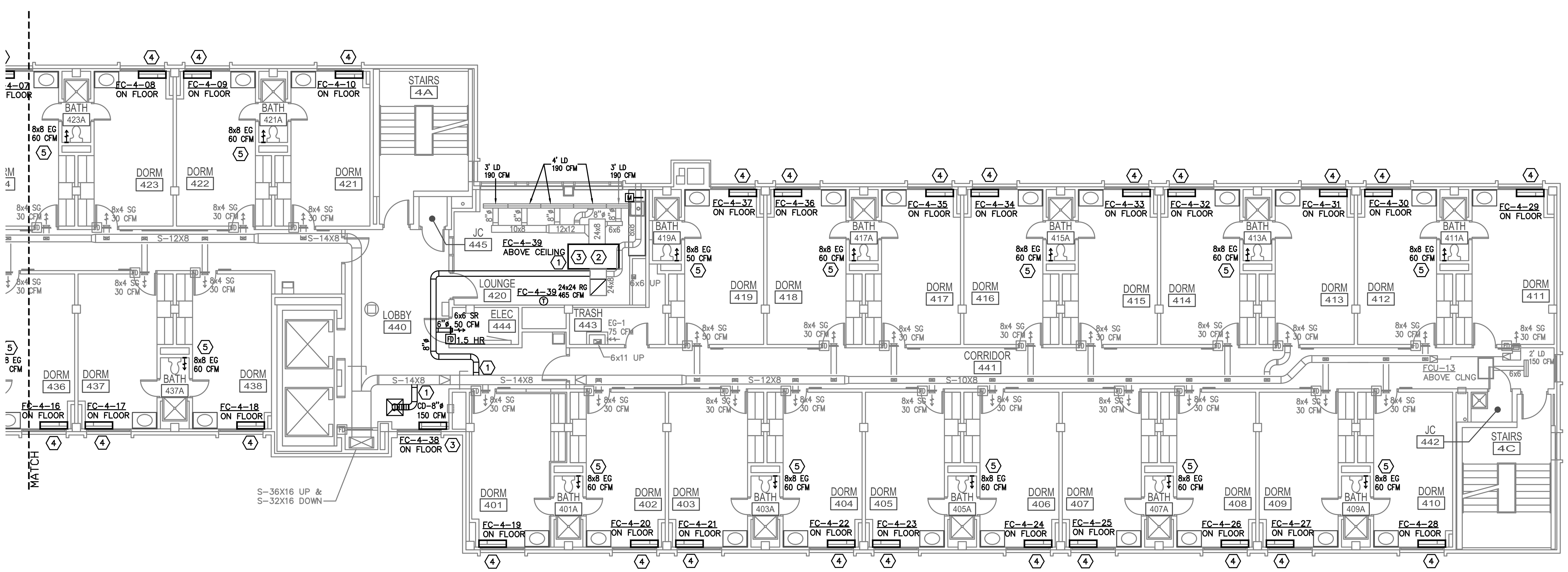

GENERAL DDC CONTROL NOTES

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H.V.A.C. - NEW DUCTWORK - FOURTH FLOOR

SCALE: 1/8" = 1' - 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

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ISSUE	REVISION	DATE
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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. NEW DUCTWORK FOURTH FLOOR

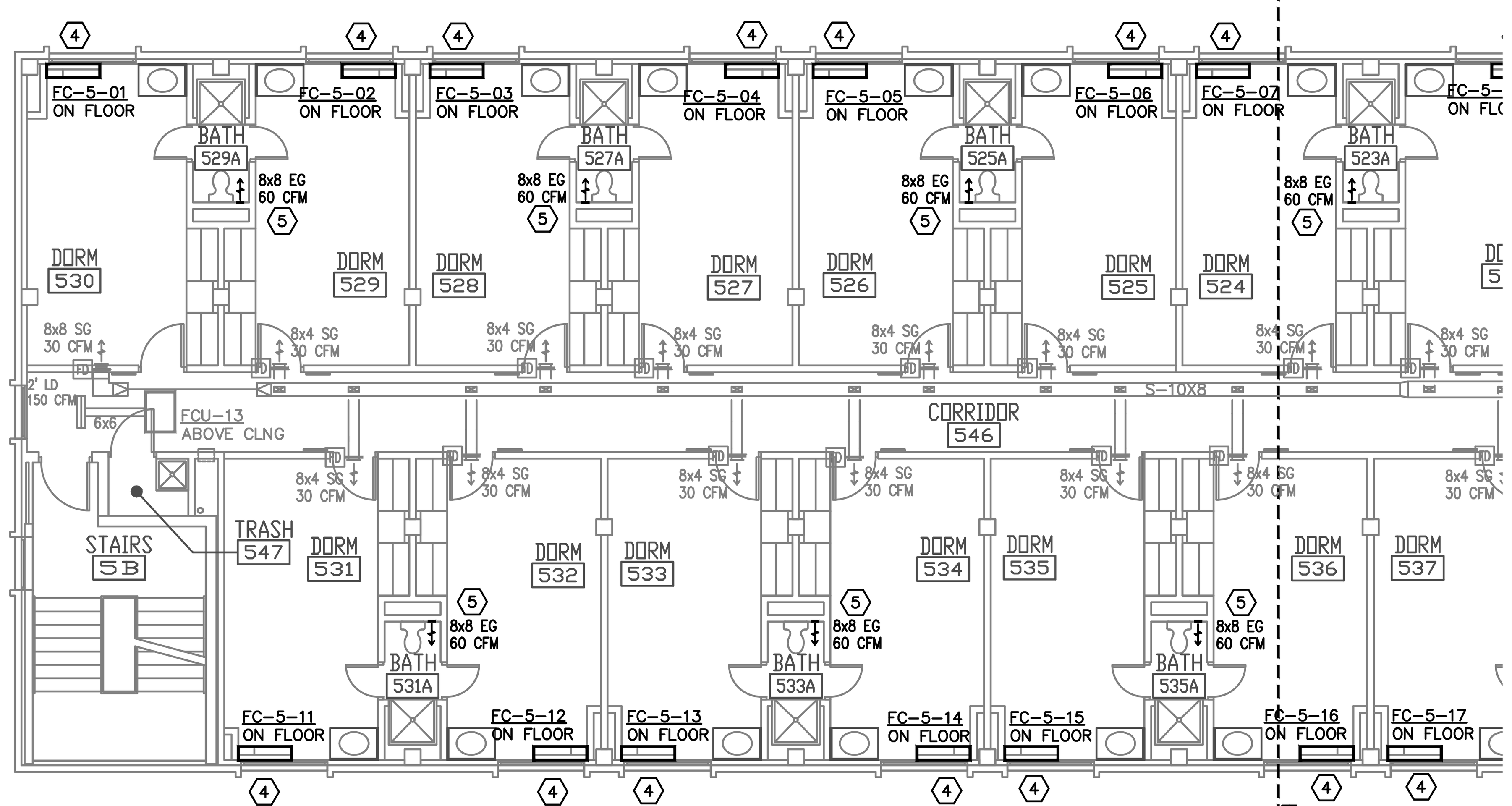
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV104

15054HV104.dwg

4/24/2014 10:19 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HV104.DWG



H.V.A.C. - NEW DUCTWORK - FIFTH FLOOR

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NEW WORK GENERAL NOTES

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F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

H. SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.

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2. CONNECT NEW FAN COIL TO EXISTING DUCTWORK. CUT AND PATCH AS NECESSARY.
3. PROVIDE DUAL ENTHALPY ECONOMIZER FUNCTION ON FAN COIL FOR COOLING IN THE WINTER. DURING THE SUMMER THE DAMPER SHALL BE CLOSED.
4. REFER TO DETAIL 233713.00-11 ON HV200 FOR SEALING OF EXISTING LOUVER.
5. PROVIDE NEW EXHAUST GRILLE EQUAL TO PRICE 635DAL. EXPAND EXISTING OPENING AS REQUIRED TO FIT NEW GRILLE.

HVAC SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	EXISTING WORK TO REMAIN
	NEW WORK
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
EG	EXHAUST GRILLE
CD	CEILING DIFFUSER
CD-10"ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
LD	LINEAR SLOT DIFFUSER
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	BRANCH TAKEOFF
	ELBOW WITH TURNING VANES
	FLEXIBLE DUCTWORK CONNECTION
FD 1.5 HR	FIRE DAMPER (1.5 HR)
T	TEMPERATURE SENSOR
T	THERMOSTAT
PS	PRESSURE SENSOR
HS	HUMIDITY SENSOR
M	MOTOR OPERATED DAMPER – LOW VOLTAGE

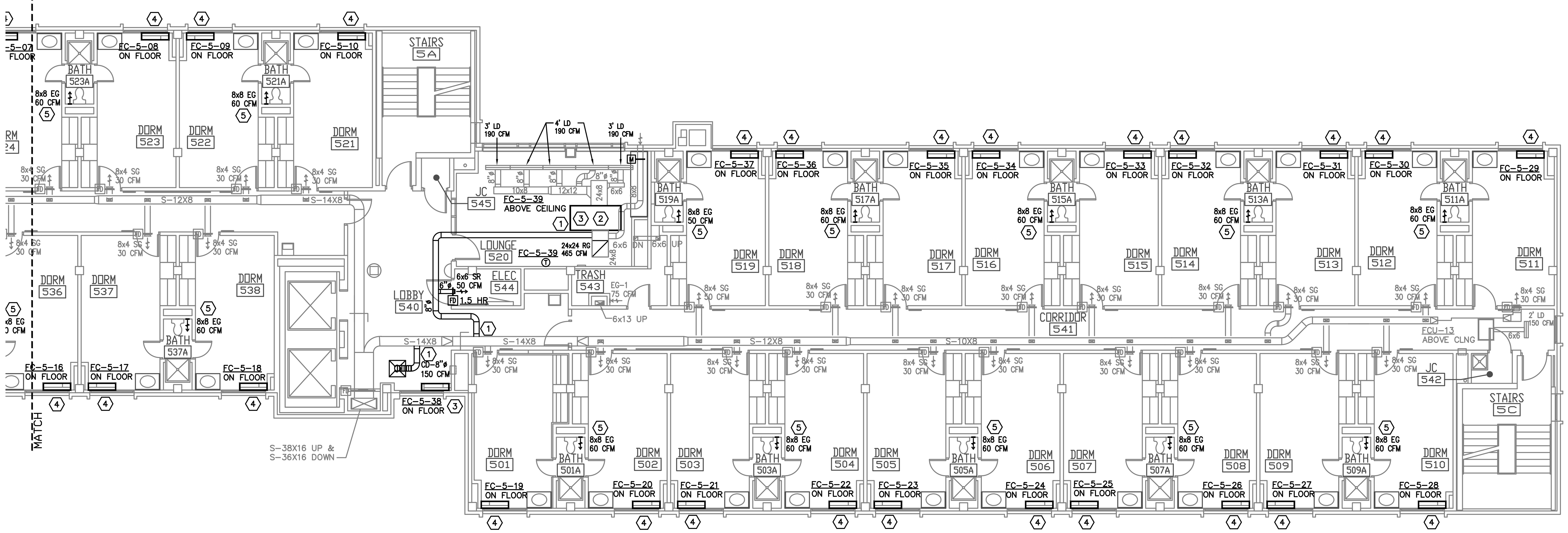
GENERAL DDC CONTROL NOTES

A. ALL DORM ROOM FANCOILS ON THE GROUND FLOOR SHALL HAVE WIRELESS THERMOSTATS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

B. ALL DORM ROOM UNIT VENTILATORS SHALL HAVE INTEGRAL CONTROLS PROVIDED FROM THE FACTORY. THEY SHALL BE STAND ALONE CONTROL WITH NO INTEGRATION INTO THE SIEMENS CAMPUS SERVER.

C. ALL COMMON AND BACK OF HOUSE AREAS THROUGHOUT THE BUILDING SHALL HAVE FACTORY CONTROLS WITH A BACNET CARD FOR INTEGRATION INTO THE EXISTING SIEMENS CAMPUS SERVER. SIEMENS WILL BE RESPONSIBLE FOR ALL INTEGRATION INTO THE EXISTING SERVER INCLUDING ALL GRAPHICS, ALARMS AND POINT BY POINT INTEGRATION. THE SIEMENS INTEGRATION SHALL BE PART OF THE PROJECT SCOPE & SHALL BE CARRIED BY THE CONTRACTOR.

D. ALL COMMON AREAS SHALL BE EQUIPPED WITH A FACTORY PROVIDED DUAL ENTHALPY ECONOMIZER THAT WILL PROVIDE COOLING IN THE WINTER AS REQUIRE. AS PART OF THE PROJECT SCOPE, DAMPERS SHALL BE ADDED TO THE RETURN DUCTWORK THAT MODULATE INVERSELY WITH THE OUTSIDE AIR DAMPERS TO ASSURE PROPER OUTSIDE AIRFLOW. IN THE SUMMER THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AT ALL TIMES. ALL UNITS THAT UTILIZE AN ECONOMIZER SHALL ALSO HAVE A FREEZE STAT INSTALLED THAT WILL ALARM THE SYSTEM IF THE COIL SENSES TEMPERATURES BELOW FREEZING. IN THE EVENT OF AN ALARM, THE OUTSIDE AIR DAMPER SHALL CLOSE, AND THE HEATING VALVE SHALL GO TO THE FULL OPEN POSITION.



WINDOW CONTROL CONTACTS

1. ALL UNITS SHALL HAVE DRY CONTACTS FOR FUTURE WINDOW SENSORS FOR SHUTTING THE UNIT DOWN WHEN WINDOWS ARE OPEN. ALL WIRING FOR SENSORS SHALL BE PROVIDED, BUT NOT CONNECTED TO EXISTING WINDOWS. FUTURE PLANS INCLUDE REPLACING THE WINDOWS & THIS OPTION SHALL BE AVAILABLE FOR FUTURE SENSORS.

UNIT PRICE

1. PROVIDE A $/LINEAL FOOT FOR PROVIDING & INSTALLING PIPING INSULATION ON EXISTING PIPING.
2. PROVIDE A $/LINEAL FOOT FOR PROVIDING & INSTALLING DUCTWORK INSULATION ON EXISTING DUCTWORK.

H.V.A.C. - NEW DUCTWORK - FIFTH FLOOR

SCALE: 1/8" = 1' - 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

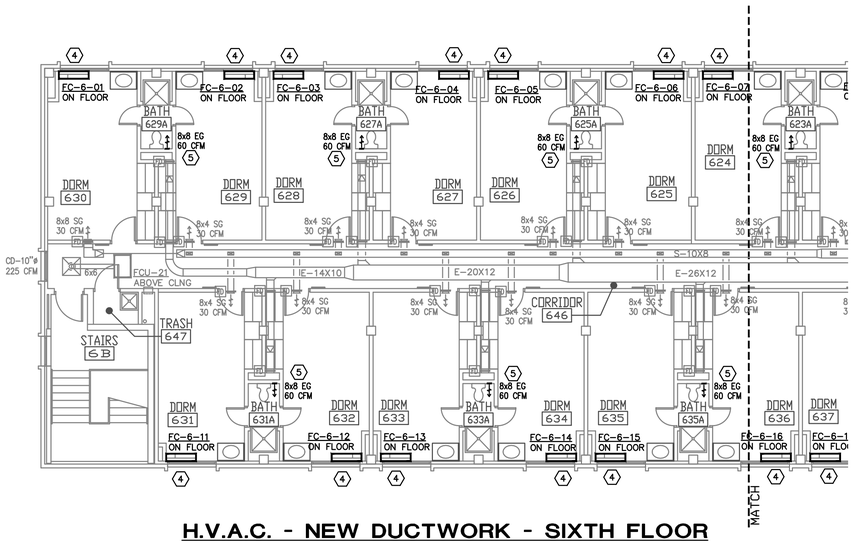
H.V.A.C. NEW DUCTWORK FIFTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV105

15054HV105.dwg



H.V.A.C. - NEW DUCTWORK - SIXTH FLOOR

SCALE: 1/8" = 1' – 0"

NEW WORK GENERAL NOTES

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETELY FURNISH, INSTALL, AND PLACE INTO OPERATION, ALL SYSTEMS SHOWN ON THE DRAWINGS AND DELINEATED IN THE SPECIFICATIONS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. REPORT ANY KNOWN DISCREPANCIES TO THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

B. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS AND GRILLES.

C. DO NOT SCALE DRAWINGS; REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS, DOORS, WINDOWS, AND CABINETRY.

D. COORDINATE WORK AND SPACE REQUIREMENTS IN CEILING SPACES WITH OTHER TRADES PRIOR TO INSTALLATION.

E. PROVIDE VOLUME DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST DUCT BRANCH TAKE-OFFS.

F. PROVIDE TURNING VANES IN ALL 90 DEGREE MITERED ELBOWS. OMIT TURNING VANES IN ACOUSTIC LINED RETURN DUCT ELBOWS.

G. PROVIDE FLEXIBLE DUCT ON INLET TO EACH CEILING DIFFUSER. CUT FLEXIBLE DUCTS TO LENGTH NEEDED AND INSTALL WITHOUT KINKS OR SHARP BENDS (BENDS WITH CENTERLINE RADIUS LESS THAN DUCT DIAMETER).SUPPORT FLEXIBLE DUCTS WITH MINIMUM 1" WIDE METAL STRAPS OR SADDLES.

H. SIZES OF ACOUSTIC LINED DUCTS ARE NET INSIDE DIMENSION. INCREASE SHEET METAL SIZE ACCORDINGLY.

I. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.

J. INSTALL ALL EQUIPMENT WITH CODE REQUIRED AND MANUFACTURER RECOMMENDED MINIMUM CLEARANCES FOR SERVICE, ACCESS, AND FIRE PROTECTION.

K. MAINTAIN A MINIMUM OF 10 FEET BETWEEN ALL OUTSIDE AIR INTAKES AND ALL EXHAUST, VENT, AND FLUE OUTLETS.

NEW WORK KEYED NOTES

1. CONNECT NEW DUCTWORK TO EXISTING.
2. CONNECT NEW FAN COIL TO EXISTING DUCTWORK. CUT AND PATCH AS NECESSARY.
3. PROVIDE DUAL ENTHALPY ECONOMIZER FUNCTION ON FAN COIL FOR COOLING IN THE WINTER. DURING THE SUMMER THE DAMPER SHALL BE CLOSED.
4. REFER TO DETAIL 233713.00-11 ON HV200 FOR SEALING OF EXISTING LOUVER.
5. PROVIDE NEW EXHAUST GRILLE EQUAL TO PRICE 635DAL. EXPAND EXISTING OPENING AS REQUIRED TO FIT NEW GRILLE.

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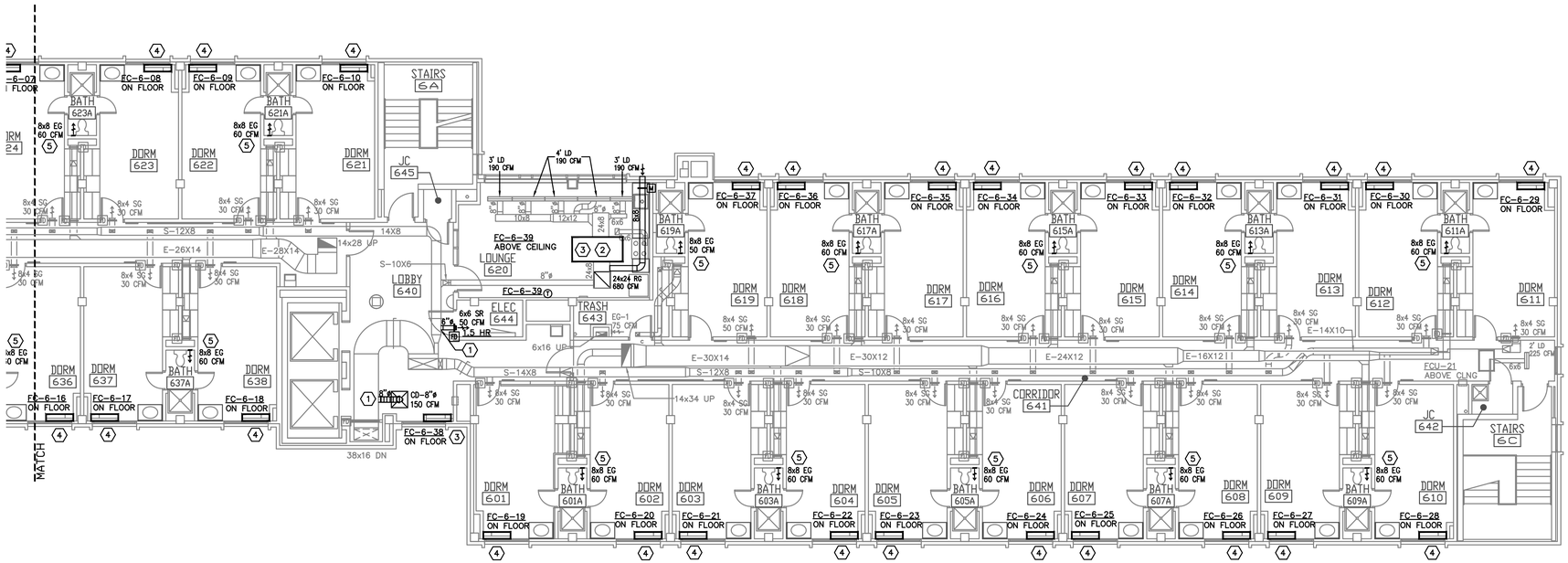

H.V.A.C. - NEW DUCTWORK - SIXTH FLOOR

SCALE: 1/8" = 1' – 0"

GENERAL DDC CONTROL NOTES

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2. PROVIDE A $/LINEAL FOOT FOR PROVIDING & INSTALLING DUCTWORK INSULATION ON EXISTING DUCTWORK.

0'-2" REFERENCE LINE

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REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. NEW DUCTWORK SIXTH FLOOR

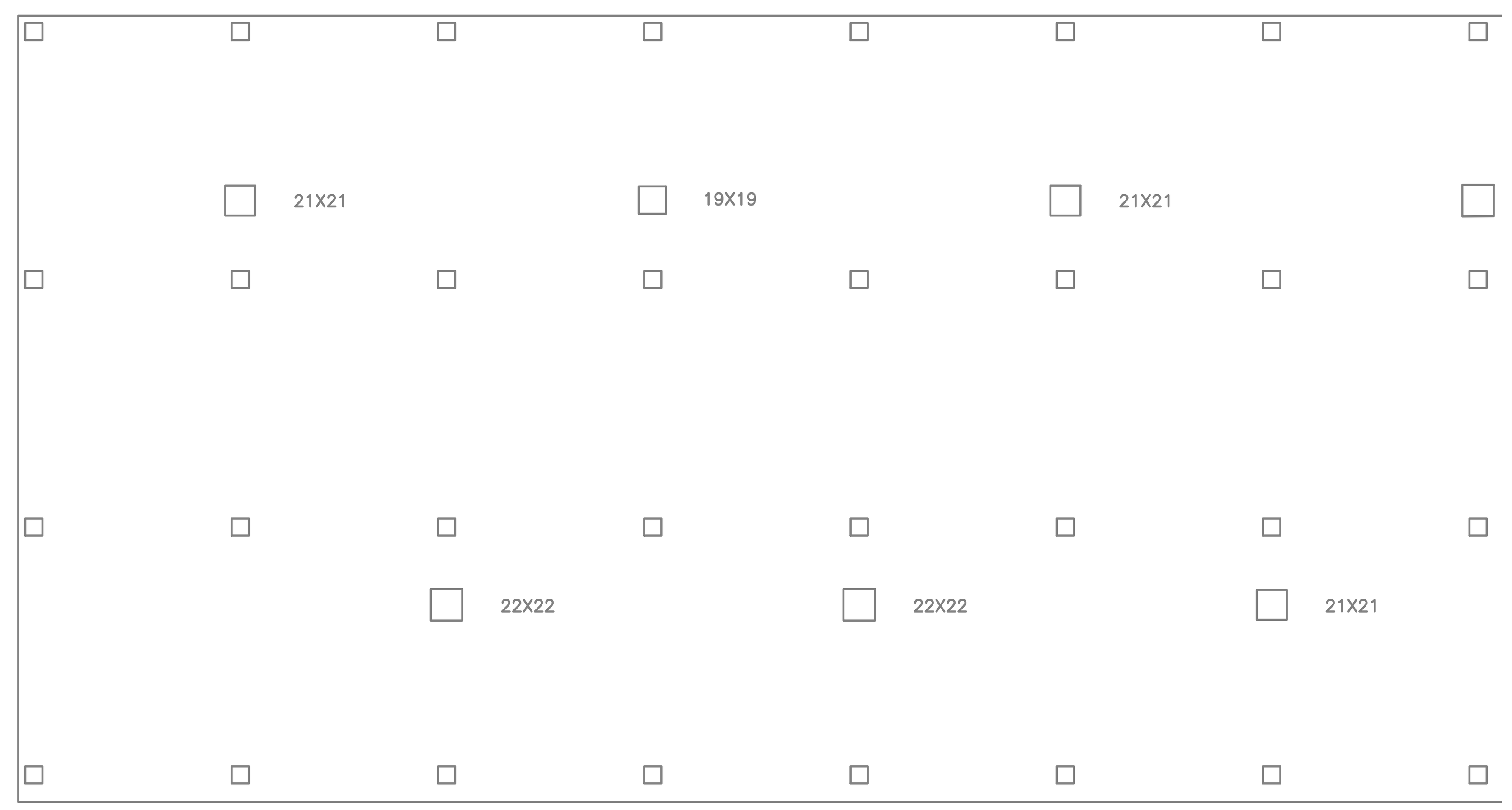
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV106

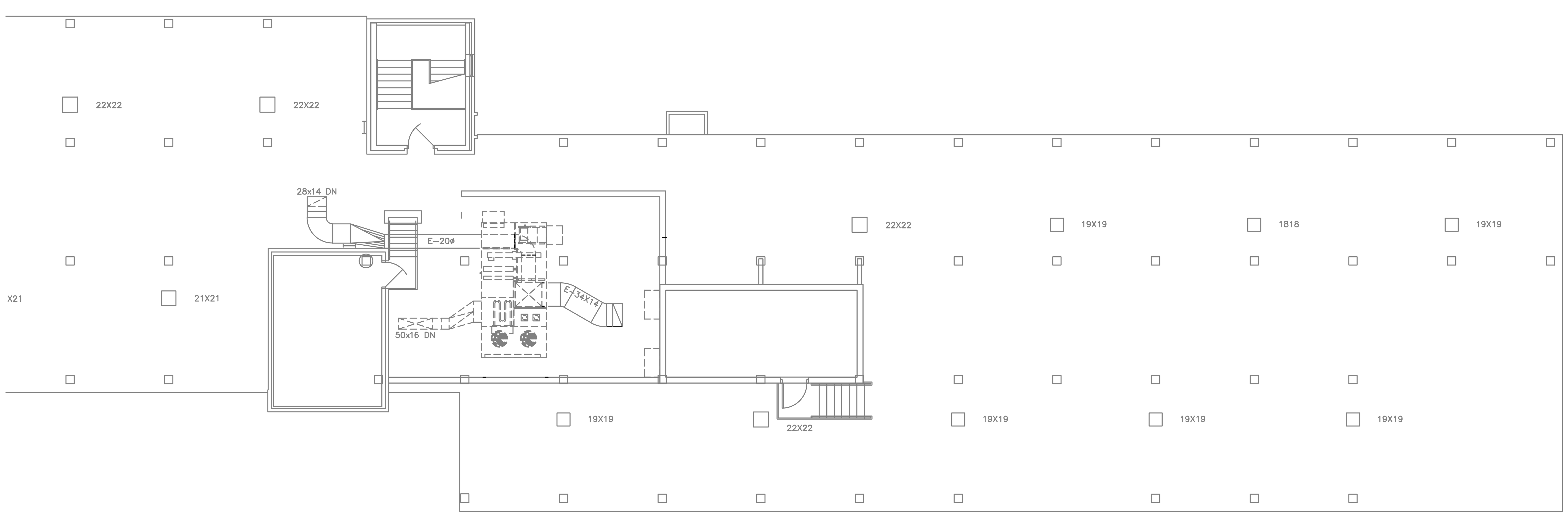
4/24/2014 10:19 AM G:\15000-15999\15000-15099\15054L_CONSTRUCTION SET\15054HV106.DWG

15054HV106.dwg



H.V.A.C. - ROOF
SCALE: 1/8" = 1' - 0"

FOR REFERENCE ONLY



H.V.A.C. - ROOF
SCALE: 1/8" = 1' - 0"

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KUHLMAN HALL RENOVATION PHASE II

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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. NEW DUCTWORK ROOF

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV107

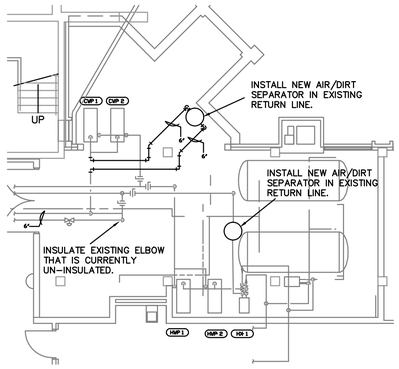
15054HV107.dwg

GENERAL SCOPE OUTLINE

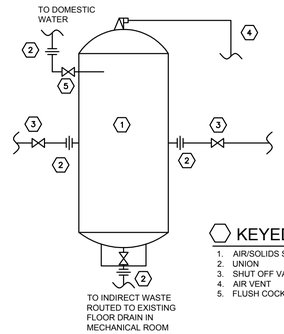
1. ALL EXISTING FAN COILS ARE TO BE REPLACED. NEW SHUT-OFF VALVES TO BE INSTALLED. INSULATED METAL PANELS SHALL BE INSTALLED TO BLANK OFF OUTSIDE AIR LOUVER.
2. ALL DIFFUSERS AND RETURN REGISTERS ARE TO BE REPLACED.
3. ALL EXISTING EXHAUST GRILLES IN BATHROOM TO BE REPLACED WITH ALUMINUM GRILLES WITH DAMPER ASSEMBLY OPTION.
4. RETURN DIFFUSER IN RECREATION ROOM TO BE RELOCATED TO ACCOMMODATE NEW ENTRY NICHE.
5. OUTSIDE AIR TO BE PROVIDED IN ELECTRIC ROOMS AND COMMON AREAS.
6. ALL EXISTING UNINSULATED PIPING TO BE INSULATED.
7. ALL EXISTING UNINSULATED DUCTWORK TO BE INSULATED.
8. MOTOR OPERATED DAMPER TO BE ADDED TO EXHAUST FANS IN LAUNDRY ROOM.
9. ADD AIR/DIRT SEPARATOR TO HOT WATER AND CHILLED WATER LINES.

