PROPOSED RENOVATIONS TO: DELAWARE STATE UNIVERSITY'S LYDIA P. LAWS RESIDENCE HALL

1200 NORTH DUPONT HIGHWAY ~ DOVER, KENT COUNTY, DELAWARE

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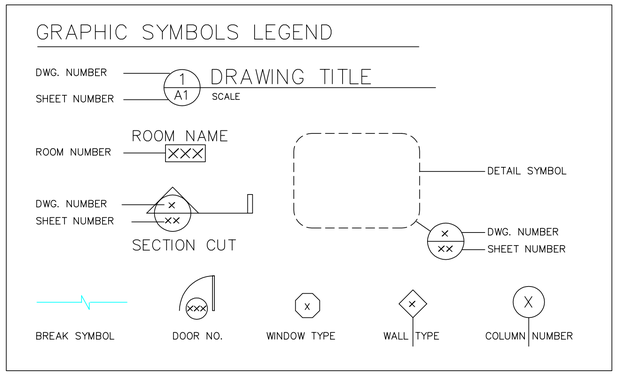

PROJECT TEAM

OWNER:

DELAWARE STATE UNIVERSITY

DIRECTOR: ANTHONY I. PATTERSON
1200 NORTH DUPONT HIGHWAY
DOVER, DELAWARE 19901
PHONE 302.857.7144
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ARCHITECT:

JEFF FLOWERS ASSOCIATES, LLC

216 MEADOWBROOK AVENUE
WILMINGTON, DELAWARE 19804
PHONE: 302.981.4385
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ENGINEER:

DELAWARE ENGINEERING AND DESIGN CORPORATION

315 SOUTH CHAPEL STREET
NEWARK, DELAWARE 19711
PHONE: 302.738.7172
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CLASSIFICATION OF WORK

ALTERATION – LEVEL: 2

(BASED ON 2009 IEBC: CHAPTER 4, SECTION 404 & CHAPTER 7)

SCOPE OF WORK:
Cosmetic upgrade of existing college residence hall. New painting, stripping & rewaxing of existing floors, walls and ceilings. The removal and replacement of existing bathtub and shower units. New wall & floor tile. The removal of two doors.

BUILDING CODE ANALYSIS

FACILITY DESIGNED IN ACCORDANCE WITH THE FOLLOWING:

2009 INTERNATIONAL EXISTING BUILDING CODE
2009 INTERNATIONAL EXISTING PLUMBING CODE
2009 INTERNATIONAL EXISTING MECHANICAL CODE
2009 NATIONAL ELECTRICAL CODE
2009 NFPA–101–LIFE SAFETY CODE

GENERAL NOTES

1. The contractor shall verify all dimensions, details, and conditions at the job site and correct any discrepancies with the Architect before proceeding with any work.
2. These drawings are the exclusive property of the Architect, and may not be reproduced without the Architect's approval.
3. Some existing building components and structural conditions are inaccessible and assumed. The contractor shall verify all dimensions, details, and conditions at the job site and correct any discrepancies before proceeding with any work.
4. The Contractor shall be responsible to provide all job safety requirements in accordance with applicable laws, rules, and regulations.
5. The Architect is not responsible for any deviation and/or modification to work indicated, detailed, or specified in the drawings.
6. The Contractor shall carefully supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the work under the Contract.
7. The Contractor shall establish all lines, levels, and shall superintend the entire project, arrange between subcontractors what shall be furnished by them, save the Owner from loss or annoyance be reason of liens or claims of any kind on account of infringement of any patent, protect the Owner against all liens, accidents to the public, neighboring premises and parties employed on the work. He shall carry on the operation in an expeditious and workmanlike manner.
8. The Contractor and sub–contractors shall carefully study and compare the Contract Documents and shall at once report to the Architect and Owner any error, inconsistency, or omission they may discover.
9. The General Contractor shall coordinate and cooperate with other Trades and Owner's separate contractor's for equipment locations and clearances.
10. Removal of construction trash is the responsibilty of the Contractor.
11. Prior to installation of any work, the Contractor shall carefully inspect the installed work of all other trades and verify that all such work is complete to the point where installation may properly commence.
12. All manufactured materials, components, fasteners, assemblies etc., shall be handled and installed in accordance with the manufacturer's instructions and provisions of applicable ICBO research recommendations.
13. Construction loads shall not overload the structure nor shall they be in excess of the design loadings.
14. The Contractor shall remove ALL rubbish and debris occasioned by the work and leave all spaces and areas clean and ready for tenant use.
15. The owner shall coordinate with his contractors for the proper disconnection, dismantling and removal of existing building utilities as required before proceeding with the work.
16. Do not scale drawings. Verify locations of equipment and fixtures with other trades and at the job site.

BUILDING USE GROUP

Use and Occupancy.....R–2

CONSTRUCTION TYPE

Construction Type.....5B

FIRE SEPARATION

Automatic Fire Suppression System.....Yes
Fire Area Separation .....2 hr.s

BIDDING DOCUMENTS

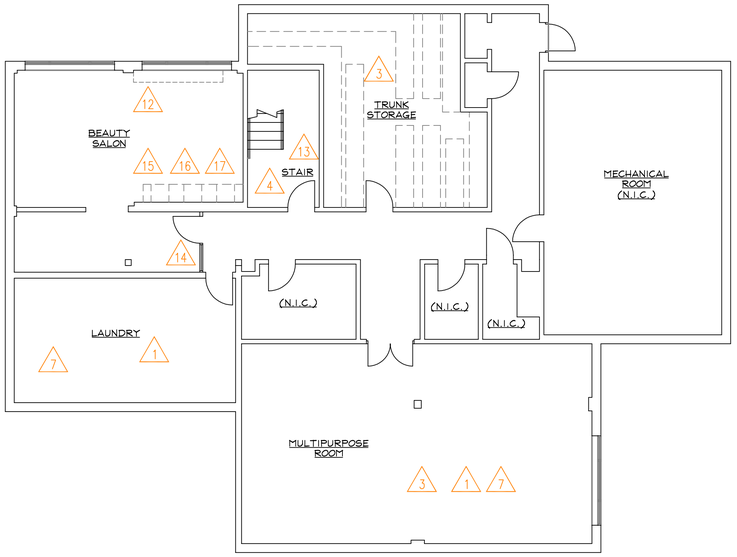
JEFF FLOWERS ASSOCIATES
ARCHITECTS • PLANNERS
WILMINGTON, DE 302.351.3347

PROPOSED RENOVATION LOCATED AT:
LYDIA P. LAWS RESIDENCE HALL
DELAWARE STATE UNIVERSITY
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12

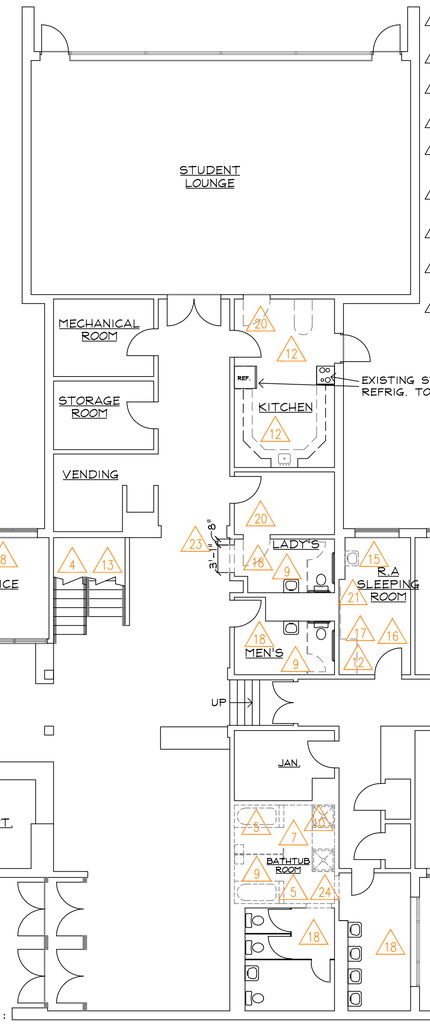
REVISIONS

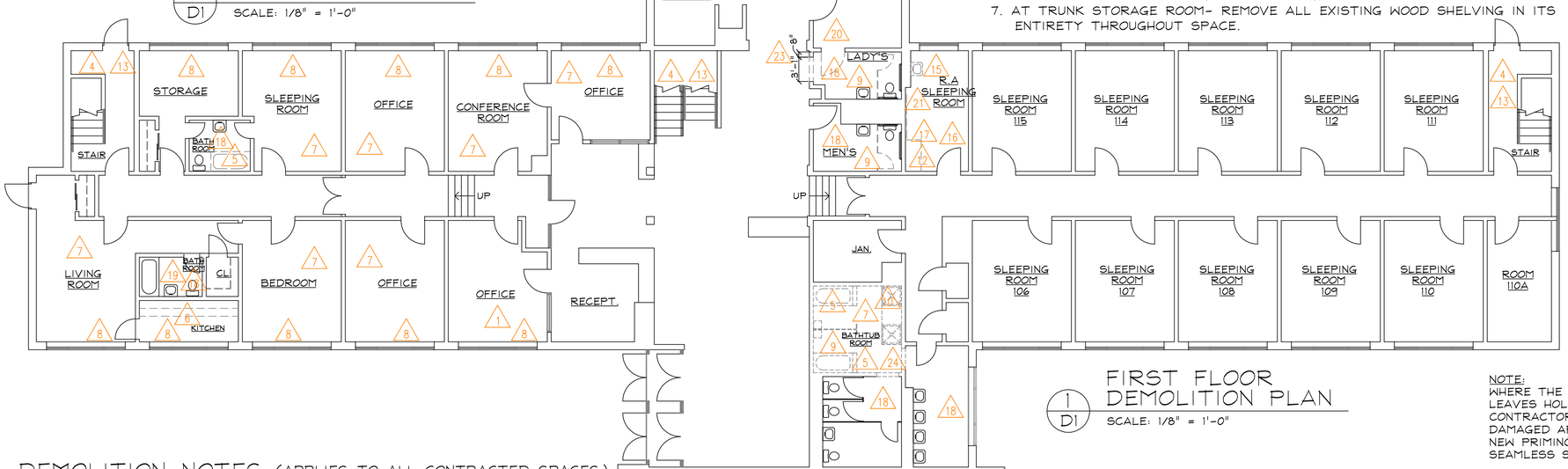
SHEET No.
CV



2 / D1 BASEMENT DEMOLITION PLAN

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





1 / D1 FIRST FLOOR DEMOLITION PLAN

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

DEMOLITION TAGS (NOT ALL TAGS APPLY):

1. REMOVE EXISTING CEILING IN ITS ENTIRETY.
2. REMOVE DAMAGE OR BROKEN CEILING TILES OR PORTIONS OF DAMAGED DRYWALL CEILING- PREP SURFACE FOR PRIMING & PAINTING.
3. REMOVE ALL DISCARDED ITEMS, RUBBISH, DEBRIS. AND EXISTING WOOD SHELVING IN ITS ENTIRETY.
4. REMOVE DAMAGED STAIR TREAD(S) &/OR RISERS.
5. REMOVE BATHTUB, ENCLOSURES AND FITTINGS.
6. REMOVE EXISTING BASE AND WALL CABINETS.
7. REMOVE ALL EXISTING FLOORING TYP. IN THIS AREA.
8. REMOVE EXISTING WINDOW TREATMENT.
9. REMOVE TOILET STALL PARTITIONS, FITTINGS & ASSEMBLIES.
10. REMOVE ALL SHOWERS, FITTINGS & SURROUNDS IN THEIR ENTIRETY.
11. REMOVE WALL PANELING THROUGHOUT IN ITS ENTIRETY.
12. REMOVE EXISTING COUNTERTOP/COUNTER & SUPPORTS IN THEIR ENTIRETY.
13. REMOVE PORTION OF DAMAGED FLOORING TYP.
14. STRIP AND/OR REMOVE PAINT OR STAIN FROM EXISTING WOOD/METAL HANDRAILS, SPINDLES, BARS, GUARDRAILS, CASING &/OR FRAMES TYP.- PREP ALL SURFACES FOR NEW PRIMING/PAINTING OR STAINING.
15. REMOVE SINK & FIXTURES- CAP ALL PIPING AS REQUIRED.
16. REMOVE EXISTING MILLWORK.
17. REMOVE EXISTING MIRROR(S).
18. STRIP ALL FLOOR & WALL TILES- PREP. AREAS & SURFACES FOR REGLAZING.
19. STRIP ALL BATHTUBS- PREP. FOR REGLAZING. REMOVE EXISTING CAULKING/SEALANT.
20. REMOVE EXISTING DOOR, FRAME & HARDWARE.
21. REMOVE ALL ITEMS ALONG EXISTING WALL.
22. REMOVE EXISTING WINDOWS & FRAMES IN ITS ENTIRETY.
23. REMOVE PORTION OF EXISTING WALL AS INDICATED FOR NEW DOOR INSTALL.- VERIFY NEW OPENING W/ REQ'D DOOR R.O.
24. REMOVE ALL WALL, BASE & FLOOR TILES IN THEIR ENTIRETY, TYP.

TRUNK STORAGE ROOM AND MULTIPURPOSE ROOM DEMOLITION NOTES:

1. AT TRUNK STORAGE ROOM REMOVE EXISTING DAMAGED OR BROKEN CEILING.
3. AT TRUNK STORAGE ROOM REMOVE EXISTING DAMAGED OR BROKEN FLOOR MATERIAL.
4. AT MULTIPURPOSE ROOM REMOVE ALL EXISTING FLOORING IN ITS ENTIRETY.
5. REMOVE EXISTING VINYL WALL BASE THROUGHOUT.
6. REMOVE PORTIONS OF DAMAGED OR BROKEN WALL MATERIAL- PREP. AREA OR SECTION FOR NEW PRIMING AND PAINTING.
7. AT TRUNK STORAGE ROOM- REMOVE ALL EXISTING WOOD SHELVING IN ITS ENTIRETY THROUGHOUT SPACE.

NOTE:
WHERE THE REMOVAL OF AN ITEM OR SYSTEM LEAVES HOLES IN THE WALL SURFACE, ECT. CONTRACTOR IS TO PROPERLY PATCH & SEAL DAMAGED AREA. PREPARE AREA & SURFACE FOR NEW PRIMING & PAINTING TO PROVIDE A SEAMLESS SURFACE TRANSITION.

GENERAL DEMOLITION NOTES: (APPLIES TO ALL CONTRACTED SPACES):

A. THESE NOTES ARE ALL INCLUSIVE. NOT ALL NOTES APPEAR ON EACH DRAWING OR IN EACH ROOM, SPACE OR AREA.
B. REMOVE ALL EXISTING WALL BASE TYPICAL THROUGHOUT RESIDENCE HALL IN ALL CONTRACTED SPACES.
C. REMOVE ALL RESIDENCE HALL DOOR NUMBER DESIGNATIONS &/OR METAL MARKERS, TYPICAL THROUGHOUT.
D. REMOVE OLD/DAMAGED STAIR TREADS AND RISERS TYPICAL THROUGHOUT.
E. PATCH/REPAIR EXISTING GYPSUM BOARD AND CONCRETE BLOCK WALL TYP. THROUGHOUT- PREPARE ALL SURFACE AREAS FOR NEW PRIME AND PAINT.
F. STRIP ALL WOOD DOORS, INTERIOR WOOD WINDOW FRAMES & WOOD CASINGS THROUGHOUT IN PREPARATION FOR NEW STAINING TYP. THROUGHOUT RESIDENCE HALL.
G. STRIP ALL METAL DOORS & METAL FRAMES TYP. IN PREPARATION FOR NEW PRIMING & PAINTING THROUGHOUT. RESIDENCE HALL.
H. REMOVE ALL OLD AND ABANDONED SIGNAGE, ELECTRONIC SYSTEMS AND WIRES TYP, THROUGHOUT RESIDENCE HALL.
I. REMOVE ALL DAMAGED, BRUISED & WARPED FLOORING MATERIAL, CEILING PANELS, TILES, PORTIONS OF DRYWALL CEILING, TYP. THROUGHOUT.
J. COMPLETELY STRIP ALL FLOORS, TYP. THROUGHOUT IN PREP. FOR NEW WAXING AND POLISHING.
K. PREP. ALL WALL & CEILING SURFACES THROUGHOUT ALL CONTRACTED SPACES FOR NEW PRIMING & PAINTING.
L. REMOVE ALL EXISTING SEALANT/CAULKING AT ALL WINDOW FRAMES- PREP. SURFACES FOR INSTALL. OF NEW SEALANT/CAULKING.
M. REMOVE ALL EXISTING WINDOW SCREENS, TYP., THROUGHOUT- PREP. FOR INSTALLATION OF NEW WINDOW SCREENS.
N. THE CONTRACTOR SHALL INSPECT AREAS OF EXISTING WATER LEAKAGE AND SEAL & CORRECT.

LAUNDRY ROOM DEMOLITION NOTES:

1. REMOVE EXISTING VINYL WALL BASE IN ITS ENTIRETY.
2. REMOVE PORTIONS OF DAMAGED OR BROKEN WALL MATERIAL AS REQ'D- PREP. AREA OR SECTION FOR NEW PRIMING AND PAINTING.
3. REMOVE EXISTING CEILING IN ITS ENTIRETY.

BEAUTY SALON DEMOLITION NOTES:

1. REMOVE EXISTING VINYL WALL BASE IN ITS ENTIRETY.
2. REMOVE PORTIONS OF DAMAGED OR BROKEN WALL MATERIAL- PREP. AREA OR SECTION FOR NEW PRIMING AND PAINTING.
3. REMOVE EXISTING SHOWER BOWLS, HAND & COSMETIC BOOTHS & SINKS IN THEIR ENTIRETY- PREP. AREA FOR INSTALL. OF NEW SINKS & FIXTURES- VERIFY WITH PLUMBING DRAWINGS.
4. REMOVE EXISTING COUNTER & SUPPORT BRACKETS IN THEIR ENTIRETY.

BIDDING DOCUMENTS

JEFF FLOWERS ASSOCIATES
ARCHITECTS • PLANNERS
WILMINGTON, DE 302.981.4385

PROPOSED RENOVATION LOCATED AT:
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DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12
REVISIONS

SHEET No
D1

DEMOLITION NOTES: SEE ALSO ELECTRICAL & PLUMBING DWGS. FOR DEMOLITION DRAWINGS

1. DEMOLITION INCLUDES
   A. Removing designated building equipment and fixtures; removing designated partitions and components.
   B. Disposing of removed materials.

2. REGULATORY REQUIREMENTS
   A. Conform to applicable codes for demolition, safety of structures, dust control, service utilities, and discovered hazards.

3. PREPARATION
   A. Notify affected utility companies before starting work and comply with their requirements.
   B. Identify location and termination of known utilities.
   C. Provide appropriate temporary signage including signage for exit or building egress.
   D. Prevent movement or settlement of existing structure. Provide bracing and shoring.
   E. Protect existing items which are not indicated to be removed.

4. DEMOLITION REQUIREMENTS
   A. Maintain protected egress from existing building at all times.
   B. Do not disable or disrupt building fire or life safety systems with out written notice to Owner.
   C. Cease operations immediately if existing structure appear to be in danger. Notify Architect.
   D. Mark location of termination or utilities.

5. SELECTIVE DEMOLITION
   A. Demolish and remove components in an orderly and careful manner, in sequence as indicated on Drawings.
   B. Protect existing supporting structural members to maintain load carrying capacity.
   C. Demolish and remove all existing mechanical, plumbing and electric components as required.

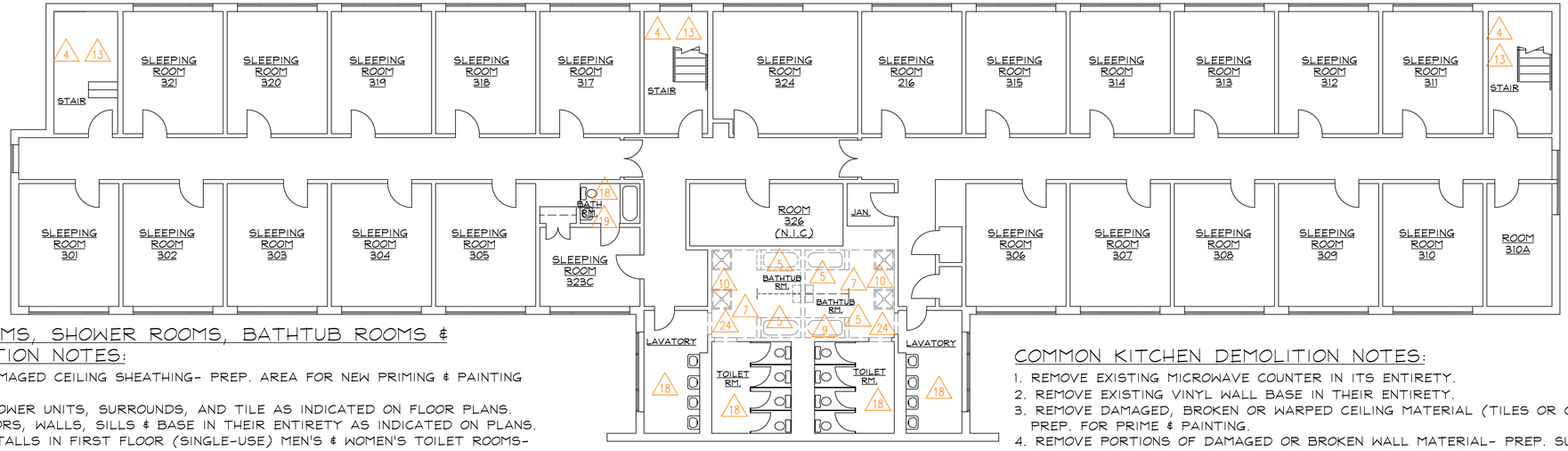
6. CLEAN UP
   A. Remove demolished materials from site as work progresses.
   B. Do not burn or bury materials on site.
   C. Leave areas of work in clean condition.
   D. Remove temporary work.

RESIDENCE HALL SLEEPING ROOM DEMOLITION NOTES:

1. REMOVE/PATCH EXISTING DAMAGED CEILING SHEATHING- PREP. AREA FOR NEW PRIMING & PAINTING TYP. THROUGHOUT..
2. REMOVE DAMAGED, WARPED OR BROKEN CEILING TILES THROUGHOUT- REPLACE WITH NEW.
3. STRIP EXISTING FLOORS- PREP. FOR BUFFING, POLISHING AND/OR WAXING THROUGHOUT.
4. REMOVE WALL BASE THROUGHOUT.
5. REMOVE PORTIONS OF DAMAGED OR BROKEN WALL MATERIAL- PREP. AREAS OR SECTIONS OF EXPOSED GYPSUM BOARD AND/OR CONCRETE MASONRY FOR NEW PRIMING AND PAINTING.
6. REMOVE EXISTING DOOR NUMBERS/MARKERS.
7. PREP. EXISTING DOORS FOR NEW PRIMING, PAINTING & STAINING AS APPLICABLE, TYPICAL.

STUDENT LOUNGE DEMOLITION NOTES:

1. REMOVE EXISTING DAMAGED, WARPED OR BROKEN CEILING.
2. REMOVE EXISTING VINYL WALL BASE IN ITS ENTIRETY.
3. REMOVE PORTIONS OF DAMAGED OR BROKEN WALL MATERIAL- PREP. SURFACE AREA OR SECTIONS FOR NEW PRIMING AND PAINTING.



COMMON TOILET ROOMS, SHOWER ROOMS, BATHTUB ROOMS & LAVATORIES DEMOLITION NOTES:

1. REMOVE/PATCH EXISTING DAMAGED CEILING SHEATHING- PREP. AREA FOR NEW PRIMING & PAINTING TYP. THROUGHOUT.
2. REMOVE EXISTING TUB & SHOWER UNITS, SURROUNDS, AND TILE AS INDICATED ON FLOOR PLANS.
3. REMOVE EXISTING TILE FLOORS, WALLS, SILLS & BASE IN THEIR ENTIRETY AS INDICATED ON PLANS.
4. REMOVE EXISTING TOILET STALLS IN FIRST FLOOR (SINGLE-USE) MEN'S & WOMEN'S TOILET ROOMS- PROPERLY DISPOSE.

APARTMENT UNIT DEMOLITION NOTES:

1. REMOVE/PATCH EXISTING DAMAGED CEILING AND WALL SHEATHING- PREP. AREAS FOR NEW PRIMING & PAINTING TYP. THROUGHOUT..
2. REMOVE EXISTING FLOORING THROUGHOUT ENTIRE UNIT (EXCEPT KITCHEN & BATHROOM).
3. REMOVE EXISTING WALL BASE IN ITS ENTIRETY THROUGHOUT.
4. REMOVE EXISTING KITCHEN BASE, WALL CABINETS & COUNTERTOP IN THEIR ENTIRETY.

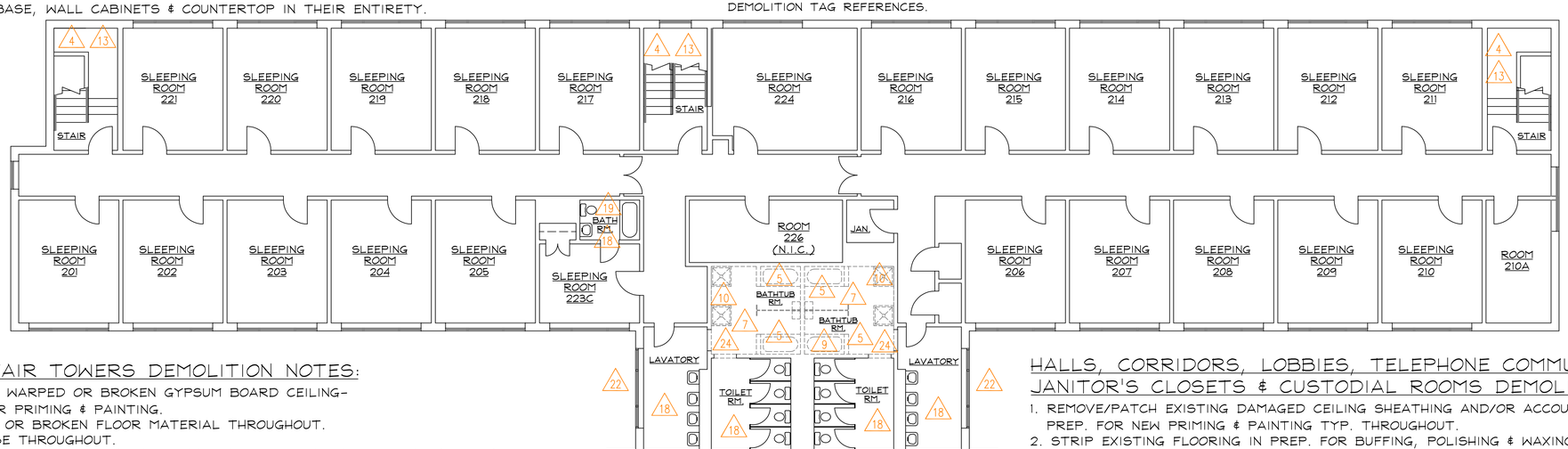
2 / D2 THIRD FLOOR DEMOLITION PLAN

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

NOTE:
REFER TO SHEET D-1 FOR FOR DEMOLITION TAG REFERENCES.

COMMON KITCHEN DEMOLITION NOTES:

1. REMOVE EXISTING MICROWAVE COUNTER IN ITS ENTIRETY.
2. REMOVE EXISTING VINYL WALL BASE IN THEIR ENTIRETY.
3. REMOVE DAMAGED, BROKEN OR WARPED CEILING MATERIAL (TILES OR GYP. BOARD)- PREP. FOR PRIME & PAINTING.
4. REMOVE PORTIONS OF DAMAGED OR BROKEN WALL MATERIAL- PREP. SURFACES OF GYPSUM BOARD OR CONCRETE MASONRY FOR NEW PRIMING AND PAINTING.
5. PREP. EXISTING DOORS FOR NEW PRIMING, PAINTING OR STAINING AS APPLICABLE.
6. REMOVE EXISTING KITCHEN COUNTERTOP IN ITS ENTIRETY- CONTRACTOR TO PROTECT EXISTING BASE & WALL CABINETS DURING KITCHEN COUNTER REMOVAL.



COMMON STEPS & STAIR TOWERS DEMOLITION NOTES:

1. REMOVE EXISTING DAMAGED, WARPED OR BROKEN GYPSUM BOARD CEILING- PREP. CEILING SURFACES FOR PRIMING & PAINTING.
2. REMOVE EXISTING DAMAGED OR BROKEN FLOOR MATERIAL THROUGHOUT.
3. REMOVE EXISTING WALL BASE THROUGHOUT.
4. REMOVE PORTIONS OF DAMAGED OR BROKEN WALL MATERIAL- PREP. AREA OR SECTION FOR NEW PRIMING AND PAINTING.
5. PREP. EXISTING MT. RAILS, BARS & SPINDLES FOR NEW PRIMING, PAINTING OR STAINING AS APPLICABLE.
6. REMOVE EXISTING DAMAGED & BROKEN RISERS & TREADS.

D2 SECOND FLOOR DEMOLITION PLAN

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

HALLS, CORRIDORS, LOBBIES, TELEPHONE COMMUNICATION ROOMS, JANITOR'S CLOSETS & CUSTODIAL ROOMS DEMOLITION NOTES:

1. REMOVE/PATCH EXISTING DAMAGED CEILING SHEATHING AND/OR ACCOUST. TILES- PREP. FOR NEW PRIMING & PAINTING TYP. THROUGHOUT.
2. STRIP EXISTING FLOORING IN PREP. FOR BUFFING, POLISHING & WAXING THROUGHOUT.
3. REMOVE DAMAGED OR BROKEN WALL BASE THROUGHOUT.
4. REMOVE PORTIONS OF DAMAGED OR BROKEN WALL MATERIAL- PREP. AREAS OR SECTIONS OF EXPOSED GYPSUM BOARD OR CONCRETE MASONRY FOR NEW PRIMING AND PAINTING.

