# Union Brothers Furniture Company

37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

16225 : MTA PROJECT #
PERMIT / CONSTRUCTION SUBMISSION
06/16/17

## PROJECT TEAM

| | |
|---|---|
| OWNER: | 37 West Cross Street, LLC<br>1120 South Hanover Street<br>Baltimore MD 21230 |
| ARCHITECT: | Marks, Thomas Architects<br>1414 Key Highway<br>2nd Floor<br>Baltimore MD. 21230<br>410.539.4300 |
| STRUCTURAL ENGINEER: | Field & Tung Structural Engineers<br>2031 Florida Ave NW<br>Third Floor<br>Washington DC, 20009<br>202-760-2270 |
| MECHANICAL / ELECTRICAL / PLUMBING: | JennErik Engineering. Inc.<br>9440 Belair Rd<br>Nottingham MD. 21236<br>410.870.1300 |
| CIVIL ENGINEER: | Colbert, Matz, Rosenfelt<br>2835 Smith Ave,<br>Suite G<br>Baltimore MD, 21209<br>410.653.3838 |
| CONTRACTOR: | TBD |
| | |

## SYMBOLS

| | | | |
|---|---|---|---|
| 1 A101 SIM | BUILDING SECTION | | ROOM NAME<br>ROOM NUMBER<br>(AREA) |
| 1 A101 SIM | WALL SECTION | S1 | WALL / PARTITION ASSEMBLY TYPE (SEE 35.01) |
| 1 A101 SIM | DETAIL | 1 | KEY NOTE |
| 1 35.01 | BUILDING ELEVATION | 101 | DOOR NUMBER |
| 1 4 35.01 2 3 | INTERIOR ELEVATION | C1 | WINDOW TAG<br>LOUVER TAG |
| | | | DATUM ELEVATION |
| 0 | COLUMN GRID NUMBER | 1 | REVISION / ADDENDUM |
| | | | NORTH ARROW |

SITE PLAN

LOCATION PLAN

### Drawing List

| Number | Sheet Name | Issue Date |
|---|---|---|
| 00.00 | COVER SHEET | 10/05/17 |
| 00.06 | CODE REVIEW | 10/05/17 |
| 00.07 | CODE REVIEW | 10/05/17 |
| 20.01 | EXISTING CONDITIONS - SITE PLAN | 10/05/17 |
| 20.02 | PROPOSED CONDITIONS - SITE PLAN | 10/05/17 |
| 20.03 | SITE DETAILS | 10/05/17 |
| 28.00 | BASEMENT AND FIRST FLOOR DEMO PLANS | 10/05/17 |
| 28.01 | SECOND FLOOR DEMO PLAN | 10/05/17 |
| 28.02 | THIRD FLOOR DEMO PLAN | 10/05/17 |
| 28.03 | ROOF DEMO PLAN | 10/05/17 |
| 28.04 | EXTERIOR DEMO ELEVATIONS | 10/05/17 |
| 28.05 | EXTERIOR DEMO ELEVATIONS | 10/05/17 |
| 28.06 | SALVAGE | 10/05/17 |
| 30.01 | BASEMENT AND FIRST FLOOR PLAN | 10/05/17 |
| 30.02 | SECOND FLOOR PLAN | 10/05/17 |
| 30.03 | THIRD FLOOR PLAN | 10/05/17 |
| 30.04 | ROOF PLAN | 10/05/17 |
| 31.01 | EXTERIOR ELEVATIONS | 10/05/17 |
| 31.02 | EXTERIOR ELEVATIONS | 10/05/17 |
| 31.03 | ENLARGED ENTRANCE ELEVATIONS | 10/05/17 |
| 32.01 | BUILDING SECTIONS | 10/05/17 |
| 33.01 | WALL SECTIONS | 10/05/17 |
| 33.02 | CANOPY & ENTRANCE DETAILS | 10/05/17 |
| 33.03 | CANOPY & ENTRANCE DETAILS | 10/05/17 |
| 33.06 | ROOF DETAILS | 10/05/17 |
| 34.01 | STAIRCASE 1 & ELEVATOR PLANS & DETAILS | 10/05/17 |
| 34.02 | STAIRCASE 2 & 3 PLANS & DETAILS | 10/05/17 |
| 34.03 | WALL DETAILS | 10/05/17 |
| 35.01 | WALL AND DOOR SCHEDULE | 10/05/17 |
| 35.02 | WINDOW SCHEDULE | 10/05/17 |
| 35.03 | WINDOW DETAILS | 10/05/17 |
| 36.02 | LOBBY DETAILS | 10/05/17 |
| 36.03 | ENLARGED RESTROOMS | 10/05/17 |
| 60.01 | GENERAL NOTES | 10/05/17 |
| 60.02 | GENERAL NOTES | 10/05/17 |
| 61.00 | FOUNDATION & BASEMENT PLAN | 10/05/17 |
| 61.01 | FIRST FLOOR FRAMING PLAN | 10/05/17 |
| 61.02 | SECOND FLOOR FRAMING PLAN | 10/05/17 |
| 61.03 | THIRD FLOOR FRAMING PLAN | 10/05/17 |
| 61.04 | ROOF FRAMING PLAN | 10/05/17 |
| 61.05 | PENTHOUSE ROOF FRAMING PLAN | 10/05/17 |
| 62.30 | CONCRETE DETAILS | 10/05/17 |