GENERAL PHASING OUTLINE

1. THE KUHLMAN DORMITORY BUILDING WILL BE REQUIRED TO STAY ONLINE DURING THE CONSTRUCTION PERIOD OVER THE SUMMER. THERE WILL BE A 2 TO 3 WEEK PERIOD IN LATE MAY, EARLY JUNE WHEN THE BUILDING CAN BE SHUT DOWN. THIS SHUTDOWN WILL NEED TO BE COORDINATED WITH XAVIER. DURING THIS SHUT DOWN, FIELD SUPPLIED FULL PORT BALL VALVES SHALL BE INSTALLED IN THE EXISTING HOT WATER AND CHILLED WATER LINES. THIS WILL ALLOW FOR THE FANCOILS TO BE INSTALLED INDIVIDUALLY WITHOUT SHUTTING DOWN THE ENTIRE SYSTEM. THE PROCESS FOR THIS VALVE INSTALL SHALL BE COORDINATED WITH XAVIER PRIOR TO STARTING WORK.

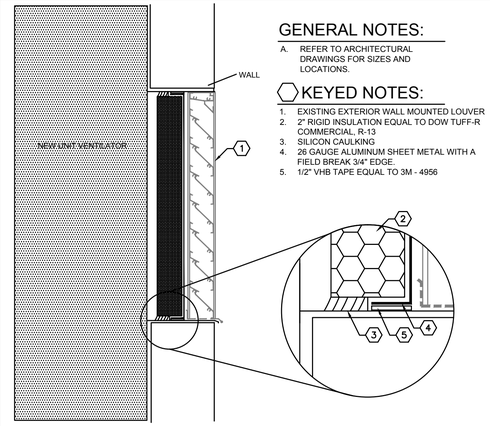


232113.23 MECHANICAL ROOM DETAIL
SCALE: NOT TO SCALE



KEYED NOTES:
1. AIR/SOLIDS SEPARATOR
2. UNION
3. SHUT OFF VALVE
4. AIR VENT
5. FLUSH COCK

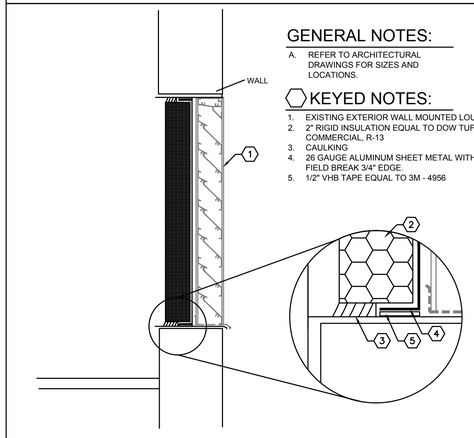
232113.23 AIR/SOLIDS SEPARATOR
SCALE: NONE



GENERAL NOTES:
A. REFER TO ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATIONS.

KEYED NOTES:
1. EXISTING EXTERIOR WALL MOUNTED LOUVER
2. 2" RIGID INSULATION EQUAL TO DOW TUFF-R COMMERCIAL, R-13
3. SILICON CAULKING
4. 26 GAUGE ALUMINUM SHEET METAL WITH A FIELD BREAK 3/4" EDGE.
5. 1/2" VHB TAPE EQUAL TO 3M - 4956

233713.00-11 EXISTING LOUVER SEALING W/FANCOIL
SCALE: NONE



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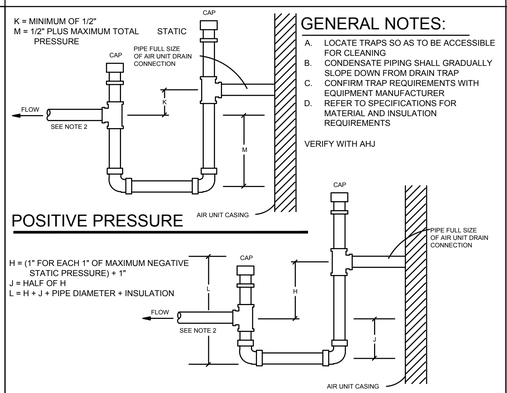
233713.00-12 EXISTING LOUVER SEALING GROUND FLOOR
SCALE: NONE

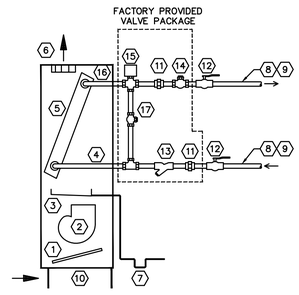


GENERAL NOTES:
A. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING
B. CONDENSATE PIPING SHALL GRADUALLY SLOPE DOWN FROM DRAIN TRAP
C. CONFIRM TRAP REQUIREMENTS WITH EQUIPMENT MANUFACTURER
D. REFER TO SPECIFICATIONS FOR MATERIAL AND INSULATION REQUIREMENTS

VERIFY WITH AHJ

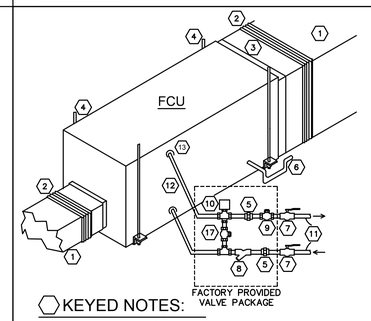
NOTE: OUTDOOR UNITS AND UNITS LOCATED IN UNCONDITIONED SPACES WHICH PROVIDE COOLING IN THE WINTER MUST HAVE HEAT TRACE ON CONDENSATE PIPING.

232113.23-05 COND. DRAIN TRAP POSITIVE & NEGATIVE
SCALE: NONE



KEYED NOTES:
1. 1" FILTER
2. FAN
3. CONDENSATE DRAIN PAN
4. CHILLED WATER COOLING COIL
5. HOT WATER COIL IN REHEAT POSITION
6. TOP DISCHARGE GRILLE
7. CONDENSATE LINE W/ TRAP, MINIMUM 1" DEEP TRAP
8. INSULATED CHILLED WATER PIPING - SEE COIL PIPING DIAGRAM
9. INSULATED HOT WATER PIPING - SEE COIL PIPING DIAGRAM
10. BOTTOM RETURN AIR
11. UNION
12. ISOLATION VALVE WITH HANDLE EXTENSION - PROVIDE DI-ELECTRIC UNION IF DISSIMILAR PIPING MATERIAL USED. PROVIDE SEPARATELY FROM FACTORY SUPPLIED PIPING PACKAGE.
13. STRAINER
14. AUTOMATIC BALANCING VALVE WITH PRESSURE TEST PORT AND MEMORY STOP
15. CONTROL VALVE (3-WAY W/ BYPASS, SEE TEMPERATURE CONTROL SPECIFICATION)
16. MANUAL AIR BLEEDER AT HIGHEST POINT IN PIPING TO BOX
17. MANUAL BALANCING VALVE

238219.00-06 FAN COIL UNIT
SCALE: NONE

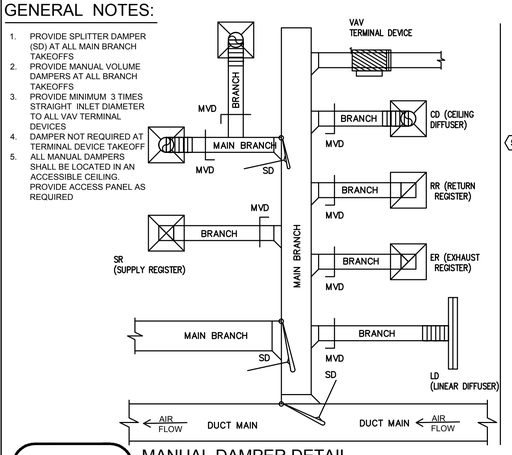


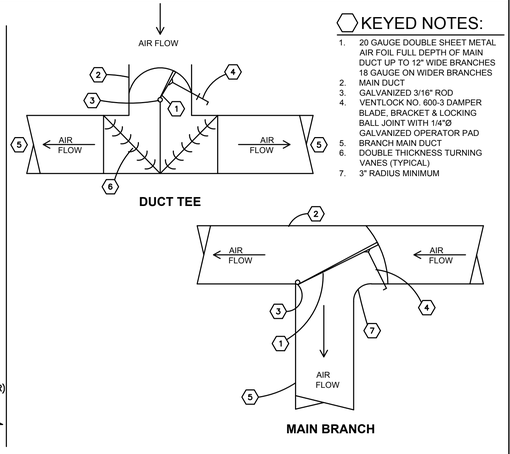
KEYED NOTES:
1. INSULATED SUPPLY DUCT
2. FLEXIBLE CONNECTION
3. FILTER RACK AND ACCESS DOOR
4. GALVANIZED ALL-THREAD ROD W/ VIBRATION ISOLATOR (TYP.) ATTACHED TO STRUCTURE
5. UNION
6. 1" CONDENSATE LINE WITH TRAP, MINIMUM 1" DEEP TRAP
7. ISOLATION VALVE WITH HANDLE EXTENSION - PROVIDE DI-ELECTRIC UNION IF DISSIMILAR PIPING MATERAL USED. PROVIDE SEPARATELY FROM FACTORY SUPPLIED PIPING PACKAGE.
8. STRAINER
9. AUTOMATIC BALANCING VALVE
10. CONTROL VALVE (3-WAY W/ BYPASS, SEE TEMPERATURE CONTROL SPECIFICATION)
11. CHILLED / HOT WATER PIPING WITH 1" MINIMUM INSULATION
12. CHILLED / HOT WATER COIL
13. MANUAL AIR BLEEDER AT HIGHEST POINT IN PIPING TO BOX.
14. MANUAL BALANCING VALVE

238219.00-07 FAN-COIL UNIT
SCALE: NONE

GENERAL NOTES:

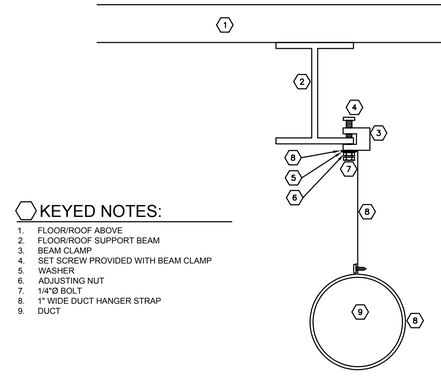
1. PROVIDE SPLITTER DAMPER (SD) AT ALL MAIN BRANCH TAKEOFFS
2. PROVIDE MANUAL VOLUME DAMPERS AT ALL BRANCH TAKEOFFS
3. PROVIDE MINIMUM 3 TIMES STRAIGHT INLET DIAMETER TO ALL VAV TERMINAL DEVICES
4. DAMPER NOT REQUIRED AT TERMINAL DEVICE TAKEOFF
5. ALL MANUAL DAMPERS SHALL BE LOCATED IN AN ACCESSIBLE CEILING. PROVIDE ACCESS PANEL AS REQUIRED





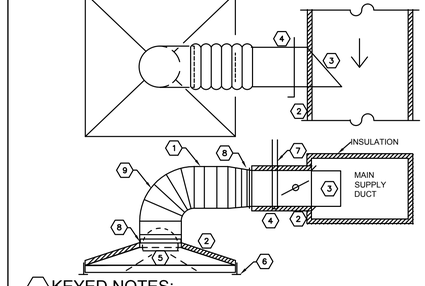
KEYED NOTES:
1. 20 GAUGE DOUBLE SHEET METAL AIR FOIL FULL DEPTH OF MAIN DUCT UP TO 12" WIDE BRANCHES 18 GAUGE ON WIDER BRANCHES
2. MAIN DUCT
3. GALVANIZED 3/16" ROD
4. VENTLOCK NO. 600-3 DAMPER BLADE, BRACKET & LOCKING BALL JOINT WITH 1/4"Ø GALVANIZED OPERATOR PAD
5. BRANCH MAIN DUCT
6. DOUBLE THICKNESS TURNING VANES (TYPICAL)
7. 3" RADIUS MINIMUM

233300.00-01 MANUAL DAMPER DETAIL
SCALE: NONE



KEYED NOTES:
1. FLOOR/ROOF ABOVE
2. FLOOR/ROOF SUPPORT BEAM
3. BEAM CLAMP
4. SET SCREW PROVIDED WITH BEAM CLAMP
5. WASHER
6. ADJUSTING NUT
7. 1/4"Ø BOLT
8. 1" WIDE DUCT HANGER STRAP
9. DUCT

233113.00-02 DUCT SUPPORT DETAIL
SCALE: NONE



KEYED NOTES:
1. MAXIMUM LENGTH OF INSUL. FLEX DUCT EQUALS 5 FEET. FLEX NOT PERMITTED IN INACCESSIBLE CEILINGS
2. INSULATED DUCT, COLLAR AND DIFFUSER BY HVAC CONTRACTOR
3. SCOOP
4. SPIN IN FITTING WITH MANUAL VOLUME DAMPER
5. INTERNAL BUTTERFLY DAMPER FOR DRYWALL APPLICATIONS ONLY. (PROVIDE KEY FOR ADJUSTMENT)
6. SECURE TO CEILING PER MANUFACTURER'S RECOMMENDATIONS AND PER CEILING FINISH. PROVIDE GRID CLIPS PER MFG'R REQUIREMENTS. PROVIDE FRAMING FOR DRYWALL INSTALLATION.
7. HANGER, SECURE TO STRUCTURE AND DUCTWORK.
8. PEEL BACK INSULATION AND PROVIDE STRAPPING AND SHEET METAL SCREWS AT FLEX CONNECTION TO DUCT. THEN PROVIDE STRAPPING AROUND INSULATION.
9. SUPPORT FLEX TO PREVENT COLLAPSING

233713.00-04 DIFFUSER INSTALLATION (TYPICAL)
SCALE: NONE

H.V.A.C. - DETAILS
SCALE: NOT TO SCALE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

KOHRS LORSBACH KEIL, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLKENGR.COM
1536 ALEXANDRIA PIKE, SUITE 11, FT. THOMAS, KENTUCKY 41075, 859-394-9781, 859-442-8050 FAX
LEXINGTON, KENTUCKY
COLUMBUS, OHIO
DAYTON, OHIO
NEW YORK, NEW YORK

OFFICE OF PHYSICAL PLANT
XAVIER UNIVERSITY
3800 VICTORY PARKWAY
CINCINNATI, OH 45207
513-745-3151

STATE OF OHIO — JOSEPH RICHARD KOHRS — E-54242 — REGISTERED PROFESSIONAL ENGINEER — 3/14/2014

DRAWN BY: | CHECKED BY:

H.V.A.C. DETAILS

PROJECT NUMBER 911717

DATE APRIL 25, 2014

SHEET NO. HV200

0'-2" REFERENCE LINE

4/24/2014 10:19 AM G:\15000-15999\15000-15099\15054_ CONSTRUCTION SET\15054HV200.DWG

15054HV200.dwg

HVAC VENTILATION SCHEDULE-1

ROOMNUM	ROOMNAME	SYSTEM	ZONE	AREA	CLNGHT	AIR CHGS	OA CHGS	PEOPLE DES	PEOPLE RED	OA PER	OA SQFT	REQ SUP	ACT SUP	REQ OA	ACT OA	ACT RET	ACT EXH	CRITICAL	PRESSURE	PCT OPERABLE	NATURAL VENTILATION
001	DORM	31		204	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
002	DORM	32		198	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
002A	BATHROOM	32		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
003	DORM	33		198	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
004	DORM	34		198	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
004A	BATHROOM	34		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
005	DORM	35		198	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
006	DORM	36		198	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
006A	BATHROOM	36		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
007	DORM	37		198	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
008	DORM	38		198	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
008A	BATHROOM	38		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
009	DORM	39		198	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
010	DORM	40		198	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
010A	BATHROOM	40		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
011	DORM	43		198	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
012	DORM	44		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
012A	BATHROOM	44		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
013	DORM	45		198	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
014	DORM	46		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
014A	BATHROOM	46		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
015	DORM	47		198	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
016	DORM	48		198	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
016A	BATHROOM	48		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
017	DORM	42		182	0	0	0	2	2	5	0.06	286	310	20	22	310	0	0.0838	E	0	
017A	BATHROOM	42		54	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
018	DORM	41		185	0	0	0	2	2	5	0.06	525	550	21	22	550	0	0.0472	E	0	
020	TELEPHONE EQUIPMENT	237		135	0	0	0	0	0	0	0.12	200	220	16	18	220	0	0.0909	E	0	
021	SHOP	236		129	0	0	0	0	0	0	0.12	39	40	15	15	40	0	0.475	E	0	
022	MAINTENANCE	236		155	0	0	0	0	0	0	0.12	58	60	22	23	60	0	0.4	E	0	
023	STORAGE	236		266	0	0	0	0	0	0	0.12	108	110	41	42	110	0	0.3636	E	0	
024	VENDING ROOM	235		179	0	0	0	3	3	7.5	0.12	200	210	46	48	210	0	0.2619	E	0	
025	TOILET	234		41	0	0	0	0	0	0	0	67	80	4	5	0	80	0	E	0	
026	BREAK ROOM	234		100	0	0	0	2	2	5	0.06	217	240	13	14	240	0	0.0833	E	0	
027	TOILET	234		35	0	0	0	0	0	0	0	17	20	1	1	0	80	0	N	0	
028	TOILET	234		35	0	0	0	0	0	0	0	17	20	1	1	0	80	0	N	0	
029	BREAK ROOM	234		99	0	0	0	2	2	5	0.06	217	240	13	14	240	0	0.0833	E	0	
030	RECEIVING	233		146	0	0	0	0	0	0	0.12	194	200	33	34	200	0	0.11	E	0	
031	TRASH ROOM	233		151	0	0	0	0	0	0	0.12	65	70	11	12	70	0	0.3142	E	0	
032	RECREATION ROOM	239		395	0	0	0	12	12	7.5	0.06	489	500	93	95	500	0	0.284	E	0	
032	RECREATION ROOM	278		500	0	0	0	15	15	7.5	0.06	871	900	148	153	900	0	0.1977	E	0	
032	RECREATION ROOM	277		423	0	0	0	13	13	7.5	0.06	847	900	127	135	900	0	0.1711	E	0	
033	LAUNDRY ROOM	286		514	0	0	0	10	10	7.5	0.06	733	760	110	114	760	0	0.1736	E	0	
034	OFFICE	241		261	0	0	0	2	2	5	0.06	225	240	27	29	240	0	0.1333	E	0	
040	VESTIBULE	242		181	0	0	0	0	0	0	0.12	733	1080	22	32	1080	0	0.0259	E	0	
041	ELEVATOR LOBBY	243		388	0	0	0	12	12	7.5	0.06	280	280	126	126	280	0	0.5035	E	0	
043	CORRIDOR	244		88	0	0	0	0	0	0	0.06	74	90	14	17	90	0	0.0666	E	0	
044	CORRIDOR	244		644	0	0	0	0	0	0	0.06	179	220	34	42	220	0	0.2227	E	0	
046	CORRIDOR	239		437	0	0	0	0	0	0	0.06	221	225	42	43	225	0	0.1422	E	0	
047	CORRIDOR	239		259	0	0	0	0	0	0	0.06	221	225	42	43	225	0	0.0888	E	0	
048	CORRIDOR	238		97	0	0	0	0	0	0	0.06	133	150	4	4	150	0	0.0533	E	0	
049	JANITORS CLOSET	238		19	0	0	0	0	0	0	0.12	133	160	4	5	160	0	0.0125	E	0	
1	Outside air	287		100	0	0	0	0	0	0	0	0	8675	0	8675	8675	0	0	E	0	
100	ELEVATOR LOBBY	249		523	0	0	0	16	16	5	0.06	367	370	99	100	370	0	0.3756	E	0	
101	DORM	12		197	0	0	0	2	2	5	0.06	230	230	23	23	230	0	0.1217	E	0	
102	DORM	13		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
102A	BATHROOM	13		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
103	DORM	14		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
104	DORM	15		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
104A	BATHROOM	15		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
105	DORM	16		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
106	DORM	17		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
106A	BATHROOM	17		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
107	DORM	18		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
108	DORM	19		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
108A	BATHROOM	19		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
109	DORM	20		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
110	DORM	21		197	0	0	0	2	0	0	0	0	220	0	22	220	0	0	E	0	
110A	BATHROOM	21		30	0	0	0	0	0	0	0	0	10	0	1	0	80	0	N	0	
111	DORM	22		194	0	0	0	2	2	5	0.06	314	320	22	22	320	0	0.0875	E	0	
111A	BATHROOM	22		30	0	0	0	0	0	0	0	14	10	1	1	0	80	0	N	0	
112	DORM	23		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
113	DORM	24		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
113A	BATHROOM	24		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
114	DORM	25		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
115	DORM	26		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
115A	BATHROOM	26		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
116	DORM	27		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
117	DORM	28		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
117A	BATHROOM	28		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
118	DORM	29		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
119	DORM	30		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
119A	BATHROOM	30		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
120	LOUNGE	281		172	0	0	0	5	5	7.5	0.06	250	290	50	58	290	0	0.2068	E	0	
120	LOUNGE	285		172	0	0	0	5	5	7.5	0.06	408	440	49	53	440	0	0.1363	E	0	
120	LOUNGE	280		172	0	0	0	5	5	7.5	0.06	408	430	49	52	430	0	0.1395	E	0	
120	LOUNGE	284		172	0	0	0	5	5	7.5	0.06	294	310	50	53	310	0	0.1935	E	0	
120A	HD OFFICE	240		89	0	0	0	1	1	5	0.06	53	190	10	36	190	0	0.0631	E	0	
122	KITCHEN	247		118	0	0	0	2	2	7.5	0.12	143	270	30	57	270	0	0.1333	E	0	
123	DORM	4		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
123A	BATHROOM	4		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
124	DORM	3		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
125	DORM	2		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
125A	BATHROOM	2		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
126	DORM	1		199	0	0	0	2	2	5	0.06	275	320	22	26	320	0	0.0875	E	0	
127	DORM	5		197	0	0	0	2	2	5	0.06	209	230	23	25	230	0	0.1217	E	0	
128	DORM	6		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
128A	BATHROOM	6		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
129	DORM	7		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
130	DORM	8		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
130A	BATHROOM	8		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
131	DORM	9		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
132	DORM	10		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
132A	BATHROOM	10		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
133	DORM	11		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
134	DORM	232		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
134	STUDENT ROOM			197	0	0	0	2	2	5	0.06	0	0	0	0	0	0	0		0	
134A	BATHROOM			30	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
140	VESTIBULE	248		59	0	0	0	0	0	0	0.06	188	200	15	16	200	0	0.025	E	0	
141	LOBBY	279		168	0	0	0	6	6	7.5	0.06	306	310	52	53	310	0	0.2225	E	0	
141	LOBBY	248		186	0	0	0	6	6	7.5	0.06	600	650	48	52	650	0	0.1076	E	0	
142	RA OFFICE	279		142	0	0	0	2	2	5	0.06	165	165	28	28	165	0	0.1454	E	0	
143	CORRIDOR	251		598	0	0	0	0	0	0	0.06	284	290	54	55	290	0	0.1551	E	0	
144	JANITOR'S CLOSET	251		18	0	0	0	0	0	0	0.12	11	10	2	2	10	0	0.2	E	0	
145	TRASH ROOM	251		53	0	0	0	0	0	0	0.12	21	20	4	4	20	0	0.4	E	0	
146	ELECTRICAL CLOSET	249		45	0	0	0	0	0	0	0.12	100	100	27	27	100	0	0.06	E	0	
150	CORRIDOR	250		547	0	0	0	0	0	0	0.06	257	270	36	38	270	0	0.1518	E	0	