BIDDING DOCUMENTS

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NEW WORK NOTES:

1. PROVIDE NEW SOLID SURFACE SHOWER UNITS, FITTINGS & FIXTURES. COORDINATE W/ PLUMBING DRAWINGS.
2. INSTALL NEW ADA COMPLIANT GRAB BARS.
3. PROVIDE NEW TOILET ROOM PRIVACY LOCKSET.
4. PROVIDE NEW PLATE MIRROR.
5. PROVIDE NEW KEYS FOR EXISTING COUNTER LOCKSETS.
6. STRIP, BUFF & WAX EXISTING FLOOR (AND WALL TILE) TILE- REPLACE DAMAGED TILES AS REQ'D.
7. PROVIDE NEW CARPET TILES- COLOR, TYPE & STYLE TO BE SELECTED BY OWNER.
8. PROVIDE NEW SHAMPOO BOWLS & COSMETIC BOOTHS.
9. PROVIDE NEW WINDOW TREATMENTS- TYPE, STYLE & COLOR TO BE SELECTED BY OWNER.
10. INSTALL NEW BATHTUBS & TILE W/ SHOWER FITTINGS. COORDINATE W/ PLUMBING DRAWINGS.
11. PROVIDE NEW INSULATED WALL CONSTRUCTION AS INDICATED. MODIFY EXISTING WINDOW SILL, JAMBS & HEAD AS REQUIRED FOR NEW CONSTRUCTION.
12. PRIME & PAINT OR STAIN & REFINISH EXISTING HANDRAILS, SPINDLES, BARS, STRINGERS CASINGS &/OR FRAMES.
13. INSTALL NEW WINDOWS & FRAMES.
14. INSTALL NEW ELECTRIC HEATER- VERIFY W/ ELECTRICAL DRAWINGS.
15. REPAIR EXISTING WINDOW HARDWARE.
16. INSPECT WATER LEAKAGE/INFILTRATION THIS GENERAL AREA.
17. INSTALL NEW WEATHERSTRIPPING, CAULKING & SEALANT.
18. INSTALL NEW SOLID SURFACE COUNTERTOP AS INDICATED.
19. STENCIL NEW ROOM NUMBER/SPACE IDENTIFICATION ON DOOR.
20. INSTALL NEW DOOR, FRAME & HARDWARE AS INDICATED.
21. PATCH/REPAIR DAMAGED WALL- PREP. AREA FOR PRIMING & PAINTING.
22. INSTALL NEW 2x4 ACCOUST. CEILING TILE GRID SYSTEM- CENTER CEILING SYSTEM IN ROOM.
23. INSTALL NEW BASE & WALL KITCHEN/KITCHENETTE- COORDINATE NEW SINK & STOVE LOCATIONS W/ EXISTING.
24. NEW STUD WALL INFILL OF EXISTING OPENING.
25. INSTALL NEW WALL TILES (6x6 PATTERN) & FLOOR TILES (MOSAIC)- TYPE, COLOR & PATTER TO BE SELECTED BY OWNER.
26. INSTALL NEW VINYL TILE FLOOR AS SELECTED BY OWNER.

GENERAL NOTES

A. NEW WORK NOTES ARE ALL INCLUSIVE. NOT ALL NOTES APPEAR ON EACH DRAWING. FOR ONE OF KIND NOTES NOT NUMBERED SEE FLOOR PLANS AND/OR NEW WORK NOTES.

B. ALL CONTRACTED SPACES SHALL BE LEFT CLEAN AND READY FOR THE USERS TO OCCUPY.

C. REPLACE ALL DAMAGED STAIR TREADS & RISERS, TYP., THROUGHOUT.

D. REGLAZE ALL EXISTING BATHTUBS, TYP. THROUGHOUT. PROVIDE NEW CAULKING AT ALL BATHTUBS & SHOWERS.

E. PRIME, PAINT AND/OR STAIN ALL DOORS& FRAMES- BACKS, FRONTS & JAMBS, TYP. THROUGHOUT RESIDENCE HALL.

F. (N.I.C.) DESIGNATES AREAS OR SPACES "NOT IN CONTRACT".

G. PAINT (ALL WALLS & CEILINGS AS REQUIRED) ALL COMMON AREAS, CORRIDORS, HALLS, LOBBIES, STAIR AREAS & TOWERS (INCLUDING METAL STRINGERS & RISERS) VESTIBULES AND ALL PUBLIC SPACES (PAINT COLOR TO MATCH EXISTING).

H. PAINT (ALL WALLS & CEILINGS AS REQUIRED) ALL RESIDENCE HALL SLEEPING AREAS, SHOWER ROOMS, BATH ROOMS, TOILET ROOMS, KITCHENS, BREAK ROOMS, CLOSETS AND LOUNGES (COLOR TO MATCH EXISTING).

I. PATCH/REPAIR ALL DAMAGED, BROKEN OR MISSING FLOOR, WALL AND/OR CEILING MATERIALS. PATCH/REPAIR ALL HOLES IN WALLS, PARTITIONS, FLOORS, AS REQUIRED TYP. THROUGHOUT. PREP. ALL AREAS FOR NEW PRIMING AND PAINTING.

J. PROVIDE/REPLACE AT ALL SPRINKLER HEADS STICKERS/SIGNAGE TO INDICATE "NEVER HANG OBJECTS" THROUGHOUT TYPICAL.

K. PROVIDE NEW "STENCILED" DOOR NUMBER DESIGNATIONS (AT EVERY DOOR WITH EXISTING SIGNAGE) AT ALL RESIDENCE HALL DOORS. LOCATION & HEIGHT SHALL BE ADA COMPLIANT. FONT STYLE TO BE SELECTED BY OWNER.

L. THE BEAUTY SALON SHALL RECEIVE THREE NEW STYLING CHAIRS, THREE NEW SHAMPOO BOWLS WITH BOOTHS & THREE HAIR DRYERS AS SPECIFIED.

M. PROVIDE NEW 6" VINYL WALL BASE (COLOR SELECTED BY OWNER) THROUGHOUT ALL CONTRACTED AREAS OF RESIDENCE HALL, TYP.

N. INSTALL NEW WINDOW BLINDS (TREATMENTS) AS SELECTED BY OWNER AS INDICATED ON FLOOR PLANS.

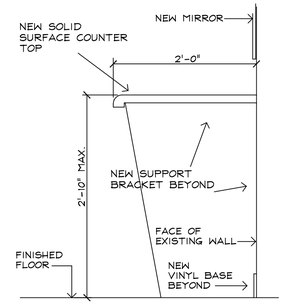
O. INSTALL NEW WINDOW SCREENS AT ALL WINDOWS, TYP. THROUGHOUT RESIDENCE HALL.

P. CONTRACT TO REPAIR, REPLACE EXISTING "WATER CONDENSATE" STAINED WINDOW GLAZING, TYP. THROUGHOUT.

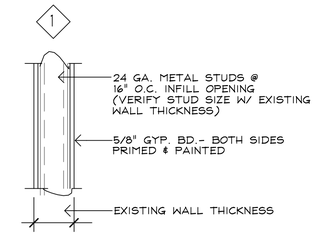
Q. THE CONTRACTOR SHALL PROVIDE PROPER ANCHORING OF ALL EXISTING HANDRAILS & GUARDRAILS THROUGHOUT RESIDENCE HALL.

R. THE CONTRACTOR SHALL PROVIDE PROPER ANCHORING OF ALL HAND DRYERS, PAPER TOWEL HOLDERS, TOWL RACKS AND ALL OTHER BATHROOM, TOILETROOM, SHOWERS & LAVATORY ROOM ACCESSORIES (NEW & EXISTING).

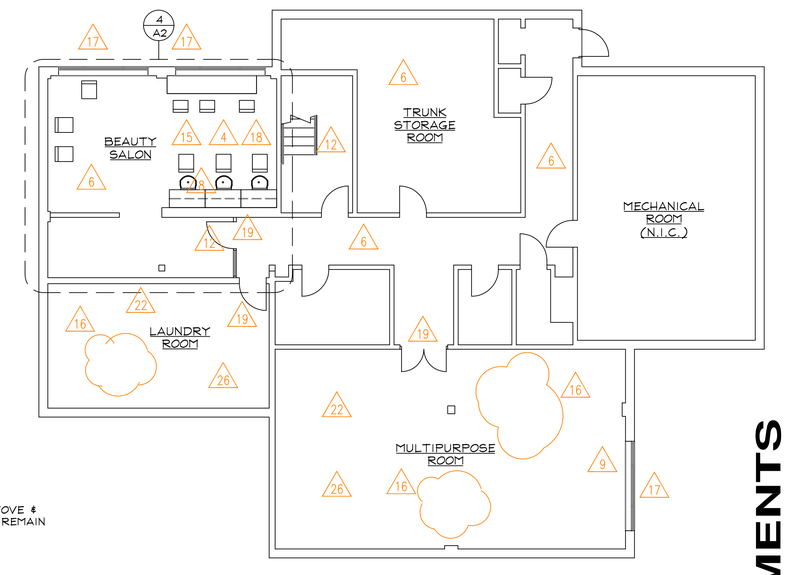
S. ALL CONTRACTED SPACES SHALL BE LEFT CLEAN AND READY FOR THE USERS TO OCCUPY.



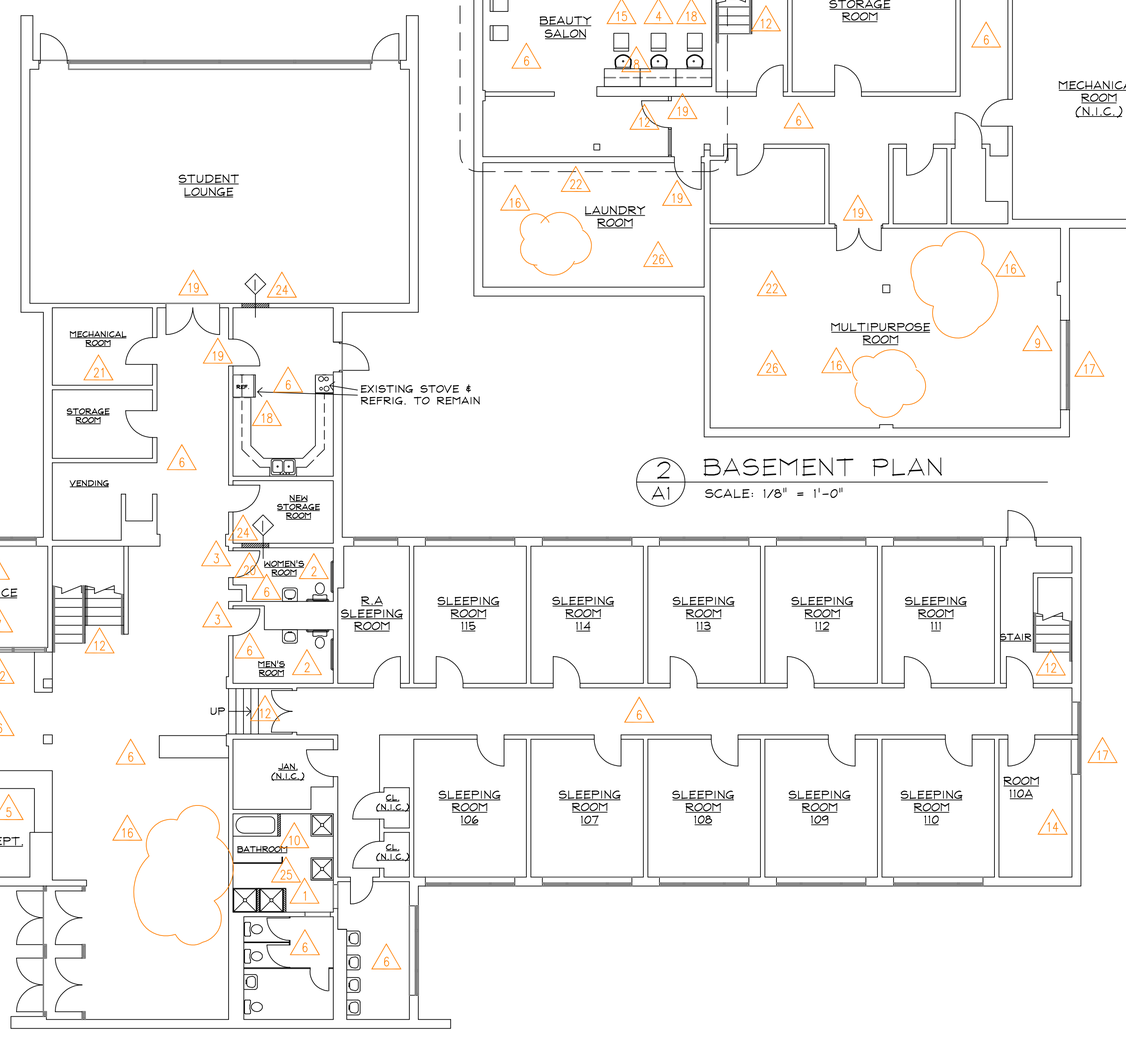
5 A1 COUNTER DETAIL
SCALE: 1" = 1'-0"



4 A1 PARTITION TYPES
SCALE: N.T.S.



2 A1 BASEMENT PLAN
SCALE: 1/8" = 1'-0"



1 A1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

DENOTES NEW WALL CONSTRUCTION
DENOTES EXISTING WALL CONSTRUCTION

1 1/2" **ROOM 210**

3 A1 SIGNAGE DETAIL
SCALE: 1" = 1'-0"

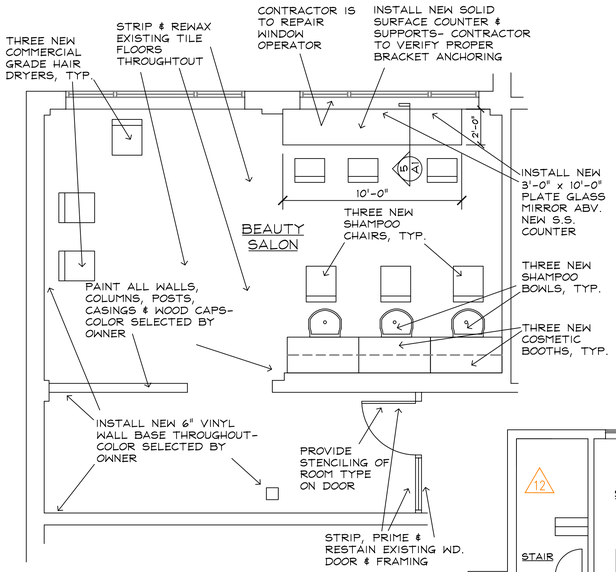
BIDDING DOCUMENTS

JEFF FLOWERS ASSOCIATES
ARCHITECTS • PLANNERS
WILMINGTON, DE
302.981.4385

PROPOSED RENOVATION LOCATED AT:
LYDIA P. LAWS RESIDENCE HALL
DELAWARE STATE UNIVERSITY
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12
REVISIONS

SHEET No
A1

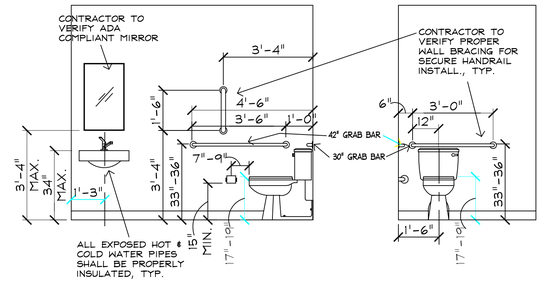


4 A2 ENLARGED FLOOR PLAN
SCALE: 1/4" = 1'-0"

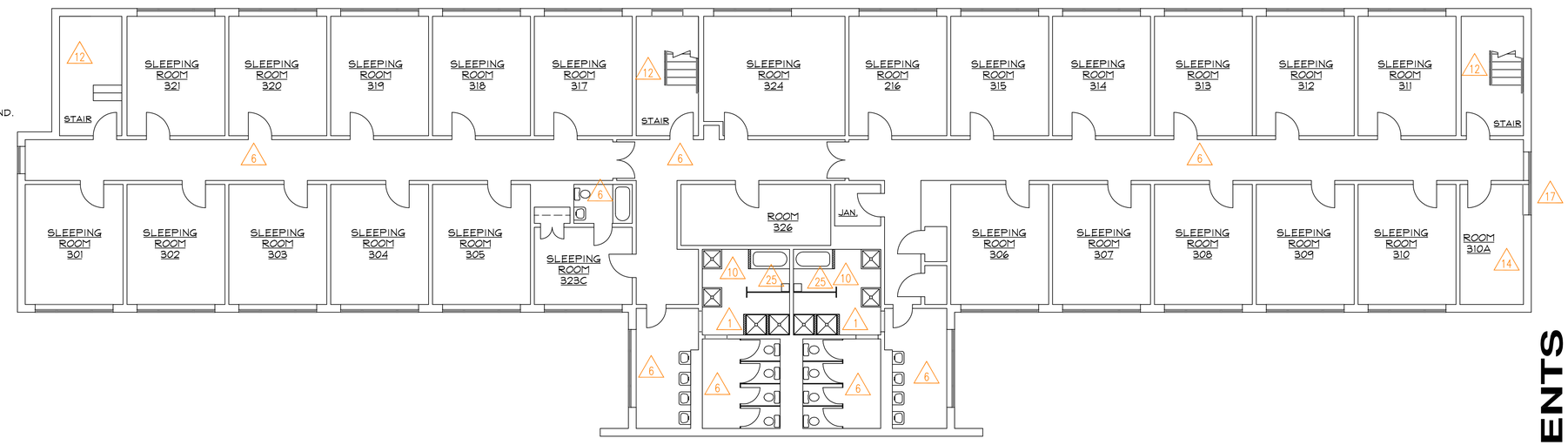
BEAUTY SALON SHALL RECEIVE:

1. THREE PANTERA ALL-PURPOSE STYLING CHAIRS. BRAND MINERVA MODEL# 6603b
2. THREE COSMETIC BOOTHS LTD MODEL# SL61-48TF BULKHEAD. AS AVAILABLE, COLOR CHOICES BY OWNER.
3. THREE SHAMPOO BOWLS BELVEDERE MODEL# 3100 CAMEO PORCELAIN ENAMEL CAST-IRON BOWL ALONG WITH ALL REQUIRED ACCESSORIES (MOUNTING BRACKETS, BRACKET BOLTS, NECK REST & VACUUM BREAKER).
4. THREE HAIR DRYERS BELVEDERE MODEL# 8900S MEGA DRYER WITH REQUIRED OPTIONS.

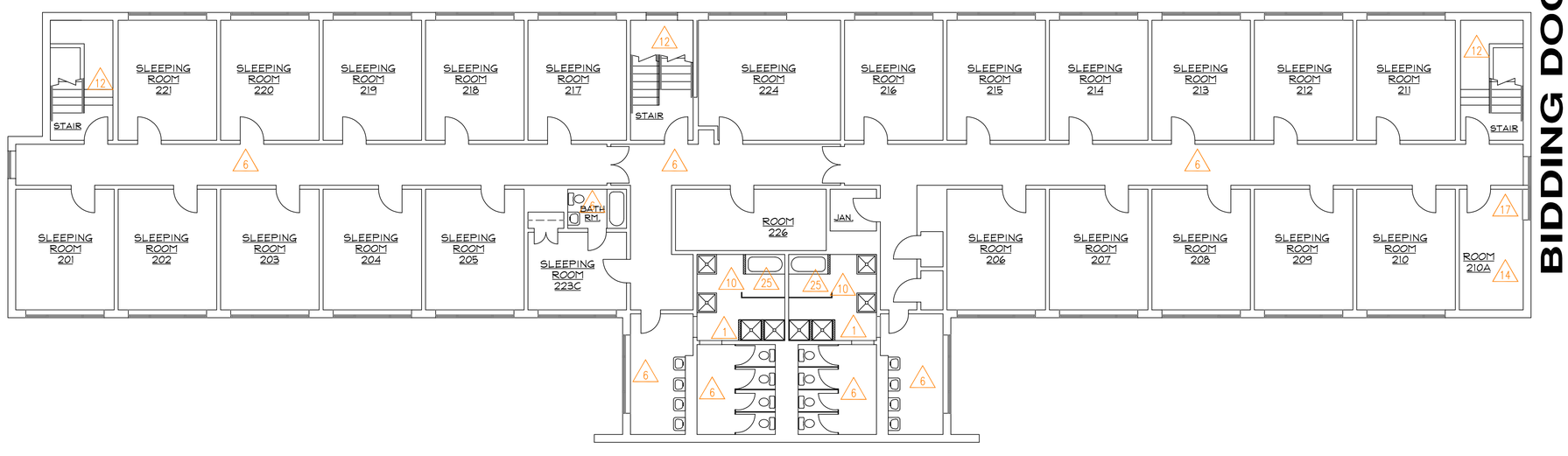
NOTE:
ALL COLORS SHALL BE SELECTED BY OWNER.



3 A2 TOILET ROOM DETAILS
SCALE: 3/8" = 1'-0"



2 A2 THIRD FLOOR PLAN
SCALE: 1/8" = 1'-0"



1 A2 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

BIDDING DOCUMENTS

JEFF FLOWERS ASSOCIATES
ARCHITECTS • PLANNERS
WILMINGTON, DE
302.981.1385

PROPOSED RENOVATION LOCATED AT:
LYDIA P. LAWS RESIDENCE HALL
DELAWARE STATE UNIVERSITY
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12
REVISIONS

SHEET No
A2

GENERAL NOTES:

DIVISION ONE – GENERAL REQUIREMENTS

A. MAJOR CODES AND STANDARDS (LATEST EDITIONS)

1. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE 2009 INTERNATIONAL BUILDING CODE
2. AMERICAN INSTITUTE OF STEEL CONSTRUCTION– MANUAL OF STEEL CONSTRUCTION
3. AMERICAN CONCRETE INSTITUTE–BUILDING CODE
4. AMERICAN SOCIETY FOR TESTING MATERIALS
5. AMERICAN WELDING SOCIETY
6. CONCRETE REINFORCING INSTITUTE MANUAL OF STANDARD PRACTICE
7. AMERICAN CONCRETE INSTITUTE (ACI)–BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES

B. IN CASE OF CONFLICT BY GOVERNING CODES, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.

C. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCING WORK; THE ENGINEER, ARCHITECT OR OWNER SHALL BE NOTIFIED OF ANY DISCREPANCIES WHICH MAY EXIST.

D. CONTRACTOR SHALL SUBMIT TO THE OWNER AND ARCHITECT INFORMATION, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. SUBMITTALS SHALL BE IN SUFFICIENT DETAIL TO PERMIT ANALYSIS AND REVIEW. SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING
REQUIREMENTS FOR REINFORCED CONCRETE LATEST EDITION
SUBMITTAL SCHEDULE.
PRODUCT DATA AND SAMPLES.
SCHEDULE OF INSPECTIONS AND TESTS.
LIST OF SUBCONTRACTORS AND MATERIAL SUPPLIERS FOR REVIEW.
OWNER'S MANUALS (INCLUDING INSTRUCTIONS FOR MAINTENANCE, CLEANING, CARE AND OPERATING.)

DIVISION TWO – SITEWORK

NOT USED.

DIVISION THREE – CONCRETE

NOT USED.

DIVISION FOUR – MASONRY

NOT USED.

DIVISION FIVE – METALS

NOT USED.

SECTION - 064023 INTERIOR ARCHITECTURAL WOODWORK

DIVISION SIX – WOOD AND PLASTICS

PART 1 - GENERAL

1.1 SUMMARY
- A. THIS SECTION INCLUDES THE FOLLOWING:
- 1. INTERIOR DOOR FRAMES, JAMBS AND HARDWARE.
- 2. PLASTIC-LAMINATE CABINETS.
- 3. PLASTIC-LAMINATE COUNTERTOPS.
- 4. SOLID-SURFACING-MATERIAL COUNTERTOPS.

1.2 SUBMITTALS
- A. PRODUCT DATA: FOR SOLID-SURFACING MATERIAL AND CABINET HARDWARE AND ACCESSORIES.
- B. SHOP DRAWINGS: SHOW LOCATION OF EACH ITEM, DIMENSIONED PLANS AND ELEVATIONS, LARGE-SCALE DETAILS, ATTACHMENT DEVICES, AND OTHER COMPONENTS.
- C. SAMPLES:
- 1. PLASTIC-LAMINATES, FOR EACH TYPE, COLOR, PATTERN, AND SURFACE FINISH.
- 2. SOLID-SURFACING MATERIALS.

1.3 DELIVERY STORAGE AND HANDLING
- A. PRIOR TO DELIVERY, INSPECT ALL MILLWORK TO ENSURE THAT NO DEFECTIVE PIECES ARE DELIVERED
- B. STORE MILLWORK IN PROTECTED AREAS UNTIL PROPER STORAGE AREAS ARE PROVIDED AT THE SITE, OR INSTALLATION
- C. PRIOR TO INSTALLATION, STORE ALL MATERIALS FOR MIN. 48 HOURS IN PROTECTED SECURED AREAS WITHIN THE BUILDING. COORDINATE STORAGE AREAS WITH CONSTRUCTION SCHEDULE INCLUDING DELIVERY AND INSTALLATION OF OWNER SUPPLIED EQUIPMENT.

PART 2 - PRODUCTS

2.1 MATERIALS
- A. WOOD SPECIES FOR OPAQUE FINISH: POPLAR.
- B. WOOD PRODUCTS: RECYCLED CONTENT OF MEDIUM-DENSITY FIBERBOARD AND PARTICLEBOARD: PROVIDE PRODUCTS WITH AN AVERAGE RECYCLED CONTENT SO POSTCONSUMER RECYCLED CONTENT PLUS ONE-HALF OF PRECONSUMER RECYCLED CONTENT IS NOT LESS THAN 25 PERCENT.
- 1. HARDBOARD: AHA□A135.4.
- 2. MEDIUM-DENSITY FIBERBOARD: ANSI□A208.2, GRADE□MD,□MADE WITH BINDER CONTAINING NO UREA FORMALDEHYDE.
- 3. PARTICLEBOARD: ANSI□A208.1, GRADE□M-2-EXTERIOR GLUE.
- 4. SOFTWOOD PLYWOOD: DOC□PS□1,□MEDIUM DENSITY OVERLAY.
- 5. VENEER-FACED PANEL PRODUCTS (HARDWOOD PLYWOOD): HPVA□HP-1,□MADE WITH ADHESIVE CONTAINING NO UREA FORMALDEHYDE.
- C. THERMOSET DECORATIVE PANELS: PARTICLEBOARD OR MEDIUM-DENSITY FIBERBOARD FINISHED WITH THERMALLY FUSED, MELAMINE-IMPREGNATED DECORATIVE PAPER COMPLYING WITH LMA□SAT-1.
- D. HIGH-PRESSURE DECORATIVE LAMINATE: NEMA□LD□3, GRADES AS INDICATED OR, IF NOT INDICATED, AS REQUIRED BY WOODWORK QUALITY STANDARD.
- E. SOLID-SURFACING MATERIAL: HOMOGENEOUS SOLID SHEETS OF FILLED PLASTIC RESIN COMPLYING WITH ISSFA-2.
- 1. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
  - a. AVONITE, INC.
  - b. E. I. DU PONT DE NEMOURS AND COMPANY.
  - c. FORMICA CORPORATION.
  - d. WILSON ART

  DELETE PARAGRAPH ABOVE OR BELOW. RETAIN OPTION FOR SEAMED EXPOSED EDGES BELOW IF UNFRAMED GLASS DOORS ARE USED.

2.2 CABINET HARDWARE AND ACCESSORIES
- A. GENERAL: PROVIDE CABINET HARDWARE AND ACCESSORY MATERIALS ASSOCIATED WITH ARCHITECTURAL WOODWORK, EXCEPT FOR ITEMS SPECIFIED IN DIVISION□8 SECTION "DOOR HARDWARE (SCHEDULED BY NAMING PRODUCTS)."
- B. FRAMELESS CONCEALED HINGES (EUROPEAN TYPE): BHMA□A156.9, B01602, 100 DEGREES OF OPENING.
- C. BACK-MOUNTED PULLS: BHMA□A156.9, B02011.
- D. WIRE PULLS: BACK MOUNTED, SOLID METAL, LONG, IN DIAMETER.
- E. CATCHES: MAGNETIC CATCHES, BHMA□A156.9, B03141.
- F. DRAWER SLIDES: BHMA□A156.9, B05091.
- 1. HEAVY DUTY (GRADE□1HD-100 AND GRADE□1HD-200): SIDE MOUNTED; FULL-EXTENSION TYPE; ZINC-PLATED STEEL BALL-BEARING SLIDES.

  GRADES IN THREE SUBPARAGRAPHS BELOW CORRESPOND TO THE FOLLOWING INITIAL LOAD TEST REQUIREMENTS: GRADE□2: 30 LBF (13.3□KG); GRADE□1: 50 LBF (22.2□KG); GRADE□1HD-100: 100 LBF (44.5□KG); GRADE□1HD-200: 200 LBF (90□KG).
  - 2. BOX DRAWER SLIDES: GRADE□1HD-100; FOR DRAWERS NOT MORE THAN HIGH AND WIDE.
  - 3. FILE DRAWER SLIDES: GRADE□1HD-200; FOR DRAWERS MORE THAN HIGH OR WIDE.
  - 4. PENCIL DRAWER SLIDES: GRADE□1; FOR DRAWERS NOT MORE THAN HIGH AND WIDE.
- G. DOOR LOCKS: BHMA□A156.11, E07121.
- H. DRAWER LOCKS: BHMA□A156.11, E07041.
- I. EXPOSED HARDWARE FINISHES: FOR EXPOSED HARDWARE, PROVIDE FINISH THAT COMPLIES WITH BHMA□A156.18 FOR BHMA FINISH NUMBER INDICATED.
- 1. SATIN STAINLESS STEEL: BHMA□630.

2.3 MISCELLANEOUS MATERIALS
- A. FURRING, BLOCKING, SHIMS, AND HANGING STRIPS: SOFTWOOD OR HARDWOOD LUMBER, KILN-DRIED TO LESS THAN 15 PERCENT MOISTURE CONTENT.
- B. ADHESIVES, GENERAL: DO NOT USE ADHESIVES THAT CONTAIN UREA FORMALDEHYDE.
- C. METAL COUNTER BRACKETS: PRIMED METAL CLEAR KNEE SPACE . SEE SECTION 9 FOR PAINTING SPECIFICATIONS

2.4 FABRICATION
- A. GENERAL: COMPLETE FABRICATION TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT TO PROJECT SITE. WHERE NECESSARY FOR FITTING AT SITE, PROVIDE ALLOWANCE FOR SCRIBING, TRIMMING, AND FITTING.
- B. PLASTIC-LAMINATE CABINETS:
- 1. AWI TYPE OF CABINET CONSTRUCTION: FLUSH OVERLAY.

  RETAIN SUBPARAGRAPH ABOVE IF AWI STANDARD IS REFERENCED. IF WI STANDARD IS REFERENCED, DELETE ABOVE AND SELECT ONE WI REQUIREMENT FROM EACH OF THREE SUBPARAGRAPHS BELOW.
- 2. LAMINATE CLADDING FOR EXPOSED SURFACES: HIGH-PRESSURE DECORATIVE LAMINATE AS FOLLOWS:
  - a. HORIZONTAL SURFACES OTHER THAN TOPS: GRADE□HGS.
  - b. VERTICAL SURFACES: GRADE□HGS.
  - c. EDGES: GRADE□HGS.
  - d. CABINET INTERIORS W/O DOORS: GRADE HGS

  DELETE FIRST THREE SUBPARAGRAPHS BELOW FOR WOODWORKER'S OPTION FROM CHOICES IN STANDARD. SEE EDITING INSTRUCTION NO.□2 IN THE EVALUATIONS.
- 3. MATERIALS FOR SEMIEXPOSED SURFACES OTHER THAN DRAWER BODIES: THERMOSET DECORATIVE PANELS.
- 4. DRAWER SIDES AND BACKS: THERMOSET DECORATIVE PANELS.
- 5. DRAWER BOTTOMS: THERMOSET DECORATIVE PANELS.
- 6. COLORS, PATTERNS, AND FINISHES: AS INDICATED BY MANUFACTURER'S DESIGNATIONS.

  RETAIN AND EDIT SUBPARAGRAPH ABOVE OR BELOW.