### Drawing List

| Number | Sheet Name | Issue Date |
|---|---|---|
| 62.31 | CONCRETE DETAILS | 10/05/17 |
| 62.32 | CONCRETE DETAILS | 10/05/17 |
| 62.40 | MASONRY DETAILS | 10/05/17 |
| 62.41 | MASONRY DETAILS | 10/05/17 |
| 62.42 | MASONRY DETAILS | 10/05/17 |
| 62.50 | STEEL DETAILS | 10/05/17 |
| 62.55 | COLD-FORMED METAL DETAILS | 10/05/17 |
| 62.60 | WOOD DETAILS | 10/05/17 |
| 62.61 | WOOD DETAILS | 10/05/17 |
| 63.30 | CONCRETE REPAIR DETAILS | 10/05/17 |
| 63.40 | MASONRY REPAIR DETAILS | 10/05/17 |
| 70.00 | PLUMBING LEGEND, ABBREVIATIONS & NOTES | 10/05/17 |
| 70.01 | BASEMENT PLUMBING DEMOLITION | 10/05/17 |
| 70.02 | SUBSLAB PLUMBING NEW WORK | 10/05/17 |
| 70.03 | BASEMENT PLUMBING- NEW WORK | 10/05/17 |
| 70.04 | FIRST FLOOR PLUMBING - NEW WORK | 10/05/17 |
| 70.05 | SECOND FLOOR PLUMBING - NEW WORK | 10/05/17 |
| 70.06 | THIRD FLOOR PLUMBING - NEW WORK | 10/05/17 |
| 70.07 | ROOF PLUMBING - NEW WORK | 10/05/17 |
| 75.01 | PLUMBING DETAILS | 10/05/17 |
| 75.02 | PLUMBING RISER DIAGRAMS | 10/05/17 |
| 80.00 | MECHANICAL LEGEND, NOTES & ABBREVIATIONS | 10/05/17 |
| 80.01 | BASEMENT MECHANICAL - NEW WORK | 10/05/17 |
| 80.02 | FIRST FLOOR MECHANICAL - NEW WORK | 10/05/17 |
| 80.03 | SECOND FLOOR MECHANICAL - NEW WORK | 10/05/17 |
| 80.04 | THIRD FLOOR MECHANICAL - NEW WORK | 10/05/17 |
| 80.05 | ROOF PLAN MECHANICAL - NEW WORK | 10/05/17 |
| 86.01 | MECHANICAL SCHEDULES | 10/05/17 |
| 90.01 | ELECTRICAL LEGEND ABBREVIATIONS AND NOTES | 10/05/17 |
| 91.01 | BASEMENT POWER AND FIRE ALARM PLAN -NEW WORK | 10/05/17 |
| 91.02 | FIRST FLOOR POWER AND FIRE ALARM PLAN -NEW WORK | 10/05/17 |
| 91.03 | SECOND FLOOR POWER AND FIRE ALARM PLAN -NEW WORK | 10/05/17 |
| 91.04 | THIRD FLOOR POWER AND FIRE ALARM PLAN -NEW WORK | 10/05/17 |
| 91.05 | ROOF ELECTRICAL NEW WORK | 10/05/17 |
| 92.01 | BASEMENT LIGHTING NEW WORK | 10/05/17 |
| 92.02 | FIRST FLOOR LIGHTING NEW WORK | 10/05/17 |
| 92.03 | SECOND FLOOR LIGHTING NEW WORK | 10/05/17 |
| 92.04 | THIRD FLOOR LIGHTING NEW WORK | 10/05/17 |
| 95.01 | ELECTRICAL DIAGRAMS | 10/05/17 |
| 96.01 | ELECTRICAL SCHEDULES | 10/05/17 |
| 96.02 | ELECTRICAL SCHEDULES | 10/05/17 |