HVAC VENTILATION SCHEDULE-2

ROOMNUM	ROOMNAME	SYSTEM	ZONE	AREA	CLNGHT	AIR CHGS	OA CHGS	PEOPLE DES	PEOPLE RED	OA PER	OA SQFT	REQ SUP	ACT SUP	REQ OA	ACT OA	ACT RET	ACT EXH	CRITICAL	PRESSURE	PCT OPERABLE	NATURAL VENTILATION
151	TRASH	250		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
152	BEDROOM	282		212	0	0	0	2	2	5	0.06	267	280	24	25	280	0	0.1035	E	0	
153	HALL DIRECTOR'S LIVING RO	245		135	0	0	0	2	2	5	0.06	210	230	21	23	230	0	0.0956	E	0	
153	LIVING ROOM	276		215	0	0	0	2	2	5	0.06	256	290	23	26	290	0	0.1	E	0	
153A	HALL DIRECTOR'S BATHROOM	245		39	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
153B	HALL DIRECTOR'S CLOSET	245		33	0	0	0	0	0	0	0.06	10	10	1	1	10	0	0.2	E	0	
154	HALL DIRECTOR'S KITCHEN	246		199	0	0	0	2	2	7.5	0.12	267	420	40	63	420	0	0.1166	E	0	
155	BEDROOM	275		140	0	0	0	1	1	5	0.06	87	90	13	14	90	0	0.1777	E	0	
156	RESTROOM	249		57	0	0	0	0	0	0	0	19	20	5	5	0	80	0	N	0	
157	RESTROOM	249		55	0	0	0	0	0	0	0	19	20	5	5	0	80	0	N	0	
201	DORM	65		197	0	0	0	2	2	5	0.06	230	230	23	23	230	0	0.1217	E	0	
202	DORM	66		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
202	STUDENT ROOM			194	0	0	0	2	2	5	0.06	0	0	0	0	0	0	0		0	
202A	BATHROOM	66		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
202A	BATHROOM			30	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
203	DORM	67		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
204	DORM	68		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
204A	BATHROOM	68		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
204A	BATHROOM			30	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
205	DORM	69		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
206	DORM	70		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
206A	BATHROOM	70		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
207	DORM	71		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
208	DORM	72		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
208A	BATHROOM	72		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
209	DORM	73		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
210	DORM	74		197	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
210A	BATHROOM			30	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
210A	BATHROOM	74		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
211	DORM	75		194	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
211A	BATHROOM	75		30	0	0	0	0	0	0	0	14	10	1	1	0	80	0	N	0	
212	DORM	76		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
213	DORM	77		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
213A	BATHROOM	77		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
214	DORM	78		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
215	DORM	79		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
215A	BATHROOM	79		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
216	DORM	80		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
217	DORM	81		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
217A	BATHROOM	81		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
218	DORM	82		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
219	DORM	83		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
219A	BATHROOM	83		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
220	LOUNGE/KITCHENETTE	257		300	0	0	0	9	9	7.5	0.06	800	850	88	94	850	0	0.127	E	0	
221	CHAPEL	274		273	0	0	0	33	33	5	0.06	576	585	196	199	585	0	0.3863	E	0	
221	CHAPEL	256		251	0	0	0	32	32	5	0.06	559	570	190	194	570	0	0.3842	E	0	
222	LIVING ROOM	254		349	0	0	0	4	4	5	0.06	300	390	42	55	390	0	0.1307	E	0	
222C	BEDROOM	255		157	0	0	0	1	1	5	0.06	191	190	21	21	190	0	0.0947	E	0	
222D	BATHROOM	255		44	0	0	0	0	0	0	0	45	50	5	6	0	80	0	N	0	
222E	CLOSET	255		66	0	0	0	0	0	0	0.12	27	30	3	3	30	0	0.3333	E	0	
223	DORM	56		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
223A	BATHROOM	56		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
224	DORM	55		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
225	DORM	54		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
225A	BATHROOM	54		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
226	DORM	53		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
227	DORM	52		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
227A	BATHROOM	52		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
228	DORM	51		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
229	DORM	50		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
229A	BATHROOM	50		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
230	DORM	49		199	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
231	DORM	57		197	0	0	0	2	2	5	0.06	230	230	23	23	230	0	0.1217	E	0	
232	DORM	58		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
232	STUDENT ROOM			194	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
232A	BATHROOM	58		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
233	DORM	59		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
234	DORM	60		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
234A	BATHROOM	60		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
235	DORM	61		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
236	DORM	62		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
236A	BATHROOM	62		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
237	DORM	63		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
238	DORM	64		197	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
238A	BATHROOM	64		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
240	ELEVATOR LOBBY	253		603	0	0	0	18	18	5	0.06	412	420	136	139	420	0	0.3761	E	0	
244	ELEC	283		37	0	0	0	0	0	0	0.12	44	50	4	4	50	0	0.1	E	0	
246	CORRIDOR	252		547	0	0	0	0	0	0	0.06	257	270	36	38	270	0	0.1518	E	0	
247	JANITOR'S CLOSET	252		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
301	DORM	102		197	0	0	0	2	2	5	0.06	230	230	23	23	230	0	0.1217	E	0	
302	DORM	103		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
302A	BATHROOM	103		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
303	DORM	104		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
304	DORM	105		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
304A	BATHROOM	105		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
305	DORM	106		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
306	DORM	107		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
306A	BATHROOM	107		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
307	DORM	108		297	0	0	0	2	2	5	0.06	242	260	29	31	260	0	0.1346	E	0	
308	DORM	109		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
308A	BATHROOM	109		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
309	DORM	110		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
310	DORM	111		194	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
310A	BATHROOM	111		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
311	DORM	112		194	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
311A	BATHROOM	112		30	0	0	0	0	0	0	0	14	10	1	1	0	80	0	N	0	
312	DORM	113		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
313	DORM	114		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
313A	BATHROOM	114		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
314	DORM	115		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
315	DORM	116		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
315A	BATHROOM	116		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
316	DORM	117		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
317	DORM	118		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
317A	STUDENT ROOM	118		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
318	DORM	119		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
319	DORM	120		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
319A	BATHROOM	120		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
319A	BATHROOM			30	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
320	LOUNGE/KITCHENETTE	259		309	0	0	0	9	9	7.5	0.12	771	950	108	133	950	0	0.1378	E	0	
321	DORM	93		194	0	0	0	2	2	5	0.06	314	320	22	22	320	0	0.0875	E	0	
321A	BATHROOM	93		30	0	0	0	0	0	0	0	14	10	1	1	0	80	0	N	0	
322	DORM	92		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
323	DORM	91		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
323A	BATHROOM	91		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
324	DORM	90		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
325	DORM	89		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
325A	BATHROOM	89		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	

H.V.A.C. - SCHEDULES

SCALE: NOT TO SCALE

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION
PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER
UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

KOHRS LONNEMANN HEIL
ENGINEERS, PSC
MECHANICAL/ELECTRICAL ENGINEERS
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JOSEPH RICHARD KOHRS
E-54242
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
SCHEDULES

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV300

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HVAC VENTILATION SCHEDULE-3

ROOMNUM	ROOMNAME	SYSTEM	ZONE	AREA	CLNGHT	AIR CHGS	OA CHGS	PEOPLE DES	PEOPLE RED	OA PER	OA SQFT	REQ SUP	ACT SUP	REQ OA	ACT OA	ACT RET	ACT EXH	CRITICAL	PRESSURE	PCT OPERABLE	NATURAL VENTILATION
326	DORM	88		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
327	DORM	87		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
327A	BATHROOM	87		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
328	DORM	86		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
329	DORM	85		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
329A	BATHROOM	85		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
330	DORM	84		199	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
331	DORM	94		197	0	0	0	2	2	5	0.06	230	230	23	23	230	0	0.1217	E	0	
332	DORM	95		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
332A	BATHROOM	95		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
333	DORM	96		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
334	DORM	97		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
334A	BATHROOM	97		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
335	DORM	98		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
336	DORM	99		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
336A	BATHROOM	99		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
337	DORM	100		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
338	DORM	101		197	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
338A	BATHROOM	101		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
340	ELEVATOR LOBBY	258		387	0	0	0	12	12	7.5	0.12	277	280	155	157	280	0	0.6071	E	0	
341	CORRIDOR	260		600	0	0	0	0	0	0	0.06	286	290	40	41	290	0	0.1551	E	0	
342	JANITOR'S CLOSET	260		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
344	ELEC	283		37	0	0	0	0	0	0	0.12	44	50	4	4	50	0	0.1	E	0	
346	CORRIDOR	267		606	0	0	0	0	0	0	0.06	286	290	40	41	290	0	0.1551	E	0	
347	JANITOR'S CLOSET	267		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
401	DORM	139		197	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
401A	BATHROOM	139		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
402	DORM	140		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
402A	BATHROOM	140		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
403	DORM	141		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
404	DORM	142		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
404A	BATHROOM	142		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
405	DORM	143		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
406	DORM	144		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
406A	BATHROOM	144		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
407	DORM	145		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
408	DORM	146		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
408A	TOILET	146		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
409	DORM	147		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
410	DORM	148		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
410A	BATHROOM	148		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
411	DORM	149		194	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
411A	BATHROOM	149		30	0	0	0	0	0	0	0	14	10	1	1	0	80	0	N	0	
412	DORM	150		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
413	DORM	151		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
413A	BATHROOM	151		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
414	DORM	152		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
415	DORM	153		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
415A	BATHROOM	153		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
416	DORM	154		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
417	DORM	155		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
417A	BATHROOM	155		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
418	DORM	156		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
418A	BATHROOM	156		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
419	DORM	157		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
419A	BATHROOM	157		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
420	LOUNGE/KITCHENETTE	264		309	0	0	0	9	9	7.5	0.12	771	950	108	133	950	0	0.1378	E	0	
421	DORM	130		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
421A	BATHROOM	130		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
422	DORM	129		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
423	DORM	128		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
423A	BATHROOM	128		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
424	DORM	127		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
425	DORM	126		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
425A	BATHROOM	126		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
426	DORM	125		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
427	DORM	124		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
427A	BATHROOM	124		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
428	DORM	123		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
429	DORM	122		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
429A	BATHROOM	122		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
430	DORM	121		199	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
431	DORM	131		197	0	0	0	2	2	5	0.06	230	230	23	23	230	0	0.1217	E	0	
432	DORM	132		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
432A	BATHROOM	132		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
433	DORM	133		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
434	DORM	134		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
434A	BATHROOM	134		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
435	DORM	135		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
436	DORM	136		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
436A	BATHROOM	136		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
437	DORM	137		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
438	DORM	138		194	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
438A	BATHROOM	138		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
440	ELEVATOR LOBBY	261		387	0	0	0	12	12	7.5	0.12	277	280	155	157	280	0	0.6071	E	0	
441	CORRIDOR	268		600	0	0	0	0	0	0	0.06	286	290	40	41	290	0	0.1551	E	0	
442	JANITOR'S CLOSET	268		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
444	ELEC	283		37	0	0	0	0	0	0	0.12	44	50	4	4	50	0	0.1	E	0	
446	CORRIDOR	269		606	0	0	0	0	0	0	0.06	286	290	40	41	290	0	0.1551	E	0	
447	JANITOR'S CLOSET	269		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
501	DORM	176		197	0	0	0	2	2	5	0.06	230	230	23	23	230	0	0.1217	E	0	
502	DORM	177		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
502A	BATHROOM	177		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
503	DORM	178		194	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
504	DORM	179		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
504A	BATHROOM	179		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
505	DORM	180		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
506	DORM	181		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
506A	BATHROOM	181		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
507	DORM	182		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
508	DORM	183		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
508A	BATHROOM	183		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
509	DORM	184		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
510	DORM	185		194	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
510A	BATHROOM	185		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
511	DORM	186		194	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
511A	BATHROOM	186		30	0	0	0	0	0	0	0	14	10	1	1	0	80	0	N	0	
512	DORM	187		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
513	DORM	188		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
513A	BATHROOM	188		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
514	DORM	189		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
515	DORM	190		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
515A	BATHROOM	190		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
516	DORM	191		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
517	DORM	192		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
517A	BATHROOM	192		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
518	DORM	193		197	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
519	DORM	194		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	

HVAC VENTILATION SCHEDULE-4

ROOMNUM	ROOMNAME	SYSTEM	ZONE	AREA	CLNGHT	AIR CHGS	OA CHGS	PEOPLE DES	PEOPLE RED	OA PER	OA SQFT	REQ SUP	ACT SUP	REQ OA	ACT OA	ACT RET	ACT EXH	CRITICAL	PRESSURE	PCT OPERABLE	NATURAL VENTILATION
519A	BATHROOM	194		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
520	LOUNGE/KITCHENETTE	265		309	0	0	0	9	9	7.5	0.12	771	950	108	133	950	0	0.1378	E	0	
521	DORM	167		194	0	0	0	2	2	5	0.06	314	320	22	22	320	0	0.0875	E	0	
521A	BATHROOM	167		30	0	0	0	0	0	0	0	14	10	1	1	0	80	0	N	0	
522	DORM	166		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
523	DORM	165		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
523A	BATHROOM	165		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
524	DORM	164		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
525	DORM	163		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
525A	BATHROOM	163		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
526	DORM	162		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
527	DORM	161		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
527A	BATHROOM	161		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
528	DORM	160		199	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
529	DORM	159		194	0	0	0	2	2	5	0.06	275	310	22	25	310	0	0.0903	E	0	
529A	BATHROOM	159		30	0	0	0	0	0	0	0	12	10	1	1	0	80	0	N	0	
530	DORM	158		199	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
531	DORM	168		197	0	0	0	2	2	5	0.06	230	230	23	23	230	0	0.1217	E	0	
532	DORM	169		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
532A	BATHROOM	169		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
533	DORM	170		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
534	DORM	171		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
534A	BATHROOM	171		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
535	DORM	172		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
536	DORM	173		194	0	0	0	2	2	5	0.06	220	220	22	22	220	0	0.1272	E	0	
536A	BATHROOM	173		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
537	DORM	174		197	0	0	0	2	2	5	0.06	209	220	23	24	220	0	0.1272	E	0	
538	DORM	175		194	0	0	0	2	2	5	0.06	220	230	22	23	230	0	0.1217	E	0	
538A	BATHROOM	175		30	0	0	0	0	0	0	0	10	10	1	1	0	80	0	N	0	
540	ELEVATOR LOBBY	262		387	0	0	0	12	12	7.5	0.12	277	280	155	157	280	0	0.6071	E	0	
541	CORRIDOR	270		600	0	0	0	0	0	0	0.06	286	290	40	41	290	0	0.1551	E	0	
542	JANITOR'S CLOSET	270		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
544	ELEC	283		37	0	0	0	0	0	0	0.12	44	50	4	4	50	0	0.1	E	0	
546	CORRIDOR	271		606	0	0	0	0	0	0	0.06	286	290	40	41	290	0	0.1551	E	0	
547	JANITOR'S CLOSET	271		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
601	DORM	213		197	0	0	0	2	2	5	0.06	230	250	23	25	250	0	0.112	E	0	
602	DORM	214		194	0	0	0	2	2	5	0.06	233	240	21	22	240	0	0.1166	E	0	
602A	BATHROOM	214		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
603	DORM	215		197	0	0	0	2	2	5	0.06	230	240	23	24	240	0	0.1166	E	0	
604	DORM	216		194	0	0	0	2	2	5	0.06	233	240	21	22	240	0	0.1166	E	0	
604A	BATHROOM	216		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
605	DORM	217		197	0	0	0	2	2	5	0.06	230	240	23	24	240	0	0.1166	E	0	
606	DORM	218		194	0	0	0	2	2	5	0.06	233	240	21	22	240	0	0.1166	E	0	
606A	BATHROOM	218		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
607	DORM	219		197	0	0	0	2	2	5	0.06	230	240	23	24	240	0	0.1166	E	0	
608	DORM	220		194	0	0	0	2	2	5	0.06	233	240	21	22	240	0	0.1166	E	0	
608A	BATHROOM	220		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
609	DORM	221		197	0	0	0	2	2	5	0.06	230	240	23	24	240	0	0.1166	E	0	
610	DORM	222		194	0	0	0	2	2	5	0.06	233	250	21	22	250	0	0.112	E	0	
610A	BATHROOM	222		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
611	DORM	223		194	0	0	0	2	2	5	0.06	300	340	21	24	340	0	0.0823	E	0	
611A	BATHROOM	223		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
612	DORM	224		197	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
613	DORM	225		194	0	0	0	2	2	5	0.06	300	330	21	23	330	0	0.0848	E	0	
613A	BATHROOM	225		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
614	DORM	226		197	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
615	DORM	227		194	0	0	0	2	2	5	0.06	300	330	21	23	330	0	0.0848	E	0	
615A	BATHROOM	227		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
616	DORM	228		197	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
617	DORM	229		194	0	0	0	2	2	5	0.06	300	330	21	23	330	0	0.0848	E	0	
617A	BATHROOM	229		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
618	DORM	230		197	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
619	DORM	231		194	0	0	0	2	2	5	0.06	300	330	21	23	330	0	0.0848	E	0	
619A	BATHROOM	231		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
620	LOUNGE/KITCHENETTE	266		309	0	0	0	9	9	7.5	0.12	900	950	108	114	950	0	0.1378	E	0	
621	DORM	204		194	0	0	0	2	2	5	0.06	300	340	21	24	340	0	0.0823	E	0	
621A	BATHROOM	204		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
622	DORM	203		199	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
623	DORM	202		194	0	0	0	2	2	5	0.06	300	330	21	23	330	0	0.0848	E	0	
623A	BATHROOM	202		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
624	DORM	201		199	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
625	DORM	200		194	0	0	0	2	2	5	0.06	300	330	21	23	330	0	0.0848	E	0	
625A	BATHROOM	200		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
626	DORM	199		199	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
627	DORM	198		194	0	0	0	2	2	5	0.06	300	330	21	23	330	0	0.0848	E	0	
627A	BATHROOM	198		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
628	DORM	197		199	0	0	0	2	2	5	0.06	314	330	22	23	330	0	0.0848	E	0	
629	DORM	196		194	0	0	0	2	2	5	0.06	300	330	21	23	330	0	0.0848	E	0	
629A	BATHROOM	196		30	0	0	0	0	0	0	0	14	20	1	1	0	80	0	N	0	
630	DORM	195		199	0	0	0	2	2	5	0.06	314	350	22	24	350	0	0.08	E	0	
631	DORM	205		197	0	0	0	2	2	5	0.06	230	250	23	25	250	0	0.112	E	0	
632	DORM	206		194	0	0	0	2	2	5	0.06	233	240	21	22	240	0	0.1166	E	0	
632A	BATHROOM	206		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
633	DORM	207		197	0	0	0	2	2	5	0.06	230	240	23	24	240	0	0.1166	E	0	
634	DORM	208		194	0	0	0	2	2	5	0.06	233	240	21	22	240	0	0.1166	E	0	
634A	BATHROOM	208		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
635	DORM	209		197	0	0	0	2	2	5	0.06	230	240	23	24	240	0	0.1166	E	0	
636	DORM	210		194	0	0	0	2	2	5	0.06	233	240	21	22	240	0	0.1166	E	0	
636A	BATHROOM	210		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
637	DORM	211		197	0	0	0	2	2	5	0.06	230	240	23	24	240	0	0.1166	E	0	
638	DORM	212		194	0	0	0	2	2	5	0.06	233	250	21	22	250	0	0.112	E	0	
638A	BATHROOM	212		30	0	0	0	0	0	0	0	22	20	2	2	0	80	0	N	0	
640	ELEVATOR LOBBY	263		387	0	0	0	12	12	7.5	0.12	317	320	152	154	320	0	0.5312	E	0	
641	CORRIDOR	272		600	0	0	0	0	0	0	0.06	286	290	40	41	290	0	0.1551	E	0	
642	JANITOR'S CLOSET	272		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	
644	ELEC	283		37	0	0	0	0	0	0	0.12	44	50	4	4	50	0	0.1	E	0	
646	CORRIDOR	273		606	0	0	0	0	0	0	0.06	286	290	40	41	290	0	0.1551	E	0	
647	JANITOR'S CLOSET	273		18	0	0	0	0	0	0	0.12	7	10	1	1	10	0	0.2	E	0	

H.V.A.C. - SCHEDULES

SCALE: NOT TO SCALE

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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3/14/2014

DRAWN BY: CJS
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H.V.A.C. SCHEDULES

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV301

4/24/2014 1:02 PM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HV301.DWG

HVAC SYSTEM EQUIPMENT SCHEDULE-1

MARK	DESCRIPTION	AREA SERVED	STATUS	MFGR	MODEL	MIN EER	MIN COP	VOLTS	PHASE	WEIGHT	EMERG	CFM	STATIC	OACFM	CO2 CFM	BHP	HP	RPM	COND GPM	CLG MBH	CLG SENS	CLG GPM	CW EWT	CW LWT	HTG MBH	HTG GPM	HW EWT	HW LWT	GAS HTG IN	GAS HTG OUT	MIN GAS PRESSURE	MAX GAS PRESSURE	HTG KW	ACCESS	FLA	MCA	OCP	DOMESTIC WATER
FC-1-01	FANCOIL UNIT	DORM 126		TRANE	FCBB04			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-1-02	FANCOIL UNIT	DORM 125		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-1-03	FANCOIL UNIT	DORM 124		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-1-04	FANCOIL UNIT	DORM 123		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-1-05	FANCOIL UNIT	DORM 127		TRANE	FCBB03			120	1			230	0.5	25						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-1-06	FANCOIL UNIT	DORM 128		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-07	FANCOIL UNIT	DORM 129		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-08	FANCOIL UNIT	DORM 130		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-09	FANCOIL UNIT	DORM 131		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-10	FANCOIL UNIT	DORM 132		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-11	FANCOIL UNIT	DORM 133		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-12	FANCOIL UNIT	DORM 101		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-1-13	FANCOIL UNIT	DORM 102		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-14	FANCOIL UNIT	DORM 103		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-15	FANCOIL UNIT	DORM 104		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-16	FANCOIL UNIT	DORM 105		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-17	FANCOIL UNIT	DORM 106		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-18	FANCOIL UNIT	DORM 107		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-19	FANCOIL UNIT	DORM 108		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-20	FANCOIL UNIT	DORM 109		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-21	FANCOIL UNIT	DORM 110		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-22	FANCOIL UNIT	DORM 111		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-1-23	FANCOIL UNIT	DORM 112		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-1-24	FANCOIL UNIT	DORM 113		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-1-25	FANCOIL UNIT	DORM 114		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-1-26	FANCOIL UNIT	DORM 115		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-1-27	FANCOIL UNIT	DORM 116		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-1-28	FANCOIL UNIT	DORM 117		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-1-29	FANCOIL UNIT	DORM 118		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-1-30	FANCOIL UNIT	DORM 119		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-1-31	FANCOIL UNIT	DORM 134		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-1-32	FANCOIL UNIT	HD OFFICE		TRANE	FCCB02			120	1			190	0.5	36						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-1-33A	FANCOIL UNIT	LOUNGE		TRANE	FCLB06			120	1			290	0.25	58						9	7	1.80	44	54	9	0.90	180	160								3.88	15	
FC-1-33B	FANCOIL UNIT	LOUNGE		TRANE	FCLB06			120	1			440	0.5	53						12	10	2.40			10	1.00										3.88	15	
FC-1-34	FANCOIL UNIT	LOUNGE		TRANE	FCLB06			120	1			430	0.25	52						12	10	2.40	44	54	10	1.00	180	160								3.88	15	
FC-1-34B	FANCOIL UNIT	LOUNGE		TRANE	FCLB06			120	1			310	0.5	53						10	7	2.00			9	0.90										3.88	15	
FC-1-41	FANCOIL UNIT	KITCHEN		TRANE	FCBB04			120	1			270	0.5	57						8	7	1.60	44	54	7	0.70	180	160								2.75	15	
FC-1-42B	FANCOIL UNIT	LOBBY		TRANE	FCCB06			120	1			475	0.5	81						15	11	3.00	44	54	6	0.60	180	160								3.88	15	
FC-1-43	FANCOIL UNIT	LOBBY		TRANE	FCBB02			120	1			510	0.5	137						19	13	3.80	44	54	10	1.00	180	160								2.75	15	
FC-2-01	FANCOIL UNIT	DORM 230		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-02	FANCOIL UNIT	DORM 229		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-03	FANCOIL UNIT	DORM 228		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-2-04	FANCOIL UNIT	DORM 227		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-05	FANCOIL UNIT	DORM 226		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-2-06	FANCOIL UNIT	DORM 225		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-07	FANCOIL UNIT	DORM 224		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-2-08	FANCOIL UNIT	DORM 223		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-09	FANCOIL UNIT	DORM 231		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-2-10	FANCOIL UNIT	DORM 232		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-11	FANCOIL UNIT	DORM 233		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-12	FANCOIL UNIT	DORM 234		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-13	FANCOIL UNIT	DORM 235		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-14	FANCOIL UNIT	DORM 236		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-15	FANCOIL UNIT	DORM 237		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-16	FANCOIL UNIT	DORM 238		TRANE	FCBB02			120	1			240	0.5	24						6	6	1.20	44	54	5	0.50	180	160								2.75	15	
FC-2-17	FANCOIL UNIT	DORM 201		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-2-18	FANCOIL UNIT	DORM 202		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-19	FANCOIL UNIT	DORM 203		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-20	FANCOIL UNIT	DORM 204		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-21	FANCOIL UNIT	DORM 205		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-22	FANCOIL UNIT	DORM 206		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-23	FANCOIL UNIT	DORM 207		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-24	FANCOIL UNIT	DORM 208		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-25	FANCOIL UNIT	DORM 209		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-2-26	FANCOIL UNIT	DORM 210		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-2-27	FANCOIL UNIT	DORM 211		TRANE	FCBB04			120	1			340	0.5	24						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-28	FANCOIL UNIT	DORM 212		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-2-29	FANCOIL UNIT	DORM 213		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-30	FANCOIL UNIT	DORM 214		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-2-31	FANCOIL UNIT	DORM 215		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-32	FANCOIL UNIT	DORM 216		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-2-33	FANCOIL UNIT	DORM 217		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-34	FANCOIL UNIT	DORM 218		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-2-35	FANCOIL UNIT	DORM 219		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-2-37	FANCOIL UNIT	ELEVATOR LOBBY		TRANE	FCBB06			120	1			420	0.5	139						18	11	3.60	44	54	10	1.00	180	160								3.88	15	
FC-2-41	FANCOIL UNIT	LOUNGE/KITCHENETTE		TRANE	FCCB10			120	1			850	0.5	94						23	19	4.60	44	54	17	1.70	180	160								6.97	15	
FC-3-01	FANCOIL UNIT	DORM 330		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-02	FANCOIL UNIT	DORM 329		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-03	FANCOIL UNIT	DORM 328		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-3-04	FANCOIL UNIT	DORM 327		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-05	FANCOIL UNIT	DORM 326		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-3-06	FANCOIL UNIT	DORM 325		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-07	FANCOIL UNIT	DORM 324		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-3-08	FANCOIL UNIT	DORM 323		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-09	FANCOIL UNIT	DORM 322		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-3-10	FANCOIL UNIT	DORM 321		TRANE	FCBB03			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-11	FANCOIL UNIT	DORM 331		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-3-12	FANCOIL UNIT	DORM 332		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-13	FANCOIL UNIT	DORM 333		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-14	FANCOIL UNIT	DORM 334		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-15	FANCOIL UNIT	DORM 335		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-16	FANCOIL UNIT	DORM 336		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-17	FANCOIL UNIT	DORM 337		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-18	FANCOIL UNIT	DORM 338		TRANE	FCBB02			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-3-19	FANCOIL UNIT	DORM 301		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-3-20	FANCOIL UNIT	DORM 302		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-21	FANCOIL UNIT	DORM 303		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-22	FANCOIL UNIT	DORM 304		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-23	FANCOIL UNIT	DORM 305		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-24	FANCOIL UNIT	DORM 306		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-25	FANCOIL UNIT	DORM 307		TRANE	FCBB02			120	1			260	0.5	31						7	6	1.40	44	54	5	0.50	180	160								2.75	15	
FC-3-26	FANCOIL UNIT	DORM 308		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-27	FANCOIL UNIT	DORM 309		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC-3-28	FANCOIL UNIT	DORM 310		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC-3-29	FANCOIL UNIT	DORM 311		TRANE	FCBB04			120	1			340	0.5	24						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-30	FANCOIL UNIT	DORM 312		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-3-31	FANCOIL UNIT	DORM 313		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-32	FANCOIL UNIT	DORM 314		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-3-33	FANCOIL UNIT	DORM 315		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-34	FANCOIL UNIT	DORM 316		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-3-35	FANCOIL UNIT	DORM 317		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-36	FANCOIL UNIT	DORM 318		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC-3-37	FANCOIL UNIT	DORM 319		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-3-38	FANCOIL UNIT	ELEVATOR LOBBY		TRANE	FCBB06			120	1			280	0.5	157						15	9	3.00	44	54	12	1.20	180	160								3.88	15	
FC-3-39	FANCOIL UNIT	LOUNGE/KITCHENETTE		TRANE	FCCB10			120	1			950	0.5	133						27	22	5.40	44	54	20	2.00	180	160								6.97	15	
FC-4-01	FANCOIL UNIT	DORM 430		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-4-02	FANCOIL UNIT	DORM 429		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC-4-03	FANCOIL UNIT	DORM 428		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	

H.V.A.C. - SCHEDULES

SCALE: NOT TO SCALE

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

KOHRS LONNEMANN HEIL ENGINEERS, PSC
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM

1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
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LEXINGTON, KENTUCKY
COLUMBUS, OHIO
DAYTON, OHIO
NEW YORK, NEW YORK

OFFICE OF PHYSICAL PLANT
XAVIER UNIVERSITY
3800 VICTORY PARKWAY
CINCINNATI, OH 45207
513-745-3151

JOSEPH RICHARD KOHRS
E-54242
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C. SCHEDULES

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV302

4/24/2014 1:02 PM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054HV302.DWG