  DELETE SUBPARAGRAPH BELOW IF NOT DESIRED. DUST PANELS ARE NOT REQUIRED BY STANDARDS.
  - 7. PROVIDE DUST PANELS OF PLYWOOD OR TEMPERED HARDBOARD ABOVE COMPARTMENTS AND DRAWERS, UNLESS LOCATED DIRECTLY UNDER TOPS.
- D. PLASTIC-LAMINATE COUNTERTOPS:
- 1. HIGH-PRESSURE DECORATIVE LAMINATE GRADE: HGS.
- 2. COLORS, PATTERNS, AND FINISHES: AS INDICATED BY MANUFACTURER'S DESIGNATIONS.
- 3. EDGE TREATMENT: SAME AS LAMINATE CLADDING ON HORIZONTAL SURFACES.
- 4. CORE MATERIAL AT SINKS: MEDIUM-DENSITY FIBERBOARD MADE WITH EXTERIOR GLUE.
- 5. LEDGERS UNDER COUNTERS HIGHER THAN 30"A.F.F.: HGS
- E. SOLID-SURFACING-MATERIAL COUNTERTOPS:
  - I. SOLID-SURFACING-MATERIAL THICKNESS: .
- 2. COLORS, PATTERNS, AND FINISHES: AS INDICATED BY MANUFACTURER'S DESIGNATIONS.
- 3. FABRICATE TOPS IN ONE PIECE WITH LOOSE BACKSPLASHES FOR FIELD APPLICATION. COMPLY WITH SOLID-SURFACING-MATERIAL MANUFACTURER'S WRITTEN RECOMMENDATIONS FOR ADHESIVES, SEALERS, FABRICATION, AND FINISHING.
- 4. INSTALL INTEGRAL SINK BOWLS IN COUNTERTOPS IN SHOP.

2.5 SHOP FINISHING
- A. FINISH ARCHITECTURAL WOODWORK AT FABRICATION SHOP. DEFER ONLY FINAL TOUCHUP, CLEANING, AND POLISHING UNTIL AFTER INSTALLATION.
- B. BACKPRIMING: APPLY ONE COAT OF SEALER OR PRIMER, COMPATIBLE WITH FINISH COATS, TO CONCEALED SURFACES OF WOODWORK. APPLY TWO COATS TO BACK OF PANELING.

PART 3 - EXECUTION

3.1 INSTALLATION
- A. INSTALL WOODWORK LEVEL, PLUMB, TRUE, AND STRAIGHT TO A TOLERANCE OF . SHIM AS REQUIRED WITH CONCEALED SHIMS.
- B. SCRIBE AND CUT WOODWORK TO FIT ADJOINING WORK, REFINISH CUT SURFACES, AND REPAIR DAMAGED FINISH AT CUTS.
- C. ANCHOR WOODWORK TO ANCHORS OR BLOCKING BUILT IN OR DIRECTLY ATTACHED TO SUBSTRATES. SECURE WITH COUNTERSUNK, CONCEALED FASTENERS AND BLIND NAILING AS REQUIRED FOR COMPLETE INSTALLATION. USE FINE FINISHING NAILS OR FINISHING SCREWS FOR EXPOSED FASTENING, COUNTERSUNK AND FILLED FLUSH WITH WOODWORK AND MATCHING FINAL FINISH IF TRANSPARENT FINISH IS INDICATED.
- D. COUNTERTOPS: ANCHOR SECURELY BY SCREWING THROUGH CORNER BLOCKS OF BASE CABINETS OR OTHER SUPPORTS INTO UNDERSIDE OF COUNTERTOP. CALK SPACE BETWEEN BACKSPLASH AND WALL WITH SEALANT SPECIFIED IN DIVISION□7 SECTION "JOINT SEALANTS."

DIVISION SEVEN – THERMAL AND MOISTURE PROTECTION

SECTION 07900 – SEALANT

1. PART 1 – GENERAL

1.1 QUALITY ASSURANCE

A. Installation of sealants shall be performed only by workmen thoroughly skilled and specially trained in the techniques of sealants and who are completely familiar with the published recommendations of the sealant material being used.

1.2SUBMITTALS

A.Color samples of each type of sealant specified for Architect's and Owner's selection.

1.3WARRANTY

A.Contractor shall furnish a written warranty against failure in materials and workmanship for a period of five years after completion of work.

2.PART 2 – PRODUCTS

2.2 INTERIOR

A.One of the following:

1.Pecora AC–20 Acrylic Latex
2.DAP Acrylic Latex
3.PTI 737 Vinyl Acrylic

3.PART 3 – EXECUTION

3.1INSPECTION

A.Carefully inspect all surfaces to receive caulking or sealants and verify that materials can be installed in accordance with manufacturer's recommendations.

B.Correct any unsuitable surfaces prior to start of any work under this section. Notify Architect in writing of any unacceptable conditions before proceeding with work.

3.2 INSTALLATION

A.Clean all joints of loose and foreign materials.

B.Apply caulking materials in strict accordance with manufacturer's recommendations.

C.After completion of work, clean all surrounding surfaces.

DIVISION EIGHT – DOORS AND WINDOWS

SECTION 08100 – HOLLOW METAL DOORS AND FRAMES

PART 1.00–GENERAL

1.01 RELATED DOCUMENTS:

DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUP–PLEMENTARY CONDITIONS AND DIVISION–1 SPECIFICATION SECTIONS APPLY TO WORK SPECIFIED IN THIS SECTION.

1.02 DESCRIPTION OF WORK:

EXTENT OF HOLLOW METAL DOORS AND FRAMES IS SHOWN AND SCHEDULED ON DRAWINGS.

1.03 QUALITY ASSURANCE:

A. PROVIDE DOORS AND FRAMES COMPLYING WITH STEEL DOOR INSTITUTE "RECOMMENDED SPECIFICATIONS: STANDARD STEEL DOORS AND FRAMES" (SDI–100) AND AS HEREIN SPECIFIED.

B. MANUFACTURER:

PROVIDE STANDARD STEEL DOORS AND FRAMES BY A SINGLE FIRM SPECIALIZING IN PRODUCTION OF THIS TYPE OF WORK.

C. FIRE–RATED ASSEMBLIES:

PROVIDE FIRE–RATED DOORS INVESTIGATED AND TESTED AS FIRE DOOR ASSEMBLIES COMPLETE, WITH TYPE OF HARDWARE TO BE USED. IDENTIFY EACH FIRE DOOR WITH RECOGNIZED TESTING LABORATORY LABELS INDICATING APPLICABLE FIRE RATING OF STEEL DOORS. CONSTRUCT AND INSTALL ASSEMBLIES TO COMPLY WITH STANDARD NO. 80 AND AS SPECIFIED HEREIN.

1.04 SHOP DRAWINGS: CUSTOM HOLLOW METAL WORK:

SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND INSTALLATION OF HOLLOW METAL WORK. INCLUDE DETAILS OF EACH FRAME TYPE, ELEVATIONS OF DOOR DESIGN TYPES, CONDITIONS AT OPENINGS, DETAILS OF CONSTRUCTION, LOCATION AND INSTALLATION REQUIREMENTS OF FINISH HARDWARE AND REINFORCEMENTS, AND DETAILS OF JOINTS AND CONNECTIONS TO GENERAL CONTRACTOR.

1.05 DELIVERY, STORAGE AND HANDLING:

A. DELIVER HOLLOW METAL WORK CARTONED OR CRATED TO PROVIDE PROTECTION DURING TRANSIT AND JOB STORAGE.

B. INSPECT HOLLOW METAL WORK UPON DELIVERY FOR DAMAGE. MINOR DAMAGES MAY BE REPAIRED PROVIDED FINISH ITEMS ARE EQUAL IN ALL RESPECTS TO NEW WORK AND ACCEPTABLE TO ARCHITECT; OTHERWISE REMOVE AND REPLACE DAMAGED ITEMS AS DIRECTED.

C. STORE DOORS AND FRAMES AT BUILDING SITE UNDER COVER. PLACE UNITS ON WOOD SILLS AT LEAST 4" HIGH OR OTHERWISE STORE ON FLOORS IN MANNER THAT WILL PREVENT RUST OR DAMAGE.

PART 2.00–PRODUCTS

2.01 MATERIALS:

A. HOT–ROLLED STEEL SHEETS AND STRIP:
COMMERCIAL QUALITY CARBON STEEL, PICKLED AND OILED, COMPLYING WITH ASTM A–569 AND ASTM A–568.

B. COLD–ROLLED STEEL SHEETS:
COMMERCIAL QUALITY CARBON STEEL, PICKLED AND OILED, COMPLYING WITH ASTM A–366 AND ASTM A–568.

C. SUPPORTS AND ANCHORS:
FABRICATE OF NOT LESS THAN 18–GAUGE GALVANIZED SHEET STEEL.

D. INSERTS, BOLTS, AND FASTENERS:
MANUFACTURER'S STANDARD UNITS, EXCEPT HOT–DIP GALVANIZED ITEMS TO BE BUILT INTO EXTERIOR WALLS, COMPLYING WITH ASTM A–153, CLASS C OR D AS APPLICABLE.

E. SHOP–APPLIED PAINT:
RUST–INHIBITIVE ENAMEL OR PAINT, EITHER AIR–DRYING OR BAKING, SUITABLE AS A BASE FOR SPECIFIED FINISH PAINTS.

2.02. FABRICATION – GENERAL:

A. FABRICATED STEEL DOOR AND FRAME UNITS TO BE RIGID, NEAT IN APPEARANCE AND FREE OF DEFECTS, WARP, OR BUCKLE. WHEREVER PRACTICABLE FIT AND ASSEMBLE UNITS IN MANUFATURER'S PLANT. CLEARLY IDENTIFY WORK THAT CAN NOT BE PERMANENTLY FACTORY ASSEMBLED BEFORE SHIPMENT TO ASSURE PROPER ASSEMBLY AT PROJECT SITE.

B. FABRICATE EXPOSED FACES OF DOORS AND PANELS, INCLUDING STILES AND RAILS OF NON–FLUSH UNITS FROM ONLY COLD–ROLLED STEEL.

C. FABRICATE FRAMES, CONCEALED STIFFENERS, REINFORCEMENT, EDGE CHANNELS, LOUVERS, AND MOLDINGS FROM EITHER COLD–ROLLED OR HOT–ROLLED STEEL (AT FABRICATOR'S OPTION).

D. FABRICATE EXTERIOR DOORS WITH CLOSED TOP AND BOTTOM EDGES AS INTEGRAL PART OF DOOR CONSTRUCTION OR BY ADDITION OF INVERTED STEEL CHANNELS. EXPOSED FASTENERS: UNLESS OTHERWISE INDICATED, PROVIDE COUNTERSUNK FLAT PHILLIPS HEADS FOR EXPOSED SCREWS AND BOLTS.

E. THERMAL–RATED (INSULATING) ASSEMBLIES:

AT EXTERIOR LOCATIONS AND ELSEWHERE AS SHOWN OR SCHEDULED, PROVIDE DOORS WHICH HAVE BEEN FABRICATED AS THERMAL INSULATING DOOR AND FRAME ASSEMBLIES AND TESTED IN ACCORDANCE WITH ASTM C–236. UNLESS OTHERWISE INDICATED, MAX. APPARENT U FACTOR FOR THERMAL–RATED ASSEMBLIES IS 0.24 BTU/HOUR (FT 2) DEGREES F.

F. FINISH HARDWARE PREPARATION:

PREPARE DOORS AND FRAMES TO RECEIVE MORTISED AND CONCEALED FINISH HARDWARE IN ACCORDANCE WITH FINAL FINISH HARDWARE SCHEDULE AND TEMPLATES PROVIDED BY HARDWARE SUPPLIER. COMPLY WITH APPLICABLE REQUIREMENTS OF ANSI A–115 SERIES SPECIFICATIONS FOR DOOR AND FRAME PREPARATION FOR HARDWARE.
REINFORCE DOORS AND FRAMES TO RECEIVE SURFACE–APPLIED HARDWARE. DRILLING AND TAPPING FOR SURFACE–APPLIED FINISH HARDWARE MAY BE DONE AT PROJECT SITE.

G. SHOP PAINTING:

CLEAN, TREAT, AND PAINT EXPOSED SURFACES OF STEEL DOOR AND FRAME UNITS, INCLUDING GALVANIZED SURFACES.
CLEAN STEEL SURFACES OF MILL SCALE, RUST, OIL, GREASE, DIRT, AND OTHER FOREIGN MATERIALS BEFORE APPLICATION OF PAINT.
APPLY SHOP COAT OF PRIME PAINT OF EVEN CONSISTENCY TO PROVIDE A UNIFORMLY FINISHED SURFACE READY TO RECEIVE FINISH PAINT.

2.03. STANDARD HOLLOW METAL DOORS:

PROVIDE HOLLOW METAL DOORS OF TYPES AND STYLES INDICATED ON DRAWINGS OR SCHEDULES.

2.04 STANDARD HOLLOW METAL FRAMES:

A. PROVIDE HOLLOW METAL FRAMES FOR DOORS, BORROWED LIGHTS, AND OTHER OPENINGS OF TYPES AND STYLES AS SHOWN ON DRAWINGS AND SCHEDULES. CONCEAL FASTENINGS UNLESS OTHERWISE NOTED.
FABRICATE FRAMES WITH MITERED CORNERS KNOCKED–DOWN FOR FIELD ASSEMBLY.

B. DOOR SILENCERS:

EXCEPT ON WEATHERSTRIPPED FRAMES, DRILL STOPS TO RECEIVE TWO SILENCERS ON STRIKE JAMBS OF SINGLE–SWING FRAMES AND TWO SILENCERS ON HEADS DOUBLE–SWING FRAMES.
MANUFACTURER'S "STICK–ON" SILENCERS WILL NOT BE ACCEPTABLE.

C. PLASTER GUARDS:

PROVIDE 26–GAUGE STEEL PLASTER GUARDS OR MORTAR BOXES WELDED TO FRAME AT BACK OF FINISH HARDWARE CUTOUTS WHERE MORTAR OR OTHER MATERIALS MIGHT OBSTRUCT HARDWARE OPERATIONS.

PART 3.00 – EXECUTION

3.01 INSPECTION:

INSTALLER MUST EXAMINE SUBSTRATE AND CONDITIONS UNDER WHICH DOORS AND FRAMES ARE TO BE INSTALLED AND MUST NOTIFY CONTRACTOR IN WRITING OF ANY CONDITIONS DETRIMENTAL TO PROPER AND TIMELY COMPLETION OF WORK.
DO NOT PROCEED WITH WORK UNTIL SATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN MANNER ACCEPTABLE TO INSTALLER.

3.02 INSTALLATION:

A. GENERAL:

INSTALL STANDARD DOORS, FRAMES, AND ACCESSORIES IN ACCORDANCE WITH FINAL SHOP DRAWINGS AND MANUFACTURER'S DATA AND AS HEREIN SPECIFIED.

B. PLACING FRAMING:

COMPLY WITH PROVISION OF SD–105 "RECOMMENDED ERECTION INSTRUCTIONS FOR STEEL FRAMES" UNLESS OTHERWISE INDICATED.

IN MASONRY CONSTRUCTION LOCATE 3 WALL ANCHORS PER JAMB AT HINGE AND STRIKE LEVELS. BUILDING IN OF ANCHORS AND GROUTING OF FRAMES IS SPECIFIED IN DIVISION 4.
INSTALL FIRE–RATED FRAMES IN ACCORDANCE WITH NFPA STANDARD NA 80.

IN METAL STUD PARTITIONS INSTALL AT LEAST 3 WALL ANCHORS PER JAMB AT HINGE AND STRIKE LEVELS. IN OPEN STEEL STUD PARTITIONS, PLACE STUDS IN WALL ANCHOR NOTCHES AND WIRE TIE. IN CLOSED STEEL STUD PARTITIONS, ATTACH WALL ANCHORS TO STUDS WITH TAPPING SCREWS.

C. DOOR INSTALLATION:

FIT HOLLOW METAL DOORS ACCURATELY IN FRAMES, WITHIN CLEARANCES SPECIFIED IN SDI–100.

3.03 ADJUST AND CLEAN:

PRIME COAT TOUCH–UP: IMMEDIATELY AFTER ERECTION, SAND SMOOTH ANY RUSTED OR DAMAGED AREAS OF PRIME COAT AND APPLY TOUCH–UP OF COM–PATIBLE AIR–DRYING PRIMER.

FINAL ADJUSTMENTS: CHECK AND READJUST OPERATING HARDWARE ITEMS, LEAVING STEEL DOORS AND FRAMES UNDAMAGED AND IN COMPLETE AND PROPER OPERATING CONDITION.

JEFF FLOWERS ASSOCIATES
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WILMINGTON, DE 302.351.3347

BIDDING DOCUMENTS

PROPOSED RENOVATION LOCATED AT:
LYDIA P. LAWS RESIDENCE HALL
DELAWARE STATE UNIVERSITY
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12

REVISIONS

SHEET No.
SPI

SECTION 08900 – FINISH HARDWARE

PART 2.00 – PRODUCTS

A. HARDWARE FOR ALL DOORS TO BE COMMERCIAL QUALITY AND WORKMANSHIP, SCHLAGE OR APPROVED EQUAL.

B. ALL EXTERIOR DOORS, AND INTERIOR EMERGENCY EXITS TO BE EQUIPPED WITH FULL PANIC HARDWARE.

C. ALL PERSONNEL ENTRANCES AND FIRE DOORS TO BE EQUIPPED WITH HEAVY DUTY CLOSERS, AS MANUFACTURED BY NORTON CLOSER CO. OR APPROVED EQUAL.

D. ALL EXTERIOR HARDWARE TO BE OF HEAVY–DUTY QUALITY: ALL INTERIOR HARDWARE TO BE OF STANDARD QUALITY.

E. ALL LOCK–SET CYLINDERS FOR THE BUILDING TO BE REQUIRED TO ACCEPT LOCK7–PIN CYLINDER CORES AS MANUFACTURED BY BEST LOCK CO.

F. FLOOR–MOUNTED DOOR STOPS SHALL BE PROVIDED WHEREVER AN ITEM OF DOOR HARDWARE OR A DOOR, WHEN OPENED, CONTACTS A WALL OR OTHER PART OF THE BUILDING.

G. ALL HINGES TO EXTERIOR DOORS TO HAVE A SECURITY LOCKING PIN TO PREVENT REMOVAL OF HINGE PIN.

H. ALL DOORS FOR STORAGE ROOMS, COMPUTER ROOM AND CORRIDOR ACCESS TO BE FURNISHED WITH PROPERLY INSTALLED WEATHER STRIPPING IN ORDER TO MINIMIZE AIR–FLOW AND DUST INFILTRATION.

I. ALL DOORS FOR STORAGE ROOMS AND MAIN CORRIDOR ACCESS TO BE PROVIDED WITH 18" HIGH STAINLESS STEEL KICK PLATES.

2.03 FASTENINGS:

A. GENERAL:

1. FURNISH ALL FINISH HARDWARE WITH ALL NECESSARY SCREWS, BOLTS AND OTHER FASTENERS OF SUITABLE SIZE AND TYPE TO ANCHOR THE HARDWARE IN POSITION FOR LONG LIFE UNDER HARD USE.

2. FURNISH FASTENINGS WHERE NECESSARY WITH EXPANSION SHIELDS, TOGGLE BOLTS, HEX BOLTS AND OTHER ANCHORS APPROVED BY THE ARCHITECT, ACCORDING TO THE MATERIAL TO WHICH THE HARDWARE IS APPLIED AND THE RECOMMENDATIONS OF THE HARDWARE MANUFACTURER.

B. DESIGN:

ALL FASTENINGS SHALL HARMONIZE WITH THE HARDWARE AS TO MATERIAL AND FINISH.

2.04 KEYING:

A. CONSTRUCTION KEYING:

PROVIDE A METHOD INDEPENDENT OF THE FINAL KEYING SYSTEM FOR SECURING THE BUILDING DURING CONNSTRUCTION.

B. FINAL KEYING SYSTEM:

1. GRAND MASTER ALL LOCKS IN THE BUILDING.
2. MASTER–KEY ALL LOCKS IN THE LAUNDRY PLANT AND OFFICE AREAS.
3. DELIVER TWO KEYS FOR EACH LOCK PLUS TWO MASTER KEYS TO THE TENANT/OWNER

PART 3.00 – EXECUTION

3.01 INSTALLATION:

ALL HARDWARE SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER AND IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

3.02 ADJUST AND CLEAN:

ADJUST AND CHECK EACH OPERATING ITEM OF HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EACH UNIT. LUBRICATE MOVING PARTS WITH THE TYPE OF LUBRICATION RECOMMENDED BY THE MANUFACTURER. REPLACE UNITS WHICH CANNOT BE ADJUSTED AND LUBRICATED TO OPERATE FREELY AND SMOOTHLY AS INTENDED FOR THE PARTICULAR OPERATION.

3.03 MAINTENANCE:

INSTRUCT THE OWNER'S PERSONNEL IN THE PROPER ADJUSTMENT AND MAINTENANCE OF HARDWARE AND HARDWARE FINISHES.

DIVISION NINE – FINISHES

SECTION 09250 – GYPSUM DRYWALL

PART 1.00–GYPSUM DRYWALL:

1.01 RELATED DOCUMENTS:

DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION–1 SPECIFICATION SECTIONS APPLY TO WORK SPECIFIED IN THIS SECTION.

1.02 DESCRIPTION:

A. WORK INCLUDED:

1. THE EXTENT OF THE GYPSUM DRYWALL WORK IS SHOWN ON THE DRAWINGS.
2. ALL GYPSUM DRYWALL SHALL BE APPLIED TO SCREW–TYPE METAL FRAMING.
3. REQUIREMENTS FOR FURNISHING AND INSTALLING SCREW–TYPE METAL FRAMING FOR SUPPORT OF GYPSUM DRYWALL ARE INCLUDED IN THIS SECTION.
4. EXTERIOR GYPSUM DRYWALL FOR CEILING/SOFFITS.
5. DRYWALL FINISHING (JOINT TAPE AND COMPOUND TREATMENT).

B. RELATED WORK DESCRIBED ELSEWHERE:
PAINTING SECTION 09900

SECTION 09250 – GYPSUM DRYWALL (CONT.)

1.03 QUALITY ASSURANCE:

A. FIRE RESISTANCE RATINGS:

COMPLY WITH FIRE RESISTANCE RATINGS AS INDICATED AND AS REQUIRED BY GOVERNING AUTHORITIES AND CODES. PROVIDE MATERIALS, ACCESSORIES AND APPLICATION PROCEDURES WHICH HAVE BEEN LISTED BY UL OR TESTING IN ACCORDANCE WITH ASTM E–119 FOR THE TYPE OF CONSTRUCTION SHOWN.

B. TOLERANCES FOR DRYWALL WORK:

DO NOT EXCEED A VARIATION OF 3/16" IN 8'–0" AND 1/8" IN 4'–0" FROM PLUMB, LEVEL AND FLAT (ALL DIRECTIONS). DO NOT EXCEED 1/16" OFFSET OF PLANES AT JOINTS BETWEEN PANELS; SHIM PANELS AS NECESSARY TO COMPLY WITH TOLERANCES.

C. MANUFACTURERS:

OBTAIN ALL COMPONENTS AND MATERIALS OF THE DRYWALL SYSTEM FROM A SINGLE MANUFACTURER OR FROM PRODUCERS RECOMMENDED BY THE GYPSUM WALLBOARD MANUFACTURER, UNLESS OTHERWISE INDICATED.

1.04 SUBMITTALS:

A. MANUFACTURER'S DATA, GYPSUM DRYWALL SYSTEMS:
FOR INFORMATION ONLY, SUBMIT 2 COPIES OF MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF GYPSUM DRYWALL SYSTEMS COMPONENT, INCLUDING OTHER DATA AS MAY BE REQUIRED TO SHOW COMPLIANCE WITH THESE SPECIFICATIONS. INDICATE BY TRANSMITTAL FORM THAT A COPY OF EACH SET OF INSTRUCTIONS HAS BEEN DISTRIBUTED TO THE INSTALLER.

1.05 PRODUCT HANDLING:

COORDINATE DELIVERY WITH INSTALLATION TO MINIMIZE STORAGE PERIODS AT THE PROJECT SITE. DELIVER IN MANUFACTURER'S UNOPENED CONTAINERS, BUNDLES OR PACKAGES, FULLY IDENTIFIED WITH MANUFACTURER'S NAME, BRAND, TYPE AND GRADE. PROTECT FROM WEATHER, SOILING AND DAMAGE USING HANDLING EQUIPMENT AND STORAGE TECHNIQUES RECOMMENDED BY THE MANUFACTURER.

1.06 JOB CONDITIONS:

A. INSTALLER MUST EXAMINE THE SPACES IN WHICH AND THE SUBSTRATES TO WHICH GYPSUM DRYWALL SYSTEMS ARE TO BE APPLIED AND THE CONDITIONS UNDER WHICH GYPSUM DRYWALL SYSTEMS ARE TO BE INSTALLED. NOTIFY THE CONTRACTOR IN WRITING OF ANY CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK. DO NOT PROCEED WITH THE INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN A MANNER ACCEPTABLE TO THE INSTALLER.

B. TEMPERATURE AND HUMIDITY CONDITIONS:
DO NOT INSTALL JOINT TREATMENT COMPOUNDS UNLESS INSTALLATION AREAS COMPLY WITH THE MINIMUM TEMPERATURE AND VENTILLATION REQUIREMENTS RECOMMENDED BY THE MANUFACTURER AND CONDITIONS ARE ACCEPTABLE TO THE INSTALLER.

PART 2.00–PRODUCTS

2.01 STEEL DRYWALL FRAMING:

A. STUDS AND RUNNERS:

SCREW–TYPE COMPLYING WITH ASTM C–645. PROVIDE STUDS OF THE SIZE INDICATED WITH RUNNERS OF COMPATIBLE SIZE FOR FRICTION FIT TO STUDS. FABRICATE FROM 20 GA. STEEL WITH MANUFACTURER'S STANDARD ZINC PROTECTIVE COATING.

B. RIGID FURRING CHANNELS:
SCREW–TYPE FURRING CHANNELS COMPLYING WITH ASTM C–645, FABRICATED FROM 25 GA. STEEL WITH MANUFACTURER'S STANDARD ZINC PROTECTIVE COATING.

2.02. GYPSUM DRYWALL BOARD:

A. EXPOSED DRYWALL SURFACES:

PROVIDE GYPSUM WALLBOARD COMPLYING WITH ASTM C–36 WITH PAPER–FACE SURFACE SUITABLE TO RECEIVE DECORATED FINISH AND WITH LONG EDGES TAPERED TO RECEIVE MANUFACTURER'S STANDARD JOINT TREATMENT, UNLESS OTHERWISE SHOWN. THICKNESS: 5/8" EXCEPT WHERE OTHERWISE INDICATED.

B. MOISTURE–RESISTANT APPLICATIONS:

USE 1/2" CEMENT BOARD AS A SUBSTRATE FOR NON–ABSORBENT WALL TILES (CERAMIC, PLASTIC OR METAL), PROVIDE MOISTURE RESISTANT GYPSUM BACKING BOARD WITH CORE AND PAPER FACINGS TREATED TO RESIST MOISTURE TO COMPLY WITH ASTM C–630 ON PAINTED WALLS. EXTERIOR SOFFITS SHALL BE 1/2" THICK USG EXTERIOR GYPSUM CEILING BOARD

C.. FOIL–BACK GYPSUM BOARD:

AT EXTERIOR WALLS WHERE UNFACED INSULATION IS USED AT FURRED GYPSUM WALLBOARD, PROVIDE FOIL–BACK GYPSUM WALL BOARD.

D. FIRE–RATED APPLICATIONS:

PROVIDE EITHER REGULAR OR TYPE "X" GYPSUM WALLBOARD AS REQUIRED TO MEET THE RATING FOR THE CONSTRUCTION SHOWN.

2.02 DRYWALL ACCESSORY MATERIALS:

A. FASTENERS:

PROVIDE THE KIND SPECIFIED AND OF THE TYPE AND SIZE RECOMMENDED BY THE DRYWALL MANUFACTURER FOR THE APPLICATION SHOWN.

B. SOUND ATTENUATION BLANKETS:

FS HH–251, TYPE I:
SEMI–RIGID MINERAL FIBER BLANKET WITHOUT MEMBRANE, E CLASS 25 FLAME–SPREAD, THICKNESS AS INDICATED.

C. EXPOSED ACOUSTICAL SEALANT:

LATEX, ACRYLIC, OR ACRYLIC–LATEX TYPE; PERMANENTLY ELASTIC & PAINTABLE

D. METAL TRIM ACCESSORIES:

PROVIDE TRIM ACCESSORIES OF THE SIZES REQUIRED FOR THE DRYWALL APPLICATIONS SHOWN AND SPECIFIED, FABRICATED FROM GALVANIZED STEEL, AND OF THE FOLLOWING TYPES:

1. AT EXTERNAL CORNERS PROVIDE CORNER BEAD WITH SMOOTH RIGID NOSE AND PERFORATED AND KNURLED METAL FLANGES.
2. FOR PROTECTION OF EXPOSED WALLBOARD EDGES AROUND OPENINGS PROVIDE METAL CASING BEADED NOSE WITH EXPOSED FLANGE KNURLED FOR JOINT TREATMENT. WHERE KERFED JAMBS ARE SHOWN PROVIDE TRIM WITH SPECIAL LEG DESIGNED FOR INSERTION INTO JAMB SLOT.
3. WHERE DRYWALL ABUTS OR INTERSECTS DISSIMILAR CONSTRUCTION PROVIDE SQUARE EDGE SEMI–FINISHING CASING (NO JOINT COMPOUND TREATMENT REQUIRED).

2.04 JOINT TREATMENT MATERIALS MATERIALS:

A. JOINT TAPES:

PLAIN WITH OR WITHOUT FILLERS COMPLYING WITH ASTM–C–475. PROVIDE IN DRY POWDER FORM OR PRE–MIXED READY FOR APPLICATION. PROVIDE MANUFACTURER'S SINGLE–COMPONENT COMPOUND FOR BOTH BEDDING AND FINISHING JOINTS.

3.00 – EXECUTION

3.01 INSTALLATION OF STEEL DRYWALL FRAMING:

A. MANUFACTURER'S INSTRUCTIONS:

UNLESS OTHERWISE SHOWN OR SPECIFIED, INSTALL METAL FRAMING AND ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTION.

B. ISOLATION OF PARTITIONS:

WHERE PARTITIONS ABUT CEILING OR DECK CONSTRUCTION OR VERTICAL STRUCTURAL ELEMENTS PROVIDE SLIP OR CUSHION–TYPE JOINT BETWEEN METAL FRAMING AND STRUCTURE AS RECOMMENDED BY MANUFACTURER TO PREVENT TRANSFER OF STRUCTURAL LOADS OR MOVEMENTS TO PARTITIONS, EXCEPT AS OTHERWISE INDICATED.

C. HEIGHT OF PARTITIONS:

TERMINATE TOP OF DRYWALL PARTITIONS AT FINISH CEILING CONSTRUCTION, UNLESS OTHERWISE INDICATED. EXTEND SOUND–RATED & FIRE–RATED DRYWALL PARTITIONS THROUGH SUSPENDED ACOUSTIC UNIT CEILING TO STRUCTURAL DECK OR CEILING ABOVE. CAULK ALL PARTITIONS TIGHT TO CONCRETE SLABS AT MECHANICAL EQUIPMENT ROOMS & AT AIR SHAFTS WITH SEALANT EQUAL TO USG ACOUSTICAL SEALANT.