MARKS, THOMAS ARCHITECTS
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SHEET TITLE

**COVER SHEET**

| | |
|---|---|
| Project Number: | 16225 |
| Date: | 10/05/17 |
| Drawn by: | GH |
| Checked by: | NL |

MTA/MHT SUBMISSION 09/30/16

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**

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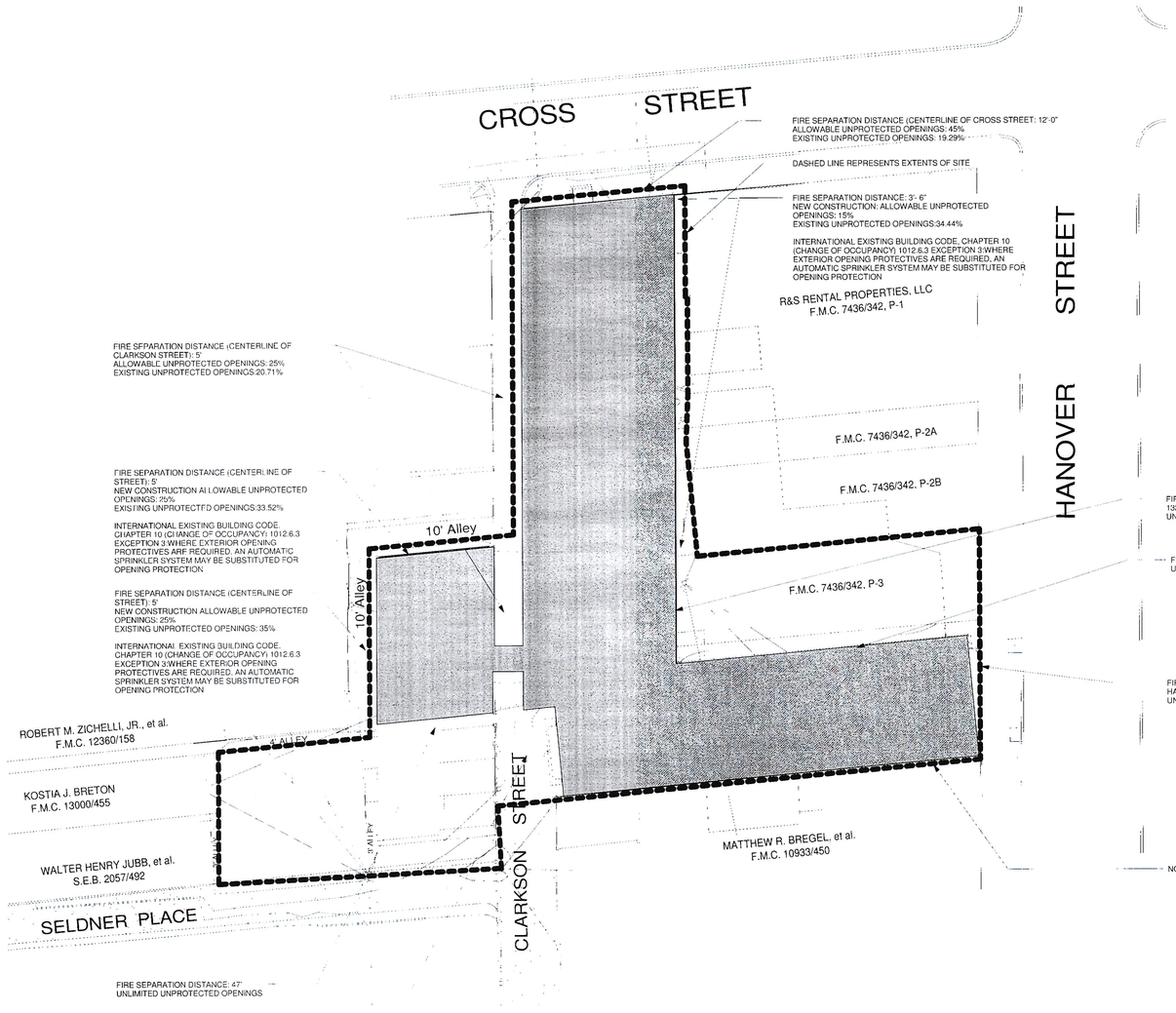


1 00.06 CODE SITE CONTEXT
1" = 20'-0"

TABLE: 4% MINIMUM OPERABLE WINDOWS REQUIRED TO COMPLY WITH FRESH AIR REQUIREMENTS.