HVAC SYSTEM EQUIPMENT SCHEDULE–2

MARK	DESCRIPTION	AREA SERVED	STATUS	MFGR	MODEL	MIN EER	MIN COP	VOLTS	PHASE	WEIGHT	EMERG	CFM	STATIC	OACFM	CO2 CFM	BHP	HP	RPM	COND GPM	CLG MBH	CLG SENS	CLG GPM	CW EWT	CW LWT	HTG MBH	HTG GPM	HW EWT	HW LWT	GAS HTG IN	GAS HTG OUT	MIN GAS PRESSURE	MAX GAS PRESSURE	HTG KW	ACCESS	FLA	MCA	OCP	DOMESTIC WATER
FC–4–04	FANCOIL UNIT	DORM 427		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–05	FANCOIL UNIT	DORM 426		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–4–06	FANCOIL UNIT	DORM 425		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–07	FANCOIL UNIT	DORM 424		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–4–08	FANCOIL UNIT	DORM 423		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–09	FANCOIL UNIT	DORM 422		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–4–10	FANCOIL UNIT	DORM 421		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–11	FANCOIL UNIT	DORM 431		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–4–12	FANCOIL UNIT	DORM 432		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–13	FANCOIL UNIT	DORM 433		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–14	FANCOIL UNIT	DORM 434		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–15	FANCOIL UNIT	DORM 435		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–16	FANCOIL UNIT	DORM 436		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–17	FANCOIL UNIT	DORM 437		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–18	FANCOIL UNIT	DORM 438		TRANE	FCBB02			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–4–19	FANCOIL UNIT	DORM 401		TRANE	FCBB03			120	1			240	0.5	24						6	6	1.20	44	54	5	0.50	180	160								2.75	15	
FC–4–20	FANCOIL UNIT	DORM 402		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–21	FANCOIL UNIT	DORM 403		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–22	FANCOIL UNIT	DORM 404		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–23	FANCOIL UNIT	DORM 405		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–24	FANCOIL UNIT	DORM 406		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–25	FANCOIL UNIT	DORM 407		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–26	FANCOIL UNIT	DORM 408		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–27	FANCOIL UNIT	DORM 409		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–28	FANCOIL UNIT	DORM 410		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–4–29	FANCOIL UNIT	DORM 411		TRANE	FCBB04			120	1			340	0.5	24						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–30	FANCOIL UNIT	DORM 412		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–4–31	FANCOIL UNIT	DORM 413		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–32	FANCOIL UNIT	DORM 414		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–4–33	FANCOIL UNIT	DORM 415		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–34	FANCOIL UNIT	DORM 416		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–4–35	FANCOIL UNIT	DORM 417		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–36	FANCOIL UNIT	DORM 418		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–37	FANCOIL UNIT	DORM 419		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–4–38	FANCOIL UNIT	ELEVATOR LOBBY		TRANE	FCBB06			120	1			280	0.5	157						15	9	3.00	44	54	12	1.20	180	160								3.88	15	
FC–4–39	FANCOIL UNIT	LOUNGE/KITCHENETTE		TRANE	FCCB10			120	1			950	0.5	133						27	22	5.40	44	54	20	2.00	180	160								6.97	15	
FC–5–01	FANCOIL UNIT	DORM 530		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–02	FANCOIL UNIT	DORM 529		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–03	FANCOIL UNIT	DORM 528		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–5–04	FANCOIL UNIT	DORM 527		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–05	FANCOIL UNIT	DORM 526		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–5–06	FANCOIL UNIT	DORM 525		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–07	FANCOIL UNIT	DORM 524		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–5–08	FANCOIL UNIT	DORM 523		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–09	FANCOIL UNIT	DORM 522		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–5–10	FANCOIL UNIT	DORM 521		TRANE	FCBB03			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–11	FANCOIL UNIT	DORM 531		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–5–12	FANCOIL UNIT	DORM 532		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–13	FANCOIL UNIT	DORM 533		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–14	FANCOIL UNIT	DORM 534		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–15	FANCOIL UNIT	DORM 535		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–16	FANCOIL UNIT	DORM 536		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–17	FANCOIL UNIT	DORM 537		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–18	FANCOIL UNIT	DORM 538		TRANE	FCBB02			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–5–19	FANCOIL UNIT	DORM 501		TRANE	FCBB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–5–20	FANCOIL UNIT	DORM 502		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–21	FANCOIL UNIT	DORM 503		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–22	FANCOIL UNIT	DORM 504		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–23	FANCOIL UNIT	DORM 505		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–24	FANCOIL UNIT	DORM 506		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–25	FANCOIL UNIT	DORM 507		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–26	FANCOIL UNIT	DORM 508		TRANE	FCBB02			120	1			230	0.5	23						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–27	FANCOIL UNIT	DORM 509		TRANE	FCBB02			120	1			220	0.5	24						6	5	1.20	44	54	4	0.40	180	160								2.75	15	
FC–5–28	FANCOIL UNIT	DORM 510		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–5–29	FANCOIL UNIT	DORM 511		TRANE	FCBB04			120	1			340	0.5	24						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–30	FANCOIL UNIT	DORM 512		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–5–31	FANCOIL UNIT	DORM 513		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–32	FANCOIL UNIT	DORM 514		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–5–33	FANCOIL UNIT	DORM 515		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–34	FANCOIL UNIT	DORM 516		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–5–35	FANCOIL UNIT	DORM 517		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–36	FANCOIL UNIT	DORM 518		TRANE	FCBB03			120	1			310	0.5	25						8	7	1.60	44	54	4	0.40	180	160								2.75	15	
FC–5–37	FANCOIL UNIT	DORM 519		TRANE	FCBB03			120	1			320	0.5	26						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–5–38	FANCOIL UNIT	ELEVATOR LOBBY		TRANE	FCBB06			120	1			280	0.5	157						15	9	3.00	44	54	12	1.20	180	160								3.88	15	
FC–5–39	FANCOIL UNIT	LOUNGE/KITCHENETTE		TRANE	FCCB10			120	1			950	0.5	133						27	22	5.40	44	54	20	2.00	180	160								6.97	15	
FC–6–01	FANCOIL UNIT	DORM 630		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	6	0.60	180	160								2.75	15	
FC–6–02	FANCOIL UNIT	DORM 629		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	5	0.50	180	160								2.75	15	
FC–6–03	FANCOIL UNIT	DORM 628		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–6–04	FANCOIL UNIT	DORM 627		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	5	0.50	180	160								2.75	15	
FC–6–05	FANCOIL UNIT	DORM 626		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–6–06	FANCOIL UNIT	DORM 625		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	5	0.50	180	160								2.75	15	
FC–6–07	FANCOIL UNIT	DORM 624		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–6–08	FANCOIL UNIT	DORM 623		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	5	0.50	180	160								2.75	15	
FC–6–09	FANCOIL UNIT	DORM 622		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–6–10	FANCOIL UNIT	DORM 621		TRANE	FCBB04			120	1			360	0.5	25						9	8	1.80	44	54	6	0.60	180	160								2.75	15	
FC–6–11	FANCOIL UNIT	DORM 631		TRANE	FCBB04			120	1			250	0.5	25						7	6	1.40	44	54	6	0.60	180	160								2.75	15	
FC–6–12	FANCOIL UNIT	DORM 632		TRANE	FCBB03			120	1			260	0.5	24						7	6	1.40	44	54	5	0.50	180	160								2.75	15	
FC–6–13	FANCOIL UNIT	DORM 633		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–6–14	FANCOIL UNIT	DORM 634		TRANE	FCBB03			120	1			260	0.5	24						7	6	1.40	44	54	5	0.50	180	160								2.75	15	
FC–6–15	FANCOIL UNIT	DORM 635		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–6–16	FANCOIL UNIT	DORM 636		TRANE	FCBB03			120	1			260	0.5	24						7	6	1.40	44	54	5	0.50	180	160								2.75	15	
FC–6–17	FANCOIL UNIT	DORM 637		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–6–18	FANCOIL UNIT	DORM 638		TRANE	FCBB03			120	1			270	0.5	24						7	6	1.40	44	54	6	0.60	180	160								2.75	15	
FC–6–19	FANCOIL UNIT	DORM 601		TRANE	FCBB04			120	1			250	0.5	25						7	6	1.40	44	54	6	0.60	180	160								2.75	15	
FC–6–20	FANCOIL UNIT	DORM 602		TRANE	FCBB03			120	1			260	0.5	24						7	6	1.40	44	54	5	0.50	180	160								2.75	15	
FC–6–21	FANCOIL UNIT	DORM 603		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–6–22	FANCOIL UNIT	DORM 604		TRANE	FCBB03			120	1			260	0.5	24						7	6	1.40	44	54	5	0.50	180	160								2.75	15	
FC–6–23	FANCOIL UNIT	DORM 605		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–6–24	FANCOIL UNIT	DORM 606		TRANE	FCBB03			120	1			260	0.5	24						7	6	1.40	44	54	5	0.50	180	160								2.75	15	
FC–6–25	FANCOIL UNIT	DORM 607		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–6–26	FANCOIL UNIT	DORM 608		TRANE	FCBB03			120	1			260	0.5	24						7	6	1.40	44	54	5	0.50	180	160								2.75	15	
FC–6–27	FANCOIL UNIT	DORM 609		TRANE	FCBB03			120	1			240	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–6–28	FANCOIL UNIT	DORM 610		TRANE	FCBB04			120	1			270	0.5	24						7	6	1.40	44	54	6	0.60	180	160								2.75	15	
FC–6–29	FANCOIL UNIT	DORM 611		TRANE	FCBB04			120	1			360	0.5	25						9	8	1.80	44	54	6	0.60	180	160								2.75	15	
FC–6–30	FANCOIL UNIT	DORM 612		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–6–31	FANCOIL UNIT	DORM 613		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	5	0.50	180	160								2.75	15	
FC–6–32	FANCOIL UNIT	DORM 614		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–6–33	FANCOIL UNIT	DORM 615		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	5	0.50	180	160								2.75	15	
FC–6–34	FANCOIL UNIT	DORM 616		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–6–35	FANCOIL UNIT	DORM 617		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	5	0.50	180	160								2.75	15	
FC–6–36	FANCOIL UNIT	DORM 618		TRANE	FCBB04			120	1			330	0.5	23						8	7	1.60	44	54	5	0.50	180	160								2.75	15	
FC–6–37	FANCOIL UNIT	DORM 619		TRANE	FCBB04			120	1			350	0.5	24						9	8	1.80	44	54	5	0.50	180	160								2.75	15	
FC–6–38	FANCOIL UNIT	ELEVATOR LOBBY		TRANE	FCBB06			120	1			320	0.5	154						15	9	3.00	44	54	13	1.30	180	160								3.88	15	
FC–6–39	FANCOIL UNIT	LOUNGE/KITCHENETTE		TRANE	FCCB10			120	1			950	0.5	114						26	22	5.20	44	54	18	1.80	180	160								6.97	15	
FC–G–01	FANCOIL UNIT	DORM 001		TRANE	FCCB03			120	1			220	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–G–02	FANCOIL UNIT	DORM 002		TRANE	FCCB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–G–03	FANCOIL UNIT	DORM 003		TRANE	FCCB03			120	1			220	0.5	24						6	5	1.20	44	54	5	0.50	180	160								2.75	15	
FC–G–04	FANCOIL UNIT	DORM 004		TRANE	FCCB03			120	1			230	0.5	23						6	5	1.20	44	54	5	0.50	180	160								2.75	15	

H.V.A.C. – SCHEDULES

SCALE: NOT TO SCALE

0'-2" REFERENCE LINE

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XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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3/14/2014

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CJS	KTW

H.V.A.C.
SCHEDULES

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV303

HVAC SYSTEM EQUIPMENT SCHEDULE–3

MARK	DESCRIPTION	AREA SERVED	STATUS	MFGR	MODEL	MIN EER	MIN COP	VOLTS	PHASE	WEIGHT	EMERG	CFM	STATIC	OACFM	CO2 CFM
FC–G–05	FANCOIL UNIT	DORM 005		TRANE	FCCB03			120	1			220	0.5	24	
FC–G–06	FANCOIL UNIT	DORM 006		TRANE	FCCB03			120	1			230	0.5	23	
FC–G–07	FANCOIL UNIT	DORM 007		TRANE	FCCB03			120	1			220	0.5	24	
FC–G–08	FANCOIL UNIT	DORM 008		TRANE	FCCB03			120	1			230	0.5	23	
FC–G–09	FANCOIL UNIT	DORM 009		TRANE	FCCB03			120	1			220	0.5	24	
FC–G–10	FANCOIL UNIT	DORM 010		TRANE	FCCB03			120	1			240	0.5	24	
FC–G–11	FANCOIL UNIT	DORM 018		TRANE	FCCB06			120	1			550	0.5	22	
FC–G–12	FANCOIL UNIT	DORM 017		TRANE	FCCB04			120	1			330	0.5	23	
FC–G–13	FANCOIL UNIT	DORM 011		TRANE	FCCB04			120	1			310	0.5	25	
FC–G–14	FANCOIL UNIT	DORM 012		TRANE	FCCB04			120	1			320	0.5	26	
FC–G–15	FANCOIL UNIT	DORM 013		TRANE	FCCB04			120	1			310	0.5	25	
FC–G–16	FANCOIL UNIT	DORM 014		TRANE	FCCB04			120	1			320	0.5	26	
FC–G–17	FANCOIL UNIT	DORM 015		TRANE	FCCB04			120	1			310	0.5	25	
FC–G–18	FANCOIL UNIT	DORM 016		TRANE	FCCB04			120	1			320	0.5	26	
FC–G–25	FANCOIL UNIT	OFFICE		TRANE	FCBB03			120	1			240	0.5	29	
FC–G–26	FANCOIL UNIT	VESTIBULE		TRANE	FCCB10			120	1			1080	0.5	32	
FC–G–29	FANCOIL UNIT	LAUNDRY ROOM		TRANE	FCCB10			120	1			760	0.5	114	

MARK	BHP	HP	RPM	COND GPM	CLG MBH	CLG SENS	CLG GPM	CW EWT	CW LWT	HTG MBH	HTG GPM	HW EWT	HW LWT
FC–G–05					6	5	1.20	44	54	5	0.50	180	160
FC–G–06					6	5	1.20	44	54	5	0.50	180	160
FC–G–07					6	5	1.20	44	54	5	0.50	180	160
FC–G–08					6	5	1.20	44	54	5	0.50	180	160
FC–G–09					6	5	1.20	44	54	5	0.50	180	160
FC–G–10					6	6	1.20	44	54	6	0.60	180	160
FC–G–11					13	12	2.60	44	54	10	1.00	180	160
FC–G–12					8	7	1.60	44	54	5	0.50	180	160
FC–G–13					8	7	1.60	44	54	5	0.50	180	160
FC–G–14					8	7	1.60	44	54	5	0.50	180	160
FC–G–15					8	7	1.60	44	54	5	0.50	180	160
FC–G–16					8	7	1.60	44	54	5	0.50	180	160
FC–G–17					8	7	1.60	44	54	5	0.50	180	160
FC–G–18					8	7	1.60	44	54	5	0.50	180	160
FC–G–25					7	6	1.40	44	54	5	0.50	180	160
FC–G–26					24	23	4.80	44	54	31	3.10	180	160
FC–G–29					22	18	0.00	44	54	15	0.00	180	160

MARK	GAS HTG IN	GAS HTG OUT	MIN GAS PRESSURE	MAX GAS PRESSURE	HTG KW	ACCESS	FLA	MCA	OCP	DOMESTIC WATER
FC–G–05								2.75	15	
FC–G–06								2.75	15	
FC–G–07								2.75	15	
FC–G–08								2.75	15	
FC–G–09								2.75	15	
FC–G–10								2.75	15	
FC–G–11								3.88	15	
FC–G–12								2.75	15	
FC–G–13								2.75	15	
FC–G–14								2.75	15	
FC–G–15								2.75	15	
FC–G–16								2.75	15	
FC–G–17								2.75	15	
FC–G–18								2.75	15	
FC–G–25								2.75	15	
FC–G–26								6.97	15	
FC–G–29								6.97	15	

HVAC ACCESSORIES

ACCESSORIES:

1. MOTOR DAMPER
2. ECONOMIZER
3. ROOF CURB
4. SMOKE DETECTOR
5. INTAKE HOOD
6. VIBRATION ISOLATION
7. FLAT FILTER
8. FILTER/MIXING BOX
9. ACCESS DOOR
10. FLEX CONNECTIONS
11. MOUNTING COLLAR
12. HOT GAS BYPASS
13. FACE/BYPASS DAMPER
14. CONDENSATE PUMP
15. MOTOR GUARD
16. GREASE TRAP
17. DUCT FLANGES
18. BASE RAIL
19. HUMIDIFIER
20. CO2 SENSORS
21. ECON POWERED EXHAUST
22. ECON BAROMETRIC RELIEF
23. HEAT RECLAIM COIL

H.V.A.C. - SCHEDULES

SCALE: NOT TO SCALE

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
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XAVIER UNIVERSITY

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JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY: CJS
CHECKED BY: KTW

H.V.A.C. SCHEDULES

PROJECT NUMBER 911717

DATE APRIL 25, 2014

SHEET NO. HV304

0'-2" REFERENCE LINE

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HVAC ELECTRICAL COORDINATION SCHEDULE (HECS)-1

ABBREVIATIONS		CONTRACTOR TYPE		MOTOR CONTROL TYPE		CONTROL TYPE	
DC	LOCAL DISCONNECT	EC	ELECTRICAL CONTRACTOR	CS	COMBINATION STARTER	TC	TIMECLOCK
MC	MOTOR CONTROL (POWER)	EX	EXISTING	MCC	MOTOR CONTROL CENTER	CPT	CONTROL POWER TRANSFORMER
SD	DUCT SMOKE DETECTOR	FC	FIRE PROTECTION CONTRACTOR	MG	MAGNETIC STARTER OR CONTACT	BAS	BUILDING AUTOMATION SYSTEM
CN	CONTROLS	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS
TS	TOGGLE SWITCH	HC	HVAC CONTRACTOR	VFD	VARIABLE FREQUENCY DRIVE	LINE	LINE VOLTAGE CONTROLS
C/B	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD	MFR	MANUFACTURER	MSR	MANUAL STARTER W/CONTROL RELAY	RLINE	REVERSE ACTING LINE VOLTAGE STAT
FUSE	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)	PC	PLUMBING CONTRACTOR	OV	OVERCURRENT PROTECTION	MAN	MANUAL
FLA	OPERATING FULL LOAD AMPS	OR	OWNER OR OTHERS			FA	FIRE ALARM
MCA	MINIMUM CIRCUIT AMPACITY					CO	CARBON MONOXIDE SENSOR
CP	CORD AND PLUG CONNECTION					INT	INTEGRAL TO EQUIPMENT

MARK	DESCRIPTION	STATUS	VOLTS	PHASE	EMERG	BHP	HP	HTG KW	WATTS	FLA	MCA	OCP	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SD QUAN
FC-1-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-1-33A	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-33B	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-34	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-34B	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-41	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-1-42B	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-1-43	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-37	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-2-41	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-3-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-36	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-37	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0

HVAC ELECTRICAL COORDINATION SCHEDULE (HECS)-2

MARK	DESCRIPTION	STATUS	VOLTS	PHASE	EMERG	BHP	HP	HTG KW	WATTS	FLA	MCA	OCP	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SD QUAN
FC-3-38	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-3-39	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-4-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-36	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-37	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-38	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-4-39	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-5-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-36	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-37	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-38	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-5-39	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-6-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-11	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-19	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-20	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-21	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-22	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-23	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-24	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-26	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-27	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-28	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-29	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-30	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-31	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-32	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-33	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-34	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-35	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-36	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-37	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-6-38	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0

H.V.A.C. - SCHEDULES

SCALE: NOT TO SCALE

KUHLMAN HALL RENOVATION
PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER
UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
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JOSEPH RICHARD KOHRS
E-54242
3/14/2014

DRAWN BY:	CHECKED BY:
CJS	KTW

H.V.A.C.
SCHEDULES

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
HV305

0'-2" REFERENCE LINE

4/24/2014 1:02 PM

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HVAC ELECTRICAL COORDINATION SCHEDULE (HECS)-3

MARK	DESCRIPTION	STATUS	VOLTS	PHASE	EMERG	BHP	HP	HTG KW	WATTS	FLA	MCA	OCP	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SD QUAN
FC-G-39	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-01	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-02	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-03	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-04	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-05	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-06	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-07	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-08	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-09	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-10	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-11	FANCOIL UNIT		120	1							3.88	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-12	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-13	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-14	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-15	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-16	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-17	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-18	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-25	FANCOIL UNIT		120	1							2.75	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	0
FC-G-26	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0
FC-G-29	FANCOIL UNIT		120	1							6.97	15	MFR	MFR	MFR	MG	MFR	MFR	MFR	LOW	HC	HC	HC	0

H.V.A.C. - SCHEDULES

SCALE: NOT TO SCALE

0'-2" REFERENCE LINE

4/24/2014 1:02 PM G:\15000-15999\15000-15099\15054L_CONSTRUCTION SET\15054HV306.DWG

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

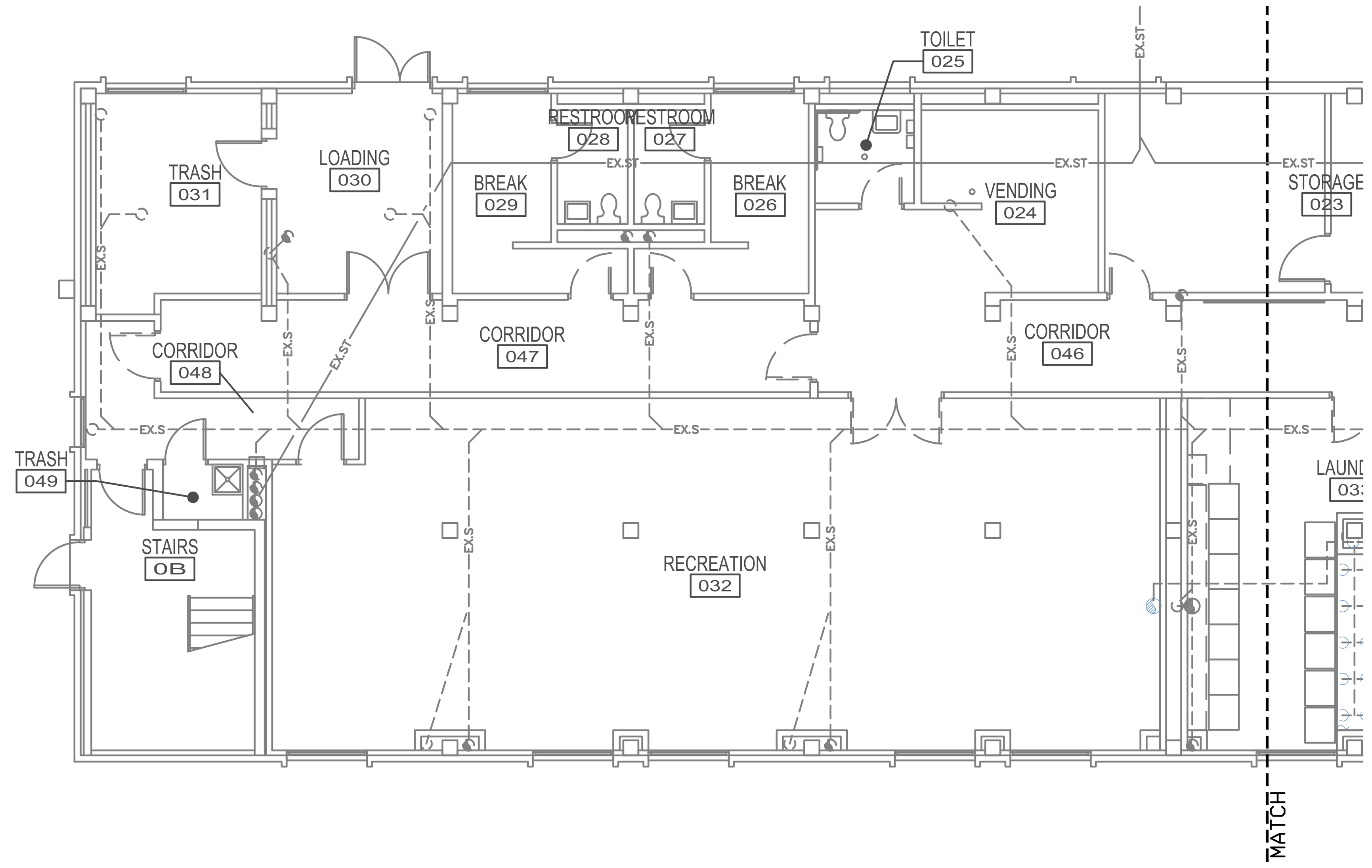
DRAWN BY:	CHECKED BY:
CJS	*KTW*

H.V.A.C. SCHEDULES

PROJECT NUMBER
911717

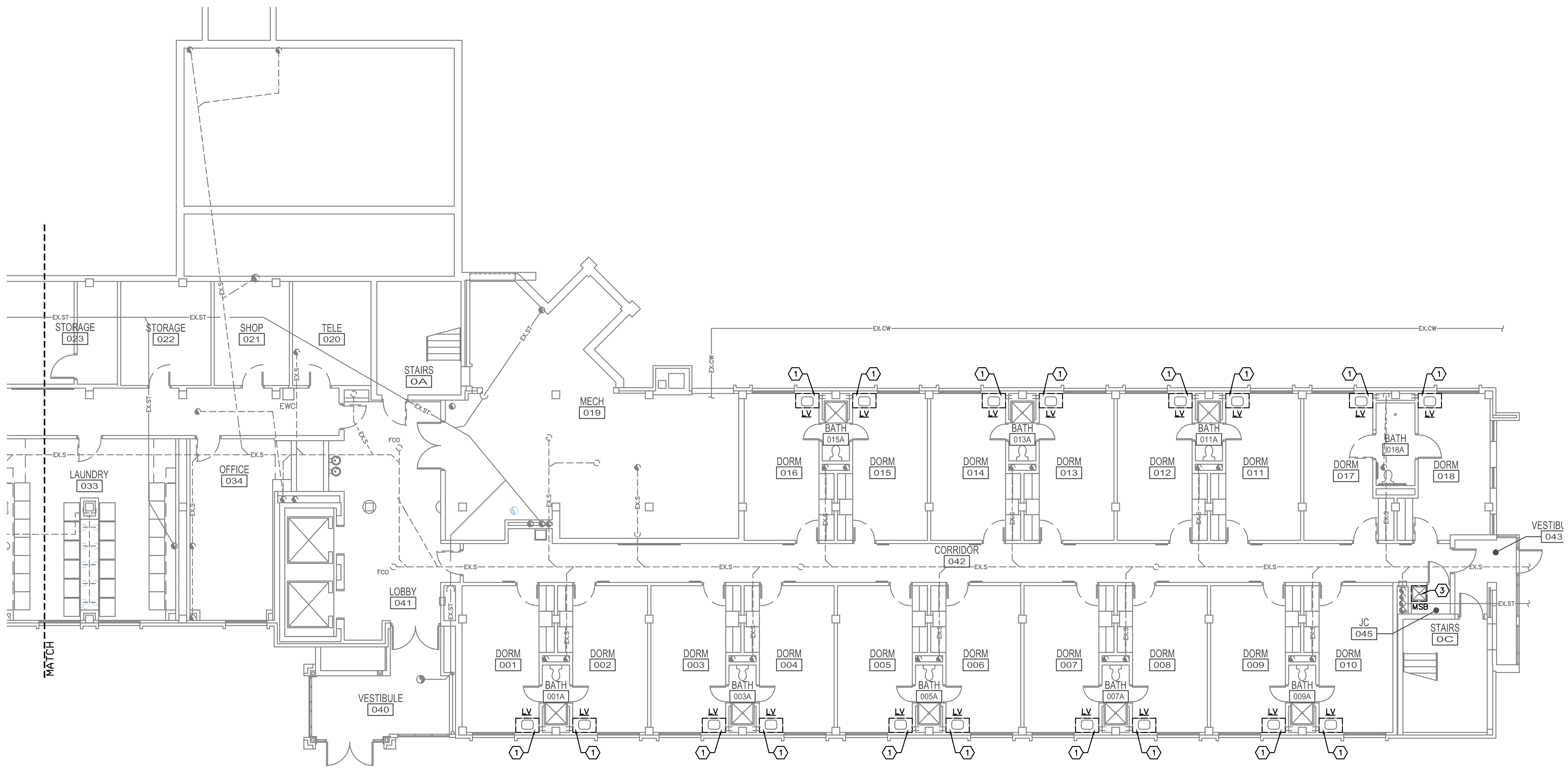
DATE
APRIL 25, 2014

SHEET NO.
HV306



PLUMBING DEMOLITION - GROUND FLOOR

SCALE: 1/8" = 1' - 0"



PLUMBING DEMOLITION - GROUND FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION KEYED NOTES

1. REMOVE VANITY, SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR CHASE WALL.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
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ISSUE	REVISION	DATE
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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING DEMOLITION GROUND FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PD100