D. FLOOR AND CEILING RUNNER TRACKS:

ALIGN RUNNER TRACKS TO THE PARTITION LAYOUT AT BOTH FLOOR & CEILING. SECURE RUNNER TRACKS AS RECOMMENDED BY THE STUD MANUFACTURER; EXCEPT DO NOT EXCEED 24" O.C. SPACING.

E. STUDS:

USE FULL LENGTH STUDS BETWEEN RUNNER TRACKS WHEREVER POSSIBLE, AND WHERE NECESSARY, SPLINE STUDS BY NESTING WITH 8" LAPS WITH 2 SCREWS THRU EACH FLANGE. FRICTION FIT STUDS TO RUNNER TRACKS BY POSITIONING & ROTATING INTO PLACE. PROVIDE POSITIVE ATTACHMENT TO RUNNER TRACKS FOR STUDS LOCATED IN PARTITION CORNERS AND INTERSECTIONS AND ADJACENT TO OPENINGS; USING 3/8 SELF–TAPPING SCREWS OR STUD CLINCHING TOOL ON BOTH FLANGES OF STUDS.

EXCEPT AS OTHERWISE INDICATED, COMPLY WITH STUD MANUFACTURER'S RECOMMENDATION BUT DO NOT EXCEED 24" O.C.

F. PROVIDE ADDITIONAL STUDS TO SUPPORT INSIDE CORNERS AT PARTITION INTERSECTIONS AND CORNERS; AND TO SUPPORT OUTSIDE CORNERS, TERMINATIONS OF PARTITIONS AND BOTH SIDES OF CONTROL JOINTS (IF ANY).

G. PROVIDE ROUGH FRAMING AT OPENINGS CONSISTING OF FULL–LENGTH STUDS ADJACENT TO JAMBS, AND HORIZONTAL HEADER AND SILL TRACKS. CUT HORIZONTAL TRACKS TO LENGTH AND SPLIT FLANGES AND BEND WEBS AT ENDS FOR FLANGE OVERLAP AND SCREW TO JAMB STUDS. INSTALL CUT–TO–LENGTH INTERMEDIATE STUDS ABOVE AND BELOW OPENINGS AT SAME SPACING AS FULL–LENGTH STUDS.

1. AT DOOR FRAMES COMPLY WITH STUD MANUFACTURER'S RECOMMENDATIONS FOR THE TYPES OF FRAMES AND WEIGHTS OF DOORS USED IN THE PROJECT; EXCEPT AS OTHERWISE INDICATED. FASTEN JAMB STUDS TO METAL FRAMES WITH ANCHOR CLIPS USING 2 SELF–TAPPING SCREWS OR BOLTS PER CLIP.
2. AT DOOR FRAMES PROVIDE EITHER ONE 20 GAUGE STUD OR TWO 25–GAUGE STUDS AT EACH JAMB; AND PROVIDE ONE ADDITIONAL STUD LOCATED NOT MORE THAN 6" FROM JAMB STUD.
3. PROVIDE RIGID METAL FURRING CHANNELS WHERE GYPSUM WALLBOARD IS TO BE APPLIED OVER MASONRY OR CONCRETE WALL SUBSTRATES UNLESS OTHERWISE INDICATED.

H. INSTALL CHANNELS AT NOT GREATER THAN 24" O.C. SPACING & PROVIDE ADDITIONAL FRAMING AT OPENINGS, CUTOUTS & CORNERS. FASTEN TO MASONRY WALLS WITH CUT NAILS DRIVEN INTO MORTAR JOINTS OR INTO FACE OF LIGHT–WEIGHT CONCRETE MASONRY UNITS (IF ANY). FASTEN TO MONOLITHIC CONCRETE WITH MASONRY NAILS OR POWER–DRIVEN FASTENERS NOT MORE THAN 24" O.C. AND STAGGER ON OPPOSITE FLANGES OF HAT–SHAPED CHANNELS.

3.02 INSTALLATION OF GYPSUM DRYWALL BOARD:

A. STANDARDS:

COMPLY WITH THE REQUIREMENTS OF ANSI A–97.1 "STANDARD SPECIFICATIONS FOR THE APPLICATION AND FINISHING OF WALLBOARD"; EXCEPT COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS WHERE MORE STRINGENT.

B. THICKNESS:

FOR HEIGHTS OF 8'–2" OR LESS, APPLY GYPSUM BOARD VERTICALLY OR HORIZ. AT CONTRACTOR'S OPTION. FOR HEIGHTS GREATER THAN 8'–2" OR FOR AREAS LESS THAN 4' WIDE APPLY VERTICALLY; USE FLOOR–TO–CEILING LENGTH BOARDS FOR VERTICAL APPLICATIONS & LOCATE EDGE JOINTS OVER SUPPORTS, BUT OFFSET AT LEAST ONE STUD SPACE ON OPPOSITE FACES OF PARTITION/WALLS. USE MAX. PRACTICAL LENGTH BOARDS FOR HORIZONTAL APPLICATIONS; LOCATE END JOINTS OVER SUPPORTS AND STAGGER IN ALTERNATE COURSES OF BOARD.

AT LOCATIONS BEHIND CERAMIC TILE PROVIDE WATER–RESISTANT GYPSUM BACKER BOARDS. FASTEN TO SUPPORTS IN ACCORDANCE WITH DRYWALL MANUFACTURER'S INSTRUCTIONS, BUT SPACE SCREWS NOT MORE THAN 12" O.C., EXCEPT WHERE TILE THICKER THAN 5/16" WILL BE APPLIED TO DRYWALL, SPACE SCREWS NOT MORE THAN 8" O.C. CUT EDGES OF DRYWALL PRIOR TO INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

C. CEILINGS:

APPLY GYPSUM BOARD WITH LONG DIMENSION AT RIGHT ANGLES TO SUPPORTS WITH END JOINTS LOCATED OVER SUPPORTS. USE MAXIMUM PRACTICAL LENGTH BOARDS TO MINIMIZE END JOINTS. STAGGER END JOINTS IN ALTERNATE COURSES OF BOARDS AND LOCATE AS FAR AWAY FROM CENTER OF CEILING AS POSSIBLE.

D. METAL SUPPORTS:

FASTEN GYPSUM WALLBOARD WITH SCREWS. COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR FASTENING BUT DO NOT EXCEED 12" O.C. SPACING.

F. RESILIENT CHANNEL APPLICATIONS:

WHERE SHOWN AS "RESILIENT" PROVIDE 25 GA. RESILIENT TYPE SCREW CHANNEL FURRING DESIGNED TO REDUCE SOUND TRANSMISSION. INSTALL CHANNELS AT RIGHT ANGLES TO SUPPORTS & SPACE NOT MORE THAN 24" O.C. BETWEEN CHANNELS. ATTACH CHANNELS AT EACH SUPPORT & TO CORNER FRAMING WITH SCREWS INACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. LOCATE A CHANNEL NOT MORE THAN 6" FROM WALL–CEILING JUNCTURES. FASTEN GYPSUM WALL–BOARD WITH SCREWS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

3.03 DRYWALL FINISHING:

A. FINISH EXPOSED DRYWALL SURFACES WITH JOINTS, CORNERS AND EXPOSED EDGES REINFORCED OR TRIMMED AS SPECIFIED, AND WITH ALL JOINTS, FASTENER HEADS, TRIM ACCESSORY FLANGES & SURFACE DEFECTS FILLED WITH JOINT COMPOUND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR A SMOOTH, FLUSH SURFACE. FORM TRUE, LEVEL OR PLUMB LINES, WITHOUT JOINTS, FASTENER HEADS, FLANGES OF TRIM ACCESSORIES OR DEFECTS VISIBLE AFTER APPLICATION OF FIELD APPLIED DECORATION.

B. USE JOINT TAPE TO REINFORCE JOINTS FORMED BY TAPERED EDGED OR BUTT ENDS OF DRYWALL UNITS & AT INTERIOR CORNERS & ANGLES. SET TAPE IN POUND AND THEN APPLY SKIM COAT OVER TAPE IN ONE APPLICATION.

WHERE OPEN SPACES OF MORE THAN 1/16" WIDTH OCCUR BETWEEN ABUTTING DRYWALL UNITS (EXCEPT AT CONTROL JOINTS), PREFILL JOINTS WITH JOINT COMPOUND AND ALLOW PREFILL TO DRY BEFORE APPLICATION OF JOINT TAPE.

C. REINFORCE EXTERNAL CORNERS OF DRYWALL WORK WITH CORNER BEADS, BOTH AT WALLS AND CEILING BULKHEADS.

SECURELY FASTEN METAL CORNER HEADS AS RECOMMENDED BY THE MANUFACTURER. USE FASTENERS WHICH WILL BE FULLY CONCEALED BY JOINT COMPOUND FILL APPLIED OVER FLANGES.

D. APPLICATION OF JOINT COMPOUNDS:

AFTER MIXING, DO NOT USE JOINT COMPOUNDS IF RECOMMENDED POTLIFE TIME HAS EXPIRED. ALLOW DRYING TIME BETWEEN APPLICATIONS OF JOINT COMPOUND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR THE RELATIVE HUMIDITY & TEMPERATURE LEVELS AT THE TIME OF APPLICATION. IN NO CASE, ALLOW LESS THAN 24 HOURS DRYING TIME BETWEEN APPLICATIONS OF JOINT COMPOUND. APPLY NOT LESS THAN 3 SEPARATE COATS OF JOINT COMPOUND OVER JOINTS, FASTENER HEADS AND METAL FLANGES.

JOINT COMPOUND TREATMENT IS NOT REQUIRED ABOVE SUSPENDED CEILINGS WHERE PARTITION/WALLS ARE SHOWN OR SPECIFIED TO EXTEND TO STRUCTURAL DECK OR CEILING ABOVE. SUSPENDED CEILING (UNLESS REQUIRED FOR SOUND ATTENUATION OR FIRE CODE).

E. EDGE TRIM:

PROVIDE SPECIFIED TYPE OF METAL CASING BEAD TRIM. INSTALL IN SINGLE UNJOINTED LENGTHS WHEREVER POSSIBLE.

F. PAINTING AND DECORATING DRYWALL:
REFER TO SECTION 09900 OF THIS SPECIFICATION.

3.04 PROTECTION OF FINISHED WORK:

INSTALLER SHALL ADVISE CONTRACTOR OF PROPER PROCEDURES FOR THE PROTECTION OF COMPLETED DRYWALL WORK FROM DAMAGE OR DETERIORATION UNTIL ACCEPTANCE OF THE WORK.

SECTION 09500 – SUSPENDED ACOUSTICAL CEILING

PART 1.00 – GENERAL

1.01 DESCRIPTION

WORK INCLUDED:

THE SUSPENDED ACOUSTICAL CEILING REQUIRED FOR THIS CONTRACT IS INDICATED ON THE DRAWINGS AND CONSISTS OF SUSPENDED EXPOSED GRIDS & ACOUSTICAL CEILING TILES.

PART 2.00 – PRODUCTS

2.01 EXPOSED GRID SYSTEM:

THE EXPOSED GRID SYSTEM SHALL BE AN INVERTED TEE "SUPRAFINE GRID", DIRECT HUNG SYSTEM MEETING THE INTERMEDIATE (OR BETTER) STRUCTURAL STANDARDS OF ASTM C–365. THE GRID SHALL BE PROVIDED WITH A BAKED–ON WHITE ENAMEL FINISH.

2.02 ACOUSTICAL CEILING PANELS: (TYPE 1)

PANELS SHALL BE 24 INCHES X 24 INCHES X 3/4 INCH CIRRUS TEGULAR UNITS AS MANUFACTURED BY ARMSTRONG OR AN APPROVED EQUAL. ALL PANELS MUST HAVE A NONCOMBUSTIBLE CLASS 25 FLAME SPREAD RATING.

2.03 OTHER MATERIALS:

ALL OTHER MATERIALS, NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR A COMPLETE & PROPER INSTALLATION OF SUSPENDED ACOUSTICAL CEILING, SHALL BE SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ARCHITECT.

PART 3.00 – EXECUTION

3.01 SURFACE CONDITIONS:

A. INSPECTIONS:

1. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY COMMENCE.
2. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

3.02 INSTALLATION OF GRID:

A. GENERAL:

1. ERECT MEMBERS IN THE PATTERN SHOWN ON THE DRAWINGS, SPACING MEMBERS SPACING MEMBERS SYMMETRICALLY ABOUT THE CENTER LINE OF AREAS IN BOTH DIRECTIONS.
2. SPACE HANGER WIRES A MAXIMUM OF FOUR FEET ON CENTERS ALONG MAIN RUNNERS.
3. SECURELY ANCHOR ALL WALL ANGLE MEMBERS IN PLACE.

B. TOLERANCES:

MAKE ALL GRID LEVEL WITHIN A TOLERANCE OF ONE IN 500 AND STRAIGHT WITHIN A TOLERANCE OF ONE IN 1000.

3.03 LATERAL BRACING:

A. GENERAL:

1. FURNISH & INSTALL LATERAL BRACING CONSISTING OF AT LEAST 12 GAUGE WIRE, SPLAYED AT 45 DEGREES, IN THE FOLLOWING LOCATIONS:

a. AT THE MIDPOINT OF ALL UNSUPPORTED PARTITIONS EXCEEDING 12 LINEAL FEET.

b. AT 12 FEET ON CENTER EACH WAY IN ALL LARGE CEILING AREAS NOT RESTRAINED BY PARTITIONS.

BIDDING DOCUMENTS

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PROPOSED RENOVATION LOCATED AT:
LYDIA P. LAWS RESIDENCE HALL
DELAWARE STATE UNIVERSITY
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12

REVISIONS

SHEET No.
SP2

2.3 ACCESSORIES

A. HARDWARE AND ACCESSORIES: MANUFACTURER'S STANDARD DESIGN, HEAVY-DUTY OPERATING HARDWARE AND ACCESSORIES.

1. MATERIAL: STAINLESS STEEL.
2. HINGES: MANUFACTURER'S STANDARD VAULT TYPE.
3. LATCH AND KEEPER: MANUFACTURER'S STANDARD SURFACE-MOUNTED LATCH UNIT DESIGNED FOR EMERGENCY ACCESS AND WITH COMBINATION RUBBER-FACED DOOR STRIKE AND KEEPER. PROVIDE UNITS THAT COMPLY WITH REGULATORY REQUIREMENTS FOR ACCESSIBILITY AT COMPARTMENTS DESIGNATED AS ACCESSIBLE.
4. COAT HOOK: MANUFACTURER'S STANDARD COMBINATION HOOK AND RUBBER-TIPPED BUMPER, SIZED TO PREVENT IN-SWINGING DOOR FROM HITTING COMPARTMENT-MOUNTED ACCESSORIES.
5. DOOR BUMPER: MANUFACTURER'S STANDARD RUBBER-TIPPED BUMPER AT OUT-SWINGING DOORS.
6. DOOR PULL: MANUFACTURER'S STANDARD UNIT AT OUT-SWINGING DOORS THAT COMPLIES WITH REGULATORY REQUIREMENTS FOR ACCESSIBILITY. PROVIDE UNITS ON BOTH SIDES OF DOORS AT COMPARTMENTS DESIGNATED AS ACCESSIBLE.

B. OVERHEAD BRACING: MANUFACTURER'S STANDARD CONTINUOUS, EXTRUDED-ALUMINUM HEAD RAIL WITH ANTIGRIP PROFILE AND IN MANUFACTURER'S STANDARD FINISH.

C. ANCHORAGES AND FASTENERS: MANUFACTURER'S STANDARD EXPOSED FASTENERS OF STAINLESS STEEL OR CHROME-PLATED STEEL OR BRASS, FINISHED TO MATCH THE ITEMS THEY ARE SECURING, WITH THEFT-RESISTANT-TYPE HEADS. PROVIDE SEX-TYPE BOLTS FOR THROUGH-BOLT APPLICATIONS. FOR CONCEALED ANCHORS, USE STAINLESS STEEL, HOT-DIP GALVANIZED STEEL, OR OTHER RUST-RESISTANT, PROTECTIVE-COATED STEEL.

2.4 FABRICATION

A. OVERHEAD-BRACED UNITS: PROVIDE MANUFACTURER'S STANDARD CORROSION-RESISTANT SUPPORTS, LEVELING MECHANISM, AND ANCHORS AT PILASTERS TO SUIT FLOOR CONDITIONS. PROVIDE SHOES AT PILASTERS TO CONCEAL SUPPORTS AND LEVELING MECHANISM.

B. DOOR SIZE AND SWINGS: UNLESS OTHERWISE INDICATED, PROVIDE WIDE, IN-SWINGING DOORS FOR STANDARD TOILET COMPARTMENTS AND WIDE, OUT-SWINGING DOORS WITH A MINIMUM WIDE, CLEAR OPENING FOR COMPARTMENTS DESIGNATED AS ACCESSIBLE.

PART 3 - EXECUTION

3.1 INSTALLATION

A. GENERAL: COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. INSTALL UNITS RIGID, STRAIGHT, LEVEL, AND PLUMB. SECURE UNITS IN POSITION WITH MANUFACTURER'S RECOMMENDED ANCHORING DEVICES.
   1. MAXIMUM CLEARANCES:
      a. PILASTERS AND PANELS: .
      b. PANELS AND WALLS: .

B. OVERHEAD-BRACED UNITS: SECURE PILASTERS TO FLOOR AND LEVEL, PLUMB, AND TIGHTEN. SET PILASTERS WITH ANCHORS PENETRATING NOT LESS THAN INTO STRUCTURAL FLOOR UNLESS OTHERWISE INDICATED IN MANUFACTURER'S WRITTEN INSTRUCTIONS. SECURE CONTINUOUS HEAD RAIL TO EACH PILASTER WITH NO FEWER THAN TWO FASTENERS. HANG DOORS TO ALIGN TOPS OF DOORS WITH TOPS OF PANELS, AND ADJUST SO TOPS OF DOORS ARE PARALLEL WITH OVERHEAD BRACE WHEN DOORS ARE IN CLOSED POSITION.

C. URINAL SCREENS: ATTACH WITH ANCHORING DEVICES TO SUIT SUPPORTING STRUCTURE. SET UNITS LEVEL AND PLUMB, RIGID, AND SECURED TO RESIST LATERAL IMPACT.

3.2 ADJUSTING

REVISE HINGE ADJUSTMENT REQUIREMENTS IN THIS ARTICLE TO SUIT PROJECT. VERIFY ACCESSIBILITY REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

A. HARDWARE ADJUSTMENT: ADJUST AND LUBRICATE HARDWARE ACCORDING TO HARDWARE MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PROPER OPERATION. SET HINGES ON IN-SWINGING DOORS TO HOLD DOORS OPEN APPROXIMATELY 30 DEGREES FROM CLOSED POSITION WHEN UNLATCHED. SET HINGES ON OUT-SWINGING DOORS TO RETURN DOORS TO FULLY CLOSED POSITION.

SECTION - 10801 TOILET ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUMMARY

A. THIS SECTION INCLUDES THE FOLLOWING:
   1. TOILET AND BATH ACCESSORIES.

1.3 SUBMITTALS

A. PRODUCT DATA: INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS AND THICKNESSES, DIMENSIONS, PROFILES, FASTENING AND MOUNTING METHODS, SPECIFIED OPTIONS, AND FINISHES FOR EACH TYPE OF ACCESSORY SPECIFIED.

B. PRODUCT SCHEDULE: INDICATING TYPES, QUANTITIES, SIZES, AND INSTALLATION LOCATIONS BY ROOM OF EACH ACCESSORY REQUIRED. USE DESIGNATIONS INDICATED IN THE TOILET AND BATH ACCESSORY SCHEDULE AND ROOM DESIGNATIONS AS INDICATED ON DRAWINGS IN PRODUCT SCHEDULE.

C. MAINTENANCE DATA: FOR ACCESSORIES TO INCLUDE IN MAINTENANCE MANUALS SPECIFIED IN DIVISION 1. PROVIDE LISTS OF REPLACEMENT PARTS AND SERVICE RECOMMENDATIONS.

1.4 COORDINATION

A. COORDINATE ACCESSORY LOCATIONS WITH OTHER WORK TO PREVENT INTERFERENCE WITH CLEARANCES REQUIRED FOR ACCESS BY DISABLED PERSONS, PROPER INSTALLATION, ADJUSTMENT, OPERATION, CLEANING, AND SERVICING OF ACCESSORIES.

B. DELIVER INSERTS AND ANCHORING DEVICES SET INTO CONCRETE OR MASONRY AS REQUIRED TO PREVENT DELAYING THE WORK.

1.6 WARRANTY

A. GENERAL WARRANTY: SPECIAL WARRANTY SPECIFIED IN THIS ARTICLE SHALL NOT DEPRIVE OWNER OF OTHER RIGHTS OWNER MAY HAVE UNDER OTHER PROVISIONS OF THE CONTRACT DOCUMENTS AND SHALL BE IN ADDITION TO, AND RUN CONCURRENT WITH, OTHER WARRANTIES MADE BY CONTRACTOR UNDER REQUIREMENTS OF THE CONTRACT DOCUMENTS.

B. MANUFACTURER'S MIRROR WARRANTY: WRITTEN WARRANTY, EXECUTED BY MIRROR MANUFACTURER AGREEING TO REPLACE MIRRORS THAT DEVELOP VISIBLE SILVER SPOILAGE DEFECTS WITHIN MINIMUM WARRANTY PERIOD INDICATED.
   1. MINIMUM WARRANTY PERIOD: 15 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. MANUFACTURERS: PRODUCTS SHOWN BY NUMBER ARE BOBRICK UNLESS OTHERWISE NOTED. EQUAL PRODUCTS BY THE FOLLOWING MANUFACTURERS SUBJECT TO COMPLIANCE WITH REQUIREMENTSARE ACCEPTABLE:
   1. TOILET AND BATH ACCESSORIES:
      a. A & J WASHROOM ACCESSORIES, INC.
      b. AMERICAN SPECIALTIES, INC.
      c. BOBRICK WASHROOM EQUIPMENT, INC.
      d. BRADLEY CORPORATION.

2.2 FABRICATION

A. GENERAL: ONE, MAXIMUM , UNOBTRUSIVE STAMPED MANUFACTURER LOGO, AS APPROVED BY ARCHITECT, IS PERMITTED ON EXPOSED FACE OF ACCESSORIES. ON INTERIOR SURFACE NOT EXPOSED TO VIEW OR BACK SURFACE OF EACH ACCESSORY, PROVIDE PRINTED, WATERPROOF LABEL OR STAMPED NAMEPLATE INDICATING MANUFACTURER'S NAME AND PRODUCT MODEL NUMBER.

B. SURFACE-MOUNTED TOILET ACCESSORIES: UNLESS OTHERWISE INDICATED, FABRICATE UNITS WITH TIGHT SEAMS AND JOINTS, AND EXPOSED EDGES ROLLED. HANG DOORS AND ACCESS PANELS WITH CONTINUOUS STAINLESS-STEEL HINGE. PROVIDE CONCEALED ANCHORAGE WHERE POSSIBLE.

C. RECESSED TOILET ACCESSORIES: UNLESS OTHERWISE INDICATED, FABRICATE UNITS OF ALL-WELDED CONSTRUCTION, WITHOUT MITERED CORNERS. HANG DOORS AND ACCESS PANELS WITH FULL-LENGTH, STAINLESS-STEEL HINGE. PROVIDE ANCHORAGE THAT IS FULLY CONCEALED WHEN UNIT IS CLOSED.

D. FRAMED GLASS-MIRROR UNITS: FABRICATE FRAMES FOR GLASS-MIRROR UNITS TO ACCOMMODATE GLASS EDGE PROTECTION MATERIAL. PROVIDE MIRROR BACKING AND SUPPORT SYSTEM THAT PERMITS RIGID, TAMPER-RESISTANT GLASS INSTALLATION AND PREVENTS MOISTURE ACCUMULATION.
   1. PROVIDE GALVANIZED STEEL BACKING SHEET, NOT LESS THAN AND FULL MIRROR SIZE, WITH NONABSORPTIVE FILLER MATERIAL. CORRUGATED CARDBOARD IS NOT AN ACCEPTABLE FILLER MATERIAL.

E. MIRROR-UNIT HANGERS: PROVIDE MIRROR-UNIT MOUNTING SYSTEM THAT PERMITS RIGID, TAMPER- AND THEFT-RESISTANT INSTALLATION, AS FOLLOWS:
   1. HEAVY-DUTY WALL BRACKETS OF GALVANIZED STEEL, EQUIPPED WITH CONCEALED LOCKING DEVICES REQUIRING A SPECIAL TOOL TO REMOVE.

F. KEYS: PROVIDE UNIVERSAL KEYS FOR INTERNAL ACCESS TO ACCESSORIES FOR SERVICING AND RESUPPLYING. PROVIDE MINIMUM OF SIX KEYS TO OWNER'S REPRESENTATIVE.

PART 3 - EXECUTION

3.1 INSTALLATION

A. INSTALL ACCESSORIES ACCORDING TO MANUFACTURERS' WRITTEN INSTRUCTIONS, USING FASTENERS APPROPRIATE TO SUBSTRATE INDICATED AND RECOMMENDED BY UNIT MANUFACTURER. INSTALL UNITS LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS AND AT HEIGHTS INDICATED.

B. SECURE MIRRORS TO WALLS IN CONCEALED, TAMPER-RESISTANT MANNER WITH SPECIAL HANGERS, TOGGLE BOLTS, OR SCREWS. SET UNITS LEVEL, PLUMB, AND SQUARE AT LOCATIONS INDICATED, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR SUBSTRATE INDICATED.

C. INSTALL GRAB BARS TO WITHSTAND A DOWNWARD LOAD OF AT LEAST , WHEN TESTED ACCORDING TO METHOD IN ASTM F 446.

3.2 ADJUSTING AND CLEANING

A. ADJUST ACCESSORIES FOR UNENCUMBERED, SMOOTH OPERATION AND VERIFY THAT MECHANISMS FUNCTION PROPERLY. REPLACE DAMAGED OR DEFECTIVE ITEMS.

B. REMOVE TEMPORARY LABELS AND PROTECTIVE COATINGS.

C. CLEAN AND POLISH EXPOSED SURFACES ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.

3.3 SCHEDULE

A. DOUBLE ROLL TOILET PAPER DISPENSER: B-274(CONTROLLED DELIVERY), B-2740(UNCONTROLLED DELIVERY) AT ADA COMPLIANT LOCATIONS

B. GRAB BAR: B-5837.99 1 1/4" DIAMETER PEENED GRIP

C. VERTICAL GRAB BAR: B-5806.99x18 1 1/4" DIAMETER PEENED GRIP

D. MIRROR: B-165 1836

E. SANITARY NAPKIN DISPOSAL: B-254

F. TRASH RECEPTOR: B-3944

g. PAPER TOWEL DISPENSER/DISPOSAL: B-3961

BIDDING DOCUMENTS

JEFF FLOWERS ASSOCIATES
ARCHITECTS • PLANNERS
WILMINGTON, DE 302.351.3347

PROPOSED RENOVATION LOCATED AT:
LYDIA P. LAWS RESIDENCE HALL
DELAWARE STATE UNIVERSITY
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12

REVISIONS

SHEET No.
SP3

SCOPE OF WORK

THE PURPOSE OF THIS PROJECT IS TO REPLACE EXISTING PLUMBING FIXTURES AS INDICATED IN L.P.LAWS RESIDENT HALL. THE SCOPE OF WORK SHALL INCLUDE ALL WORK REQUIRED FOR THE FOLLOWING AND INDICATED ON DRAWINGS:

- DEMOLITION OF FIXTURES AS INDICATED.
- REPLACEMENT OF SHOWER STALLS, HEAD & VALVE ASSEMBLIES.
- REPLACEMENT OF TUBS, VALVE & HEAD/ SPOUT ASSEMBLIES.
- REPLACEMENT OF SALON SINKS.
- PROVIDE ELECTRIC BASEBOARD HEATERS AS INDICATED.

GENERAL PROJECT NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH DELAWARE STATE UNIVERISTY STANDARDS AND SPECIFICATIONS.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY OF HIS OWN PERSONAL AND SURROUNDINGS OF THE WORK AREA. THIS INCLUDES PROVIDING ALL NECESSARY BARRICADES, SIGNS, FIRE EXTINGUISHERS, ETC. ALL APPLICABLE OSHA REGULATIONS SHALL APPLY TO THIS WORK. COMPLY WITH ALL OWNER'S SITE SAFETY CONDITIONS.

3. ALL WORK SHALL BE IN CONFORMANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS ADOPTED BY MUNICIPAL, COUNTY, STATE AND FEDERAL AUTHORITIES, UTILITY COMPANIES, INSURANCE AGENCIES AND OTHER AUTHORITIES HAVING JURISDICTION OF AUTHORITIES.

4. THE CONTRACTOR SHALL APPLY FOR, SECURE AND PAY FOR ALL PERMITS AND/OR CERTIFICATES OF INSPECTION REQUIRED IN THE PERFORMANCE OF THE WORK BY ALL AUTHORITIES HAVING JURISDICTION.

5. THESE DOCUMENTS ARE SHOWN DIAGRAMMATICALLY, CONTRACTOR SHALL VERIFY ALL ROUTING FOR POSSIBLE INTERFERENCES BEFORE FABRICATION AND INSTALLATION. CONTRACTORS BID SHALL INCLUDE LABOR, MATERIAL AND EQUIPMENT TO RESOLVE INTERFERENCES.

6. ALL COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION ARE NOT SHOWN ON THE DRAWINGS. REFER TO EQUIPMENT INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS, INCLUDING REQUIRED CONNECTION LOCATIONS, TYPES, & SIZES.

7. ALL WORK SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER SO THAT DISRUPTION TO THE AREAS INVOLVED IS KEPT TO A MINIMUM. CONTRACTOR SHALL GIVE OWNER A MINIMUM OF 5 WORKING DAYS NOTICE OF ANY AND ALL WORK THAT WILL INTERFERE WITH THE OWNER'S OPERATION SO A SCHEDULE SUITABLE TO THE OWNER CAN BE ARRANGED. ANY ACCIDENTAL INTERRUPTIONS TO SERVICES SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.

8. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT SHALL BE REMOVED, RELOCATED, REROUTED OR ABANDON BY EACH TRADE. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS: HOWEVER, THEIR REMOVAL, RELOCATIONS, REROUTING OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTACT AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.

9. ALL DEMOLITION SHALL BE COMPLETED IN A SAFE AND ORDERLY MANNER. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS. BRACING, ETC. AS MAY BE REQUIRED DURING DEMOLITION.

10. VERIFY ALL FIELD CONDITIONS, ACCESS WAYS, DIMENSIONS AND DETAILS IN THE FIELD PRIOR TO BID AND PRIOR TO FABRICATION. INCLUDE IN BID ALL WORK NECESSARY TO COVER COSTS RESULTING FROM FIELD CONDITIONS.

11. IN ADDITION TO SPECIFICS AS MAY BE DEFINED HEREINAFTER THE CONTRACTOR SHALL PROTECT THE WORK SITE AND ALL HIS WORK AGAINST DAMAGE FROM ANY SOURCE (INCLUDING BUT NOT LIMITED TO WATER, DUST, HEAT, FREEZING ETC.) UNTIL FINAL COMPLETION AND ACCEPTANCE BY THE OWNER.