| | | Room Name | Floor Area | Openable Door / Window area | % |
|---|---|---|---|---|---|
| Building 1 | Floor 1 | | | | |
| | | Retail | 6109 | 303.0 | 5.0% |
| | | Lobby (First & Second Floor) | 1299 | 134.0 | 10.3% |
| | Floor 2 | | | | |
| | | Office | 6145 | 246.2 | 4.0% |
| | Floor 3 | | | | |
| | | Office | 6187 | 246.2 | 4.0% |
| | | Lobby | 597 | 30.3 | 5.1% |
| Building 2 | Floor 1 | | | | |
| | | Office | 1857 | 158.5 | 8.5% |
| | Floor 2 | | | | |
| | | Office | 1809 | 132.7 | 7.3% |
| | | Office | 1814 | 132.7 | 7.3% |
| Building 3 | FLOOR 1 | | | | |
| | | Retail | 4447 | 360.8 | 8.1% |
| | FLOOR 2 | | | | |
| | | Office | 4688 | 187.5 | 4.0% |

OCCUPANT LOAD CHART

| LEVEL | NAME | NUMBER | AREA | OCCUPANT LOAD FACTOR | NO OF OCCUPANTS |
|---|---|---|---|---|---|
| BASEMENT | BASEMENT | 001 | 5073 SF | 300 SF | 17 |
| BASEMENT | BASEMENT | 002 | 804 SF | 300 SF | 3 |
| BASEMENT | BASEMENT | 003 | 859 SF | 300 SF | 3 |
| GROUND LEVEL | ASSEMBLY | 101 | 4447 SF | 15 SF | 296 |
| GROUND LEVEL | OFFICE | 103 | 1648 SF | 100 SF | 16 |
| GROUND LEVEL | ASSEMBLY | 102 | 6109 SF | 15 SF | 407 |
| GROUND LEVEL | VEST. | 111 | 87 SF | 300 SF | 0 |
| GROUND LEVEL | UTILITY ROOM | 118 | 133 SF | 300 SF | 0 |
| LEVEL 2 | OFFICE | 203 | 1809 SF | 100 SF | 18 |
| LEVEL 2 | OFFICE | 201 | 4688 SF | 100 SF | 47 |
| LEVEL 2 | OFFICE | 202 | 6145 SF | 100 SF | 61 |
| LEVEL 2 | MEN'S REST ROOM | 206 | 87 SF | 300 SF | 0 |
| LEVEL 2 | WOMEN'S RESTROOM | 207 | 94 SF | 300 SF | 0 |
| LEVEL 2 | J.C | 205 | 16 SF | 300 SF | 0 |
| LEVEL 3 | OFFICE | 303 | 1814 SF | 100 SF | 18 |
| LEVEL 3 | OFFICE | 302 | 6188 SF | 100 SF | 62 |
| LEVEL 3 | MEN'S RESTROOM | 306 | 87 SF | 300 SF | 0 |
| TOTAL OCCUPANT LOAD | | | | | = 949 |

ASSEMBLY SPACES WILL BE PERMITTED SEPARATELY. ACTUAL OCCUPANT LOADS WILL BE LESS THAN THOSE SHOWN ABOVE DUE TO KITCHEN, STORAGE, ETC.

PLUMBING NOTE: FIXTURES ARE PROVIDED FOR THE BUSINESS OCCUPANCIES ONLY. ASSEMBLY RESTROOMS WILL BE PART OF THE TENANT FITOUT. OCCUPANCY LOADS WILL VARY.

## CODE REVIEW GENERAL

THE PROJECT CONSISTS OF THE RENOVATION OF AN EXISTING 40867 SF HISTORIC MASONRY LOAD-BEARING WALL BUILDING, PARTIALLY 2 STORY AND PARTIALLY 3 STORY. THE PROJECT WILL BE FULLY SPRINKLERED PER NFPA 13. THE USE GROUPS FOR THE BUILDING ARE ASSEMBLY AT THE GROUND LEVEL AND BUSINESS AT THE SECOND AND THIRD LEVELS

CHAPTER 3: USE AND OCCUPANCY

FIRST FLOOR: ASSEMBLY A-2 (303.3)
SECOND, THIRD FI OOR BUSINESS B (304.1)
BASEMENT STORAGE GROUP S-2

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

TABLE 504.3, 504.4, 506.2
TYPE 3B CONSTRUCTION
MAXIMUM HEIGHT = 75'-0"
MAXIMUM NUMBER OF STORIES 3 STORIES FOR A-2
MAXIMUM AREA: 38000 SF OF A-2 SPRINKLERED, 76 000 SF FOR B SPRINKLERED PER FLOOR