15054PD100.dwg

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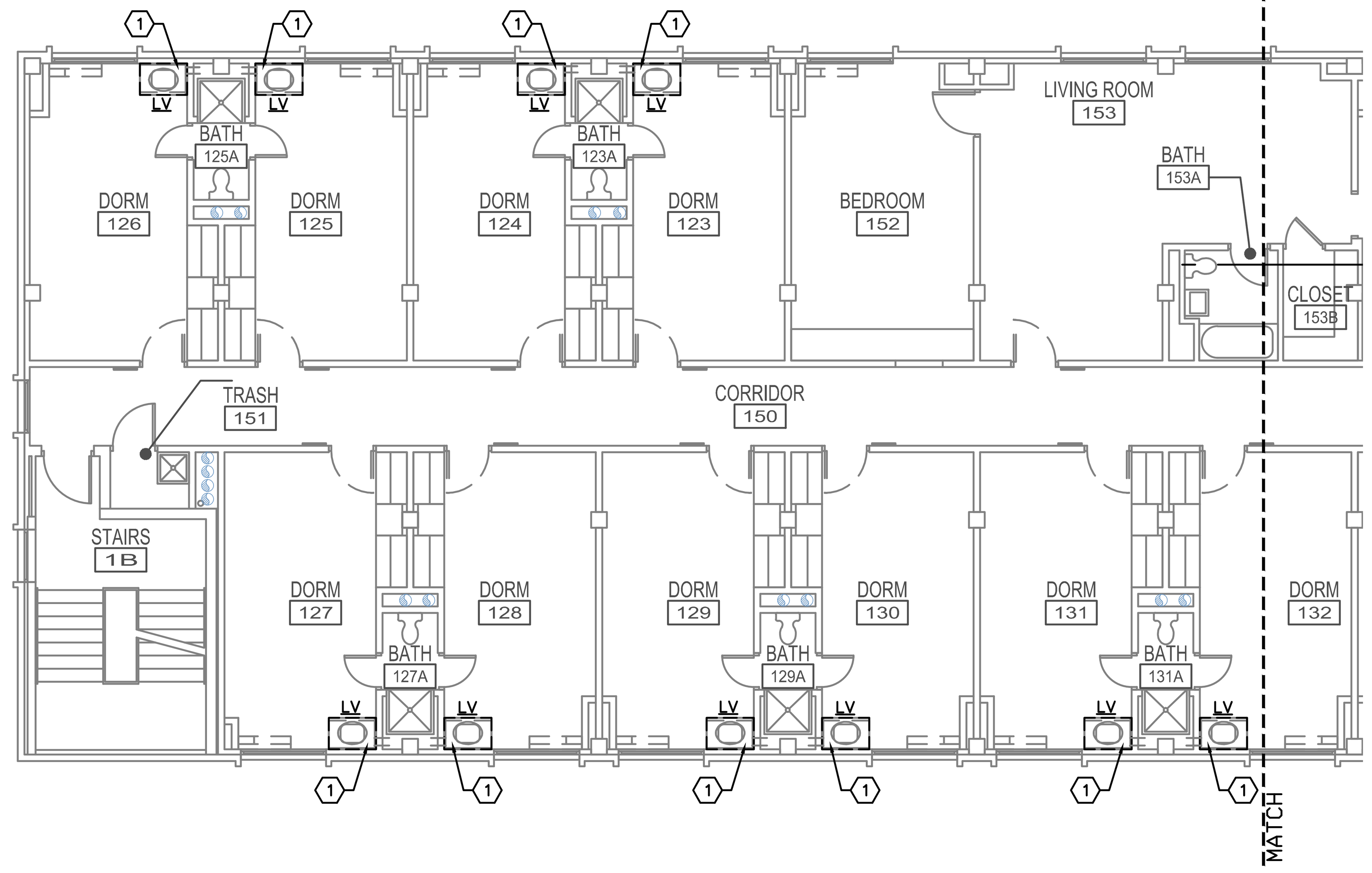
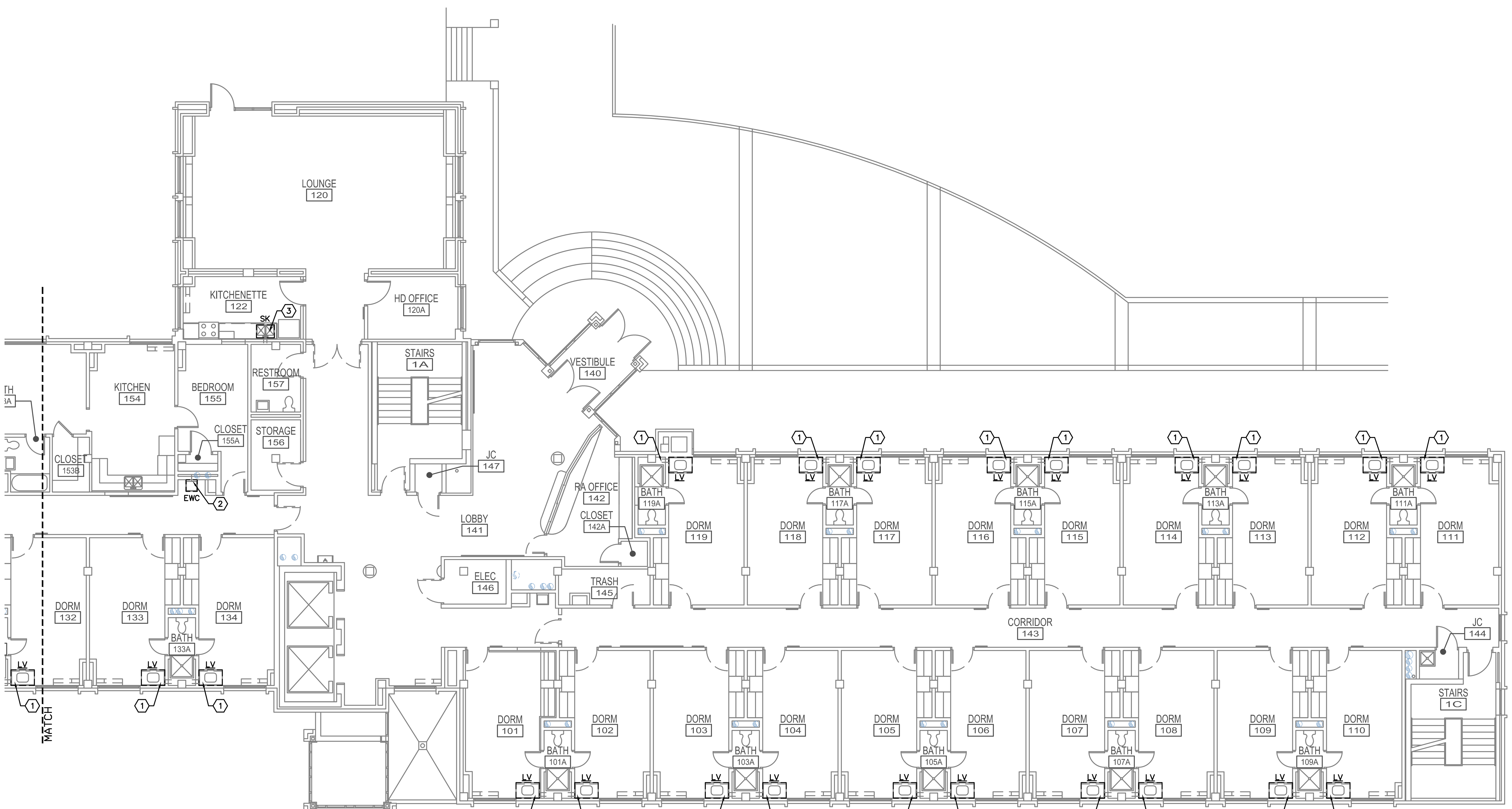
4/24/2014 9:22 AM



PLUMBING DEMOLITION - FIRST FLOOR

SCALE: 1/8" = 1' - 0"



PLUMBING DEMOLITION - FIRST FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION KEYED NOTES

1. REMOVE VANITY, SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR CHASE WALL.
2. REMOVE, SALVAGE AND TURN OVER ELECTRIC WATER COOLER TO OWNER. DISCONNECT WATER AND DRAINAGE PIPING, AND TEMPORARILY CAP AT WALL.
3. REMOVE KITCHENETTE SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR WALL.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
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CINCINNATI, OHIO 45207

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JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

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PLUMBING DEMOLITION FIRST FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PD101

0'-2" REFERENCE LINE

15054PD101.dwg

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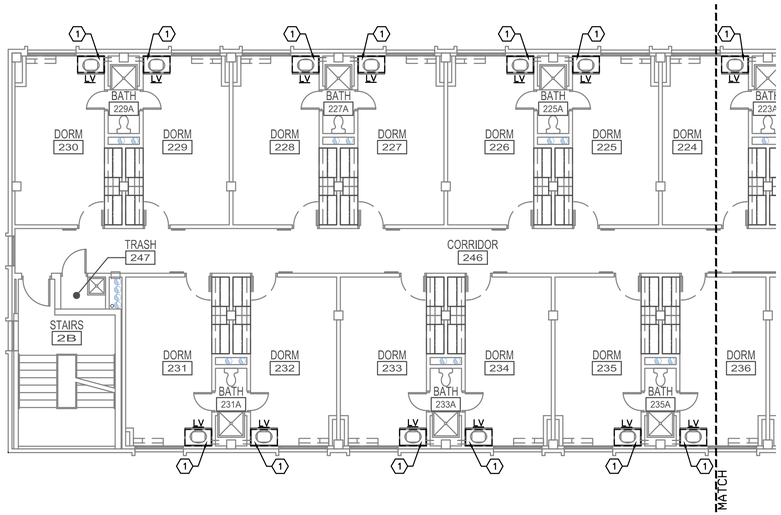
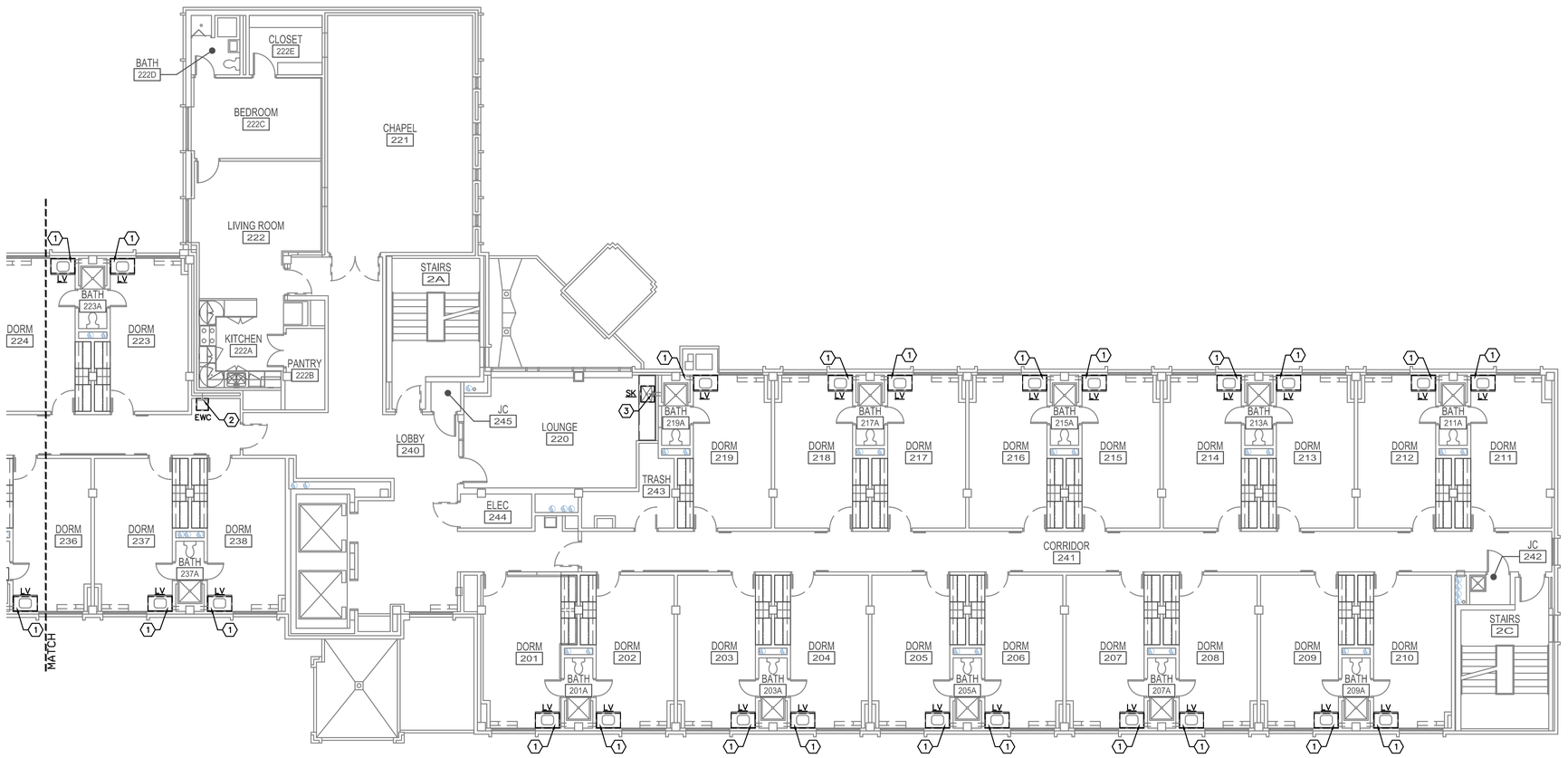


PLUMBING DEMOLITION - SECOND FLOOR

SCALE: 1/8" = 1' – 0"



PLUMBING DEMOLITION - SECOND FLOOR

SCALE: 1/8" = 1' – 0"

DEMOLITION KEYED NOTES

1. REMOVE VANITY, SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR CHASE WALL.
2. REMOVE, SALVAGE AND TURN OVER ELECTRIC WATER COOLER TO OWNER. DISCONNECT WATER AND DRAINAGE PIPING, AND TEMPORARILY CAP AT WALL.
3. REMOVE SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR WALL.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
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JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

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PLUMBING DEMOLITION SECOND FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PD102

0'-2" REFERENCE LINE

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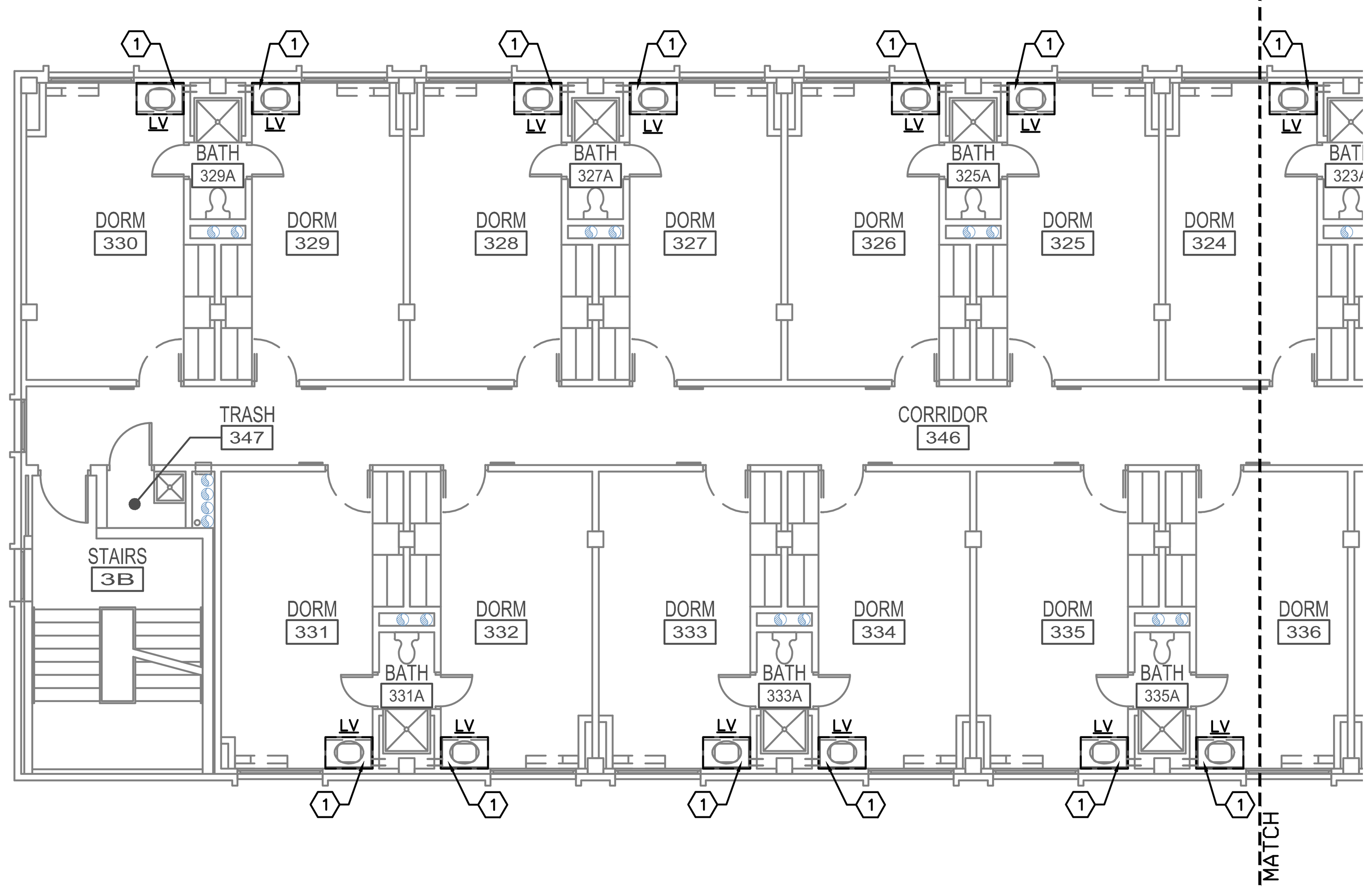
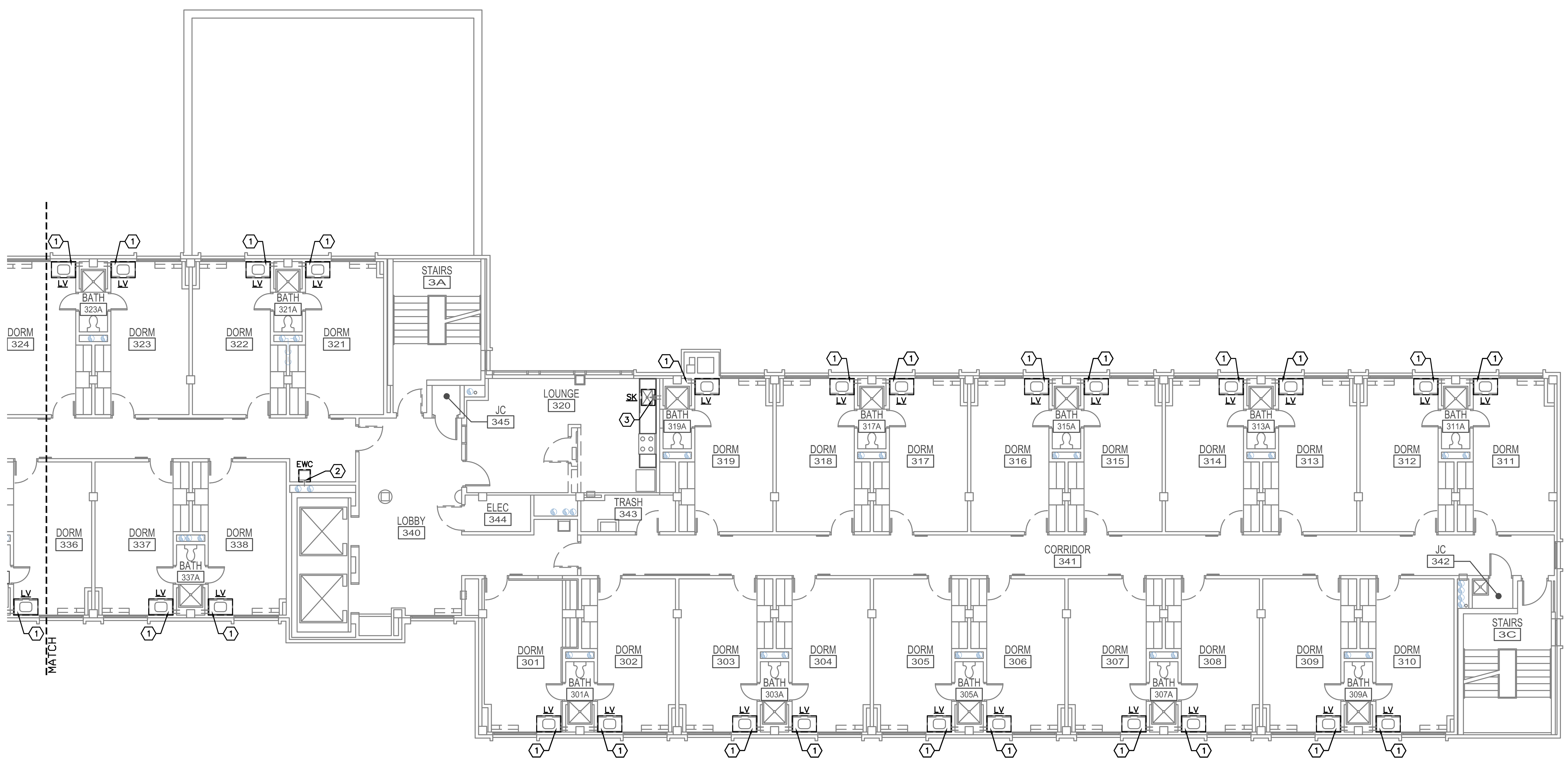
15054PD102.dwg



PLUMBING DEMOLITION - THIRD FLOOR

SCALE: 1/8" = 1' - 0"



PLUMBING DEMOLITION - THIRD FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION KEYED NOTES

1. REMOVE VANITY, SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR CHASE WALL.
2. REMOVE, SALVAGE AND TURN OVER ELECTRIC WATER COOLER TO OWNER. DISCONNECT WATER AND DRAINAGE PIPING, AND TEMPORARILY CAP AT WALL.
3. REMOVE SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR WALL.

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
3824 LEDGEWOOD DRIVE
CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING DEMOLITION THIRD FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PD103

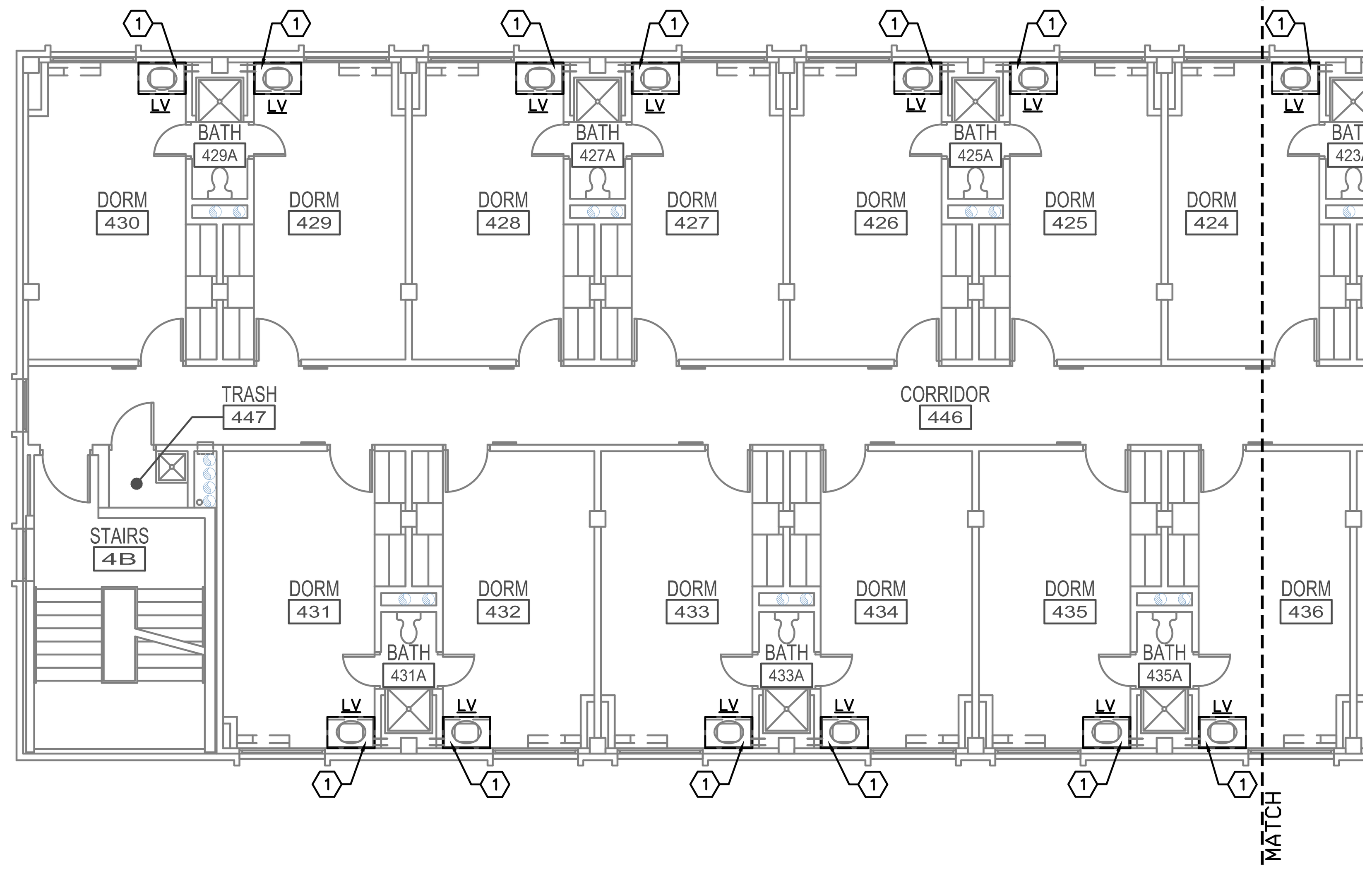
0'-2" REFERENCE LINE

15054PD103.dwg

4/24/2014 9:23 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054PD103.DWG

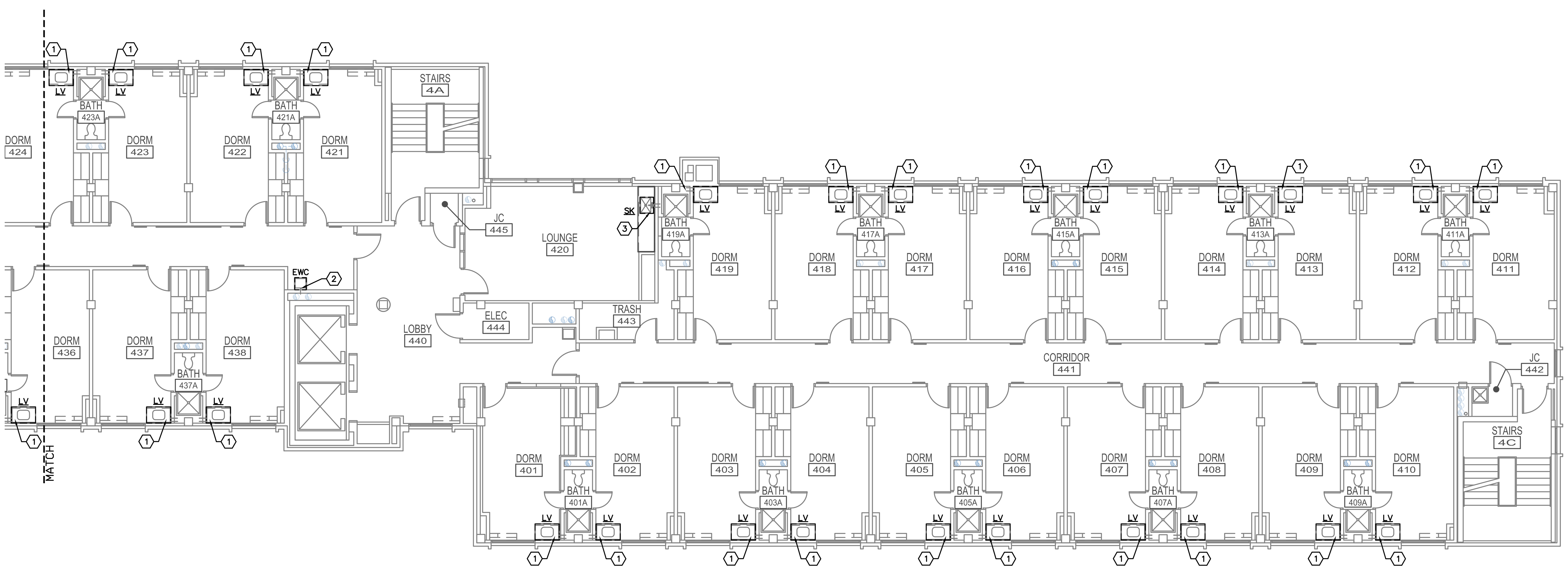
DEMOLITION KEYED NOTES

1. REMOVE VANITY, SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR CHASE WALL.
2. REMOVE, SALVAGE AND TURN OVER ELECTRIC WATER COOLER TO OWNER. DISCONNECT WATER AND DRAINAGE PIPING, AND TEMPORARILY CAP AT WALL.
3. REMOVE SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR WALL.