13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND PERFORM ALL LABOR, MATERIAL, EQUIPMENT, INCIDENTALS, METHODS AND SERVICES REQUIRED TO INSTALL ALL WORK INDICATED COMPLETELY AND IN FULL OPERATION. CONTRACTOR SHALL PROVIDE ALL HANGERS, SUPPORTS, NUTS, BOLTS, AND GASKETS AS REQUIRED FOR PROPER SYSTEM INSTALLATION.

14. EACH CONTRACTOR SHALL REVIEW "ALL" PROJECT DOCUMENTS OF "ALL" TRADES REVIEWING ALL OF THE PROJECT REQUIREMENTS PRIOR TO BIDDING. DISCREPANCIES BETWEEN DOCUMENTS SHALL BE REPORTED AT THE TIME OF BID.

15. CONTRACTOR SHALL PROVIDE ALL PIPING SPECIALTIES AS INDICATED IN DESIGN DOCUMENTS OR NECESSARY FOR PROPER OPERATION OF SYSTEMS SHOWN ON THE DRAWINGS.

16. WHERE REQUIRED FOR CLEARANCE, TO AVOID INTERFERENCE OR EQUIPMENT CONNECTIONS, THE MECHANICAL CONTRACTOR SHALL OFFSET PIPES OR CONDUITS AS NECESSARY. SPECIAL FITTINGS OR ADAPTERS SHALL BE PROVIDED TO MAINTAIN GOOD FLOW CHARACTERISTICS. PROPERLY DRAIN AND DRIP WHERE NECESSARY.

17. ALL WORK, EQUIPMENT AND MATERIALS SHALL BE PROTECTED AT ALL TIMES. ALL PIPE, DUCT AND EQUIPMENT OPENINGS SHALL BE PROPERLY CAPPED OR PLUGGED DURING INSTALLATION.

18. PROVIDE STEEL SLEEVES FOR ALL DUCTWORK AND PIPING THAT PASS THROUGH WALLS, FLOORS, CEILING AND ROOF. SEAL PENETRATION WITH AN APPROVED FIRE-STOPING SYSTEM.

19. ALL EQUIPMENT SHALL HAVE ITS MANUFACTURER'S NAMEPLATE SECURELY ATTACHED GIVING DESIGN AND OPERATING CHARACTERISTICS. NAMEPLATES SHALL NOT BE COVERED OR OBSTRUCTED FROM VIEW. ELECTRICAL PANEL SCHEDULES SHALL BE PROVIDED AND/OR WHERE EXISTING THEY SHALL BE AMENDED TO REFLECT THE NEW WORK. PIPING AND CONDUIT SYSTEMS SHALL BE LABELED AND VALVES SHALL BE TAGGED.

20. UNLESS OTHERWISE NOTED, ALL PARTS, EQUIPMENT AND MATERIALS SHALL BE NEW AND SHALL BE ASME AND/OR UL APPROVED.

21. CONTRACTOR SHALL COMPLETE ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE WORK. CUTTING AND PATCHING SHALL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER. PATCHING MATERIALS SHALL MATCH EXISTING MATERIALS TO THE GREATEST EXTENT POSSIBLE. PROVIDE TOUCH-UP PAINT TO MATCH EXISTING SURROUNDING AREAS OF CUTTING AND PATCHING WORK.

22. PRIOR TO ACCEPTANCE OF THE PROJECT, ALL SYSTEMS SHALL BE TESTED, BALANCED AND OPERATED TO DEMONSTRATE TO THE OWNER OR HIS DESIGNATED REPRESENTATIVE THAT THE INSTALLATION AND PERFORMANCE OF THESE SYSTEMS AND/OR PARTS THEREOF CONFORM TO DESIGN INTENT.

23. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY & ALL CEILING & FLOOR TILES AND GRID-WORK REQUIRED FOR WORK. AFTER INSTALLATION OF WORK IS COMPLETE, GRID AND TILES SHALL BE RE-INSTALLED. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ANY & ALL DAMAGED TILES AND GRID WITHIN THE WORK AREA. CONTRACTOR SHALL INSPECT EXISTING CEILING CONDITION BEFORE WORK AND PROVIDE WRITTEN REPORT OF EXISTING DAMAGE.

24. THE CONTRACTOR SHALL GUARANTEE THE ENTIRE INSTALLATION FOR A PERIOD OF ONE YEAR (EXCEPT WHERE EXTENSIONS OF THIS ONE-YEAR PERIOD ARE SPECIFIED) FROM THE DATE OF ACCEPTANCE OF THE SYSTEM AS A WHOLE. ANY DEFECTS IN WORKMANSHIP, MATERIALS, MALFUNCTION OF EQUIPMENT OR UNSATISFACTORY PERFORMANCE AND ALL OTHER WORK OR PARTS OF THE BUILDING DAMAGED THEREBY SHALL BE REPAIRED, REPLACED OR OTHERWISE REMEDIED WITHOUT EXPENSE TO THE OWNER. SUCH REPAIRS AND REPLACEMENTS SHALL BE MADE IN A TIMELY MANNER AND AT THE CONVENIENCE OF THE OWNER.

CONTINUITY OF EXISTING SYSTEMS AND SERVICES:

1. ALL WORK SHALL BE PERFORMED AT SUCH TIME AND IN SUCH MANNER AS WILL LEAST INTERFERE WITH MAINTENANCE AND OPERATION OF OWNER'S ACTIVITIES. PROVISIONS SHALL BE MADE TO PERMIT OWNER'S USE OF ALL THE BUILDING AND OF EXISTING SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY FACILITIES TO SECURE THESE CONDITIONS. REMOVE TEMPORARY FACILITIES WHEN PERMANENT WORK HAS BEEN PLACED INTO SERVICE.

2. FULLY COORDINATE WITH OWNER AND ALL OTHER TRADES, ALL WORK INVOLVING SHUT-DOWN AND INTERRUPTION OF EXISTING SYSTEMS AND SERVICE.

3. SHUT-DOWN OF EXISTING SERVICES WHERE REQUIRED TO INSTALL NEW SYSTEMS OR ALTER EXISTING, SHALL BE PERFORMED DURING HOURS THAT THE BUILDING IS NOT BEING USED BY OWNER. ALL COSTS FOR PERFORMING THIS WORK SHALL BE BORNE BY THE CONTRACTOR AND WITHOUT "EXTRA" COST TO THE OWNER.

4. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED, BUT ARE TO REMAIN IN USE, SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.

5. FULLY COORDINATE WITH ARCHITECT, OWNER AND OTHER TRADES TO INSURE COMPLETE CONTINUITY OF ALL SYSTEMS AND SERVICES.

DEMOLITION NOTES:

1. IT IS THE INTENT THAT ALL EXISTING PIPING, FIXTURES AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED OR ABANDONED. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT ARE TO BE REMOVED, RELOCATED, REROUTED OR ABANDONED BY EACH TRADE. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS. HOWEVER, THEIR REMOVAL, RELOCATIONS, REROUTING OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTRACT AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.

2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.

3. ALL EXISTING PIPING TO BE DEMOLISHED MAY NOT BE SHOWN. CONTRACTOR SHALL DURING PRE-BID SITE VISIT DETERMINE EXTENT OF DEMOLITION AND INCLUDE COST OF THIS WORK IN BID. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS. ALL UNKNOWN BELOW SLAB PIPING ENCOUNTERED DURING INSTALLATION OF NEW WORK SHALL BE REMOVED AND CAPPED OFF AT ACTIVE MAIN OR BRANCH. ALLOWANCE SHALL BE MADE FOR THESE ITEMS IN BID PRICE.

4. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE STORAGE LOCATION DESIGNATED BY OWNER.

5. THE CONTRACTOR MUST SURVEY AND VERIFY LOCATIONS AND PHYSICAL SIZES OF ALL EXISTING ITEMS AND DETERMINE WHETHER RELOCATION OR REROUTING WILL BE REQUIRED. IF RELOCATION OR REROUTING IS REQUIRED, INCLUDING THAT OF ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS, THE CONTRACTOR SHALL INCLUDE ALL NECESSARY WORK AS PART OF HIS CONTRACT AND IT SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.

6. IN THE REMOVAL OF ANY PART OF A DRAINAGE SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUTS SO AS TO BE ACCESSIBLE.

7. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND CAPPING OF THE BUILDING'S EXISTING DOMESTIC WATER, AND SANITARY SEWER AS SHOWN ON THE CONTRACT DRAWINGS.

8. PRIOR TO TERMINATION OF THE BUILDING'S EXISTING DOMESTIC WATER AND SANITARY SEWER, PLUMBING CONTRACTOR SHALL NOTIFY AND COORDINATE THIS WORK WITH EACH RESPECTIVE UTILITY COMPANY.

9. PRIOR TO BID, CONTRACTOR SHALL FIELD INSPECT AND VERIFY SCOPE OF DEMOLITION WORK AND INCLUDE IN BID ALL COSTS ASSOCIATED WITH THE DISCONNECTION AND SAFING-OFF OF THE BUILDING'S EXISTING DOMESTIC WATER AND SANITARY SEWER.

10. PRIOR TO DISINFECTION, POTABLE WATER PIPING SHALL BE FLUSHED WITH WATER UNTIL NO DIRTY WATER APPEARS AT THE POINTS OF OUTLETS.

11. CAPPED OFF POTABLE WATER PIPING SHALL BE DISINFECTED PRIOR TO USE PER INTERNATIONAL PLUMBING CODE. THE PIPING SHALL BE FILLED WITH A WATER CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE AND SHALL BE VALVED OFF FOR 24 HOURS OR FILLED WITH A WATER CHLORINE SOLUTION CONTAINING AT LEAST 200 PARTS PER MILLION OF CHLORINE AND ALLOWED TO STAND FOR AT LEAST 3 HOURS. FOLLOWING THE ALLOWED STANDING TIME, THE SYSTEM SHALL BE FLUSHED WITH POTABLE WATER UNTIL NO CHLORINE REMAINS IN THE SYSTEM. PROVIDE RESULTS OF DISINFECTION TO OWNER WHEN COMPLETE.

12. CAPPED OFF DOMESTIC WATER PIPE SHALL CONSIST OF A HYDROSTATIC PRESSURE TEST OF 25 PSIG ABOVE THE WORKING PRESSURE UNDER WHICH IT IS OPERATED FOR NOT LESS THAN 60 MINUTES.

13. SANITARY WASTE AND VENT PIPE SHALL BE CAPPED OFF USING SERVICE WEIGHT CAST IRON WITH NO-HUB JOINTS IN ACCORDANCE WITH CISPI-301 FOR ABOVE GROUND AND HUB AND SPIGOT JOINTS WITH COMPRESSION TYPE GASKETS PER ASTMC-564 FOR BELOW SLAB..

14. CAPPED OFF SANITARY WASTE & VENT PIPE SHALL BE AIR TESTED TO NOT LESS THAN 5 PSIG PRESSURE IN THE SYSTEM. PIPING SYSTEM SHALL SUSTAIN A CONSTANT PRESSURE FOR NOT LESS THAN 15 MINUTES.

15. IN THE REMOVAL OF ANY PART OF A DRAINAGE SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUTS SO AS TO BE ACCESSIBLE.

PLUMBING FIXTURE SCHEDULE

TAG	BASIS OF DESIGN	FLUSH VALVE OR FAUCET BASIS OF DESIGN	CONNECTION SIZES			ELECTRICAL DATA				REMARKS
			CW	HW	DRAIN	BTUH	WATTS	VOLTS/ PH	AMPS	
EBH-1	MARKEL 3900 SERIES MODEL '3910-48'	–	–	–	–	3413	1000	120/ 1	8.3	HYDRONIC ELECTRIC BASEBOARD HEATER PROVIDE W/ SINGLE POLE, IN-BUILT THERMOSTAT AND DISCONNECT SWITCH. HEATER SHALL BE IN COMMERCIAL BROWN.
LAV-2	JEFFCO MODEL '8300'	JEFFCO MODEL '570 FAUCET'	½"	½"	1 ¼"	–	–	–	–	BLACK FINISH, ACRYLIC WALL MOUNTED SHAMPOO BOWL W/ STRAINER, HEAD REST & MOUNTING BRACKET. PROVIDE FIXTURE WITH VACUUM BREAKER KIT (MODEL 388-VB), SPRAY HOSE (MODEL 561 HOSE) AND NECK REST. SINGLE LEVER FAUCET.
SH-1	FAIT PRODUCTS SEAGULL® MODEL '632'	SPEAKMAN SENTINAL-PRO™ MODEL 'SM-5010'	½"	½"	2"	–	–	–	–	32"x32" POLYPROPYLENE SHOWER STALL WITH ALUMINUM HAND-RAIL, ONE-PIECE FLOOR ASSEMBLY W/ INTEGRALLY MOLDED DRAIN BODY, STAINLESS STEEL STRAINER ASSEMBLY, AND PRE-DRILLED OPENINGS FOR VALVE ASSEMBLY. ANTI-SCALD THERMOSTATIC/ PRESSURE BALANCED SHOWER WITH 2 GPM WATER-SENSE® CERTIFICATION AND VANDAL-RESISTANT SHOWERHEAD.
SH-1	FAIT PRODUCTS CONNODORE® MODEL 'S-135'	SPEAKMAN SENTINAL-PRO™ MODEL 'SM-5460'	½"	½"	2"	–	–	–	–	32"x32" POLYPROPYLENE SHOWER STALL WITH WRAP AROUND STAINLESS GRAB BAR & FOLDING HANDICAP TRANSFER SEAT, ONE-PIECE FLOOR ASSEMBLY W/ INTEGRALLY MOLDED DRAIN BODY, STAINLESS STEEL STRAINER ASSEMBLY, AND PRE-DRILLED OPENINGS FOR VALVE ASSEMBLY. ANTI-SCALD THERMOSTATIC/ PRESSURE BALANCED SHOWER/BATH VALVE COMBINATION, INTEGRAL VOLUME CONTROL/DIVERTER, 2 GPM WATER-SENSE® CERTIFICATION AND VANDAL-RESISTANT SHOWERHEAD.
TB-1	AMERICAN STANDARD PRINCETON™ RECESS BATH MODEL '3290(1).202'	SPEAKMAN SENTINAL-PRO™ MODEL 'SM-5030'	½"	½"	2"	–	–	–	–	60"x30" TUB WITH ACID RESISTANT PORCELAIN FINISH, INTEGRAL APRON & TILING FLANGE, FULL SLIP-RESISANT COVERAGE & INTEGRAL BASE. ANTI-SCALD THERMOSTATIC/PRESSURE BALANCED SHOWER & BATH WITH VENDAL-RESISTANT SHOWERHEAD, DIVERTER TUB SPOUT 2 GPM WATER-SENSE® CERTIFICATION.

PLUMBING SPECIFICATIONS

1. DOMESTIC WATER PIPING:

A. PIPE FOR ABOVE GROUND USE SHALL BE ASTM B88 TYPE "L" SEAMLESS COPPER TUBE WITH SOLDER JOINT FITTINGS USING 95-5 SOLDER PER ASTM B32. ALL WATER DISTRIBUTION PIPING SHALL BE WATER RATED FOR NOT LESS THAN 100PSI @ 180°F. DIELECTRIC COUPLING SHALL BE USED WHERE DISSIMILAR METALS ARE JOINED. PIPING MATERIALS FOR USE ON DOMESTIC WATER SYSTEMS INCLUDING FIXTURES & VALVES SHALL NOT CONTAIN MORE THAN 8 PERCENT LEAD.
B. PRIOR TO DISINFECTION, POTABLE WATER PIPING SHALL BE FLUSHED WITH WATER UNTIL NO DIRTY WATER APPEARS AT THE POINTS OF OUTLETS.
C. POTABLE WATER PIPING SHALL BE DISINFECTED PRIOR TO USE PER INTERNATIONAL PLUMBING CODE. THE PIPING SHALL BE FILLED WITH A WATER CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE AND SHALL BE VALVED OFF FOR 24 HOURS OR FILLED WITH A WATER CHLORINE SOLUTION CONTAINING AT LEAST 200 PARTS PER MILLION OF CHLORINE AND ALLOWED TO STAND FOR AT LEAST 3 HOURS. FOLLOWING THE ALLOWED STANDING TIME, THE SYSTEM SHALL BE FLUSHED WITH POTABLE WATER UNTIL NO CHLORINE REMAINS IN THE SYSTEM. PROVIDE RESULTS OF DISINFECTION TO OWNER WHEN COMPLETE.
D. DOMESTIC WATER PIPE SHALL CONSIST OF A HYDROSTATIC PRESSURE TEST OF 25 PSIG ABOVE THE WORKING PRESSURE UNDER WHICH IT IS OPERATED FOR NOT LESS THAN 60 MINUTES.
E. IF LEAKS OCCUR DURING TESTING, REPAIRS SHALL BE MADE AND SYSTEM RETESTED UNTIL NO EVIDENCE OF LEAKS EXIST FOR THE DURATION OF THE TEST.
F. BALL VALVES SHALL BE EQUAL TO NIBCO / APOLLO. 3" AND SMALLER NFS RATED, FULL PORT, STAINLESS STEEL BALL.
G. SLEEVES SHALL BE INSTALLED THROUGH FLOORS AND FIRE RATED WALLS. SLEEVES SHALL BE 2 PIPE SIZES LARGER THAN PIPE PASSING THRU AND SHALL BE SCHEDULE 40 STEEL PIPE. PROVIDE FIRE PROOF SEAL BETWEEN PIPES AND SLEEVES WHEN PASSING THRU FIRE RATED WALLS/FLOORS. SLEEVES PASSING THRU FLOORS SHALL BE EXTENDED 4" ABOVE FLOOR.

H. ESCUTCHEON PLATES SHALL BE PROVIDED ON ALL PIPE WHICH PASS THROUGH WALL PARTITIONS, FLOORS OR CEILINGS. PLATES SHALL BE ONE PIECE, CHROME FINISHED BRONZE.

I. DIELECTRIC COUPLING SHALL BE USED WHERE DISSIMILAR METALS ARE JOINED.

5. SANITARY, WASTE & VENT PIPING:

A. SANITARY WASTE AND VENT PIPE & FITTINGS SHALL BE SERVICE WEIGHT HUBLESS CAST IRON ASTM A-888, WITH HUBLESS COUPLING GASKETS IN ACCORDANCE WITH ASTM C564 & CISPI-301 FOR ABOVE GROUND AND HUB AND SPIGOT PIPE & FITTINGS ASTM A-74, WITH COMPRESSION TYPE GASKETS PER ASTMC-564 FOR BELOW SLAB.
B. SANITARY WASTE & VENT PIPE SHALL BE AIR TESTED TO NOT LESS THAN 5 PSIG PRESSURE IN THE SYSTEM. PIPING SYSTEM SHALL SUSTAIN A CONSTANT PRESSURE FOR NOT LESS THAN 15 MINUTES.
C. DRAINAGE SPECIALTIES (CLEAN OUTS) SHALL BE FROM A SINGLE MANUFACTURER AS NOTED IN THE PLUMBING FIXTURE SCHEDULE OR APPROVED EQUAL. CONTRACTOR SHALL COORDINATE TOP SHAPE FOR FLOOR DRAINS AND CLEAN OUTS WITH FINAL FLOOR FINISHES. IN GENERAL, PROVIDE SQUARE TOPS IN TILE FLOORS, AND ROUND TOPS IN OTHER AREAS.
D. IN THE REMOVAL OF ANY PART OF A DRAINAGE SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEAN-OUT SO AS TO BE ACCESSIBLE.
E. CLEANOUTS SHALL BE TYLER PIPE CLEANOUT BODY STANDARD FERRULE 2-11 WITH TYPE "B" BRASS PLUG FOR ABOVE FLOOR. FLOOR CLEANOUTS SHALL BE JR SMITH SERIES 4020 W/ROUND ADJUSTABLE BRONZE TOP. GRADE CLEANOUTS SHALL BE JR SMITH SERIES 4250. WALL CLEANOUTS SHALL BE JR SMITH FIGURE 4402. CLEANOUTS SHALL BE INSTALLED AT BASE OF EACH RISER, AT EACH CHANGE OF DIRECTION OF HORIZONTAL RUN MORE THAN 45°, AND EVERY 75' OF HORIZONTAL RUN (FOR 4"DIA) AND EVERY 100' OF HORIZONTAL RUN(FOR 5"DIA & LARGER).

6. HANGERS & SUPPORTS:

A. HANGERS AND ANCHORS SHALL BE SECURELY ATTACHED TO BUILDING CONSTRUCTION AT SUFFICIENTLY CLOSE INTERVALS TO SUPPORT PIPING AND ITS CONTENTS.
   1. VERTICAL PIPING FOR CAST IRON SHALL BE SUPPORTED AT BASE AND AT EACH STORY HEIGHT.
   2. VERTICAL PIPING FOR COPPER SHALL BE SUPPORTED AT EACH STORY HEIGHT BUT NOT MORE THAN 10 FOOT INTERVALS.
   3. HORIZONTAL PIPING FOR CAST IRON SHALL BE SUPPORTED WITH MINIMUM ONE HANGER LOCATED WITHIN 18" OF EACH JOINT, AT CHANGES IN DIRECTION, AND AT EACH BRANCH CONNECTION. WHERE PIPE IS SUSPENDED BY NON-RIGID HANGERS MORE THAN 18" LONG PROVIDE LATERAL SUPPORT.
   4. HORIZONTAL PIPING FOR COPPER SHALL BE SUPPORTED AT 6 FOOT INTERVALS FOR PIPE SIZES 1-1/4" AND SMALLER AND AT 10 FOOT INTERVALS FOR PIPE SIZES 1-1/2" AND LARGER. WHERE PIPE IS SUSPENDED BY NON-RIGID HANGERS MORE THAN 18" LONG PROVIDE LATERAL SUPPORT.
   5. HORIZONTAL PIPING FOR STEEL SHALL BE SUPPORTED AT 10 FOOT INTERVALS FOR PIPE SIZES 1-1/4" AND SMALLER AND AT 10 FOOT INTERVALS FOR PIPE SIZES 1-1/2" AND LARGER. WHERE PIPE IS SUSPENDED BY NON-RIGID HANGERS MORE THAN 18" LONG PROVIDE LATERAL SUPPORT.
B. ALL SUPPORTS COMING IN CONTACT WITH COPPER PIPING SHALL BE PLASTIC COATED.
C. INSTALL METAL SHIELDS ON HANGERS SUPPORTING INSULATED PIPE.
D. PROVIDE HANGERS THAT ARE U.L. LISTED AND LABELED.
E. ALL DOMESTIC WATER, STORM & SANITARY WASTE PIPE SUPPORTS SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (IPC) ADOPTED BY AUTHORITY HAVING JURISDICTION.
F. PLUMBING SYSTEMS SHALL BE INSTALLED SO AS TO PREVENT STRAINS & STRESSES WHICH WILL EXCEED STRUCTURAL STRENGTH OF PIPE. PROVISIONS SHALL BE MADE FOR EXPANSION & CONTRACTION OF PIPING.
G. LONG RUNS OF DOMESTIC WATER PIPING SHALL BE SECURED TO AVOID MOVEMENT DUE TO PRESSURE FLUCTUATIONS (WATER HAMMER).

7. PIPE INSULATION:

A. ALL DOMESTIC WATER PIPING (HW & CW) SHALL BE INSULATED.
B. PRIOR TO INSULATING, PIPING SHALL BE HYDROSTATICALLY TESTED AT 100 PSIG WITH NO LOSS OF PRESSURE FOR THREE HOURS.
C. INSULATION SHALL CARRY THROUGH ALL PENETRATIONS AND PIPE SUPPORTS.
D. PROVIDE GALVANIZED METAL SHIELDS FORMED TO FIT THE INSULATION BETWEEN SUPPORT AND FINISHED INSULATIONS.
E. CLOSED-CELL ELASTOMERIC PIPE INSULATION SHALL REQUIREMENTS AS DEFINED IN ASTM C 534. INSULATION MATERIAL SHALL BE MANUFACTURED WITHOUT THE USE OF CFC'S, HFC'S OR HCFC'S. IT IS ALSO FORMALDEHYDE FREE, LOW VOC'S, FIBER FREE, DUST FREE AND RESISTS MOLD AND MILDEW.MATERIALS SHALL HAVE A MAXIMUM WATER VAPOR TRANSMISSION OF 0.08 PERM-INCHES WHEN TESTED IN ACCORDANCE WITH ASTM E 96, PROCEDURE A, LATEST REVISION. INSULATION SHALL BE SIMILAR TO K-FLEX 'INSUL-TUBE' . ACCEPTABLE MANUFACTURERS: ARMCELL, K-FLEX AND NOMACO.
F. INSULATION THICKNESS:
   1. DOMESTIC HOT WATER SUPPLY: 1" THICK
   2. DOMESTIC COLD WATER SUPPLY: 1/2" THICK
H. INSULATION SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
I. INSULATION MUST BE FIRE RATED FOR FLAME SPREAD OF 25 OR LESS AND SMOKE DEVELOPED OF 50 OR LESS.
J. ALL VALVES, INCLUDING BUT NOT LIMITED TO STRAINERS, AUTOFLOW VALVES, CIRCUIT SETTERS, BALL VALVES, BALANCING VALVES AND COMBINATION VALVES, ETC., IN CHILLED WATER AND HEATING HOT WATER SYSTEMS, SHALL BE INSULATED WITH A FACTORY FABRICATED REMOVABLE AND REUSABLE COVER. INSULATION SHALL HAVE A MINIMUM K-FACTOR OF 0.26, USING FIBERGLASS BLANKET. FLAME AND SMOKE SPREAD SHALL BE 25/50 PER ASTM E-84. OUTER JACKET SHALL BE MADE OF MATERIAL EQUAL TO DUPONT-TYCHEMA 'QC', OVERLAPPING AND COMPLETELY COVERING THE INSULATION WITH SEAMS JOINED BY TABS MADE FROM HOOK AND LOOP FASTENERS (VELCRO). BUTT ENDS SHALL HAVE SEWN-IN-PLACE ELASTIC. OUTER JACKET SHALL OVERLAP ADJOINING SECTIONS OF PIPE INSULATION. INSTALLATION SHALL NOT REQUIRE THE USE OF ANY SPECIAL HAND TOOLS. MANUFACTURERS: NO SWEAT VALVE WRAPS, INC., OR APPROVED EQUAL.

8. CONTINUITY OF EXISTING SYSTEMS AND SERVICES

A. ALL WORK SHALL BE PERFORMED AT SUCH TIME AND IN SUCH MANNER AS WILL LEAST INTERFERE WITH MAINTENANCE AND OPERATION OF OWNER'S ACTIVITIES. PROVISIONS SHALL BE MADE TO PERMIT OWNER'S USE OF ALL THE BUILDING AND OF EXISTING SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY FACILITIES TO SECURE THESE CONDITIONS. REMOVE TEMPORARY FACILITIES WHEN PERMANENT WORK HAS BEEN PLACED INTO SERVICE.
B. FULLY COORDINATE WITH OWNER AND ALL OTHER TRADES, ALL WORK INVOLVING SHUT-DOWN AND INTERRUPTION OF EXISTING SYSTEMS AND SERVICE.
C. SHUT-DOWN OF EXISTING SERVICES WHERE REQUIRED TO INSTALL NEW SYSTEMS OR ALTER EXISTING, SHALL BE PERFORMED DURING HOURS THAT THE BUILDING IS NOT BEING USED BY OWNER. ALL COSTS FOR PERFORMING THIS WORK SHALL BE BORNE BY THE CONTRACTOR AND WITHOUT "EXTRA" COST TO THE OWNER.
D. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED, BUT ARE TO REMAIN IN USE, SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.
E. FULLY COORDINATE WITH ARCHITECT, OWNER AND OTHER TRADES TO INSURE COMPLETE CONTINUITY OF ALL SYSTEMS AND SERVICES.

9. LABELING & IDENTIFICATION:

A. IDENTIFY EACH VALVE IN ALL SYSTEMS WITH BLACK, NUMBERED AND STAMPED 1-½" BRASS OR ALUMINUM TAGS FASTENED TO VALVE BY BRASS CHAIN AND S-HOOK.
B. PIPING IDENTIFICATION: IDENTIFY PIPING WITH SETON "SETMARK" OR BRIMAR, SEMI-RIGID PLASTIC, WRAPAROUND PIPE MARKERS WITH FLOW ARROWS AND CONFORMING TO ANSI A13.1. LOCATE MARKER AT EACH VALVE, CHANGES IN DIRECTION, WHERE PIPES PASS THRU BARRIERS AND EVERY 25' OF HORIZONTAL RUNS. LETTERING ON BACKGROUND SHALL BE IN ACCORDANCE WITH THE FOLLOWING COLORS:
BACKGROUND: GREEN LETTING: WHITE
COLD WATER
BACKGROUND: YELLOW LETTING: BLACK
HOT WATER
C. ACCEPTABLE MANUFACTURERS: SETON "SETMARK", BRIMAR, B-LINE MSI.

10.CLOSE-OUT :

A. UPON COMPLETION OF THE CONTRACT THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (3) COMPLETE SETS OF MANUFACTURERS' OPERATING, MAINTENANCE AND PREVENTIVE MAINTENANCE INSTRUCTIONS (IN BOUND BOOK FORM) INCLUDING PARTS LISTS AND COMPLETE PROCUREMENT INFORMATION INCLUDING EQUIPMENT NUMBERS AND DESCRIPTIONS. OPERATING STAFF PERSONS SHALL BE INSTRUCTED IN PROPER OPERATING AND SERVICE REQUIREMENTS OF THE SYSTEMS AND EQUIPMENT.