ACTAUL HEIGHT: 36' +/-
ACTUAL NUMBER OF STORIES = BASEMENT (FULLY BELOW GRADE) AND 3 STORIES
ACTUAL AREA PER STORY:
BASEMENT: 7202 SF
FIRST FLOOR: 15 181
SECOND FLOOR: 15 354
THIRD FLOOR: 10 332
TOTAL: 40867 (EXCLUDING BASEMENT)

506.2.4 MIXED OCCUPANCY MULTI STORY BUILDINGS

508 MIXED USE AND OCCUPANCY
IF THE BUILDING WERE 100% ASSEMBLY MAXIMUM ALLOWABLE SF = 38000 * 3 = 114 000 AND 3 STORIES (ACTUAL IS 40867 SF AND 4 STORIES)
SINCE THE TOTAL SQUARE FOOTAGE IS LESS THAN THE ALLOWABLE FOR THE MOST STRINGENT OCCPANCY THE MIXED USE ALLOWABLE IS NOT NECESSARY TO CALCULATE.
THIS BUILDING WILL BE "NON-SEPARATED MIXED-USE". THE BUILDING WILL FOLLOW THE REQUIREMENTS OF THE MORE STRINGENT OCCUPANCY, ASSEMBLY (A-2), THEREFORE NO FIRE RATING BETWEEN USES IS REQUIRED

CHAPTER 6: TYPES OF CONSTRUCTION

602.3 TYPE III
TYPE III CONSTRUCTION IS THAT TYPE OF CONSTRUCTION IN WHICH THE EXTERIOR WALLS ARE OF NONCOMBUSTIBLE MATERIALS AND THE INTERIOR BUILDING ELEMENTS ARE OF ANY MATERIAL PERMITTED BY THIS CODE.

TABLE 601
FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS: TYPE 3B CONSTRUCTION:
0 HOUR PRIMARY STRUCTURAL FRAME
2 HOUR EXTERIOR BEARING WALLS (ACTUAL: SOLID LOAD BEARING MASONRY > 2 HOUR)
0 HOUR INTERIOR BEARING WALLS
0 HOUR FLOOR AND ROOF CONSTRUCTION

TABLE 602 FIRE SEPARATION DISTANCE VARIES. SEE SITE PLAN. MAXIMUM EXTERIOR WALL RATING REQUIRED IS 1-HOUR WHICH WE EXCEED

CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES

TABLE 705.8 MAXIMUM AREA OF EXTERIOR WALL OPENINGS (NEW CONSTRUCTION)
3' < 5' - 15%
5' < 10' - 25%
10' < 15' - 45%
20' < 25' - 100%
INTERNATIONAL EXISTING BUILDING CODE, CHAPTER 10 (CHANGE OF OCCUPANCY) 1012.6.3 EXCEPTION 3:WHERE EXTERIOR OPENING PROTECTIVES ARE REQUIRED, AN AUTOMATIC SPRINKLER SYSTEM MAY BE SUBSTITUTED FOR OPENING PROTECTION

711.2.3 SUPPORTING CONSTRUCTION. THE SUPPORTING CONSTRUCTION SHALL BE PROTECTED TO AFFORD THE REQUIRED FIRE-RASISTANCE RATING OF THE HORIZONTAL ASSEMBLY SUPPORTED.

713.4 / 1009.3.1.2 SHAFT ENCLOSURES SHALL HAVE A FIRE-RESISTANCE RATING OF 2 - HR WHEN CONNECTING FOUR STORIES OR MORE AND 1 HR WHEN CONNECTING LESS THAN FOUR STORIES

CHAPTER 8: INTERIOR FINISHES

CHAPTER 9: FIRE PROTECTION SYSTEMS

903.2.1.1 AUTOMATIC SPRINKLERS IN ACCORDANCE WITH NFPA 13 WILL BE INSTALLED THROUGH-OUT.

906.1 PORTABLE FIRE EXTINGUISHERS IN A-2 AND B OCCUPANCIES WHERE REQUIRED. COORDINATE WITH AHJ.

907.2.9 FIRE ALARM AND SMOKE ALARMS TO BE INSTALLED IN GROUP R-2 OCCUPANCIES AS REQUIRED BY 907.2.9.3

CHAPTER 10: MEANS OF EGRESS

TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

ASSEMBLY WITH TABLES AND CHAIRS = 15 NET
BUSINESS AREAS = 100 GROSS

1011.2 STAIRWAY WIDTH MINIMUM 44"

1011.5.2 RISER HEIGHT AND TREAD DEPTH
STAIR RISER HEIGHT = 7" MAX.; TREAD DEPTH = 11" MIN.

TABLE 1006.3.1 EXITS AND EXIT ACCESS DOORWAYS. TWO EXITS ARE PROVIDED ON EACH FLOOR

1007.1.1 EXCEPTION 2 EXITS ARE PLACED A DISTANCE OF NOT LESS THAN 1/3 THE DIAGONAL DIMENSION OF THE BUILDINGS
1017.2 EXIT ACCESS TRAVEL DISTANCE IS < 250 FEET