PLUMBING DEMOLITION - FOURTH FLOOR

SCALE: 1/8" = 1' - 0"



PLUMBING DEMOLITION - FOURTH FLOOR

SCALE: 1/8" = 1' - 0"

KUHLMAN HALL RENOVATION PHASE II

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XAVIER UNIVERSITY

ISSUE	REVISION	DATE
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REGISTERED PROFESSIONAL ENGINEER
3/14/2014

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TJL	KPO

PLUMBING DEMOLITION FOURTH FLOOR

PROJECT NUMBER
911717

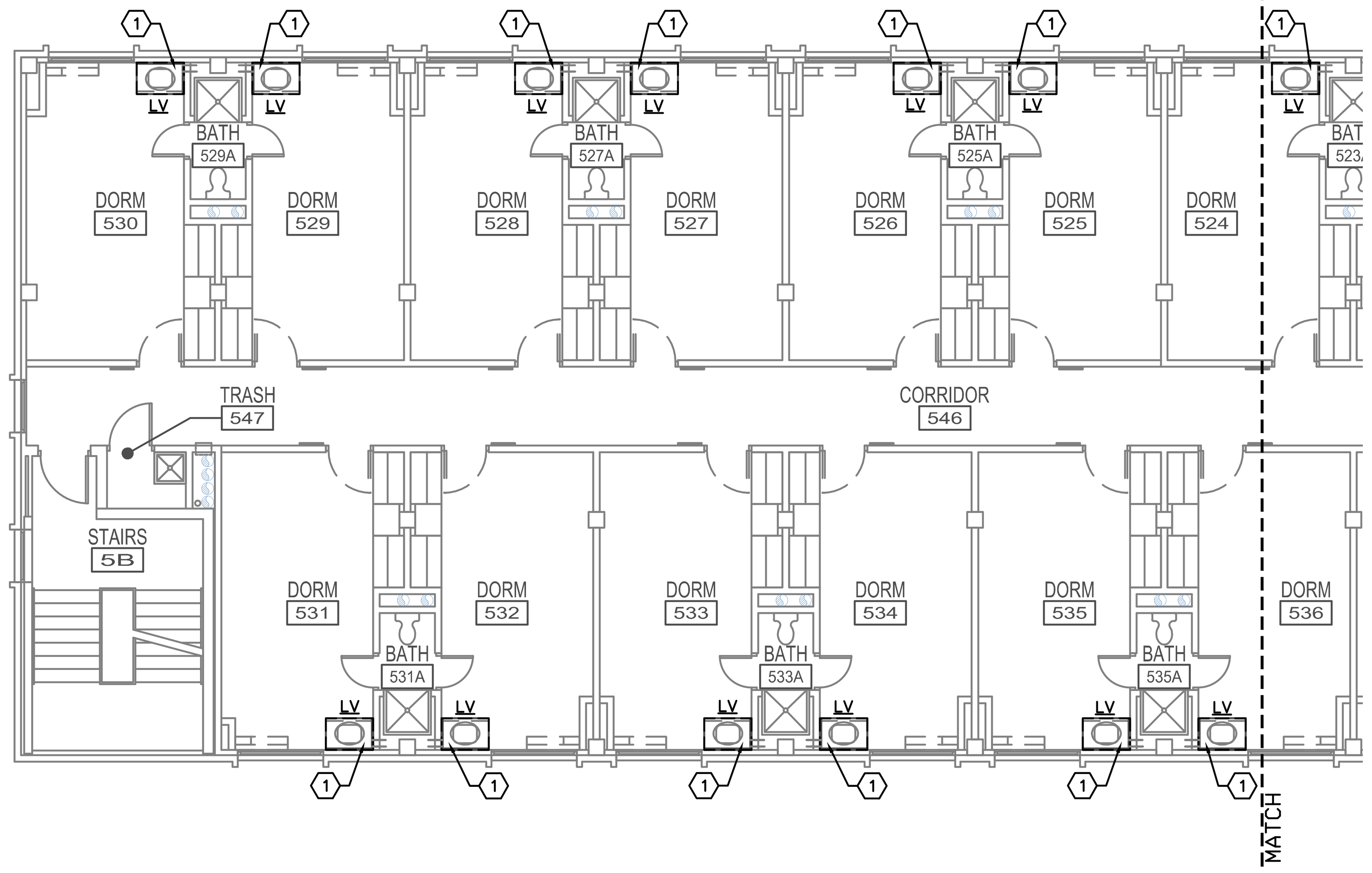
DATE
APRIL 25, 2014

SHEET NO.
PD104

0'-2" REFERENCE LINE

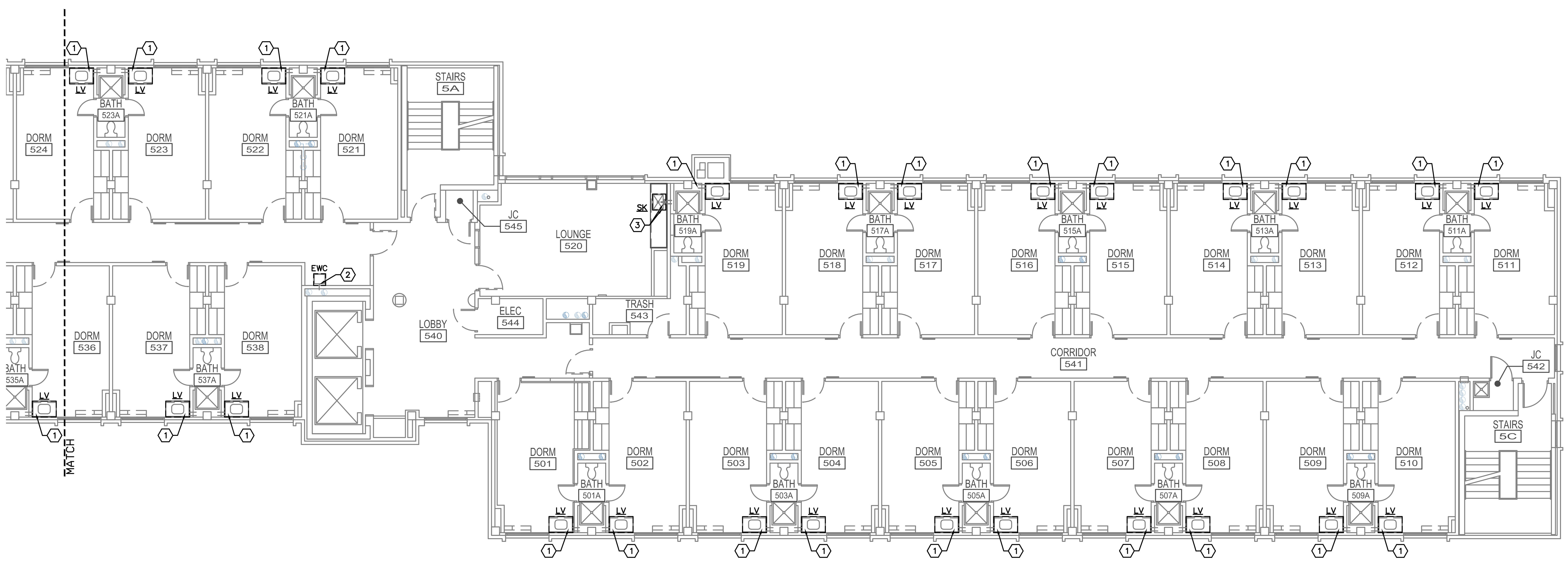
15054PD104.dwg

4/24/2014 9:24 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054PD104.DWG



PLUMBING DEMOLITION - FIFTH FLOOR

SCALE: 1/8" = 1' - 0"



PLUMBING DEMOLITION - FIFTH FLOOR

SCALE: 1/8" = 1' - 0"

DEMOLITION KEYED NOTES

1. REMOVE VANITY, SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR CHASE WALL.
2. REMOVE, SALVAGE AND TURN OVER ELECTRIC WATER COOLER TO OWNER. DISCONNECT WATER AND DRAINAGE PIPING, AND TEMPORARILY CAP AT WALL.
3. REMOVE SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR WALL.

KUHLMAN HALL RENOVATION PHASE II

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JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

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PLUMBING DEMOLITION FIFTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PD105

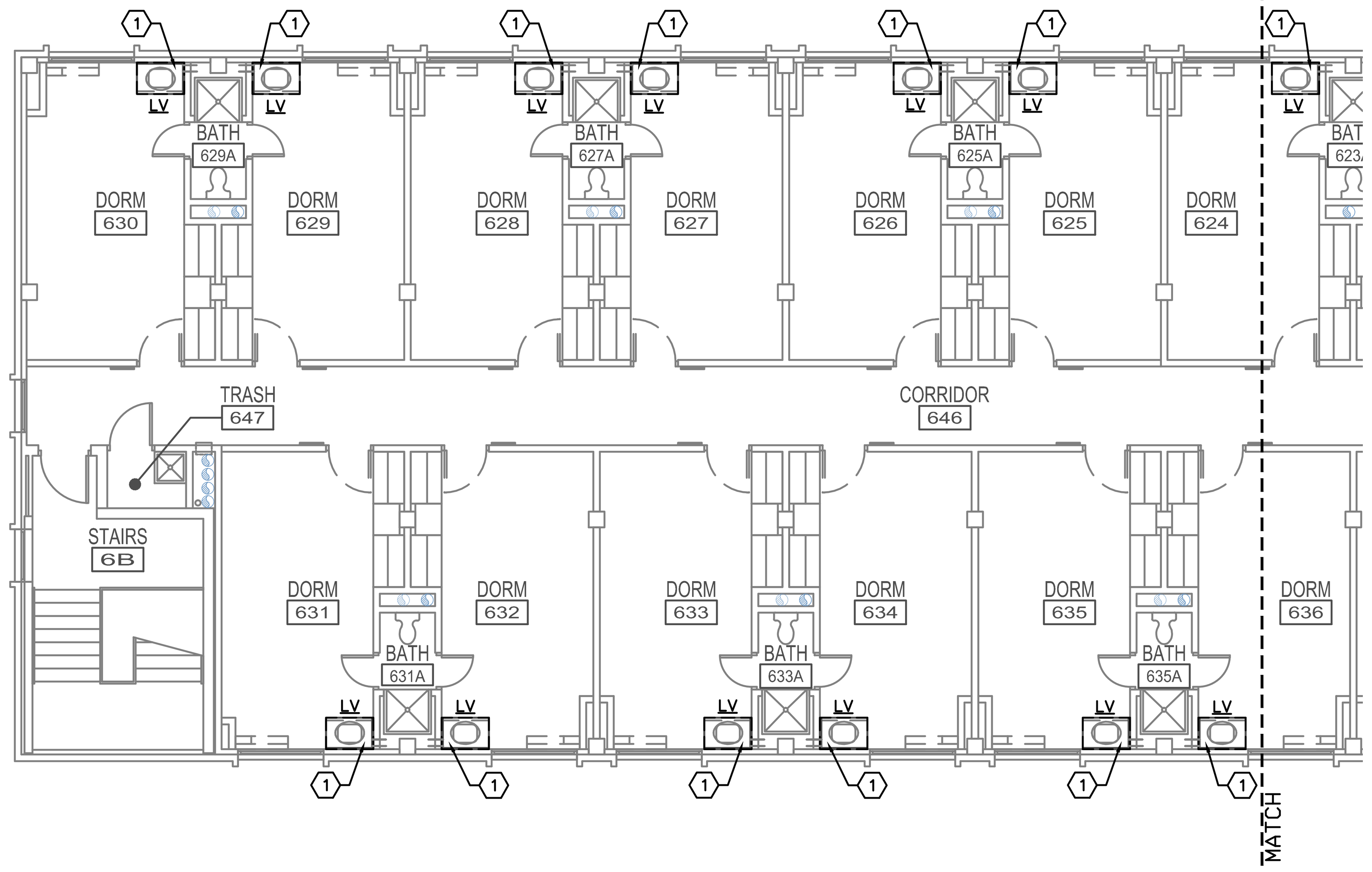
0'-2" REFERENCE LINE

4/24/2014 9:24 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054PD105.DWG

15054PD105.dwg

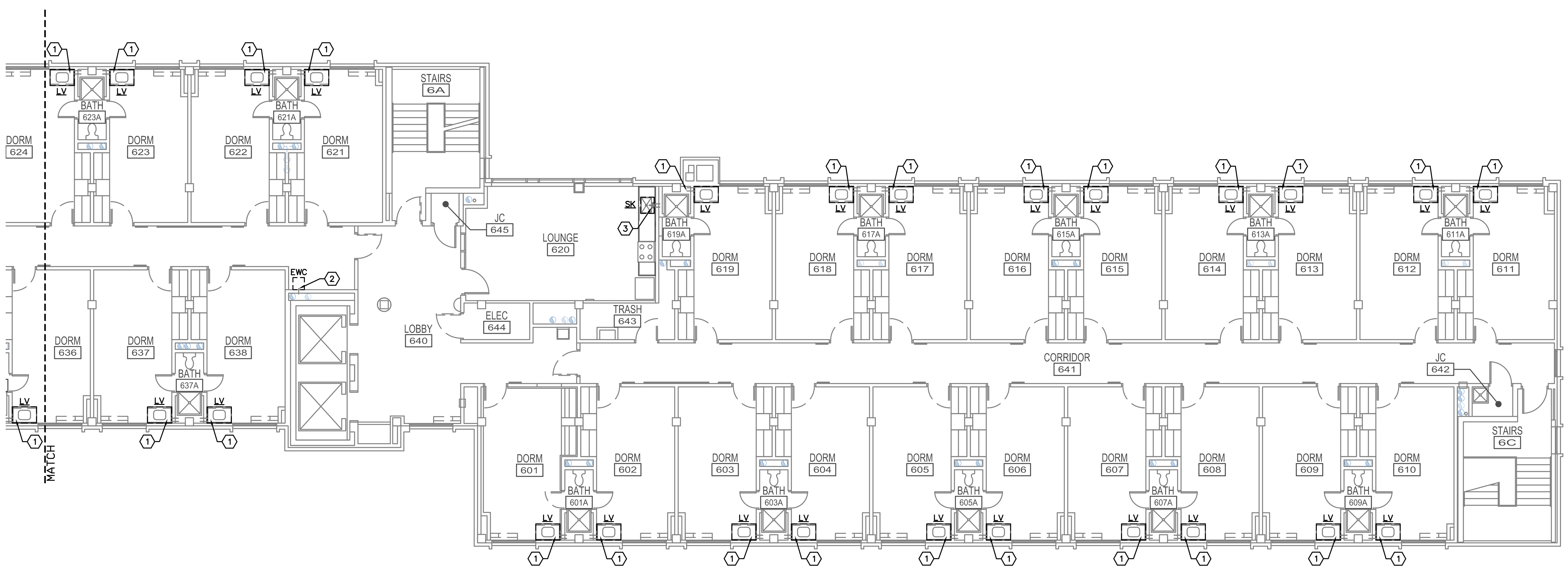
DEMOLITION KEYED NOTES

1. REMOVE VANITY, SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR CHASE WALL.
2. REMOVE, SALVAGE AND TURN OVER ELECTRIC WATER COOLER TO OWNER. DISCONNECT WATER AND DRAINAGE PIPING, AND TEMPORARILY CAP AT WALL.
3. REMOVE SINK AND FAUCET. DISCONNECT THE ASSOCIATED HOT, COLD AND DRAINAGE PIPING CONNECTING TO THE SINK AND FAUCET, AND TEMPORARILY CAP PIPING NEAR WALL.



PLUMBING DEMOLITION - SIXTH FLOOR

SCALE: 1/8" = 1' – 0"



PLUMBING DEMOLITION - SIXTH FLOOR

SCALE: 1/8" = 1' – 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

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3/14/2014

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TJL	KPO

PLUMBING DEMOLITION SIXTH FLOOR

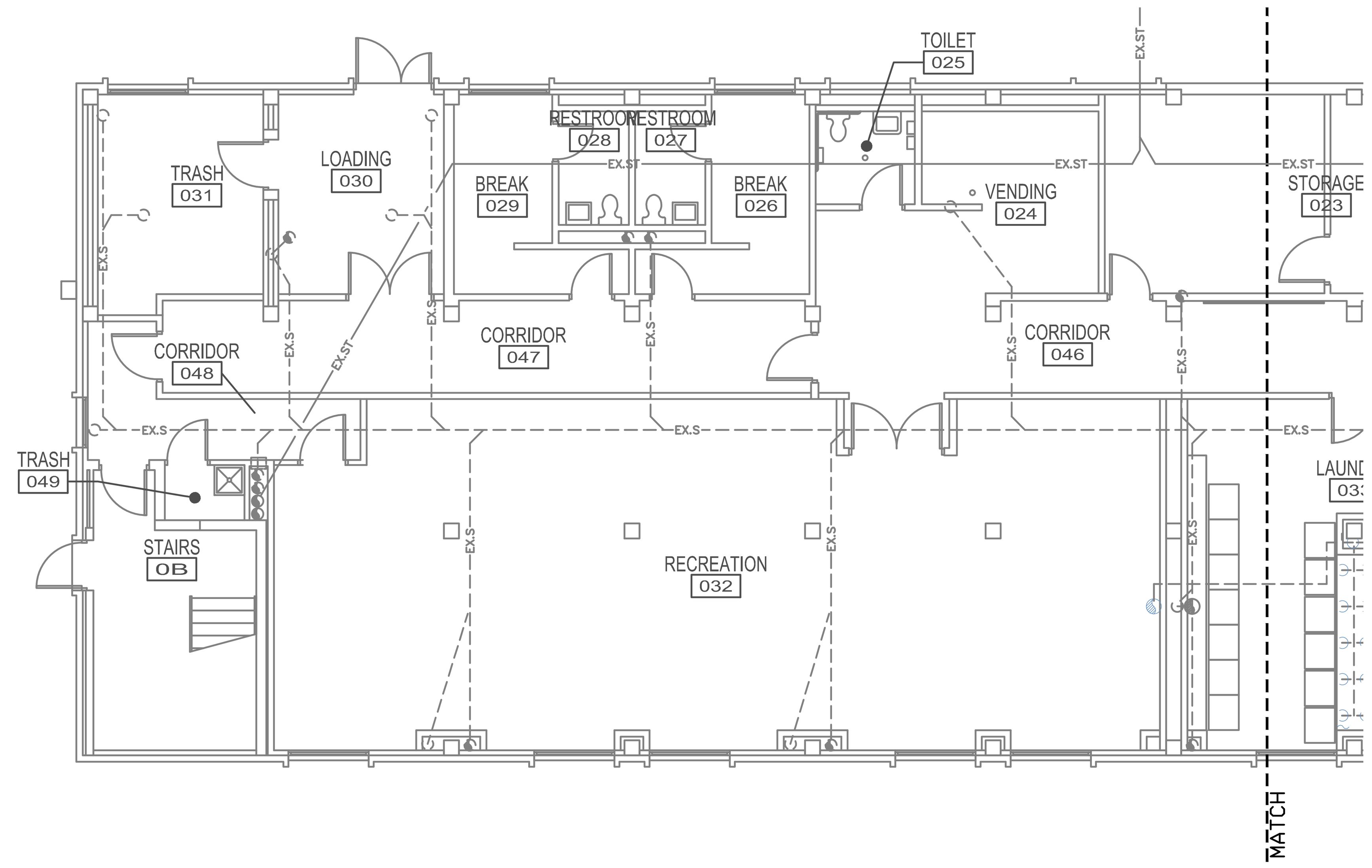
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PD106

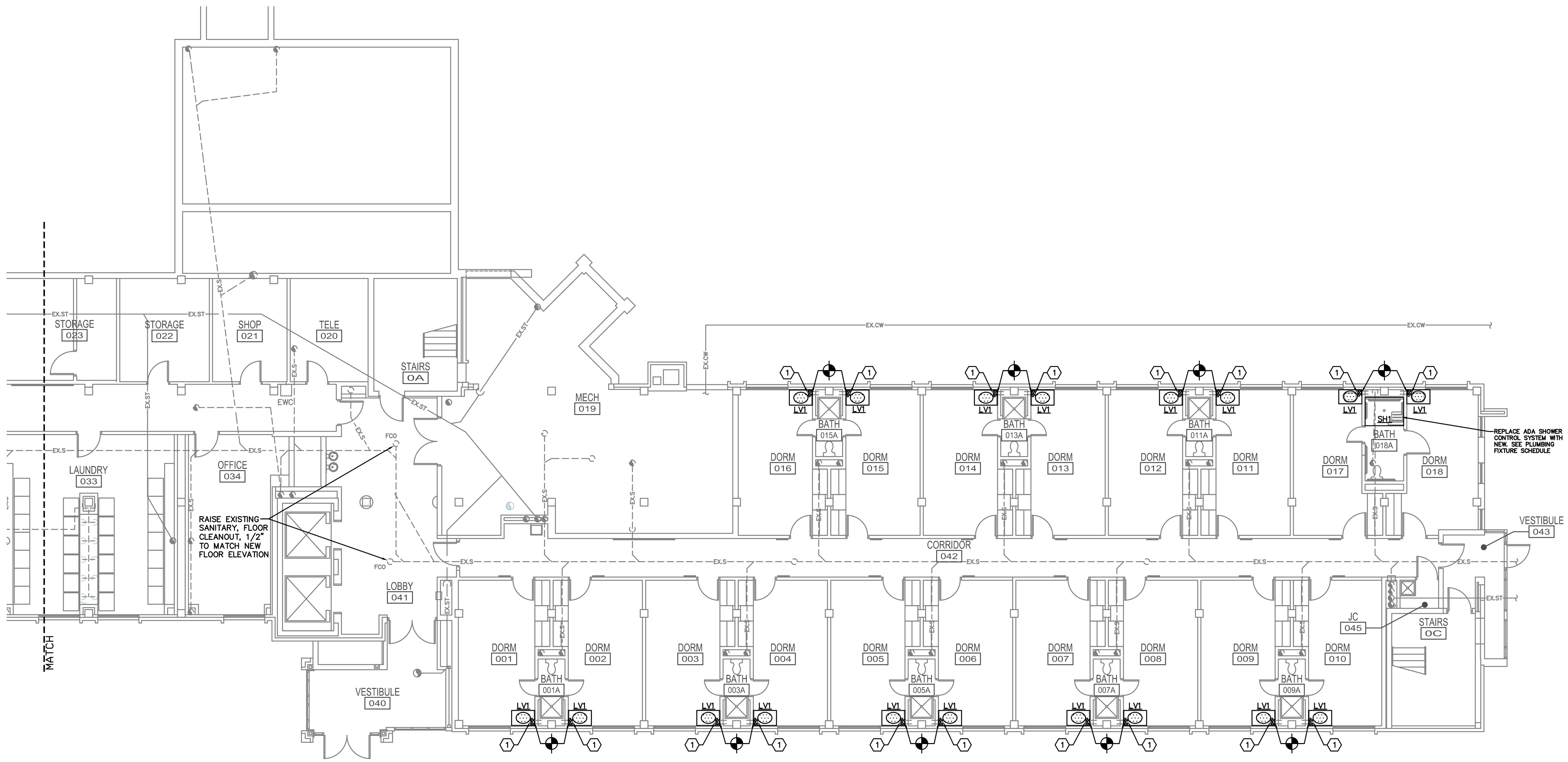
15054PD106.dwg

4/24/2014 9:24 AM G:\15000-15999\15000-15099\15054_CONSTRUCTION SET\15054PD106.DWG



PLUMBING - GROUND FLOOR

SCALE: 1/8" = 1' - 0"



PLUMBING - GROUND FLOOR

SCALE: 1/8" = 1' - 0"

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER AND SANITARY DRAINAGE PIPING PRIOR TO FABRICATION AND INSTALLATION OF NEW PIPING.

B. CONTRACTOR SHALL COORDINATE WITH OTHER PROJECT INVOLVED DISCIPLINES PRIOR TO FABRICATION AND INSTALLATION OF ALL UTILITY AND DRAINAGE PIPING.

C. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

D. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

E. ⌖ INDICATES NEW POINT OF CONNECTION.

F. PLUMBING CONTRACTOR SHALL PROVIDE PROTECTIVE INSULATION ON THE DRAIN AND WATER PIPING BELOW THE LAVATORIES AND SINKS, IN THE FOLLOWING ROOMS: 015, 016, 018, 025, 117, 118, 122, 217, 218, 220, 317, 318, 320, 417, 418 420.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
—CW—	DOMESTIC COLD WATER PIPING
—HW—	HOT WATER PIPING
—HWR—	HOT WATER RETURN PIPING
LV	LAVATORY
EWC	ELECTRIC WATER COOLER
SK	SINK

NEW KEYED NOTES

1. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER VANITY. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.

KUHLMAN HALL RENOVATION PHASE II

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STATE OF OHIO
JOSEPH RICHARD KOHRS
E-54242
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING GROUND FLOOR

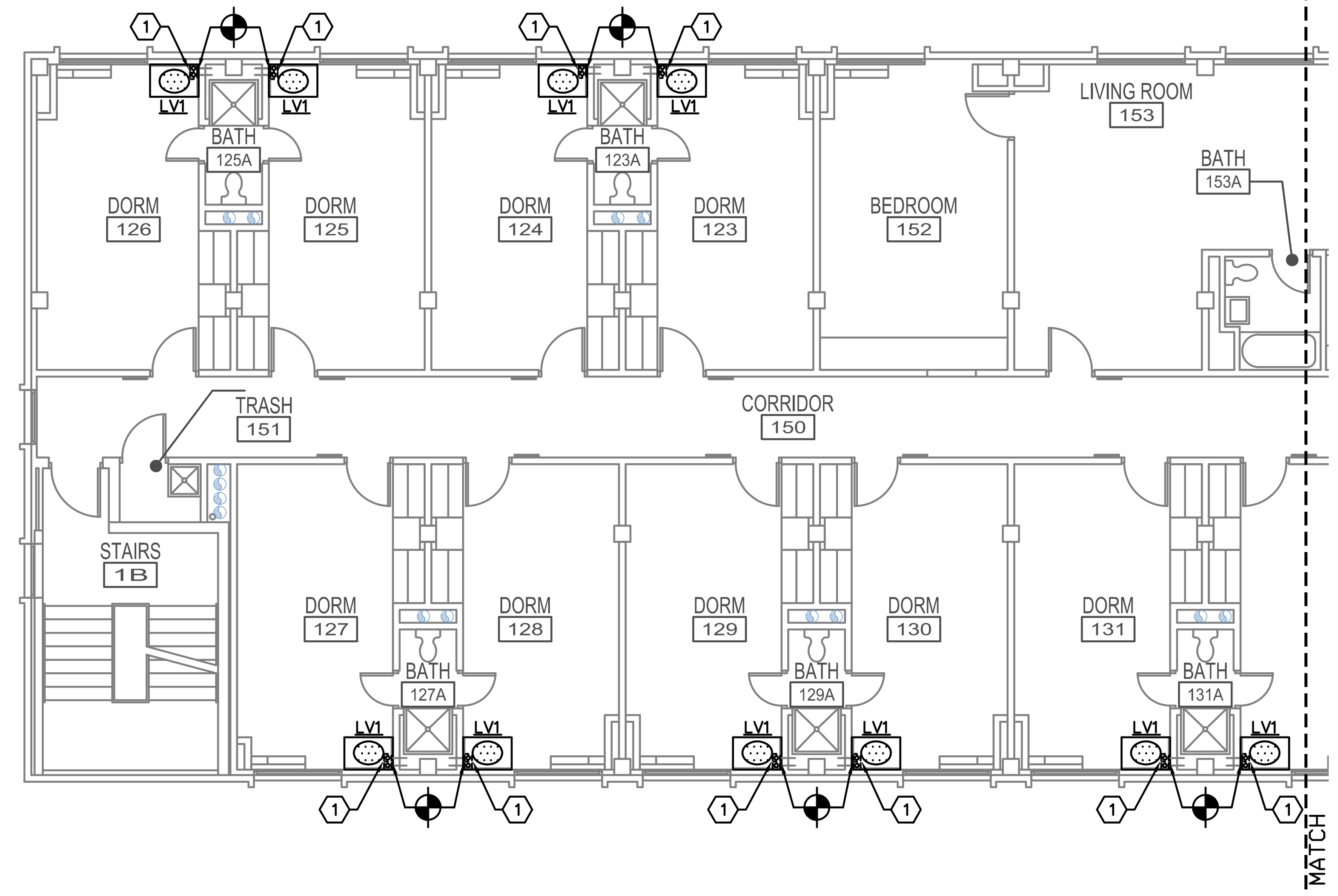
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PL100

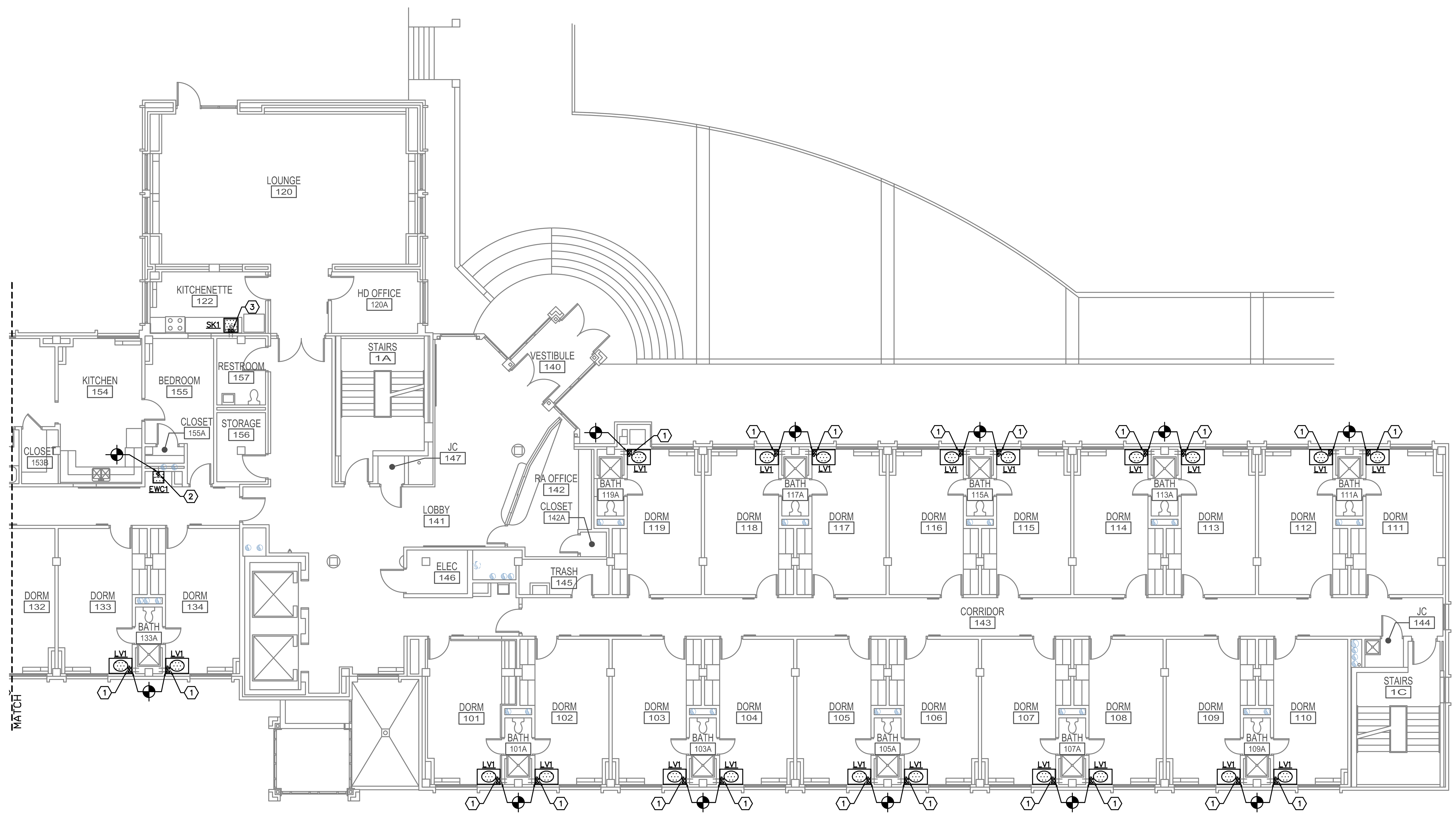
0'-2" REFERENCE LINE

15054PL100.dwg



PLUMBING - FIRST FLOOR

SCALE: 1/8" = 1' - 0"



PLUMBING - FIRST FLOOR

SCALE: 1/8" = 1' - 0"

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER AND SANITARY DRAINAGE PIPING PRIOR TO FABRICATION AND INSTALLATION OF NEW PIPING.