SYMBOL LEGEND:

	POINT OF CONNECTION
	POINT OF DISCONNECTION
	AREA OF DEMOLITION
— — —	DEMOLITION WORK
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
BLW	BELOW
BTUH	BRITISH THERMAL UNITS PER HOUR
CLG	CEILING
CW	COLD WATER – DOMESTIC
(D)	DEMOLISH AND REMOVE
DN	DOWN
(E)	EXISTING TO REMAIN
ELEC	ELECTRICAL
ELEV	ELEVATION
FLR	FLOOR
FD	FLOOR DRAIN
FT	FEET
H	HIGH
HW	HOT WATER SUPPLY – DOMESTIC
IN	INCHES
LBS	POUNDS (WEIGHT)
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NIC	NOT IN CONTRACT
SAN	SANITARY
S/C	SERVICE CLEARANCE
TYP	TYPICAL
V	VENT
W	WASTE
W/	WITH

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LYDIA P. LAWS RESIDENCE HALL
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DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12

REVISIONS

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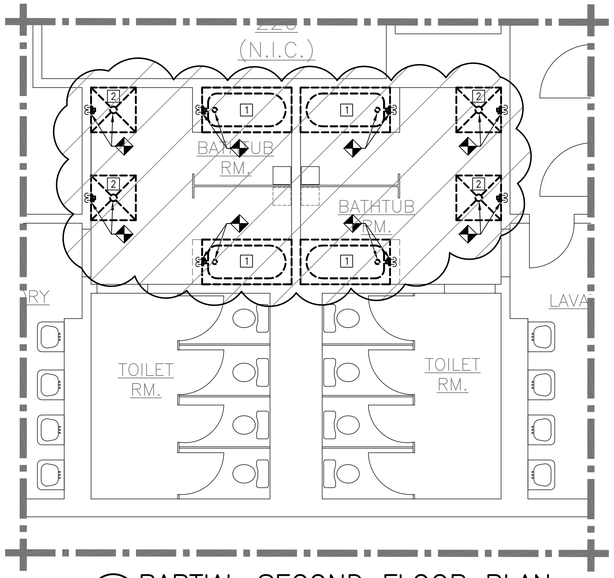

4 PD1 PARTIAL SECOND FLOOR PLAN
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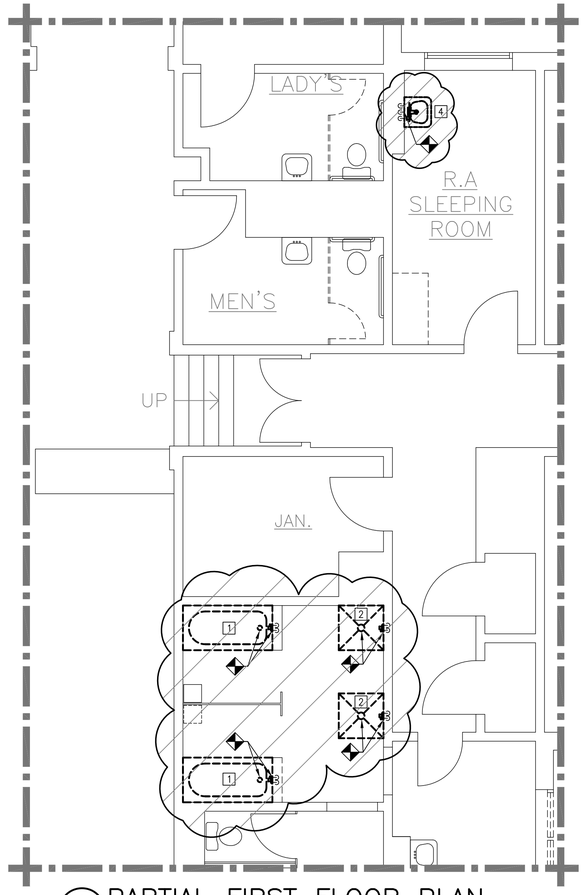

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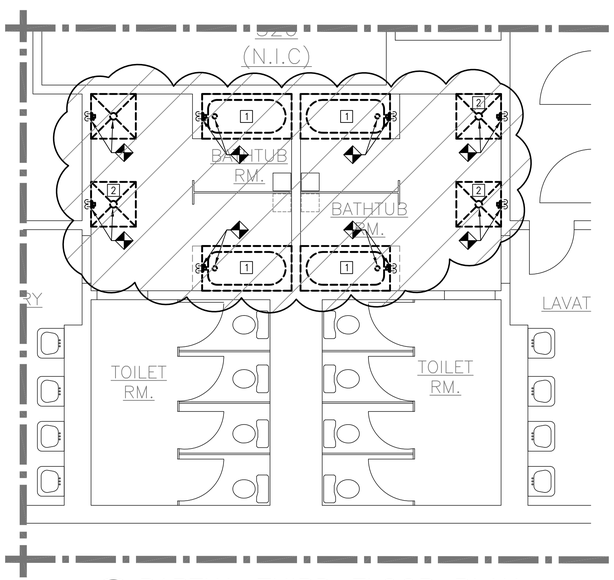

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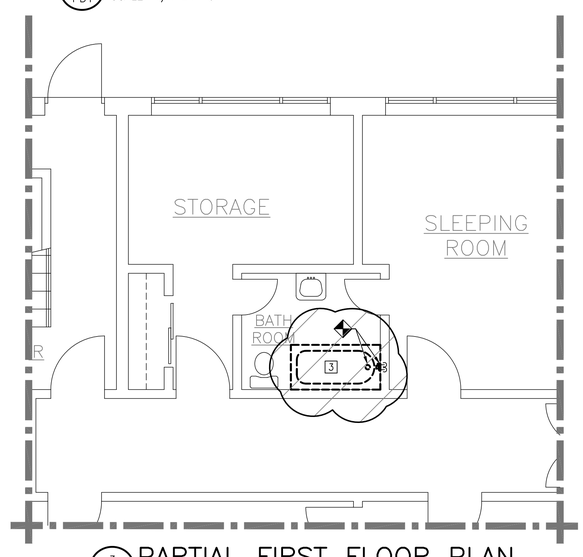

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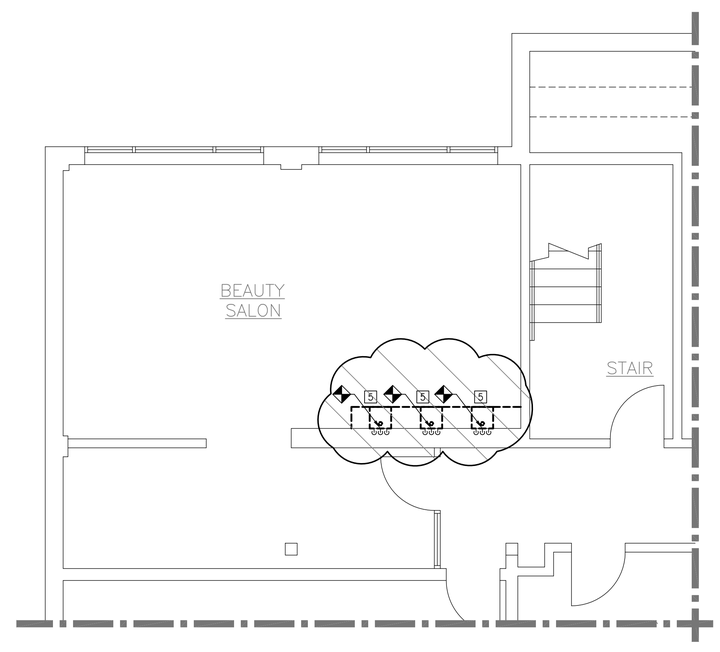

1 PD1 PARTIAL BASEMENT PLAN
SCALE: 1/4"=1'-0"

SHEET NOTES:

GENERAL:
- CONTRACTOR SHALL FIELD VERIFY ALL PIPING CONFIGURATIONS AND LAYOUT.
- CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR ALL ACCESS REQUIRED FOR PROJECT.
- ALL DEMOLITION WORK SHALL BE COORDINATE WITH CONSTRUCTION PLANS.

1 REMOVE TUB BASIN, ASSOCIATED TUB VALVE ASSEMBLY & TUB SPOUT COMPLETELY.
- DISCONNECT & SAFE-OFF (E)HW SUPPLY, (E)CW SUPPLY FOR RE-USE.
- DISCONNECT & SAFE-OFF (E)SANITARY DRAIN FOR RE-USE.
- PROVIDE ALL CUTTING & PATCHING OF EXISTING WALLS AND FLOORS REQUIRED FOR WORK. ALL PATCHING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND MATCH EXISTING FINISH.

2 REMOVE SHOWER STALL, ASSOCIATED SHOWER VALVE ASSEMBLY & SHOWER HEAD COMPLETELY.
- DISCONNECT & SAFE-OFF (E)HW SUPPLY, (E)CW SUPPLY FOR RE-USE.
- DISCONNECT & SAFE-OFF (E)SANITARY DRAIN FOR RE-USE.
- PROVIDE ALL CUTTING & PATCHING OF EXISTING WALLS AND FLOORS REQUIRED FOR WORK. ALL PATCHING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND MATCH EXISTING FINISH.

3 REMOVE TUB BASIN, ASSOCIATED TUB VALVE ASSEMBLY & TUB SPOUT COMPLETELY.
- CAP & SEAL (E)HW SUPPLY, (E)CW SUPPLY WATER TIGHT IN (E)WALL.
- PLUG & SEAL (E)SANITARY DRAIN FOR IN (E)FLOOR.
- PATCH ALL OPENING TO MATCH EXISTING FINISH AND IN COORDINATION WITH THE GENERAL CONTRACTOR.

4 REMOVE SINK & ASSOCIATED FAUCET ASSEMBLY COMPLETELY.
- CAP & SEAL (E)HW SUPPLY, (E)CW SUPPLY WATER TIGHT IN (E)WALL.
- PLUG & SEAL (E)SANITARY DRAIN FOR IN (E)WALL.
- PATCH ALL OPENING TO MATCH EXISTING FINISH AND IN COORDINATION WITH THE GENERAL CONTRACTOR.

5 REMOVE COUNTER-TOP SALON SINK & ASSOCIATED FAUCET COMPLETELY.
- DISCONNECT & SAFE-OFF (E)HW SUPPLY, (E)CW SUPPLY AT (E)WALL VALVES. (E)WALL VALVES SHALL REMAIN FOR RE-USE.
- REMOVE DRAIN PIPING AND TRAP TO (E)WALL AND SAFE-OFF FOR RE-USE.
- COMPLETELY REMOVE COUNTER-TOP IN COORDINATION WITH GENERAL CONTRACTOR.
- PATCH ALL OPENING TO MATCH EXISTING FINISH AND IN COORDINATION WITH THE GENERAL CONTRACTOR.

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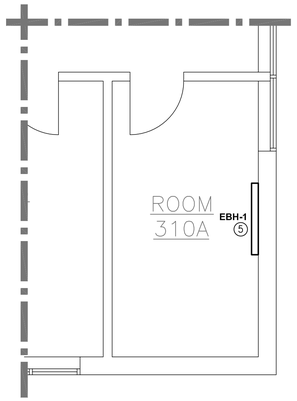

5 / P1 PARTIAL THIRD FLOOR PLAN
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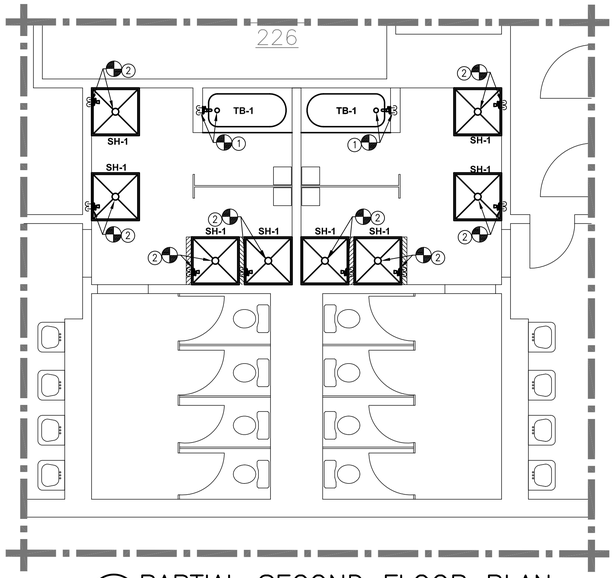

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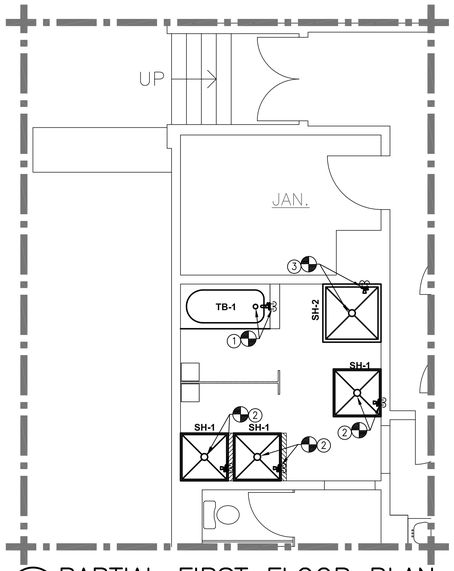
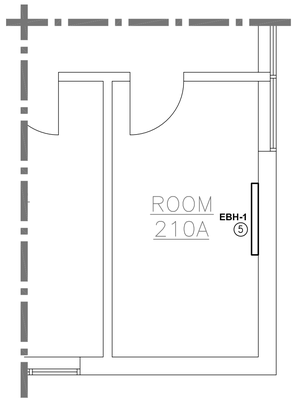


2 / P1 PARTIAL FIRST FLOOR PLAN
SCALE: 1/4"=1'-0"

SHEET NOTES:

GENERAL:
- PROVIDE ALL SUPPORTS, ANCHORS, CARRIER ADJUSTMENTS, ETC. REQUIRED FOR MOUNTING NEW FIXTURES. PROVIDE PATCHING OF ALL HOLE CREATED DURING DEMOLITION AND INSTALL TO MATCH EXISTING.

1. RECONNECT (E)½"HW, (E) ½"CW & (E)2" DRAIN TO FIXTURE, TB-1 AS REQUIRED.
   - INSTALL FIXTURE IN ACCORDANCE TO MANUFACTURER REQUIREMENTS.
   - PROVIDE ALL PIPING FROM VALVE TO SPOUT AND SHOWER HEAD.
   - PROVIDE ALL CUTTING & PATCHING OF EXISTING WALLS AND FLOORS REQUIRED FOR WORK. ALL PATCHING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND MATCH EXISTING FINISH.
2. RECONNECT (E)½"HW, (E) ½"CW & (E)2" DRAIN TO FIXTURE, SH-1 AS REQUIRED.
   - INSTALL FIXTURE IN ACCORDANCE TO MANUFACTURER REQUIREMENTS.
   - PROVIDE ALL PIPING FROM VALVE TO SHOWER HEAD.
   - PROVIDE ALL CUTTING & PATCHING OF EXISTING WALLS AND FLOORS REQUIRED FOR WORK. ALL PATCHING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND MATCH EXISTING FINISH.
3. RECONNECT (E)½"HW, (E) ½"CW & (E)2" DRAIN TO FIXTURE, SH-2 AS REQUIRED.
   - INSTALL FIXTURE IN ACCORDANCE TO MANUFACTURER REQUIREMENTS.
   - PROVIDE ALL PIPING FROM VALVE TO SHOWER HEADS.
   - PROVIDE ALL CUTTING & PATCHING OF EXISTING WALLS AND FLOORS REQUIRED FOR WORK. ALL PATCHING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND MATCH EXISTING FINISH.
4. PROVIDE PROPER SUPPORT AND SECURE FIXTURE. LAV-1 TO (E)WALL WITH MANUFACTURER FURNISHED WALL BRACKET.
   - RECONNECT (E) ½"HW AND (E) ½"CW WITH FLEXIBLE STAINLESS STEEL HOSE.
   - RECONNECT 1-¼" DRAIN & TRAP TO (E)WALL DRAIN WITH NICKEL PLATED FITTINGS. DRAIN TRAP SHALL BE ZURN NICKEL PLATE HAIR TRAP OR APPROVED SUBSTITUTION.
5. MOUNTED AND SECURE TO FLOOR/ WALL AS REQUIRED BY MANUFACTURER.
   - COORDINATE FINAL LOCATION WITH ELECTRICAL CONTRACTION.



6 / P1 PARTIAL SECOND FLOOR PLAN
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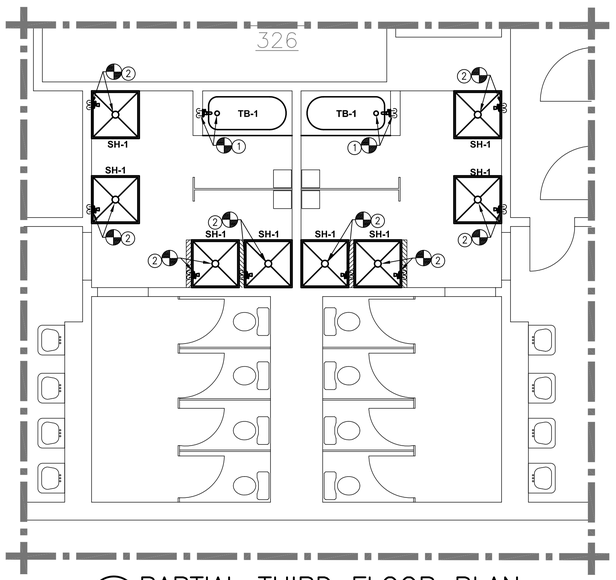

4 / P1 PARTIAL THIRD FLOOR PLAN
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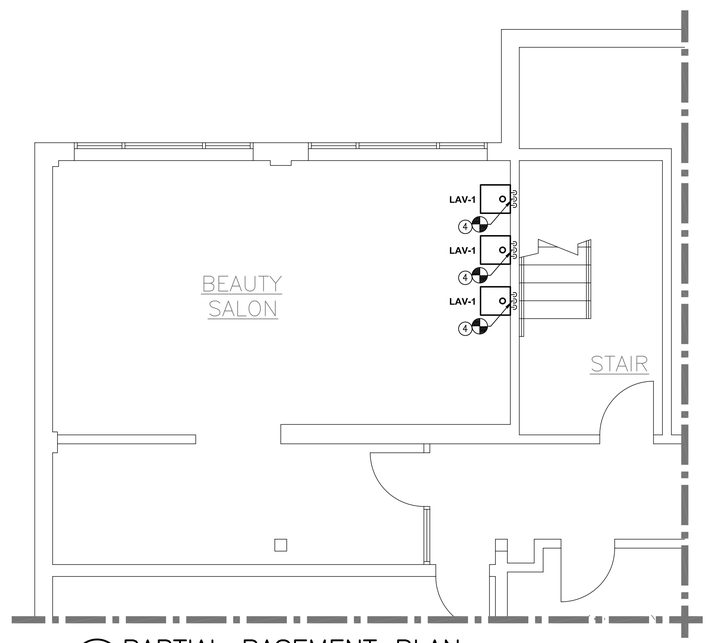

1 / P1 PARTIAL BASEMENT PLAN
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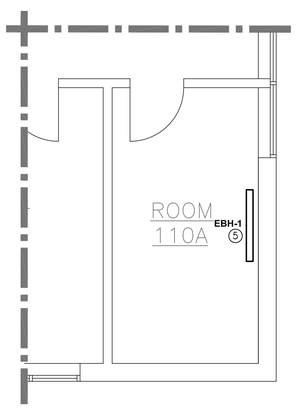

7 / P1 PARTIAL FIRST FLOOR PLAN
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PART 1 GENERAL WIRING METHODS:

A. ELECTRICAL METALLIC TUBING (E.M.T.)

1. MAY BE USED ANYWHERE IN DRY LOCATIONS FOR FEEDERS, AND BRANCH CIRCUITS 480 VOLTS AND UNDER TO GROUND.
2. SHALL NOT BE INSTALLED IN WET OR DAMP LOCATIONS. ALL FEEDERS AND BRANCH CIRCUITS ON THE EXTERIOR OF THE BUILDING SHALL BE INSTALLED WITHIN GALVANIZED RIGID STEEL CONDUIT.
3. ALL FITTINGS SHALL BE COMPRESSION LOCKING RING TYPE. SET SCREW FITTINGS ARE NOT PERMITTED.
4. ALL BOX CONNECTORS SHALL BE THE INSULATED THROAT TYPE.
5. AN INTERNAL EQUIPMENT GROUND SHALL BE RUN WITHIN ALL ELECTRICAL METALLIC TUBING.

B. TYPE M.C. METAL CLAD CABLE

1. TYPE M.C. CABLE MAY BE USED ON A LIMITED BASIS AS FOLLOWS:
   - A. TYPE M.C. CABLE MAY BE USED FOR POWER DROPS TO RECEPTACLES NOT EXCEEDING 30 AMPS, 208 VOLTS BETWEEN PHASE CONDUCTORS, AND 120 VOLTS TO GROUND. IT SHALL NOT BE USED FOR ANY 480 VOLT PHASE TO PHASE BRANCH CIRCUITS. IT SHALL BE PERMITTED FOR 277 VOLT SWITCH LOOP DROPS AND 6FT POWER WHIPS TO LIGHT FIXTURES AS DESCRIBED BELOW.
   - B. M.C. CABLE SHALL ONLY BE USED FOR VERTICAL DROPS TO WITHIN WALL VOIDS WHERE CONCEALED. M.C. CABLE IS NOT PERMITTED ABOVE CEILINGS, EXCEPT FOR LIGHTING POWER WHIPS AND WHERE THE CABLE EXITS AN ABOVE CEILING JUNCTION BOX.
   - C. CONDUCTORS FOR ALL BRANCH CIRCUIT WIRING SHALL BE CONTAINED WITHIN CONDUIT ABOVE THE CEILING AND RUN TO AN ABOVE CEILING JUNCTION BOX THAT IS TO BE LOCATED NEAR THE WIRING DEVICE. A VERTICAL M.C. CABLE DROP SHALL BE INSTALLED FROM THE JUNCTION BOX TO THE WIRING DEVICE. M.C. CABLE SHALL TERMINATE IN A JUNCTION BOX WITHIN 5 FEET FROM WHERE IT EXITS THE WALL AND ENTERS THE CEILING SPACE. IF THE JUNCTION BOX CANNOT BE INSTALLED DUE TO OBSTRUCTIONS, THEN A MAXIMUM LENGTH OF 15 FEET SHALL BE PERMITTED. VERTICAL M.C. CABLE DROPS SHALL NOT BE PERMITTED TO BE LONGER THAN 20 CABLE FEET LONG AND SHALL BE SUPPORTED IN ACCORDANCE WITH CODE. WHERE TWO OR MORE WIRING DEVICES ARE INDICATED TO BE ON THE SAME BRANCH CIRCUIT, IT WILL BE PERMITTED TO RUN M.C. CABLE FROM ONE RECEPTACLE TO THE NEXT RECEPTACLE/S, WHERE CONCEALED WITHIN WALL VOIDS.
   - D. M.C. CABLE SHALL NOT BE INSTALLED ANYWHERE IT WILL BE EXPOSED. IT SHALL NOT BE USED IN MECHANICAL OR ELECTRICAL ROOMS. IT SHALL NOT BE INSTALLED IN WET OR DAMP AREAS.
   - E. M.C. CABLE SHALL BE PERMITTED FOR VERTICAL DROPS DOWN TO LIGHT SWITCHES. M.C. CABLE SHALL TERMINATE IN A JUNCTION BOX WITHIN 5 FEET FROM WHERE IT EXITS THE WALL AND ENTERS THE CEILING SPACE. IF THE JUNCTION BOX CANNOT BE INSTALLED DUE TO OBSTRUCTIONS, THEN A MAXIMUM LENGTH OF 15 FEET SHALL BE PERMITTED.
   - F. M.C. CABLE MAY BE USED FOR POWER WHIPS FROM ABOVE CEILING JUNCTION BOXES LIGHT FIXTURES NOT EXCEEDING 6 FEET OF CABLE.
   - G. M.C. CABLE SHALL, AT NO POINT, COME IN CONTACT WITH A DROPPED CEILING.
   - H. WHERE M.C. CABLE IS USED TO FEED AN ISOLATED GROUND RECEPTACLE, TWO SEPARATE EQUIPMENT GROUNDS MUST BE CONTAINED WITHIN THE THE CABLE. THE ARMORED JACKET OF THE CABLE IS NOT TO BE USED AS AN EQUIPMENT GROUND.
   - I. BOX CONNECTORS USED ON M.C. CABLE SHALL BE OF THE TYPE LISTED FOR M.C. CABLE. INTEGRAL BOX CLAMPS SHALL NOT BE PERMITTED.
   - J. EXPOSED PORTIONS OF M.C. CABLE ABOVE A DROP CEILING SHALL BE SUPPORTED AT 6 FOOT MAXIMUM INTERVALS USING "CADDY" BRIDLE OR M.C. CABLE SUPPORTS.
   - K. ALL M.C. CABLE SHALL HAVE A <u>STEEL</u> OR <u>ALUMINUM</u> ARMORED JACKET. JACKET SHALL ONLY BE CUT WITH TOOLS SPECIFICALLY DESIGNED TO CUT M.C. CABLE.
   - L. PROVIDE PLASTIC ANTI-SHORT BUSHINGS ON ENDS OF ALL M.C. CABLE.
   - M. FITTING USED FOR THE CONNECTING TYPE MC CABLE TO BOXES, CABINETS OR OTHER EQUIPMENT SHALL BE LISTED AND IDENTIFIED FOR SUCH USE. NO SNAP IN CONNECTORS OR INTERNAL BOX CLAMP PERMITTED. ALL CONNECTORS MUST BE THE LOCKNUT TYPE, DESIGNED TO SECURE CONNECTOR TO A BOX OR ENCLOSURE.

C. FLEXIBLE METAL CONDUIT

1. MAY BE USED IN LIEU OF AND UNDER THE SAME CONDITIONS AS TYPE M.C. CABLE. WHERE THE SOLE PURPOSE OF THE CONDUIT IS TO MAKE A FLEXIBLE CONNECTION TO A MOVING OR VIBRATING LOAD, THE LENGTH OF THE CONDUIT SHALL BE LIMITED TO 18 INCHES.
2. AN INTERNAL EQUIPMENT GROUND IS TO BE RUN WITHIN ALL FLEXIBLE METAL CONDUIT. THE JACKET SHALL NOT BE PERMITTED TO BE THE SOLE EQUIPMENT GROUND.
3. FITTING USED FOR THE CONNECTING FLEXIBLE METAL CONDUIT (GREENFIELD) TO BOXES, CABINETS OR OTHER EQUIPMENT SHALL BE LISTED AND IDENTIFIED FOR SUCH USE. NO SNAP IN CONNECTORS OR INTERNAL BOX CLAMP PERMITTED. ALL CONNECTORS MUST BE THE LOCKNUT TYPE, DESIGNED TO SECURE CONNECTOR TO A BOX OR ENCLOSURE.

D. WATER TIGHT FLEXIBLE METAL CONDUIT

1. SHALL BE USED FOR ALL FLEXIBLE CONNECTIONS REQUIRED ON THE EXTERIOR OF THE BUILDING.
2. SHALL BE USED FOR CONNECTIONS TO ALL MOTORS, REGARDLESS OF WHETHER THE MOTOR IS LOCATED INSIDE OR OUTSIDE OF THE BUILDING. LENGTH OF FLEXIBLE CONNECTION SHALL NOT EXCEED 18 INCHES. AN INTERNAL EQUIPMENT GROUND SHALL BE CARRIED WITH ALL FLEXIBLE METAL CONDUIT. THE ARMORED JACKET OF THE CABLE IS NOT TO BE THE SOLE EQUIPMENT GROUND.
3. ALL CONNECTORS USED SHALL BE WATER TIGHT AND OF THE TYPE LISTED FOR USE WITH WATERTIGHT FLEXIBLE METAL CONDUIT.
4. AN INTERNAL EQUIPMENT GROUND SHALL BE RUN WITHIN ALL WATER TIGHT FLEXIBLE METAL CONDUIT. THE ARMOR OF THE CABLE JACKET SHALL NOT BE PERMITTED TO BE THE SOLE EQUIPMENT GROUND.

E. GALVANIZED RIGID STEEL CONDUIT (GRS)

1. MAY BE USED ANYWHERE AS PERMITTED OR REQUIRED BY CODE, AND SHALL BE INSTALLED WHERE SPECIFICALLY INDICATED ON PLANS.
2. WHERE USED FOR UNDERGROUND WORK, IT SHALL BE OF THE TYPE LISTED FOR UNDERGROUND INSTALLATION.
3. ALL CONDUIT THAT TERMINATES WITHIN ANY EQUIPMENT ENCLOSURE SHALL HAVE INSULATED BUSHINGS INSTALLED.
4. WHERE INDICATED ON PLANS AND AS REQUIRED BY CODE, PROVIDE INSULATED GROUNDING TYPE BUSHINGS FOR BONDING ENCLOSURE CABINETS TO THE CONDUIT SYSTEM.
5. AN INTERNAL EQUIPMENT GROUND SHALL BE RUN WITHIN ALL GALVANIZED RIGID CONDUIT.

APPLICABLE CODES	
ELECTRICAL	NFPA 70 – NATIONAL ELECTRICAL CODE 2009
LIFE SAFETY	NFPA 101 – LIFE SAFETY CODE 2009
ENERGY	INTERNATIONAL ENERGY CONSERVATION CODE – IECC 2009
–	DELAWARE STATE FIRE PREVENTION REGULATIONS – DSFPR 2009
OTHER	SEE THE SPECIFICATIONS

PART 2 GENERAL NOTES AND CONDITIONS:

A. UNLESS SPECIFICALLY INDICATED AS EQUIPMENT FURNISHED BY THE CONSTRUCTION MANAGER, ALL ELECTRICAL EQUIPMENT FOR THIS PROJECT SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL EQUIPMENT SUBMISSIONS (SHOP DRAWINGS), EQUIPMENT ARRIVAL SCHEDULING, INSTALLATION SCHEDULING WITH THE CONSTRUCTION MANAGER, EQUIPMENT REMOVAL FROM DELIVERY VEHICLES, PROVIDING SUITABLE TEMPORARY STORAGE OF EQUIPMENT (OFF SITE) UNTIL EQUIPMENT CAN BE INSTALLED, PROVIDING LIFTING EQUIPMENT TO SET EQUIPMENT, ERECTION AND ASSEMBLY OF EQUIPMENT AND TESTING.

B. UNLESS INDICATED OTHERWISE, ALL LIGHTING BRANCH CIRCUIT WIRING SHALL BE 2 #12 WITH A #12 GREEN INSULATED GROUND IN CONDUIT NOT LESS THAN 3/4 INCH MINIMUM SIZE. TYPE M.C. CABLE SHALL BE PERMITTED FOR SWITCH DROPS AND FIXTURE POWER WHIPS IN ACCORDANCE WITH PART 1, PARAGRAPH B ABOVE. ALL LIGHT FIXTURES SHALL BE CONNECTED DIRECTLY TO AN ABOVE CEILING JUNCTION BOX. DAISY CHAIN CONNECTION OF LIGHT FIXTURES IS NOT PERMITTED.

C. UNLESS INDICATED OTHERWISE, ALL POWER BRANCH CIRCUIT WIRING TO 125 VOLT RECEPTACLES, 20 AMPS AND UNDER, SHALL BE 2 #12 WITH A #12 GREEN INSULATED GROUND IN CONDUIT 3/4 INCH MINIMUM SIZE OR EQUAL TYPE M.C. CABLE WHERE PERMITTED IN PART 1, PARAGRAPH B.

D. ALL FIRE ALARM SIGNALING SYSTEMS WORK ON THIS PROJECT SHALL BE ACCOMPLISHED BY OTHERS AND IS NOT PART OF THE ELECTRICAL CONTRACT.

E. ALL VOICE/DATA CABLE WORK ON THIS PROJECT SHALL BE ACCOMPLISHED BY OTHERS AND IS NOT PART OF THE ELECTRICAL CONTRACT.

F. COORDINATE ALL WORK WITH OTHER TRADES INVOLVED IN THIS PROJECT AND THE CONSTRUCTION MANAGER.

G. KEEP WORK AREA CLEAN AND ORDERLY.

H. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY, AND SHALL FOLLOW DELAWARE STATE UNIVERSITY SAFETY RULES AND CONDITIONS FOR CONTRACTORS.

I. THE CONTRACTOR SHALL MAKE AN ON SITE SURVEY TO DETERMINE THE FULL SCOPE OF WORK, AND EXISTING SITE CONDITIONS, BEFORE SUBMITTING A PROPOSAL.

J. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION AND ROUGHING IN DIMENSIONS OF ALL EQUIPMENT AND SHALL MAKE ALL FINAL CONNECTIONS AS REQUIRED, I.E., POWER, CONTROL, INTERLOCK, ETC.

K. ALTHOUGH ALL BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED. THERE SHALL BE NO COMMON NEUTRALS.

L. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.

M. DRAWINGS ARE DIAGRAMMATIC ONLY: EXACT LOCATION, MOUNTING HEIGHTS OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED WITH THE EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL WALL/FLOOR OUTLETS AND LIGHTING FIXTURES.

N. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY SUPPORTS AND HARDWARE FOR MOUNTING OF ELECTRICAL EQUIPMENT INCLUDED IN THIS PROJECT. MOUNTING HEIGHTS AND RESTRICTIONS AS PER N.E.C.

O. PROVIDE PADLOCK LOCKOUT DEVICES ON ALL CIRCUIT BREAKERS.

P. ALL FUSES FOR ALL EQUIPMENT SHALL BE BUSSMANN LOW PEAK TYPE RK-1. EXCLUDES CONTROL TRANSFORMER FUSES.

Q. <u>MOTOR TERMINATIONS SHALL BE MADE</u> USING T&B COLOR KEYED COMPRESSION "MOTOR LEAD DISCONNECTS" (MOTOR PIGTAIL CONNECTORS). T&B CATALOG NUMBER SERIES MDxxx. THESE CONNECTORS ELIMINATE BOLTING, TAPING, LOOSE CONNECTIONS, AND PROVIDE QUICK & EASY CHANGE-OUT OF MOTORS. CONNECTORS COME WITH A SLIP-ON <u>INSULATING BOOT</u> RATED 600 VOLT, 90 DEGREES CELSIUS FOR #16 THRU #4/0 AWG. HIGH VOLTAGE INSULATING BOOTS ARE RATED 5KV FOR #8 THRU #4/0 AWG AND ARE SUPPLIED WITH BOOT, PIN AND SILICONE GEL. <u>T&B SEALANT</u>, CAT#MDBOOT-SEAL SHALL BE USED WITH ALL INSULATING BOOTS. MOTOR TERMINATIONS USING BUGS & MECHANICAL CONNECTORS <u>ARE NOT PERMITTED</u>, UNLESS APPROVED BY THE ENGINEER.

R. EACH CONTRACTOR SHALL REVIEW "ALL" PROJECT DOCUMENTS OF "ALL" TRADES REVIEWING ALL OF THE PROJECT REQUIREMENTS PRIOR TO BIDDING. DISCREPANCIES BETWEEN DOCUMENTS SHALL BE REPORTED AT THE TIME OF BID.

S. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, INCIDENTALS, METHODS AND SERVICES REQUIRED TO INSTALL ALL WORK COMPLETELY AND IN FULL OPERATION.

T. CONTRACTOR SHALL PROVIDE SUBMITTALS (CATALOG CUTS), AND SHOP DRAWINGS FOR PRODUCTS/DEVICES. ALL NEW MATERIAL SHALL BE NEW AND UL OR ETL LISTED WHERE AVAILABLE.

U. THE CONTRACTOR IS REQUIRED TO MAKE SUBMISSIONS TO THE ENGINEER FOR APPROVAL OF EQUIPMENT, MATERIALS AND SYSTEMS INSTALLED ON THIS PROJECT. IN SOME INSTANCES CATALOG NUMBERS MAY CHANGE OVER THE COURSE OF TIME, NUMBERS SOMETIMES INADVERTENTLY ARE TRANSCRIBED INCORRECTLY OR THE OWNER FOR A SPECIFIC ITEM MAY INITIATE A CHANGE. SHOP DRAWINGS AND REQUIRED SUBMISSIONS ARE CHECKED BY THE ENGINEER FOR THESE DISCREPANCIES OR CHANGES. FOR THIS REASON, REQUIRED SUBMISSIONS ARE NOT WAIVED BY THE ENGINEER FOR ANY REASON. FAILURE OF THE CONTRACTOR TO MAKE THE REQUIRED SUBMISSION AND OBTAINS THE MATERIAL, EQUIPMENT OR SYSTEM WITHOUT APPROVAL TAKES FULL RESPONSIBILITY FOR THE SUITABILITY OF THE MATERIAL, EQUIPMENT OR SYSTEM. INADEQUACIES AND DEFICIENCIES OF MATERIALS, EQUIPMENT OR SYSTEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER TO MEET PROJECT REQUIREMENTS AND PARAMETERS.

V. ALL CONDUIT PENETRATIONS INTO ELECTRICAL PANELS, MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, STARTERS, CONTROL PANELS, TRANSFORMERS, VFD'S, ETC. SHALL BE MADE BY THE ELECTRICAL CONTRACTOR.

W. PRIOR TO CORE DRILLING THROUGH THE FLOOR, THE ELECTRICAL CONTRACTOR SHALL VISUALLY SURVEY BOTH SIDES TO SEE IF THERE ARE ANY PIPES, DUCTS, OR ELECTRICAL SERVICES THAT MAY PRESENT AN OBSTACLE. IN ADDITION TO A VISUAL SURVEY, THE ELECTRICAL CONTRACTOR SHALL HAVE THE FLOOR X-RAYED, TO DETERMINE IF THERE ARE ANY HIDDEN OBSTACLES IN THE FLOOR. AFTER IT HAS BEEN DETERMINED THAT THERE ARE NOT ANY OBSTACLES, THE FLOOR CAN THEN BE CORE DRILLED.

X. ALL CONDUIT PENETRATIONS THRU FLOORS, AND WALLS SHALL BE SEALED ON BOTH SIDES WITH FIREPROOFING CAULK SO AS TO KEEP THE FIRE RATING OF THE FLOOR OR WALL.

Y. ALL CONDUIT PENETRATIONS THRU THE ROOF, AND WALLS TO THE OUTSIDE SHALL BE SEALED WATERTIGHT.

Z. POWER CIRCUITS FROM POWER SOURCE TO VARIABLE FREQUENCY DRIVE UNITS (VFD), AND FROM VFD OUT TO LOADS SHALL BE CONTAINED WITHIN CONDUIT. THESE CIRCUITS SHALL BE INSTALLED INDIVIDUALLY WITHIN CONDUIT RACEWAY SYSTEM. TWO OR MORE VFD POWER CIRCUITS SHALL NOT OCCUPY THE SAME CONDUIT OR PULL BOX.

AA. THE CONTRACTOR SHALL PROVIDE IDENTIFICATION LABELING OF WIRING DEVICES, CONDUIT, CONDUCTORS AND EQUIPMENT IN ACCORDANCE WITH THE SPECIFICATIONS. THE FOLLOWING AUGMENTS AND ENHANCES THAT SPECIFICATION.

1. ALL INDIVIDUAL PHASE AND NEUTRAL BRANCH CIRCUIT CONDUCTORS SHALL BE IDENTIFIED WITHIN ALL PULL BOXES, JUNCTION BOXES AND AT POINT OF USE WITH THE BRANCH CIRCUIT NUMBER POLE POSITION CONNECTED TO AT THE POWER OR LIGHTING PANEL.
2. ALL CONDUITS CONTAINING CONDUCTORS THAT ARE 480 VOLTS PHASE TO PHASE OR 480 VOLTS TO GROUND SHALL BE IDENTIFIED WITH BRADY VOLTAGE MARKERS WITH THE VOLTAGE ENCLOSED (SEE SPECIFICATIONS). MARKERS SHALL BE PLACED AT POINT OF ORIGIN, POINT OF USE, AND WITHIN (1) ONE FOOT OF ALL PULL AND JUNCTION BOXES. UNLESS SPECIFICALLY INDICATED ON PLANS, CONDUITS CONTAINING CONDUCTORS 208 VOLTS PHASE TO PHASE AND 120 VOLTS TO GROUND DO NOT NEED TO BE IDENTIFIED.
3. REGARDLESS OF VOLTAGE, ALL JUNCTION AND PULL BOXES FOR BRANCH CIRCUITS, SUB FEEDERS AND FEEDERS SHALL IDENTIFY THE CIRCUITS WITHIN BY CIRCUIT NUMBER AND PANEL OF ORIGIN. IDENTIFICATION SHALL BE ACCOMPLISHED WITH BLACK PERMANENT FELT TIP MARKERS.
4. ALL WIRING DEVICES (RECEPTACLES AND LIGHT SWITCHES) SHALL HAVE 1/4 INCH "DYMO" LABELS AFFIXED TO THEIR COVER PLATE. IDENTIFY THE CONNECTED BRANCH CIRCUIT BY PANEL AND CIRCUIT NUMBER.
5. ALL RECEPTACLES OVER 20 AMPS SHALL HAVE BLACK PLASTIC LAMINATED I.D. PLATES WITH WHITE LETTERS IDENTIFYING THEIR USE. I.E "COPIER". THIS I.D. LABEL SHALL BE AFFIXED TO THE COVER PLATE IN ADDITION TO THE BRANCH CIRCUIT "DYMO" LABEL FOR CIRCUIT IDENTIFICATION.
6. ALL LIGHTING PANELS, POWER PANELS, SAFETY SWITCHES, REMOTE STARTERS, VARIABLE FREQUENCY DRIVE UNITS, CONTROL CABINETS AND BOXES SHALL HAVE BLACK LAMINATED PLASTIC I.D. PLATES WITH WHITE LETTERS INDICATING VOLTAGE CONTAINED WITHIN, WHAT THE ITEM IS FOR, AND WHERE THE ITEM IS FED FROM:

<u>SAFETY OR MANUAL SWITCHES:</u>
480 VOLTS 30AHU-1S
FED FROM LPP1A)

<u>POWER PANELS:</u>
480Y/277 VOLTS
POWER PANEL LPP1A
FEED FROM LMDP

<u>REMOTE STARTERS:</u>
SAME AS FOR SAFETY SWITCHES.

<u>VARIABLE FREQUENCY DRIVE UNITS:</u>
SAME AS FOR SAFETY SWITCHES.

AB. SHARED NEUTRALS ARE NOT PERMITTED ANYWHERE ON THIS PROJECT (EXCLUDING MODULAR FURNITURE PARTITION WITH OVERSIZED NEUTRALS).

AC. UNLESS OTHERWISE INDICATED, ALL LIGHT SWITCHES SHALL BE MOUNTED +48 INCHES A.F.F. AND ALL RECEPTACLES AND OUTLET BOXES SHALL BE MOUNTED +18 INCHES A.F.F. SEE ARCHITECTURAL DWG'S FOR EXACT MOUNTING HEIGHTS.

AD. THE CONTRACTOR SHALL CIRCUIT ALL WIRING DEVICES IN THE PROJECT AREA AS SHOWN ON THE PROJECT DRAWINGS. IF DIFFERENT CIRCUIT NUMBERS ARE USED THAN THOSE SHOWN ON DRAWINGS, THE CONTRACTOR SHALL FOLLOW SAME CIRCUIT SCHEME AND DOCUMENT CIRCUIT NUMBER CHANGES ON REQUIRED "AS BUILT" DRAWINGS AND PANEL SCHEDULES.

AE. THE CONTRACTOR SHALL BE AWARE OF ALL FLASH HAZARD REQUIREMENTS FOR THIS PROJECT. PROTECTIVE EQUIPMENT SHALL BE WORN AND PRACTICES FOLLOWED IN ACCORDANCE WITH FLASH HAZARD LEVEL.

AF. CONTRACTOR SHALL ARRANGE FOR ALL WORK TO BE INSPECTED IN ACCORDANCE WITH DELAWARE STATE LAW BY FIRST STATE INSPECTION AGENCY. CONTRACTOR SHALL PAY FOR ALL PERMITS AND INSPECTIONS AS MAY BE REQUIRED.

AG. ALL WORK SHALL BE DONE IN A SAFE AND ORDERLY MANNER AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL ODE, OSHA, AND STATE REGULATIONS.

AH. ALL RECESSED LIGHT FIXTURES SHALL HAVE AN INDEPENDENT SYSTEM OF SAFETY SUPPORT WIRE ATTACHED AT CORNERS OF A LIGHT FIXTURE AND ATTACHED TO THE BUILDING STRUCTURE AT THE OTHER END. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO HAVE THE SUPPORT WIRES INSTALLED, WHETHER SELF-INSTALLED OR BY SUB-CONTRACTING TO THE CEILING INSTALLER. THE ELECTRICAL CONTRACTOR SHALL SECURE FIXTURE TO CEILING GRID.

PART 2 GENERAL NOTES AND CONDITIONS (continued):

AI. ALL EXIT AND EMERGENCY LIGHTS SHALL BE CONNECTED TO THE UNSWITCHED HOT LEG OF THE DESIGNATED EMERGENCY LIGHTING CIRCUIT.

AJ. PRIOR TO ACCEPTANCE OF THE PROJECT, BY THE OWNER, ALL SYSTEMS SHALL BE TESTED AND OPERATED TO DEMONSTRATE TO THE OWNER, OR HIS DESIGNATED REPRESENTATIVE, THAT THE INSTALLATION AND PERFORMANCE OF THESE SYSTEMS AND/OR PARTS THEREOF CONFORM TO THE DESIGN INTENT.

AK. PROVIDE OPERATING AND MAINTENANCE MANUALS FOR ALL NEW EQUIPMENT AND DEVICES INSTALLED AS PART OF THE WORK. MANUALS SHALL INCLUDE:

1. SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE,
2. OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED,
3. SPARE PARTS LISTS FOR ALL EQUIPMENT,
4. NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY,
5. A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, AND BE BOUND IN A SUBSTANTIAL BINDER. PROVIDE THREE (3) COPIES OF THE OPERATING AND MAINTENANCE MANUALS.

AL. SIZE HOMERUN BRANCH CIRCUIT CONDUCTORS FROM PANELBOARD TO THE FIRST OUTLET IN ACCORDANCE WITH THE FOLLOWING MAXIMUM CIRCUIT LIMITS, USING CENTER OF LOAD SERVED AS BASIS FOR COMPUTING CIRCUIT LENGTHS:

<u>#12 AWG</u>
120VOLT (20A) 100FT
277VOLT (20A) 200FT

<u>#10 AWG</u>
120VOLT (20A) 165FT
277VOLT (20A) 300FT

AM. PROVIDE HACR TYPE CIRCUIT BREAKERS FOR ALL HVAC CIRCUITS.

AN. ALL WIRING SHALL BE AS A MINIMUM COPPER CONDUCTOR WITH THHN/THWN INSULATION RATED 600 VOLT AND 90/75 DEGREES CELSIUS.

AO. BONDING OF ELECTRICAL EQUIPMENT TO THE BUILDING STRUCTURE INCLUDING BUT NOT LIMITED TO TRANSFORMER BONDING SHALL BE MADE WITH AN IRREVERSIBLE BEAM CLAMP WITH COMPRESSION LUG BURNDY TYPE YGIB OR EQUIVALENT, WITH NEMA 2-HOLE LUG, MOUNTING KIT & ALL REQUIRED HARDWARE.

AP. THE ELECTRICAL CONTRACTOR SHALL UPON COMPLETION OF WORK SUBMIT A SET OF DRAWINGS SHOWING ALL CHANGES FROM THE CONTRACT DRAWINGS. IF ANY CONCEALED OR BURIED ELECTRICAL ITEMS, SHOW DIMENSIONED LOCATIONS WITH ELEVATIONS.

AQ. THE CONTRACTOR SHALL FURNISH AND INSTALL <u>ONE WRAP OF SCOTCH 33 BLACK ELECTRICAL TAPE</u> ON ALL RECEPTACLES, SWITCHES AND OTHER SIMILAR TYPE WIRING DEVICES, WHERE INSTALLED IN METAL BOXES.

AR. THE CONTRACTOR SHALL <u>IDENTIFY ALL NIGHT LIGHT AND EMERGENCY FIXTURES</u> BY INSTALLING P-TOUCH BRAND OR DYMO LABEL BRAND OR EQUAL BLUE COLOR VINYL TAPE TO OUTSIDE OF LIGHT FIXTURE FRAME FOR FIXTURES THAT DO NOT SIT IN A DROP TYPE SUSPENDED CEILING GRID. FOR FIXTURES THAT SIT IN A DROP TYPE SUSPENDED CEILING GRID INSTALL CIRCUIT I.D. VINYL TAPE LABEL TO THE CEILING GRID (NOT TO FIXTURE). TAPE SHALL BE MEDIUM OR DARK BLUE COLOR WITH WHITE LETTERS STATING "NIGHT LIGHT, PANEL #..... & CKT #....". VINYL TAPE SHALL BE PLACED ON CEILING GRID OR FRAME OF FIXTURE (AS MAY BE THE CASE) IN A CONSPICUOUS LOCATION, SO THAT MAINTENANCE PERSONNEL CAN WALK THRU THE AREA AND LOOK UP TO SEE THE BLUE TAPE.

AS. <u>AS-BUILT PANEL SCHEDULES FURNISHED BY THE CONTRACTOR</u> TO CONSTRUCTION MANAGER, AT THE END OF THE PROJECT, SHALL LIST IN THE DESCRIPTION, THE <u>ACTUAL ROOM NUMBERS</u> SERVED BY ANY NEW OR REWORKED CIRCUITS ASSOCIATED WITH THE PROJECT. FOR THOSE FEW ROOMS THAT MAY NOT HAVE AN ASSIGNED ROOM NUMBER, THE CONTRACTOR SHALL INCLUDE A ROOM DESCRIPTION (EXAMPLE "NORTH END UTILITY CLOSET"). THESE ROOM NUMBERS/DESCRIPTIONS SHALL BE INCLUDED IN THE ELECTRONIC PANEL SCHEDULE DIRECTORY CARDS.

GENERAL DEMOLITION NOTES:

1. ALL AREAS----BEFORE WORKING ON ELECTRIC CIRCUITS, IDENTIFY POWER SOURCE, TURN CIRCUIT BREAKER OR SWITCH OFF, AND LOCK OUT/TAG OUT CIRCUIT. CIRCUIT NUMBERS SHOWN ON DEMOLITION PLANS ARE DEVELOPED FROM FIELD SURVEYS, PANEL DIRECTORIES, AND REVIEW OF EXISTING DRAWINGS. THESE CIRCUIT NUMBERS ARE NOT GUARANTEED AS-BUILT NUMBERS, THEREFORE THE CONTRACTOR SHALL POSITIVELY IDENTIFY THE ACTUAL CIRCUIT NUMBER BEFORE PERFORMING WORK.
2. ALL AREAS----IF CIRCUIT SERVING EQUIPMENT BEING REMOVED, IS SHARED BY OTHER EQUIPMENT NOT BEING REMOVED OR DEVICES SUCH AS GENERAL USE RECEPTACLES, REMOVE THAT PORTION OF CONDUIT AND WIRING ASSOCIATED WITH THE REMOVED EQUIPMENT BACK TO THE FIRST JUNCTION BOX AND LEAVE CIRCUIT OPERATIONAL FOR EQUIPMENT AND DEVICES BEING LEFT IN PLACE.
3. RE-IDENTIFICATION OF SPARE CIRCUIT BREAKERS, SWITCHES, AND MCC BUCKETS. THE CONTRACTOR SHALL UPDATE ALL PANEL SCHEDULES FOR PANELBOARDS AFFECTED BY THIS PROJECT. ELECTRICAL EQUIPMENT WITHOUT PANEL SCHEDULES (DIRECTORY CARDS), SUCH AS MCC'S AND FUSED SWITCHBOARDS SHALL HAVE THEIR MCC BUCKET OR SWITCH I.D. TAG UPDATED AS WELL.
4. ALL SPARE CIRCUIT BREAKERS AND SWITCHES IN MCC'S, SWITCHBOARDS, LOCAL DISCONNECTS, PANELBOARDS, ETC, SHALL HAVE THEIR OPERATING MECHANISM PLACED IN THE OFF (DE-ENERGIZED) POSITION.
5. THE CONTRACTOR SHALL MAKE AN ON-SITE SURVEY TO DETERMINE THE FULL SCOPE OF WORK AND FAMILIARIZE THEMSELVES WITH THE SITE CONDITIONS PRIOR TO SUBMITTING A BID OR A PROPOSAL.
6. THE CONTRACTOR SHALL APPLY FOR, SECURE AND PAY FOR ALL PERMITS AND/OR CERTIFICATES OF INSPECTION REQUIRED IN THE PERFORMANCE OF THE WORK BY ALL AUTHORITIES HAVING JURISDICTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY AND SHALL FOLLOW ALL OSHA AND BUILDING OWNER RULES AND CONDITIONS FOR CONTRACTORS.
8. ALL DEMOLITION WORK SHALL BE DONE IN A SAFE AND ORDERLY MANNER AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, OSHA, AND LOCAL AND STATE REGULATIONS.
9. ALL WORK SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER SO THAT DISRUPTION TO THE AREAS INVOLVED IS KEPT TO A MINIMUM. ALL POWER SHUT DOWNS AFFECTING OTHER AREAS NOT WITHIN THE SCOPE OF THE PROJECT MUST BE COORDINATED WITH THE OWNER'S REP. ANY ACCIDENTAL INTERRUPTIONS TO SERVICES SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR WITHOUT ANY ADDITIONAL COST TO THE OWNER.
10. SOME ADJACENT SPACES TO THE CONSTRUCTION AREA WILL BE OCCUPIED. THE CONTRACTOR SHALL PROVIDE ALL BARRICADES AND TEMPORARY PARTITIONS REQUIRED DURING CONSTRUCTION.
11. THE CONTRACTOR SHALL KEEP THE WORK AREA CLEAN AND ORDERLY.
12. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER AND THE OTHER TRADES INVOLVED IN THIS PROJECT.
13. THE CONTRACTOR IS RESPONSIBLE TO PATCH ANY HOLES, DENTS, CRACKS, PENETRATIONS, ETC. LEFT AFTER DEMOLITION FROM REMOVAL OF ELECTRICAL EQUIPMENT AND PARTS. THIS INCLUDES CEILINGS, WALLS, FLOORS, COLUMNS, ROOFS AND THE LIKE. PATCHING SHALL RESTORE THE STRUCTURE TO IT'S ORIGINAL DESIGN, INCLUDING ANY WATER TIGHT AND/OR FIRE RESISTANT RATINGS.
14. DAMAGE CAUSED BY THE CONTRACTOR TO AREAS OUTSIDE THE AREA OF DEMOLITION SHALL BE REPAIRED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
15. REMOVE ALL DEMOLISHED MATERIALS, WHICH ARE NOT TO BE TURNED OVER TO OWNER'S REPRESENTATIVE, FROM THE SITE DAILY. SEE THE CONSTRUCTION MANAGER FOR REQUIREMENTS WHICH SHALL BE FOLLOWED FOR DISPOSAL OF FLUORESCENT LAMPS. SALVAGED MATERIALS SHALL BE STORED FOR REUSE.
16. ANY BRANCH CIRCUIT WIRING, SECURITY CABLE, VOICE/DATA CABLE, ETC. PASSING THROUGH THE AREA, FEEDING EQUIPMENT OUTSIDE THE PROJECT AREA THAT WILL INTERFERE WITH THE NEW CONSTRUCTION SHALL BE RELOCATED SO AS NOT TO INTERFERE WITH THE NEW CONSTRUCTION. THIS WORK SHALL BE COORDINATED WITH THE OWNER BEFORE PROCEEDING WITH THE WORK.
17. DO NOT DEMOLISH THE FOLLOWING ITEMS THAT DO NOT INTERFERE WITH THE NEW CONSTRUCTION:
    - A. POWER AND BRANCH CIRCUIT WIRING PASSING THROUGH AREAS OF DEMOLITION AND FEEDING OTHER AREAS NOT WITHIN THE SCOPE OF THIS PROJECT.
    - B. COMMUNICATION WIRING PASSING THROUGH THE AREA OF DEMOLITION FEEDING OTHER AREAS NOT WITHIN THE SCOPE OF THIS PROJECT.
    - C. FIRE ALARM SIGNALING SYSTEM, AND SECURITY SIGNALING SYSTEM WIRING WITHIN OR NOT WITHIN THE AREAS OF DEMOLITION.
    - D. HVAC CONTROLS.
18. THE CONTRACTOR SHALL COORDINATE THE RELOCATION OF ANY ELECTRICAL ITEM, AND BRANCH CIRCUITS WITH THE OTHER TRADES AND THE OWNER AS REQUIRED. THE CONTRACTOR SHALL CONDUCT AN ON SITE SURVEY TO DETERMINE THE EXTENT AND SCOPE OF WORK REQUIRED. THE RELOCATION SHALL INCLUDE BUT NOT BE LIMITED TO:
    - A. CUTTING OF CONDUITS AND CONDUCTORS
    - B. INSTALLATION OF JUNCTION BOXES
    - C. EXTENDING CONDUITS & CONDUCTORS FULL SIZE

Delaware Engineering and Design Corp.
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BIDDING DOCUMENTS

PROPOSED RENOVATION AT:
LYDIA P. LAWS RESIDENCE HALL
DELAWARE STATE UNIVERSITY
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12

REVISIONS

SHEET No E0.1

MATERIAL SCHEDULE:

FLUSH WALL MOUNTED 4x4 OUTLET BOX WITH SINGLE GANG TILE RING. LETTER WITHIN BOX INDICATES TYPE OF WIRING DEVICE TO BE INSTALLED. SEE BELOW FOR TYPE OF WIRING DEVICE. 2 OR MORE BOXES CONNECTED TOGETHER INDICATES A GANGED BOX INSTALLATION. SUBSCRIPT "WP" APPEARING NEXT TO A BOX INDICATES A GASKETED WEATHERPROOF WHILE IN USE COVER PLATE (T&B), SUITABLE FOR THE WIRING DEVICE BEING INSTALLED.	AREAS OF INSTALLATION: AS NOTED ON DWGS.
SURFACE WALL MOUNTED 4x4 OUTLET BOX WITH SINGLE GANG TILE RING. LETTER WITHIN BOX INDICATES TYPE OF WIRING DEVICE TO BE INSTALLED. SEE BELOW FOR TYPE OF WIRING DEVICE. 2 OR MORE BOXES CONNECTED TOGETHER INDICATES A GANGED BOX INSTALLATION. SUBSCRIPT "WP" APPEARING NEXT TO A BOX INDICATES A GASKETED WEATHERPROOF WHILE IN USE COVER PLATE (T&B), SUITABLE FOR THE WIRING DEVICE BEING INSTALLED. SUBSCRIPT "D" APPEARING NEXT TO A BOX INDICATES A CAST TYPE OUTLET BOX (CROUSE-HINDS) WITH APPROPRIATE COVER PLATE.	AREAS OF INSTALLATION: NON-COMMON AREAS, MECHANICAL, ELECTRICAL, STORAGE RMS., ETC.
SURFACE WALL MOUNTED SINGLE GANG OUTLET BOX (WIREMOLD CAT. #V5748) AND SURFACE MOUNTED VERTICAL ONE-PIECE STEEL RACEWAY (WIREMOLD CAT. #V700). LETTER WITHIN BOX INDICATES TYPE OF WIRING DEVICE TO BE INSTALLED. SEE BELOW FOR TYPE OF WIRING DEVICE. 2 OR MORE BOXES CONNECTED TOGETHER INDICATES A GANGED BOX INSTALLATION. THE CONTRACTOR SHALL PROVIDE ALL APPROPRIATE RACEWAY COVER PLATES, DEVICE PLATES, ELBOWS, END FITTINGS, SERVICE FITTINGS, AND OTHER ACCESSORIES NECESSARY TO MAKE A COMPLETE INSTALLATION. CONVERT TO EMT OR MC CABLE ABOVE CEILING. SUBSCRIPT "WP" APPEARING NEXT TO A BOX INDICATES A GASKETED WEATHERPROOF WHILE IN USE COVER PLATE (T&B), SUITABLE FOR THE WIRING DEVICE BEING INSTALLED.	AREAS OF INSTALLATION: COMMON AREAS, DORMS, LOUNGE, BREAK RMS, ETC.

TELECOMMUNICATION LEGEND:

FLUSH WALL MOUNTED TELECOMMUNICATION OUTLET BOX. INSTALL A 4" SQUARE BY 2 1/8" DEEP WALL BOX (18"AFF) WITH (1) 1" EMT CONCEALED CONDUITS ROUTED UP WALL TO ABOVE THE CEILING SPACE.	AREAS OF INSTALLATION: AS NOTED ON DWGS.
SURFACE WALL MOUNTED TELECOMMUNICATION OUTLET BOX. INSTALL A 4" SQUARE BY 2 1/8" DEEP WALL BOX (18"AFF) WITH (1) 1"" EMT EXPOSED CONDUITS ROUTED UP WALL TO ABOVE THE CEILING SPACE.	AREAS OF INSTALLATION: NON-COMMON AREAS, MECHANICAL, ELECTRICAL, STORAGE RMS., ETC.
SURFACE WALL MOUNTED COMMUNICATION OUTLET BOX. VERTICAL EXPOSED IVORY RACEWAY SHALL BE TWO-PIECE STEEL (WIREMOLD CAT. #V2400) ROUTED UP TO ABOVE CEILING AND SURFACE MOUNTED IVORY OUTLET BOX SHALL BE TWO GANG (WIREMOLD CAT. #V2448-2). THE CONTRACTOR SHALL PROVIDE ALL APPROPRIATE RACEWAY COVER PLATES, DEVICE PLATES, ELBOWS, END FITTINGS, SERVICE FITTINGS, AND OTHER ACCESSORIES NECESSARY TO MAKE A COMPLETE INSTALLATION.	AREAS OF INSTALLATION: COMMON AREAS, DORMS, LOUNGE, BREAK RMS, ETC.

NOTES:

1. ALL NEW VOICE/DATA WIRING, COVERPLATES, AND MODULES FURNISH AND INSTALL BY TELECOMMUNICATION CONTRACTOR.
2. CONTRACTOR SHALL FURNISH AND INSTALL PULL STRING FOR ALL OUTLET BOXES.
3. ALL VOICE/DATA WIRING TERMINATION BY TELECOMMUNICATION CONTRACTOR.
4. PULL STRING FURNISH AND INSTALL BY CONTRACTOR.

COAX LEGEND:

SURFACE WALL MOUNTED COAX TV OUTLET BOX. VERTICAL EXPOSED IVORY RACEWAY SHALL BE TWO-PIECE STEEL (WIREMOLD CAT. #V2400) ROUTED UP TO ABOVE CEILING AND SURFACE MOUNTED IVORY OUTLET BOX SHALL BE TWO GANG (WIREMOLD CAT. #V2448-2). THE CONTRACTOR SHALL PROVIDE ALL APPROPRIATE RACEWAY COVER PLATES, DEVICE PLATES, ELBOWS, END FITTINGS, SERVICE FITTINGS, AND OTHER ACCESSORIES NECESSARY TO MAKE A COMPLETE INSTALLATION.	AREAS OF INSTALLATION: COMMON AREAS, DORMS, LOUNGE, BREAK RMS, ETC.

NOTES:

1. NEW INSTALLATION: ALL COAX WIRING, COVERPLATES, AND CONNECTOR BY OTHERS.
2. EXISTING/EXTENED INSTALLATION: ALL WIRING, COVERPLATES, AND CONNECTOR BY CONTRACTOR.
3. PULL STRING FURNISH AND INSTALL BY CONTRACTOR.