CHAPTER 12: INTERIOR ENVIRONMENT

1203.5.1 NATURAL VENTILATION
MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED. SEE CHART.

1205.2 NATURAL LIGHT
THE MINIMUM NET GLAZED AREA SHALL NOT BE LESS THAN 8% OF THE FLOOR AREA OF THE ROOM SERVED.

CHAPTER 15 ROOFTOP STRUCTURES

1510.2 PETHOUSES. WILL BE CONSIDERED PART OF THE FLOOR BELOW SINCE IT IS NOT MORE THAN 18' ABOVE THE ROOF DECK AND IS NOT MORE THAN 1/3 THE AREA OF THE ROOF DECK

1510.2.5 EXCEPTION 3. PENTHOUSE WALLS ARE ALLOWED TO HAVE A 1 HR RATING

APPLICABLE CODES

2015 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE
2015 INTERNATIONAL EXISTING BUILDING CODE
2014 NATIONAL ELECTRIC CODE (NEC)
2015 INTERNATIONAL PLUMBING CODE WITH LOCAL AMENDMENTS
2012 NATIONAL FUEL GAS CODE
2015 INTERNATIONAL FIRE CODE – WITH LOCAL AMENDMENTS
2013 NFPA 13: STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
MARYLAND STATE ACCESSIBILITY CODE
UNIFORM FEDERAL ACCESSIBILITY STANDARDS

MARYLAND STATE ACCESSIBILITY CODE:

INTERNATIONAL ENERGY CONSERVATION CODE

C202 COMMERCIAL BUILDINGE
TABLE C402.1.3 CLIMATE ZONE 4
- WINDOWS U-VALUE MIN. 0.35 (0.35 PROVIDED)
- WINDOWS SHGC MIN. 0.40 (0.32 PROVIDED)
- CEILING/ROOF R-VALUE ABOVE DECK MIN R-30 (R-30 PROVIDED)
- MASS WALLS - R-VALUE MIN. R-11.4 (R-5 PROVIDED) [ EXCEPTION FOR HISTORIC BUILDINGS]

INTERNATIONAL GREEN CONSTRUCTION CODE. SEE CHECKLIST PROVIDED WITH PERMIT APPLICATION

MARKS, THOMAS ARCHITECTS
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|---|---|
| Drawn by: GH | Checked by: NL |