B. CONTRACTOR SHALL COORDINATE WITH OTHER PROJECT INVOLVED DISCIPLINES PRIOR TO FABRICATION AND INSTALLATION OF ALL UTILITY AND DRAINAGE PIPING.

C. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

D. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

E. ⊕ INDICATES NEW POINT OF CONNECTION.

F. PLUMBING CONTRACTOR SHALL PROVIDE PROTECTIVE INSULATION ON THE DRAIN AND WATER PIPING BELOW THE LAVATORIES AND SINKS, IN THE FOLLOWING ROOMS: 015, 016, 018, 025, 117, 118, 122, 217, 218, 220, 317, 318, 320, 417, 418 420.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
——CW——	DOMESTIC COLD WATER PIPING
——HW——	HOT WATER PIPING
——HWR——	HOT WATER RETURN PIPING
LV	LAVATORY
EWC	ELECTRIC WATER COOLER
SK	SINK

NEW KEYED NOTES

1. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER VANITY. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.
2. PROVIDE NEW 1/2" ANGLE VALVE ON EXISTING COLD WATER SUPPLY TO ELECTRIC WATER COOLER. PROVIDE NEW SOFT COPPER TUBING TO UNIT.
3. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER KITCHENETTE SINK. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.

KUHLMAN HALL RENOVATION PHASE II

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JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING FIRST FLOOR

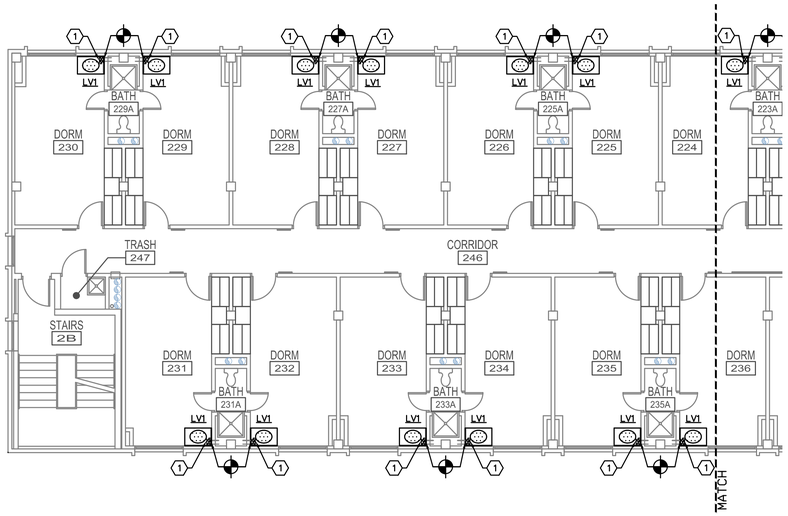
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PL101

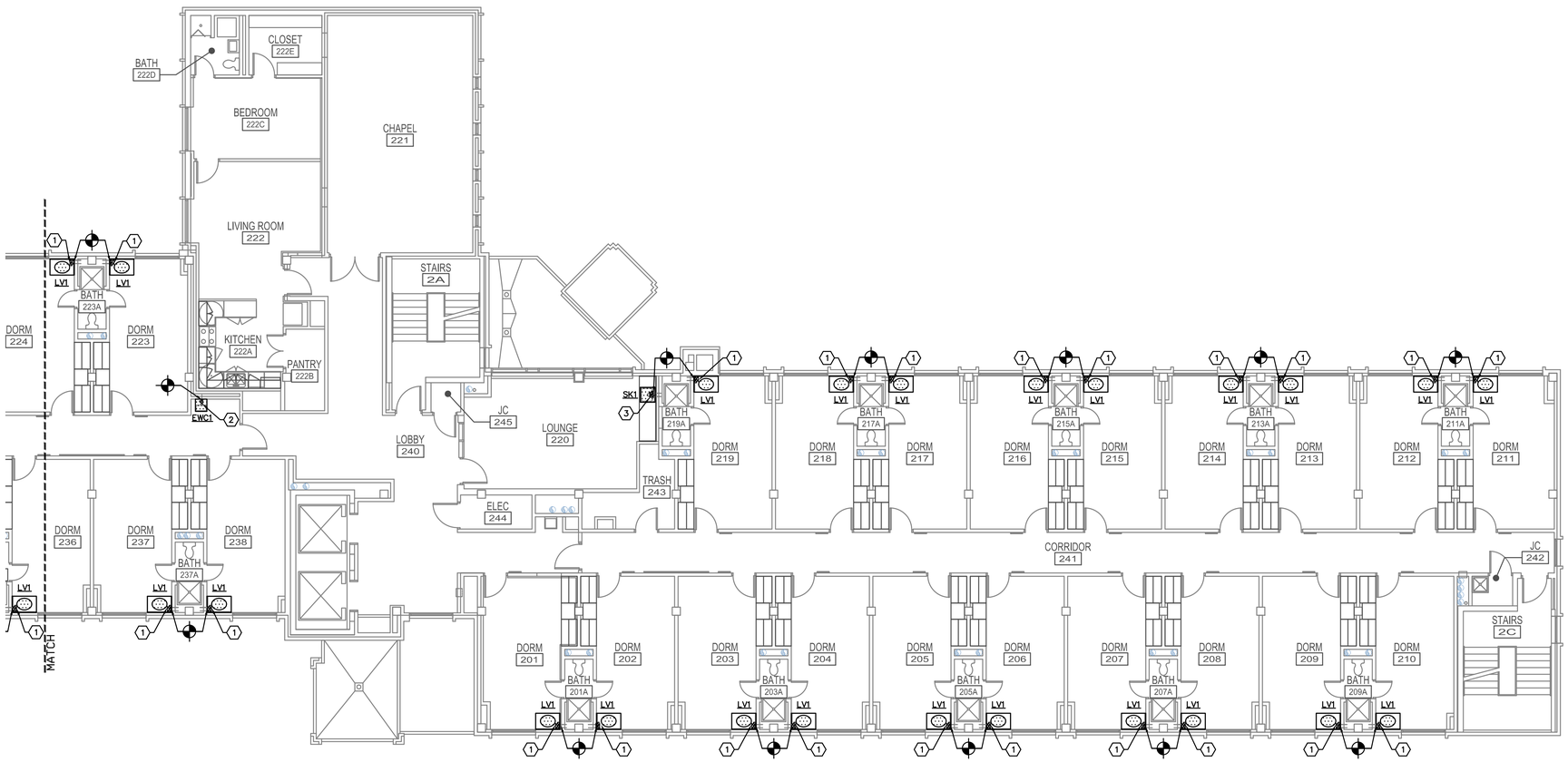
0'-2" REFERENCE LINE

15054PL101.dwg



PLUMBING - SECOND FLOOR

SCALE: 1/8" = 1' – 0"



PLUMBING - SECOND FLOOR

SCALE: 1/8" = 1' – 0"

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER AND SANITARY DRAINAGE PIPING PRIOR TO FABRICATION AND INSTALLATION OF NEW PIPING.

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C. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

D. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

E. ⌖ INDICATES NEW POINT OF CONNECTION.

F. PLUMBING CONTRACTOR SHALL PROVIDE PROTECTIVE INSULATION ON THE DRAIN AND WATER PIPING BELOW THE LAVATORIES AND SINKS, IN THE FOLLOWING ROOMS: 015, 016, 018, 025, 117, 118, 122, 217, 218, 220, 317, 318, 320, 417, 418 420.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
—CW—	DOMESTIC COLD WATER PIPING
—HW—	HOT WATER PIPING
—HWR—	HOT WATER RETURN PIPING
LV	LAVATORY
EWC	ELECTRIC WATER COOLER
SK	SINK

NEW KEYED NOTES

1. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER VANITY. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.
2. PROVIDE NEW 1/2" ANGLE VALVE ON EXISTING COLD WATER SUPPLY TO ELECTRIC WATER COOLER. PROVIDE NEW SOFT COPPER TUBING TO UNIT.
3. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER LOUNGE SINK. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.

KUHLMAN HALL RENOVATION PHASE II

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REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING SECOND FLOOR

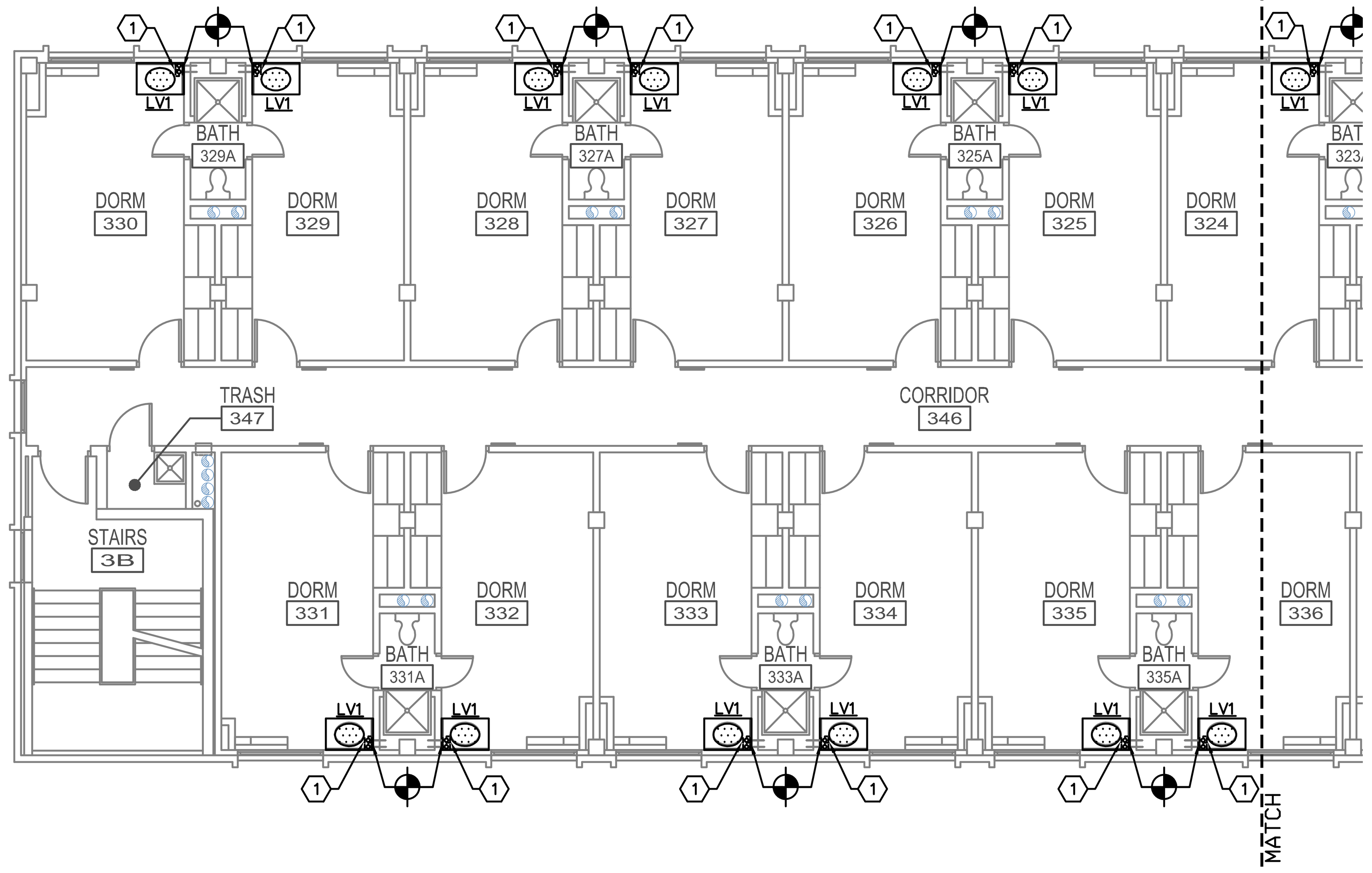
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PL102

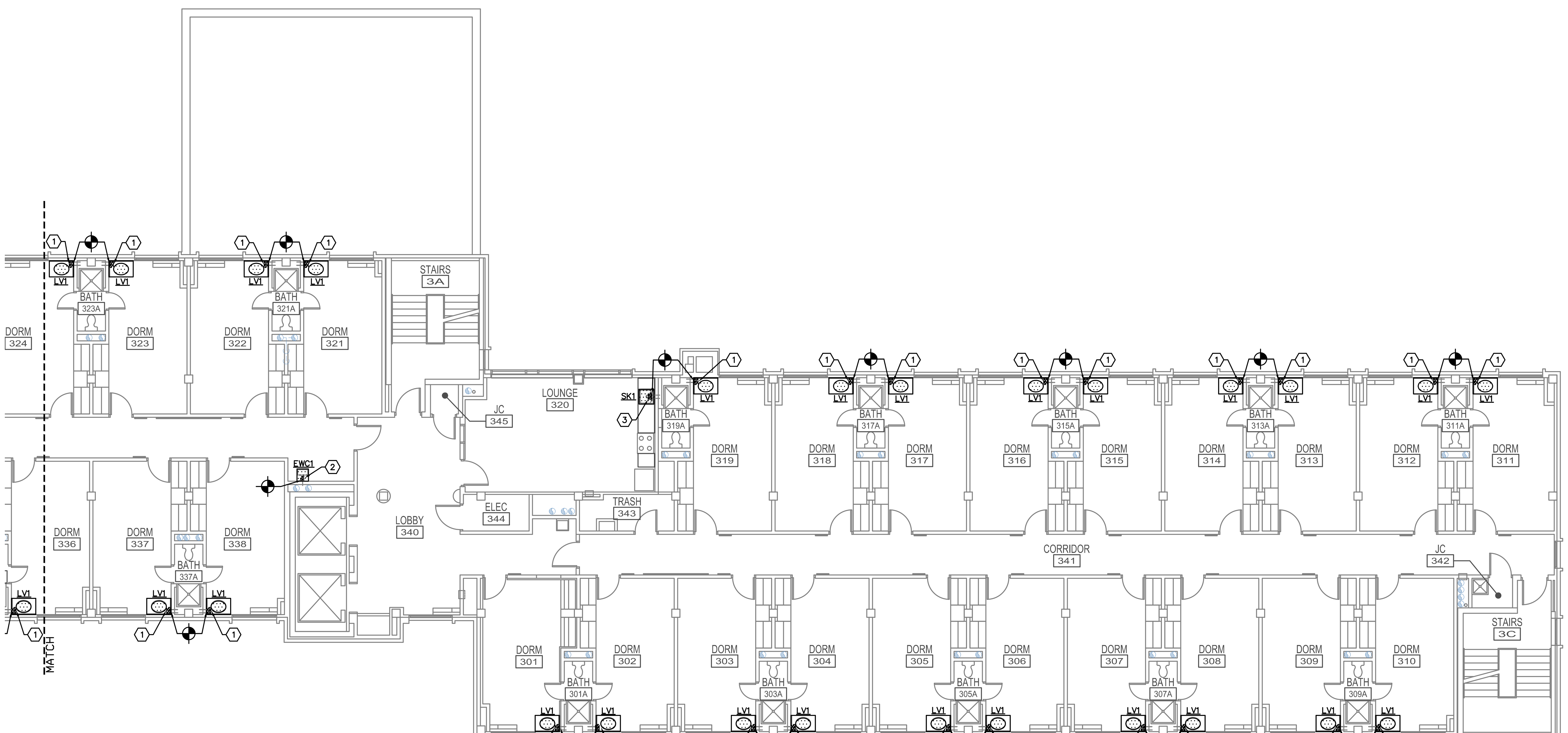
01-2" REFERENCE LINE

15054PL102.dwg



PLUMBING - THIRD FLOOR

SCALE: 1/8" = 1' - 0"



PLUMBING - THIRD FLOOR

SCALE: 1/8" = 1' - 0"

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER AND SANITARY DRAINAGE PIPING PRIOR TO FABRICATION AND INSTALLATION OF NEW PIPING.

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C. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

D. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

E. ⊕ INDICATES NEW POINT OF CONNECTION.

F. PLUMBING CONTRACTOR SHALL PROVIDE PROTECTIVE INSULATION ON THE DRAIN AND WATER PIPING BELOW THE LAVATORIES AND SINKS, IN THE FOLLOWING ROOMS: 015, 016, 018, 025, 117, 118, 122, 217, 218, 220, 317, 318, 320, 417, 418 420.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
——CW——	DOMESTIC COLD WATER PIPING
——HW——	HOT WATER PIPING
——HWR——	HOT WATER RETURN PIPING
LV	LAVATORY
EWC	ELECTRIC WATER COOLER
SK	SINK

NEW KEYED NOTES

1. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER VANITY. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.
2. PROVIDE NEW 1/2" ANGLE VALVE ON EXISTING COLD WATER SUPPLY TO ELECTRIC WATER COOLER. PROVIDE NEW SOFT COPPER TUBING TO UNIT.
3. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER LOUNGE SINK. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.

KUHLMAN HALL RENOVATION PHASE II

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REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING THIRD FLOOR

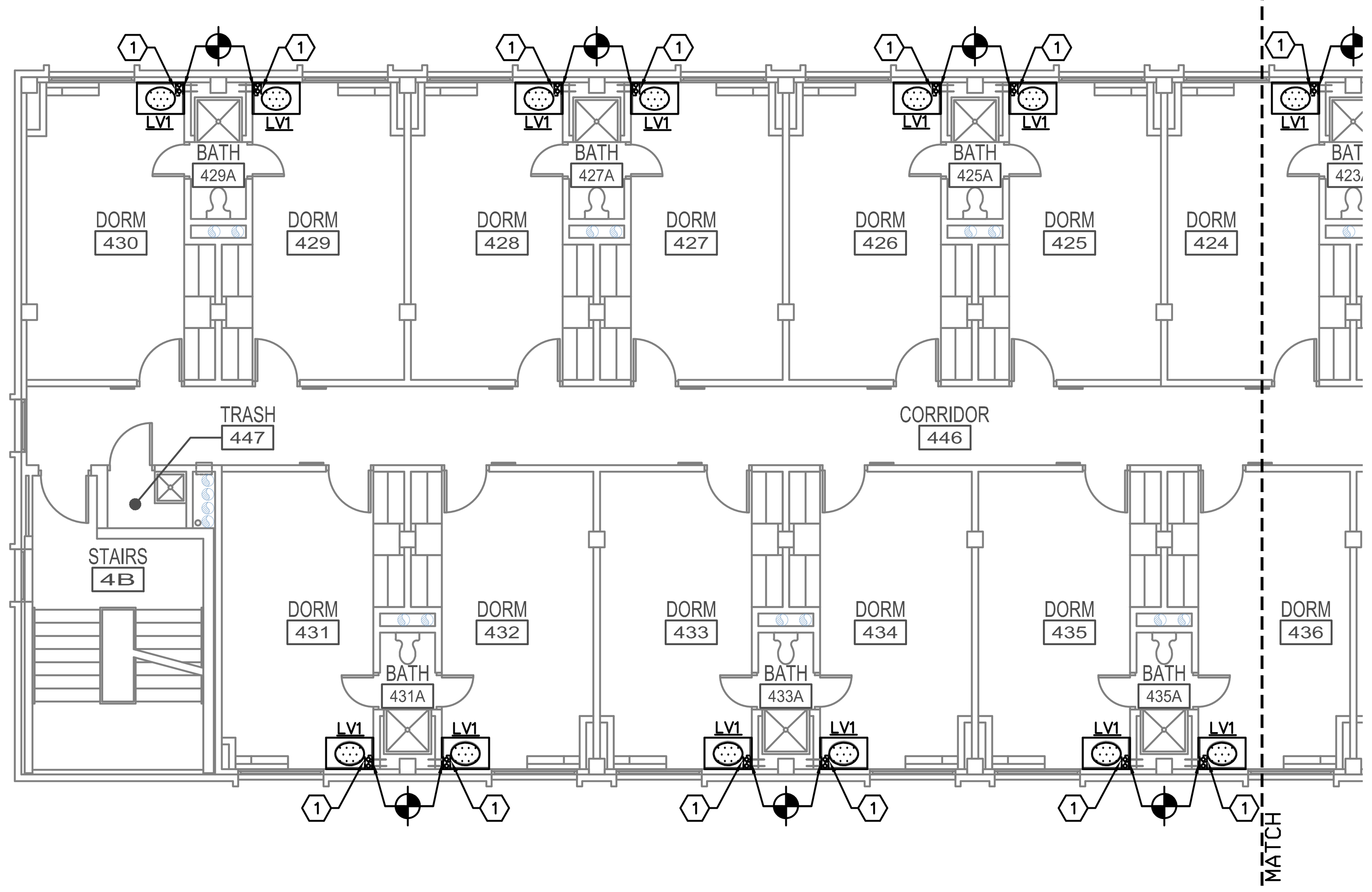
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PL103

0'-2" REFERENCE LINE

15054PL103.dwg



PLUMBING - FOURTH FLOOR

SCALE: 1/8" = 1' – 0"

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER AND SANITARY DRAINAGE PIPING PRIOR TO FABRICATION AND INSTALLATION OF NEW PIPING.

B. CONTRACTOR SHALL COORDINATE WITH OTHER PROJECT INVOLVED DISCIPLINES PRIOR TO FABRICATION AND INSTALLATION OF ALL UTILITY AND DRAINAGE PIPING.

C. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

D. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

E. ⊕ INDICATES NEW POINT OF CONNECTION.

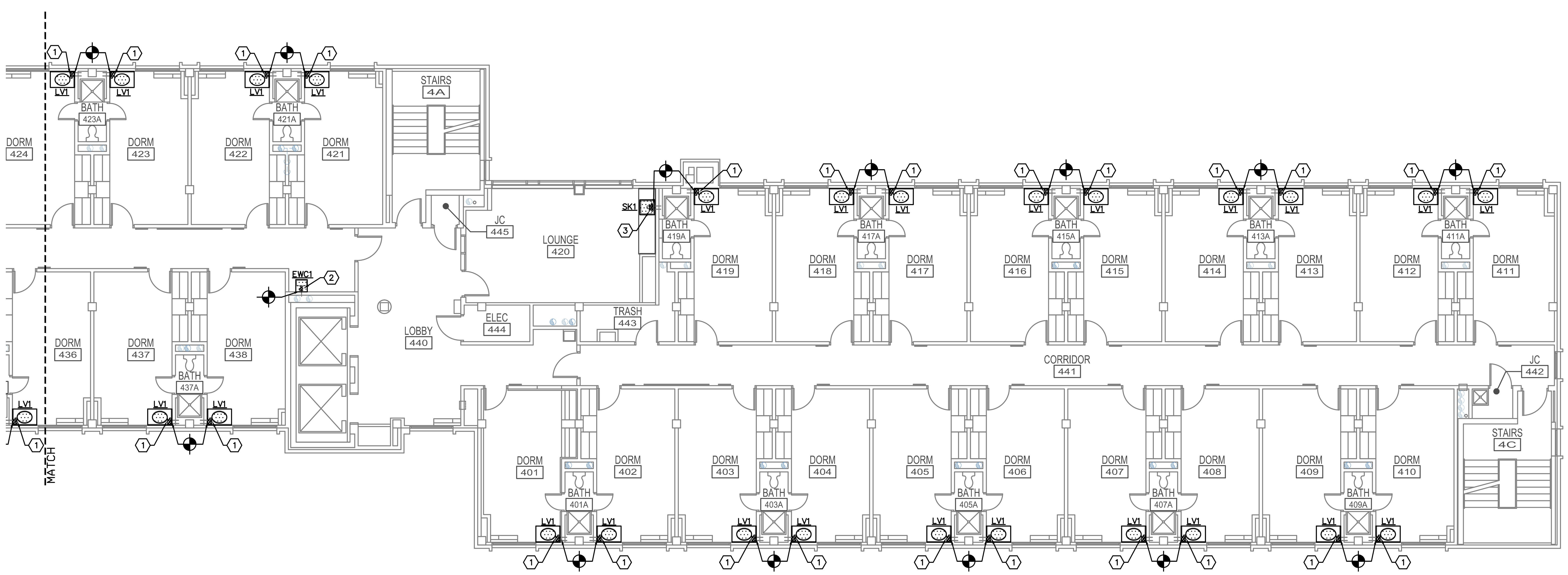
F. PLUMBING CONTRACTOR SHALL PROVIDE PROTECTIVE INSULATION ON THE DRAIN AND WATER PIPING BELOW THE LAVATORIES AND SINKS, IN THE FOLLOWING ROOMS: 015, 016, 018, 025, 117, 118, 122, 217, 218, 220, 317, 318, 320, 417, 418 420.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
——CW——	DOMESTIC COLD WATER PIPING
——HW——	HOT WATER PIPING
——HWR——	HOT WATER RETURN PIPING
LV	LAVATORY
EWC	ELECTRIC WATER COOLER
SK	SINK

NEW KEYED NOTES

1. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER VANITY. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.
2. PROVIDE NEW 1/2" ANGLE VALVE ON EXISTING COLD WATER SUPPLY TO ELECTRIC WATER COOLER. PROVIDE NEW SOFT COPPER TUBING TO UNIT.
3. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER LOUNGE SINK. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.