SWITCHES:

S COMMERCIAL SERIES SPECIFICATION GRADE SINGLE POLE TOGGLE SWITCH. 20 AMP, 120/277 VOLT, WITH GROUND SCREW, IVORY HANDLE HUBBELL CAT. #CSB120I.

S3 COMMERCIAL SERIES SPECIFICATION GRADE THREE WAY TOGGLE SWITCH. 20 AMP, 120/277 VOLT, WITH GROUND SCREW, IVORY HANDLE HUBBELL CAT. #CSB320I.

S4 COMMERCIAL SERIES SPECIFICATION GRADE FOUR WAY TOGGLE SWITCH. 20 AMP, 120/277 VOLT, WITH GROUND SCREW, IVORY HANDLE HUBBELL CAT. #CSB420I

COVER PLATES FOR ALL WALL MOUNTED WIRING DEVICES SHALL BE HUBBELL 302/304 STAINLESS STEEL WITH MATCHING SCREWS (NON-WIREMODLD APPLICATIONS) AND WIREMOLD SHALL BE MANUFACTURER'S STOCK LIST PARTS.

NOTE:
CONTRACTOR SHALL INSTALL SCOTCH #33 TAPE (WRAP ONCE) AROUND BASE OF ALL LIGHT SWITCHES.

RECEPTACLES:

A COMMERCIAL SPECIFICATION GRADE CONSTRUCTION SERIES STRAIGHT BLADE DUPLEX RECEPTACLE. 20 AMP, 125 VOLT, 2 POLE, 3 WIRE, NEMA 5-20R, IVORY COLOR. HUBBELL CAT. # CRF20I

G HEAVY DUTY SPECIFICATION GRADE GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE. 20 AMP, 125 VOLT, 2 POLE, 3 WIRE, NEMA 5-20R, IVORY COLOR. HUBBELL CAT. # GF5362I

JB 4"x4" JUNCTION BOX

COVER PLATES FOR ALL WALL MOUNTED WIRING DEVICES SHALL BE HUBBELL 302/304 STAINLESS STEEL WITH MATCHING SCREWS (NON-WIREMODLD APPLICATIONS) AND WIREMOLD SHALL BE MANUFACTURER'S STOCK LIST PARTS.

NOTE:
CONTRACTOR SHALL INSTALL SCOTCH #33 TAPE (WRAP ONCE) AROUND BASE OF ALL LIGHT SWITCHES.

BRANCH CIRCUIT IDENTIFICATION:

EXAMPLE: LRP1C – 18

POWER PANEL THAT BRANCH CIRCUITS ARE CONNECTED. — LRP1C

CIRCUIT BREAKER NUMBER WITHIN PANEL THAT CIRCUITS ARE CONNECTED. — 18

ABBREVIATIONS:

ABV	ABOVE	LFT	LINEAR FEET
ACT	ABOVE COUNTER TOP	LP	LIGHTING PANEL
AFF	ABOVE FINISHED FLOOR	MC	METAL CLAD CABLE
AFG	ABOVE FINAL GRADE	MCC	MOTOR CONTROL CENTER
AHJ	AUTHORITY HAVING JURISDICTION	MCM	SEE KCMIL
AIP	ABANDONED IN PLACE	M.H.	MOUNTING HEIGHT
ARC	ALUMINUM RIGID CONDUIT	MTD	MOUNTED
ARF	ABOVE RAISED FLOOR	(N)	NEW
ATC	AUTOMATIC TEMPERATURE CONTROL	N.E.C	NATIONAL ELECTRICAL CODE
BAS	BUILDING AUTOMATION SYSTEM	N.I.C.	NOT IN CONTRACT
BLDG	BUILDING	NL	NIGHT LIGHT
BTM	BOTTOM	PB	PULL BOX
C	CONDUIT	PC	PERSONAL COMPUTER
CKT	CIRCUIT	PNL	PANEL
CKT BKR	CIRCUIT BREAKER	PP	POWER PANEL
CM	CONSTRUCTION MANAGER	PROJ	PROJECTOR
COMP'T	COMPARTMENT	PROVIDE	FURNISH AND INSTALL
C/P	CORD AND PLUG	PS	MOTORIZED PROJECTOR SCREEN
C/PS	CORD WITH POWER SUPPLY PLUG IN	RCP	REFLECTED CEILING PLAN
DEMO	DEMOLITION	RCPT/RECEPT	RECEPTACLE
DP	DISTRIBUTION PANEL	REQ'D	REQUIRED
DS	DISCONNECT SWITCH	RL	RELOCATE
DSU	DELAWARE STATE UNIVERSITY	SB	SPLICE BOX
DWG	DRAWING	SLD	SINGLE LINE DIAGRAM
(E)	EXISTING	SOV	SOLENOID OPERATED VALVE
E.C.	ELECTRICAL CONTRACTOR	T.B.D.	TO BE DETERMINED
EMT	ELECTRICAL METALLIC TUBING	TC	TRAY CABLE
EPO	EMERGENCY POWER OFF (CRASH CKT)	T/L	TWIST-LOCK
(ER)	EXISTING RELOCATED	TYP	TYPICAL
(ETR)	EXISTING TO REMAIN	U.C.	UNDER COUNTER
F.A.C	FIRE ALARM CONTRACTOR	U.G.	UNDER GROUND
FLR	FLOOR	U.O.N.	UNLESS OTHERWISE NOTED
FT	FEET	VFD	VARIABLE FREQUENCY DRIVE
GND/GRD	GROUND	WP	WEATHER PROOF
GRC	GALVANIZED RIGID CONDUIT	XFMR	TRANSFORMER
IAW	IN ACCORDANCE WITH	1/C	SINGLE CONDUCTOR
JB	JUNCTION BOX	3R	NEMA 3R
KCMIL	THOUSAND CIRCULAR MILS		

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PROPOSED RENOVATION AT:
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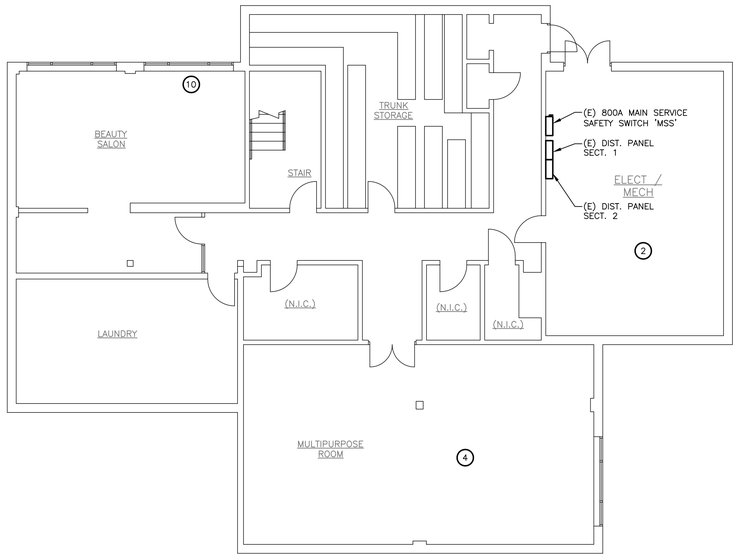
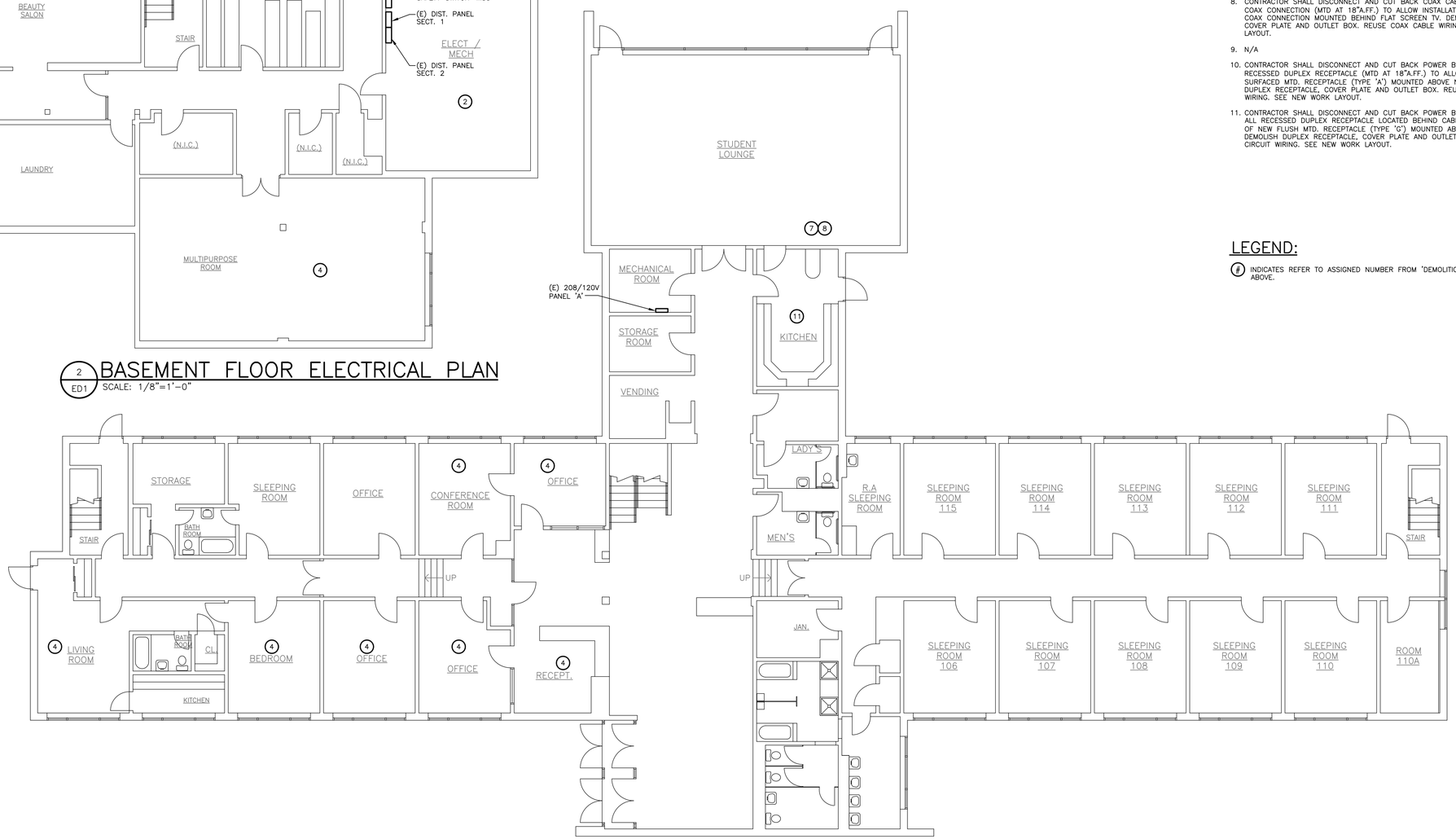
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12
REVISIONS

SHEET No
E0.2



2 ED1 BASEMENT FLOOR ELECTRICAL PLAN
SCALE: 1/8"=1'-0"



1 ED1 FIRST FLOOR ELECTRICAL PLAN
SCALE: 1/8"=1'-0"

DEMOLITION NOTES:

1. SEE DRAWING 'E0.1' FOR GENERAL DEMOLITION NOTES, ABBREVIATIONS AND LEGENDS.

DEMOLITION CONSTRUCTION NOTES:

1. CONTRACTOR SHALL REMOVE ALL RECESSED CEILING MTD LIGHT FIXTURES IN THIS AREA (UNLESS OTHER WISE NOTED) TO ALLOW NEW REPLACEMENT CEILING. LIGHTING BRANCH CIRCUIT WIRING AND LOCAL TOGGLE SWITCH SHALL REMAIN. MOUNT NEW FIXTURE AT SAME LOCATION AS OLD. SEE NEW WORK LAYOUT.
2. CONTRACTOR SHALL DEMOLISH METER TO ALLOW INSTALLATION OF NEW REPLACEMENT METER. SEE DRAWING 'E3' FOR NEW WORK.
3. CONTRACTOR SHALL DEMOLISH RECEPTACLE(S) AND COVERPLATE(S) IN THIS AREA TO ALLOW INSTALLATION OF NEW REPLACEMENT GFCI RECEPTACLE (TYPE 'G'). POWER BRANCH CIRCUIT WIRING TO REMAIN.
4. CONTRACTOR SHALL DEMOLISH ALL ABANDON TELECOMMUNICATION WIRING, MODULES AND OUTLET BOX COMPLETELY BACK TO ORIGIN.
5. CONTRACTOR SHALL DEMOLISH ALL ABANDON COAX CABLE WIRING, MODULES AND OUTLET BOX COMPLETELY BACK TO ORIGIN.
6. CONTRACTOR SHALL DEMOLISH POWER AND TELECOMMUNICATION CONNECTION COMPLETELY BACK TO ORIGIN FROM PAY PHONE EQUIPMENT IN THIS AREA.
7. CONTRACTOR SHALL DISCONNECT AND CUT BACK POWER BRANCH CIRCUIT WIRING FROM RECESSED DUPLEX RECEPTACLE (MTD AT 18"A.FF.) TO ALLOW INSTALLATION OF NEW SURFACED MTD. TV RECEPTACLE (TYPE 'A') MOUNTED BEHIND FLAT SCREEN TV. DEMOLISH DUPLEX RECEPTACLE, COVER PLATE AND OUTLET BOX. REUSE POWER BRANCH CIRCUIT WIRING. SEE NEW WORK LAYOUT.
8. CONTRACTOR SHALL DISCONNECT AND CUT BACK COAX CABLE WIRING FROM RECESSED COAX CONNECTION (MTD AT 18"A.FF.) TO ALLOW INSTALLATION OF NEW SURFACED MTD. TV COAX CONNECTION MOUNTED BEHIND FLAT SCREEN TV. DEMOLISH COAX CONNECTION, COVER PLATE AND OUTLET BOX. REUSE COAX CABLE WIRING WIRING. SEE NEW WORK LAYOUT.
9. N/A
10. CONTRACTOR SHALL DISCONNECT AND CUT BACK POWER BRANCH CIRCUIT WIRING FROM RECESSED DUPLEX RECEPTACLE (MTD AT 18"A.FF.) TO ALLOW INSTALLATION OF NEW SURFACED MTD. RECEPTACLE (TYPE 'A') MOUNTED ABOVE NEW COUNTERTOP. DEMOLISH DUPLEX RECEPTACLE, COVER PLATE AND OUTLET BOX. REUSE POWER BRANCH CIRCUIT WIRING. SEE NEW WORK LAYOUT.
11. CONTRACTOR SHALL DISCONNECT AND CUT BACK POWER BRANCH CIRCUIT WIRING FROM ALL RECESSED DUPLEX RECEPTACLE LOCATED BEHIND CABINETRY TO ALLOW INSTALLATION OF NEW FLUSH MTD. RECEPTACLE (TYPE 'G') MOUNTED ABOVE NEW COUNTERTOP. DEMOLISH DUPLEX RECEPTACLE, COVER PLATE AND OUTLET BOX. REUSE POWER BRANCH CIRCUIT WIRING. SEE NEW WORK LAYOUT.

LEGEND:

(#) INDICATES REFER TO ASSIGNED NUMBER FROM 'DEMOLITION CONSTRUCTION NOTES' ABOVE.

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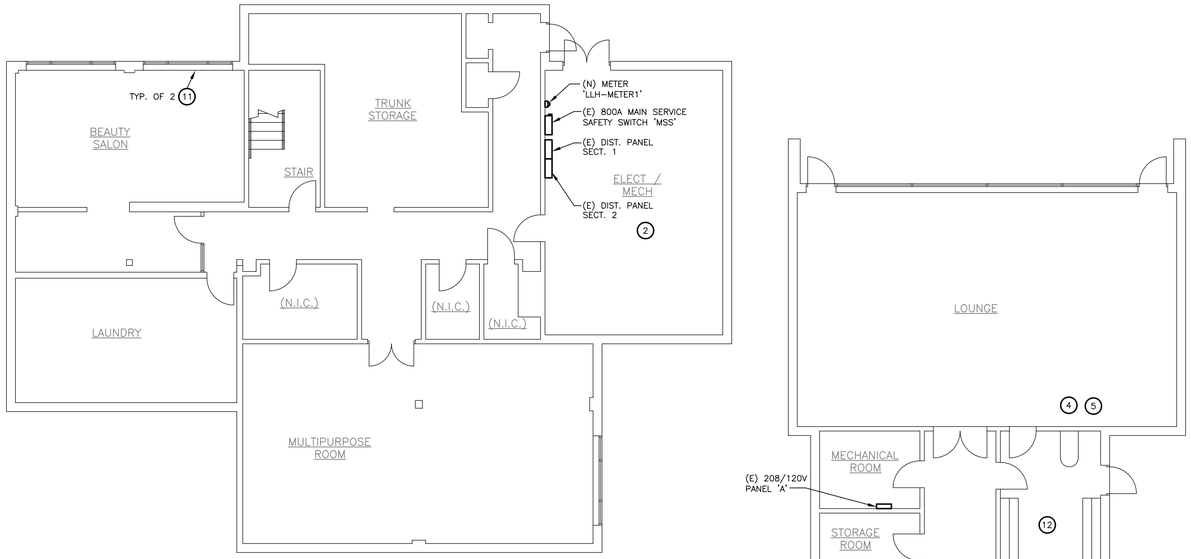
PROPOSED RENOVATION AT:
LYDIA P. LAWS RESIDENCE HALL
DELAWARE STATE UNIVERSITY
DOVER, KENT COUNTY, DELAWARE

DATE 02.17.12

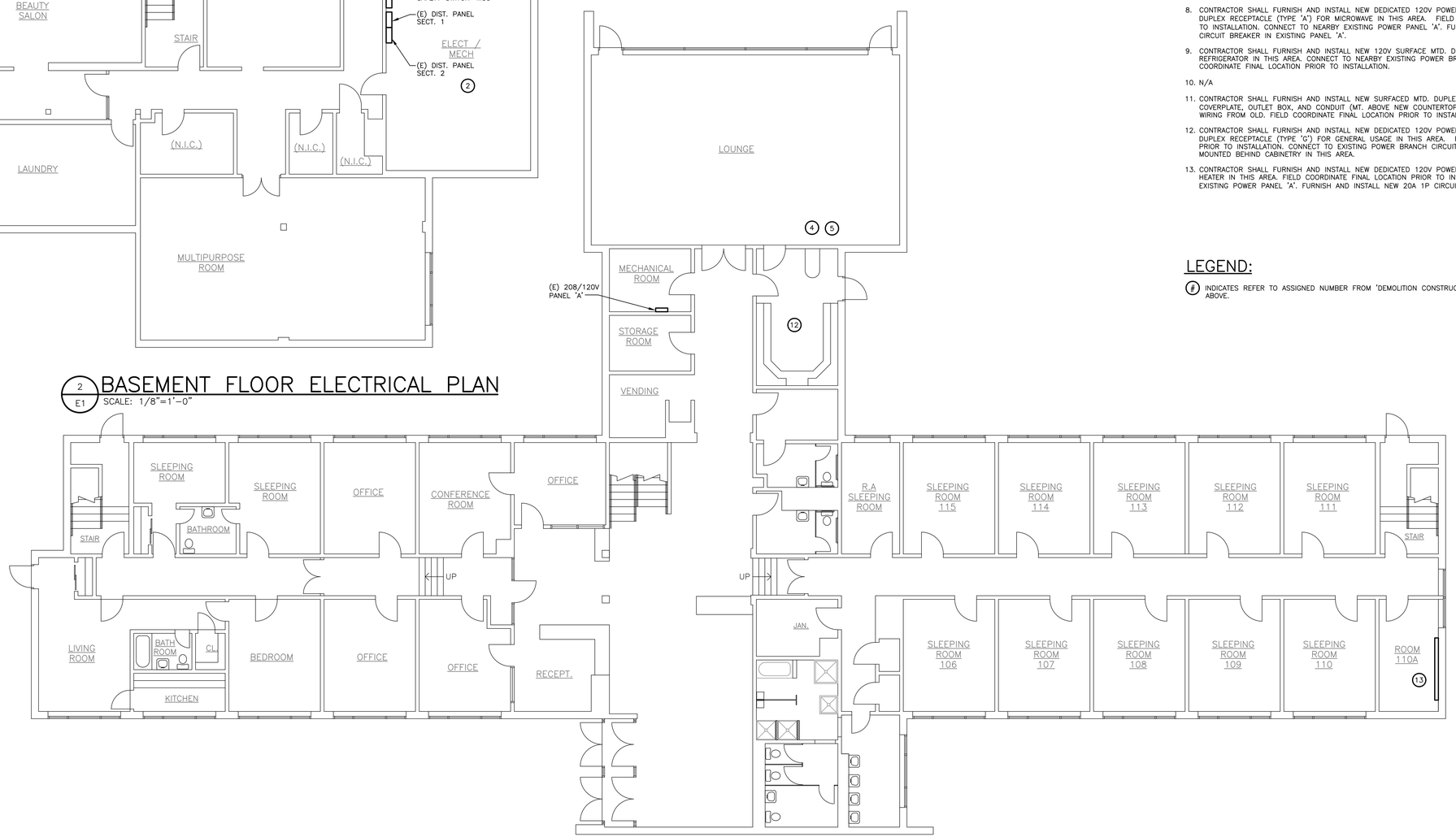
REVISIONS

SHEET No
ED1



2 / E1 BASEMENT FLOOR ELECTRICAL PLAN

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



1 / E1 FIRST FLOOR ELECTRICAL PLAN

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

NEW WORK NOTES:

1. SEE DRAWING 'E-0.1' & 'E-0.2' FOR GENERAL NOTES, ABBREVIATIONS AND LEGENDS.

NEW WORK CONSTRUCTION NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL EXISTING/RELOCCED RECESSED CEILING MTD LIGHT FIXTURES RECONNECT TO EXISTING LIGHTING BRANCH CIRCUIT WIRING AND EXISTING LOCAL TOGGLE SWITCH. MOUNT NEW FIXTURE AT SAME LOCATION AS OLD.
2. CONTRACTOR SHALL FURNISH AND INSTALL NEW METER. SEE WIRING DIAGRAM DRAWING.
3. CONTRACTOR SHALL FURNISH AND INSTALL NEW GFCI RECEPTACLE (TYPE 'G') AND COVERPLATE AT LOCATION OF OLD. RECONNECT TO EXISTING POWER BRANCH CIRCUIT WIRING.
4. CONTRACTOR SHALL FURNISH AND INSTALL NEW SURFACED MTD. TV DUPLEX RECEPTACLE (TYPE 'A'), COVERPLATE, OUTLET BOX, AND CONDUIT (MT. BEHIND FLAT SCREEN TV). REUSE POWER BRANCH CIRCUIT WIRING FROM OLD. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION.
5. CONTRACTOR SHALL FURNISH AND INSTALL NEW SURFACED MTD. TV COAX CONNECTION, WIRING, OUTLET BOX, AND CONDUIT (MT. BEHIND FLAT SCREEN TV). REUSE COAX CABLE WIRING WIRING FROM OLD. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION.
6. N/A
7. N/A
8. CONTRACTOR SHALL FURNISH AND INSTALL NEW DEDICATED 120V POWER CIRCUIT WIRING AND SURFACE MTD. DUPLEX RECEPTACLE (TYPE 'A') FOR MICROWAVE IN THIS AREA. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION. CONNECT TO NEARBY EXISTING POWER PANEL 'A'. FURNISH AND INSTALL NEW 20A 1P CIRCUIT BREAKER IN EXISTING PANEL 'A'.
9. CONTRACTOR SHALL FURNISH AND INSTALL NEW 120V SURFACE MTD. DUPLEX RECEPTACLE FOR REFRIGERATOR IN THIS AREA. CONNECT TO NEARBY EXISTING POWER BRANCH CIRCUIT WIRING. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION.
10. N/A
11. CONTRACTOR SHALL FURNISH AND INSTALL NEW SURFACED MTD. DUPLEX RECEPTACLE (TYPE 'A'), COVERPLATE, OUTLET BOX, AND CONDUIT (MT. ABOVE NEW COUNTERTOP). REUSE POWER BRANCH CIRCUIT WIRING FROM OLD. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION.
12. CONTRACTOR SHALL FURNISH AND INSTALL NEW DEDICATED 120V POWER CIRCUIT WIRING AND SURFACE MTD. DUPLEX RECEPTACLE (TYPE 'G') FOR GENERAL USAGE IN THIS AREA. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION. CONNECT TO EXISTING POWER BRANCH CIRCUIT FROM DEMO. NOTE: RECEPTACLES MOUNTED BEHIND CABINETRY IN THIS AREA.
13. CONTRACTOR SHALL FURNISH AND INSTALL NEW DEDICATED 120V POWER CIRCUIT WIRING FOR NEW BASE HEATER IN THIS AREA. FIELD COORDINATE FINAL LOCATION PRIOR TO INSTALLATION. CONNECT TO NEARBY EXISTING POWER PANEL 'A'. FURNISH AND INSTALL NEW 20A 1P CIRCUIT BREAKER IN EXISTING PANEL 'A'.

LEGEND:

(#) INDICATES REFER TO ASSIGNED NUMBER FROM 'DEMOLITION CONSTRUCTION NOTES' ABOVE.

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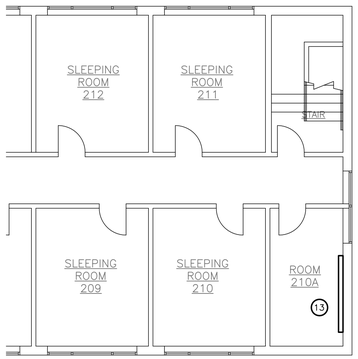
SHEET No

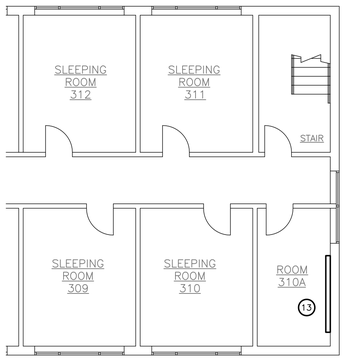
E1

NEW WORK NOTES:

1. SEE DRAWING "E0.1" & "E0.2" FOR GENERAL NOTES, ABBREVIATIONS AND LEGENDS.
2. SEE DRAWING "E1" FOR ASSIGNED NEW WORK CONSTRUCTION NOTES.



1 / E2 SECOND FLOOR PARTIAL ELECTRICAL PLAN
SCALE: 1/8"=1'-0"



2 / E2 THIRD FLOOR PARTIAL ELECTRICAL PLAN
SCALE: 1/8"=1'-0"

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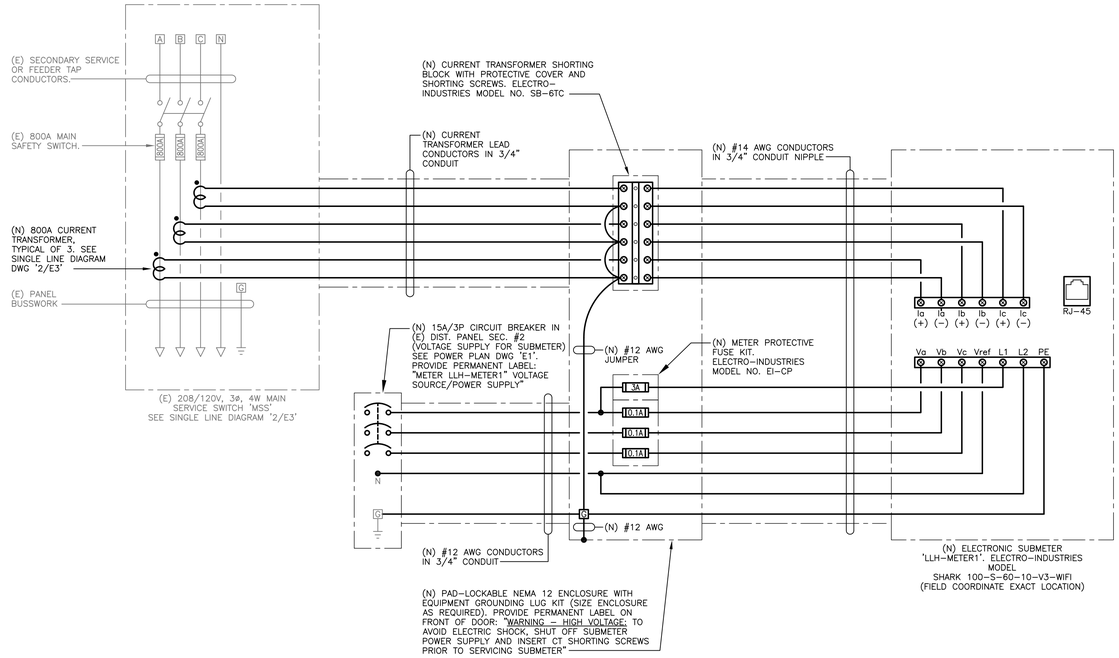
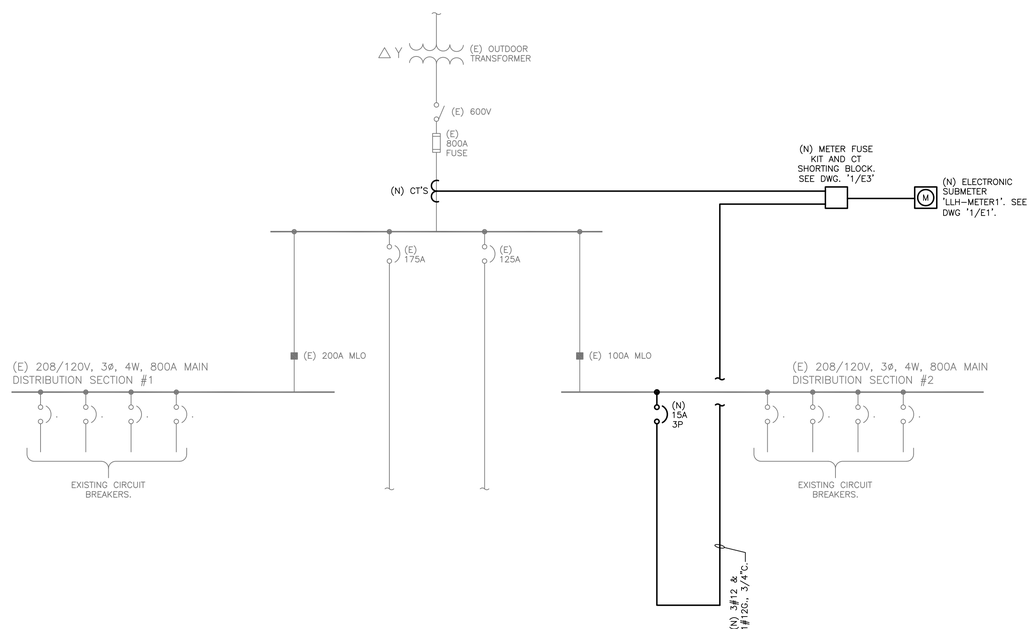
SHEET No
E2



1/E3 SUBMETERING ASSEMBLY DETAIL/WIRING DIAGRAM

SCALE: NONE



2/E3 PARTIAL SINGLE LINE DIAGRAM – NEW WORK

SCALE: NONE

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E3