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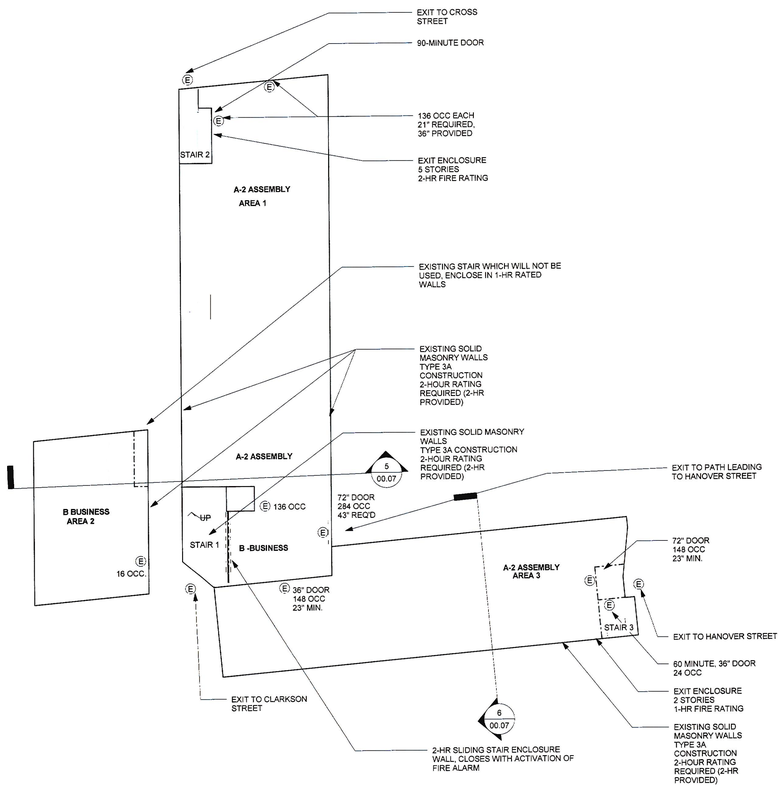
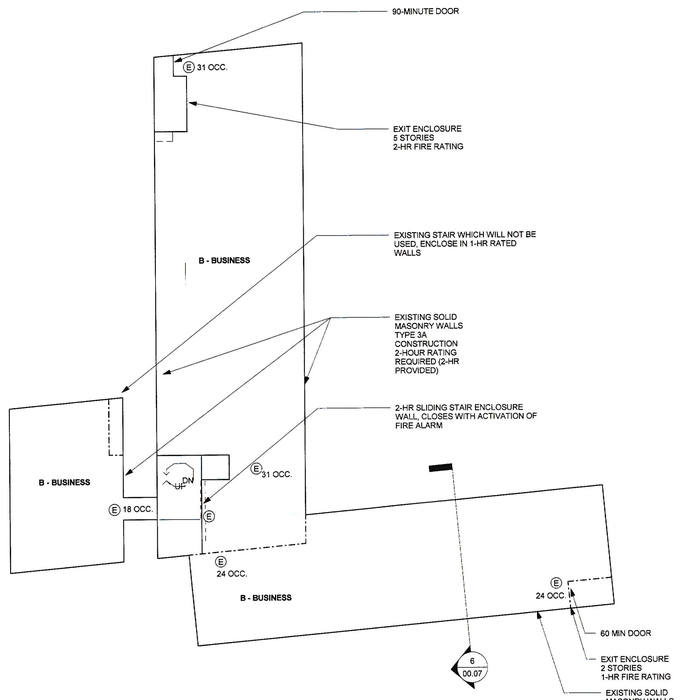
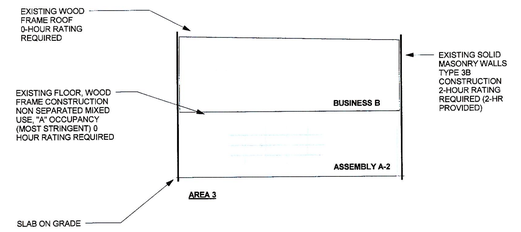



1 00.07 FIRST FLOOR PLAN
1" = 20'-0"

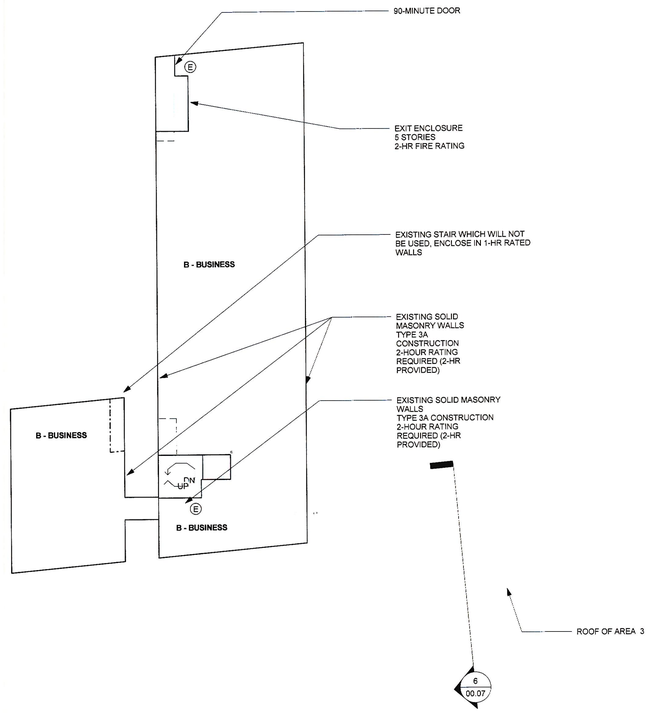



3 00.07 SECOND FLOOR PLAN
1" = 20'-0"

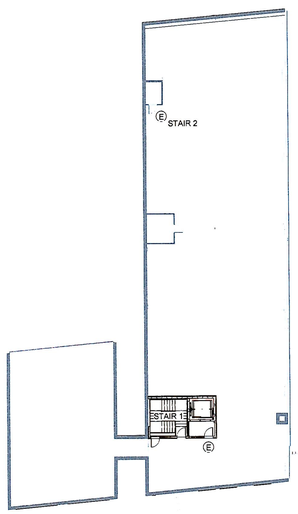
| LEGEND | |
|---|---|
| E | EXIT |
| FEC | FIRE EXTINGUISHER CABINET |
| FE | FIRE EXTINGUISHER |
| - - - - | 1 HR |
| ——— | 2 HR |