PLUMBING - FOURTH FLOOR

SCALE: 1/8" = 1' – 0"

KUHLMAN HALL RENOVATION PHASE II

XAVIER UNIVERSITY
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CINCINNATI, OHIO 45207

XAVIER UNIVERSITY

ISSUE	REVISION	DATE
	FOR BIDDING AND PERMIT	14 MAR 14
	BULLETIN #1	25 APR 14

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JOSEPH RICHARD KOHRS
E-54242
REGISTERED PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING FOURTH FLOOR

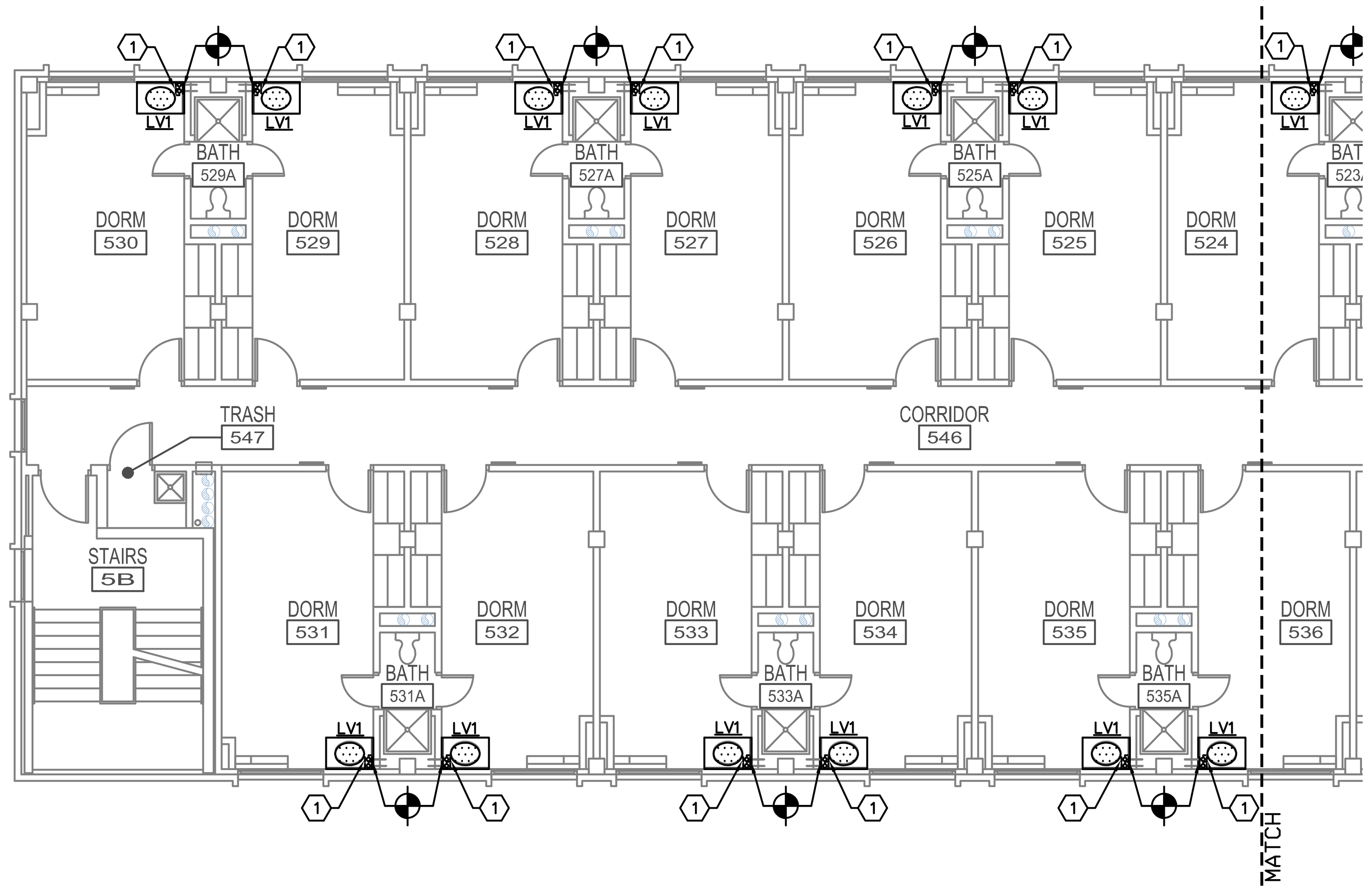
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PL104

0'-2" REFERENCE LINE

15054PL104.dwg



PLUMBING - FIFTH FLOOR

SCALE: 1/8" = 1' – 0"

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER AND SANITARY DRAINAGE PIPING PRIOR TO FABRICATION AND INSTALLATION OF NEW PIPING.

B. CONTRACTOR SHALL COORDINATE WITH OTHER PROJECT INVOLVED DISCIPLINES PRIOR TO FABRICATION AND INSTALLATION OF ALL UTILITY AND DRAINAGE PIPING.

C. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

D. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

E. ⌖ INDICATES NEW POINT OF CONNECTION.

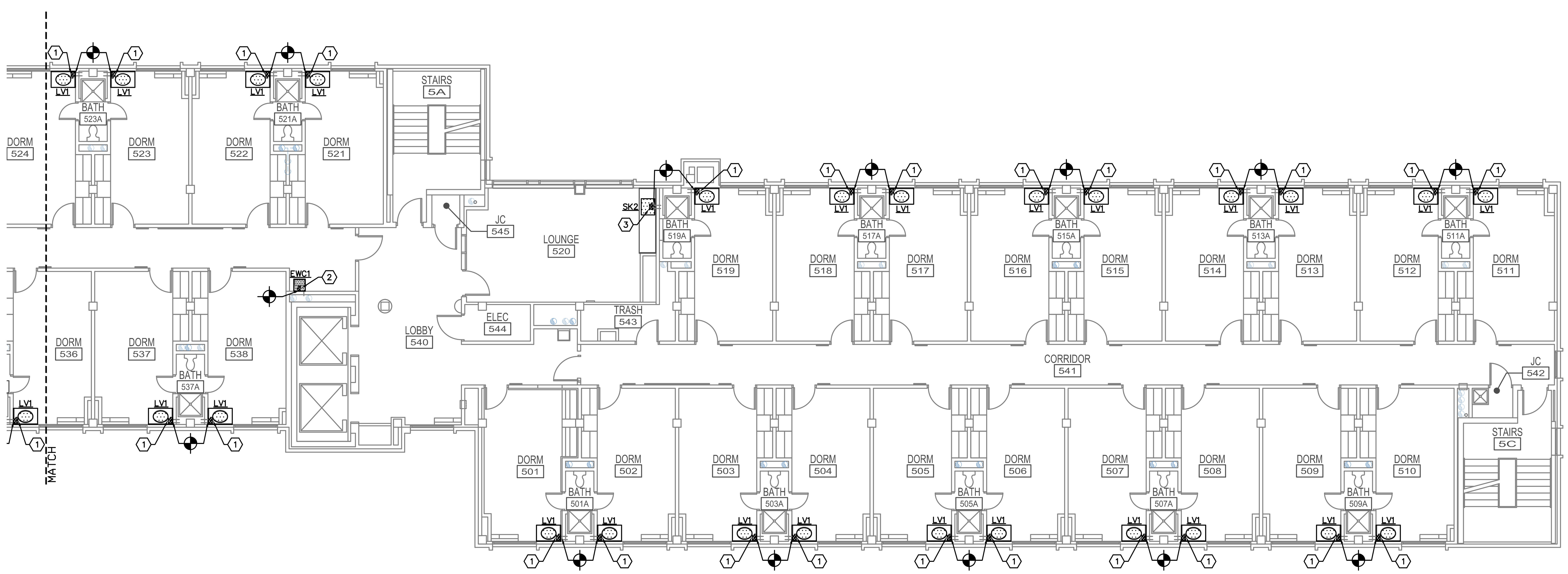
F. PLUMBING CONTRACTOR SHALL PROVIDE PROTECTIVE INSULATION ON THE DRAIN AND WATER PIPING BELOW THE LAVATORIES AND SINKS, IN THE FOLLOWING ROOMS: 015, 016, 018, 025, 117, 118, 122, 217, 218, 220, 317, 318, 320, 417, 418 420.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
——CW——	DOMESTIC COLD WATER PIPING
——HW——	HOT WATER PIPING
——HWR——	HOT WATER RETURN PIPING
LV	LAVATORY
EWC	ELECTRIC WATER COOLER
SK	SINK

NEW KEYED NOTES

1. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER VANITY. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.
2. PROVIDE NEW 1/2" ANGLE VALVE ON EXISTING COLD WATER SUPPLY TO ELECTRIC WATER COOLER. PROVIDE NEW SOFT COPPER TUBING TO UNIT.
3. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER LOUNGE SINK. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.



PLUMBING - FIFTH FLOOR

SCALE: 1/8" = 1' – 0"

KUHLMAN HALL RENOVATION PHASE II

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3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

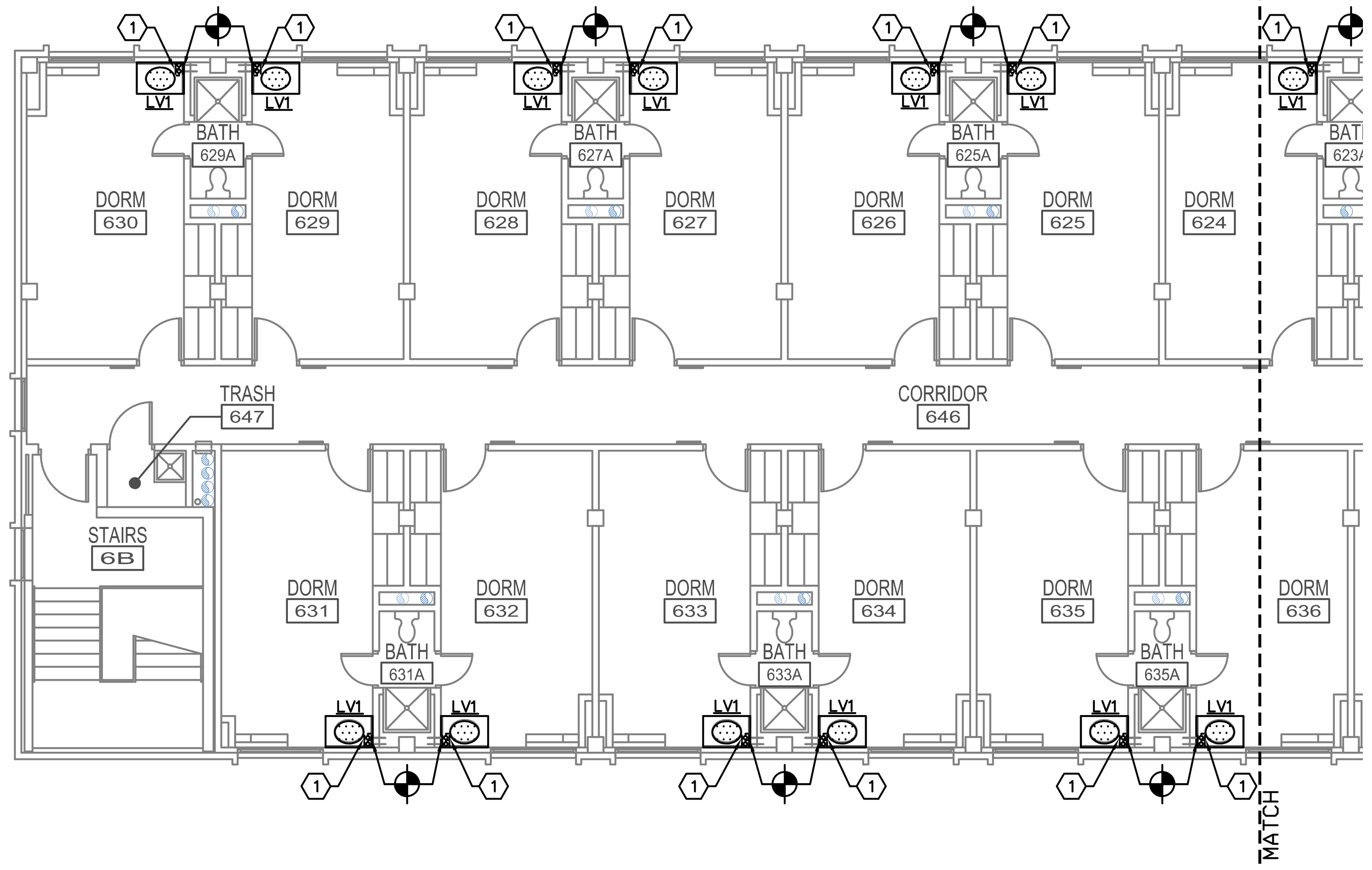
PLUMBING
FIFTH FLOOR

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PL105

15054PL105.dwg



PLUMBING - SIXTH FLOOR

SCALE: 1/8" = 1' - 0"

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER AND SANITARY DRAINAGE PIPING PRIOR TO FABRICATION AND INSTALLATION OF NEW PIPING.

B. CONTRACTOR SHALL COORDINATE WITH OTHER PROJECT INVOLVED DISCIPLINES PRIOR TO FABRICATION AND INSTALLATION OF ALL UTILITY AND DRAINAGE PIPING.

C. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

D. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

E. ⊕ INDICATES NEW POINT OF CONNECTION.

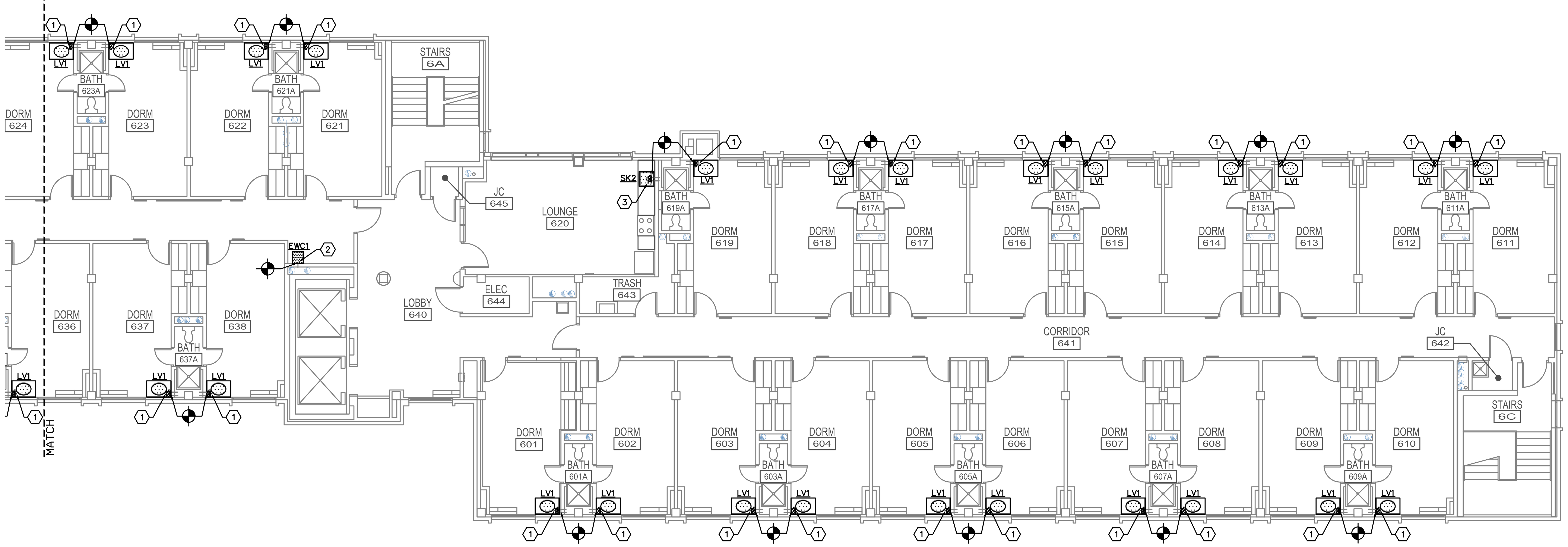
F. PLUMBING CONTRACTOR SHALL PROVIDE PROTECTIVE INSULATION ON THE DRAIN AND WATER PIPING BELOW THE LAVATORIES AND SINKS, IN THE FOLLOWING ROOMS: 015, 016, 018, 025, 117, 118, 122, 217, 218, 220, 317, 318, 320, 417, 418 420.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
——CW——	DOMESTIC COLD WATER PIPING
——HW——	HOT WATER PIPING
——HWR——	HOT WATER RETURN PIPING
LV	LAVATORY
EWC	ELECTRIC WATER COOLER
SK	SINK

NEW KEYED NOTES

1. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER VANITY. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.
2. PROVIDE NEW 1/2" ANGLE VALVE ON EXISTING COLD WATER SUPPLY TO ELECTRIC WATER COOLER. PROVIDE NEW SOFT COPPER TUBING TO UNIT.
3. PROVIDE NEW 1/2" ANGLE VALVES ON EXISTING HOT AND COLD WATER SERVICES, UNDER LOUNGE SINK. PROVIDE NEW SOFT COPPER TUBING SUPPLIES TO FAUCET.



PLUMBING - SIXTH FLOOR

SCALE: 1/8" = 1' - 0"

0'-2" REFERENCE LINE

KUHLMAN HALL RENOVATION PHASE II

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E-54242
REGISTERED
PROFESSIONAL ENGINEER
3/14/2014

DRAWN BY:	CHECKED BY:
TJL	*KPO*

PLUMBING
SIXTH FLOOR

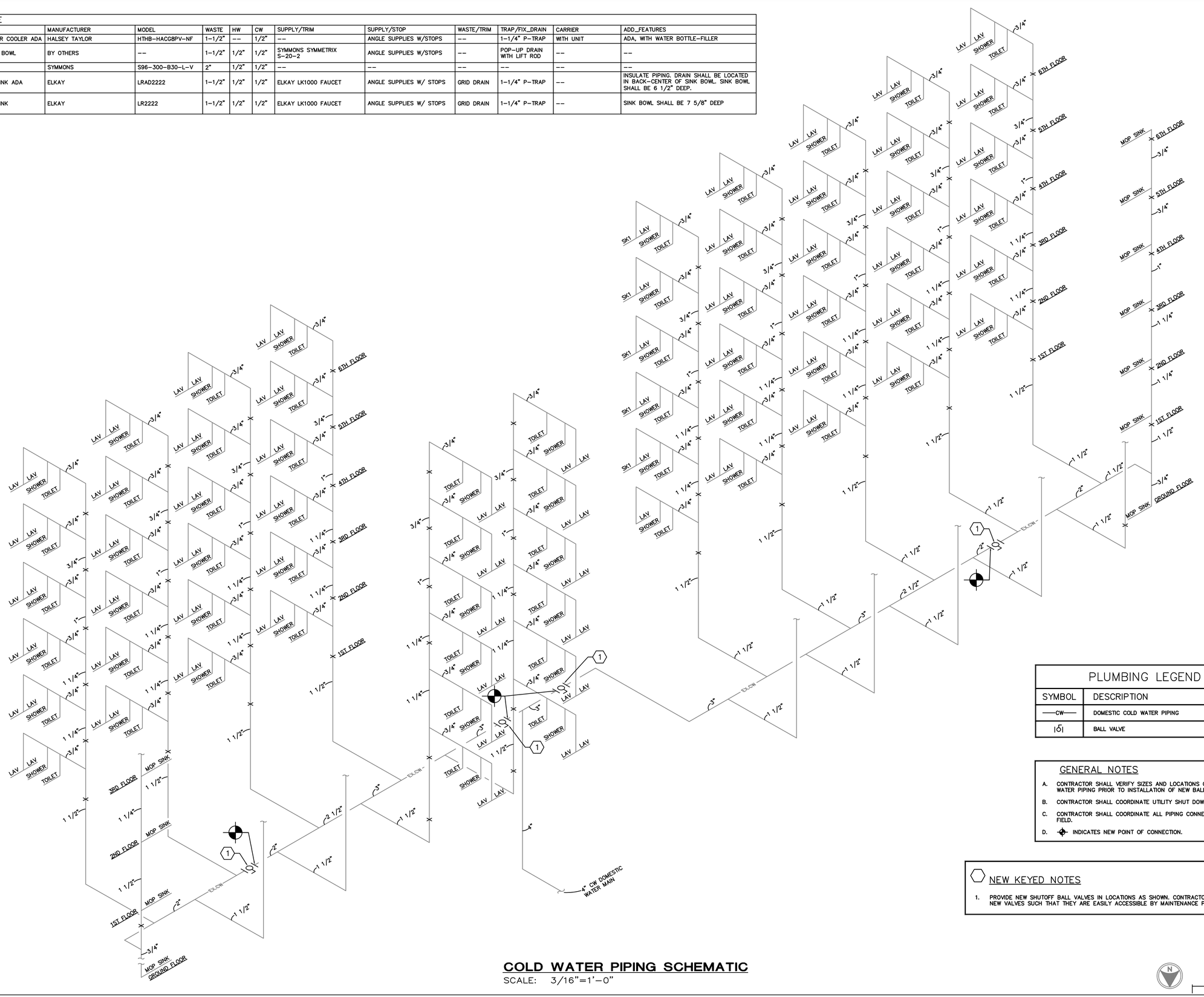
PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PL106

15054PL106.dwg

FIXTURE SCHEDULE												
ID	DESCRIPTION	MANUFACTURER	MODEL	WASTE	HW	CW	SUPPLY/TRIM	SUPPLY/STOP	WASTE/TRIM	TRAP/FIX_DRAIN	CARRIER	ADD_FEATURES
EWC1	ELECTRIC WATER COOLER ADA	HALSEY TAYLOR	HTHB-HACGBPV-NF	1-1/2"	--	1/2"	--	ANGLE SUPPLIES W/STOPS	--	1-1/4" P-TRAP	WITH UNIT	ADA, WITH WATER BOTTLE-FILLER
LV1	INTEGRAL SINK BOWL	BY OTHERS	--	1-1/2"	1/2"	1/2"	SYMMONS SYMMETRIX S-20-2	ANGLE SUPPLIES W/STOPS	--	POP-UP DRAIN WITH LIFT ROD	--	--
SH1	SHOWER	SYMMONS	S96-300-B30-L-V	2"	1/2"	1/2"	--	--	--	--	--	--
SK1	COUNTERTOP SINK ADA	ELKAY	LRAD2222	1-1/2"	1/2"	1/2"	ELKAY LK1000 FAUCET	ANGLE SUPPLIES W/ STOPS	GRID DRAIN	1-1/4" P-TRAP	--	INSULATE PIPING. DRAIN SHALL BE LOCATED IN BACK-CENTER OF SINK BOWL. SINK BOWL SHALL BE 6 1/2" DEEP.
SK2	COUNTERTOP SINK	ELKAY	LR2222	1-1/2"	1/2"	1/2"	ELKAY LK1000 FAUCET	ANGLE SUPPLIES W/ STOPS	GRID DRAIN	1-1/4" P-TRAP	--	SINK BOWL SHALL BE 7 5/8" DEEP



COLD WATER PIPING SCHEMATIC

SCALE: 3/16"=1'-0"

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
—CW—	DOMESTIC COLD WATER PIPING
⋈	BALL VALVE

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER PIPING PRIOR TO INSTALLATION OF NEW BALL VALVES.

B. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

C. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

D. ⌖ INDICATES NEW POINT OF CONNECTION.

NEW KEYED NOTES

1. PROVIDE NEW SHUTOFF BALL VALVES IN LOCATIONS AS SHOWN. CONTRACTOR TO POSITION NEW VALVES SUCH THAT THEY ARE EASILY ACCESSIBLE BY MAINTENANCE PERSONNEL.

KUHLMAN HALL RENOVATION PHASE II

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3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING COLD WATER PIPING SCHEMATIC

PROJECT NUMBER 911717

DATE APRIL 25, 2014

SHEET NO. PL300

0'-2" REFERENCE LINE

15054PL300.dwg

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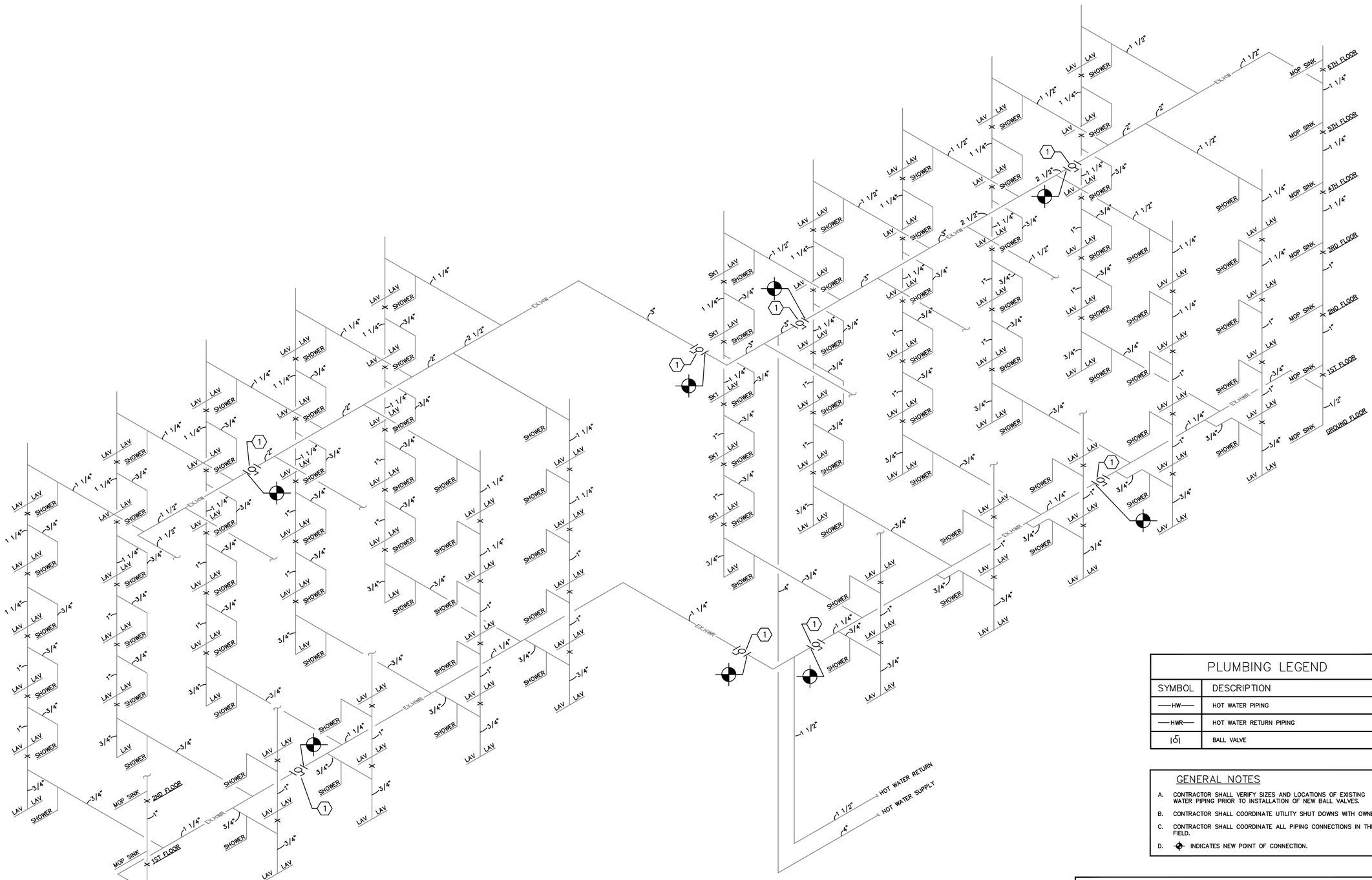

HOT WATER PIPING SCHEMATIC

SCALE: 3/16"=1'-0"

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
—HW—	HOT WATER PIPING
—HWR—	HOT WATER RETURN PIPING
⋈	BALL VALVE

GENERAL NOTES

A. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF EXISTING WATER PIPING PRIOR TO INSTALLATION OF NEW BALL VALVES.

B. CONTRACTOR SHALL COORDINATE UTILITY SHUT DOWNS WITH OWNER.

C. CONTRACTOR SHALL COORDINATE ALL PIPING CONNECTIONS IN THE FIELD.

D. ⌖ INDICATES NEW POINT OF CONNECTION.

NEW KEYED NOTES

1. PROVIDE NEW SHUTOFF BALL VALVES IN LOCATIONS AS SHOWN. CONTRACTOR TO POSITION NEW VALVES SUCH THAT THEY ARE EASILY ACCESSIBLE BY MAINTENANCE PERSONNEL.

KUHLMAN HALL RENOVATION PHASE II

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3/14/2014

DRAWN BY:	CHECKED BY:
TJL	KPO

PLUMBING HOT WATER PIPING SCHEMATIC

PROJECT NUMBER
911717

DATE
APRIL 25, 2014

SHEET NO.
PL301

0'-2" REFERENCE LINE

15054PL301.dwg

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