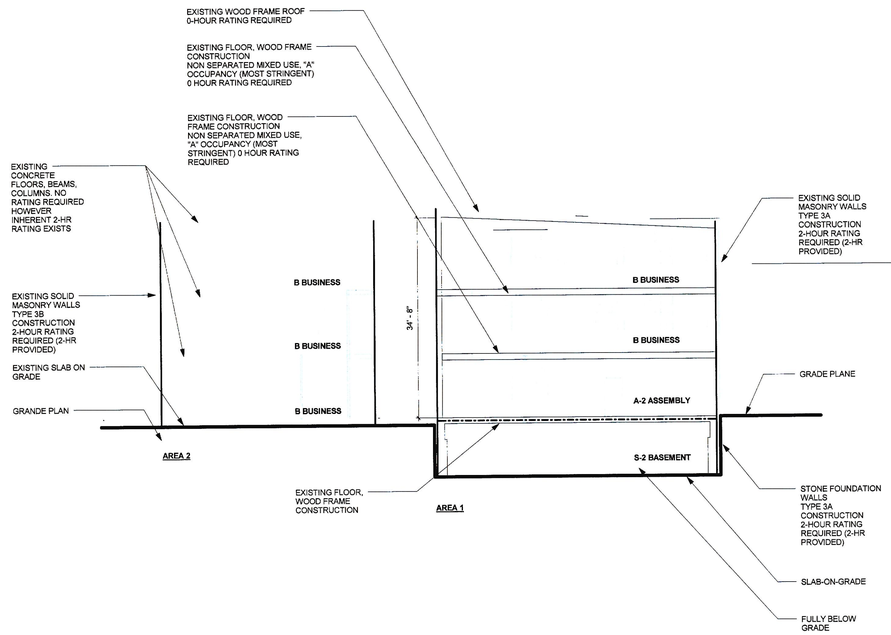

6 00.07 CODE REVIEW SECTION 2
3/32" = 1'-0"




4 00.07 THIRD FLOOR PLAN
1" = 20'-0"




2 00.07 CODE ROOF PLAN
3/64" = 1'-0"




5 00.07 CODE REVIEW SECTION 1
3/32" = 1'-0"

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**CODE REVIEW**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: Author | Checked by: Checker |
| NPS/HIT SUBMISSION | 06/30/18 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**

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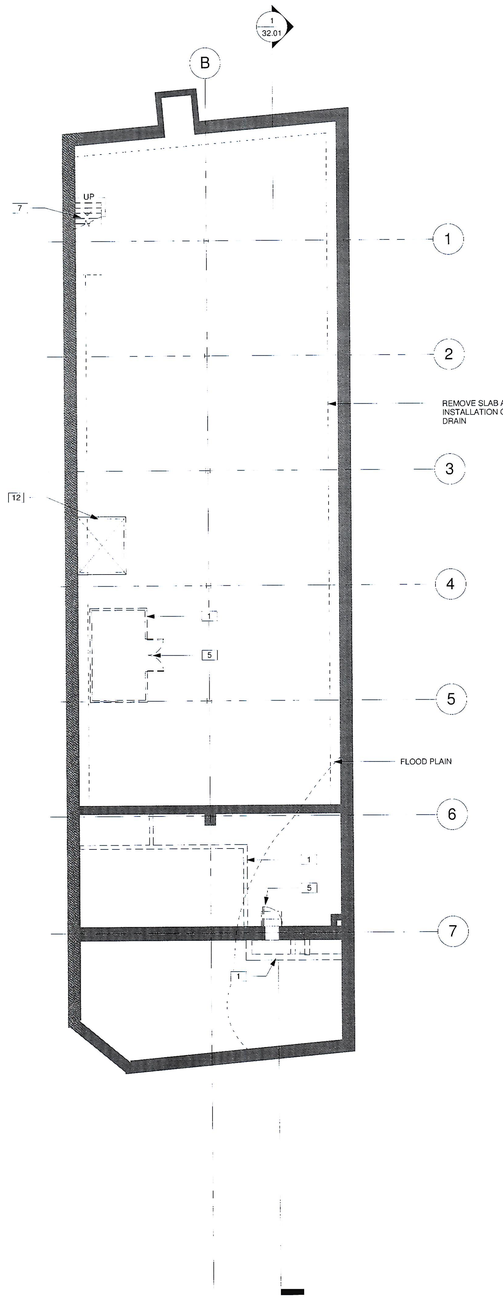
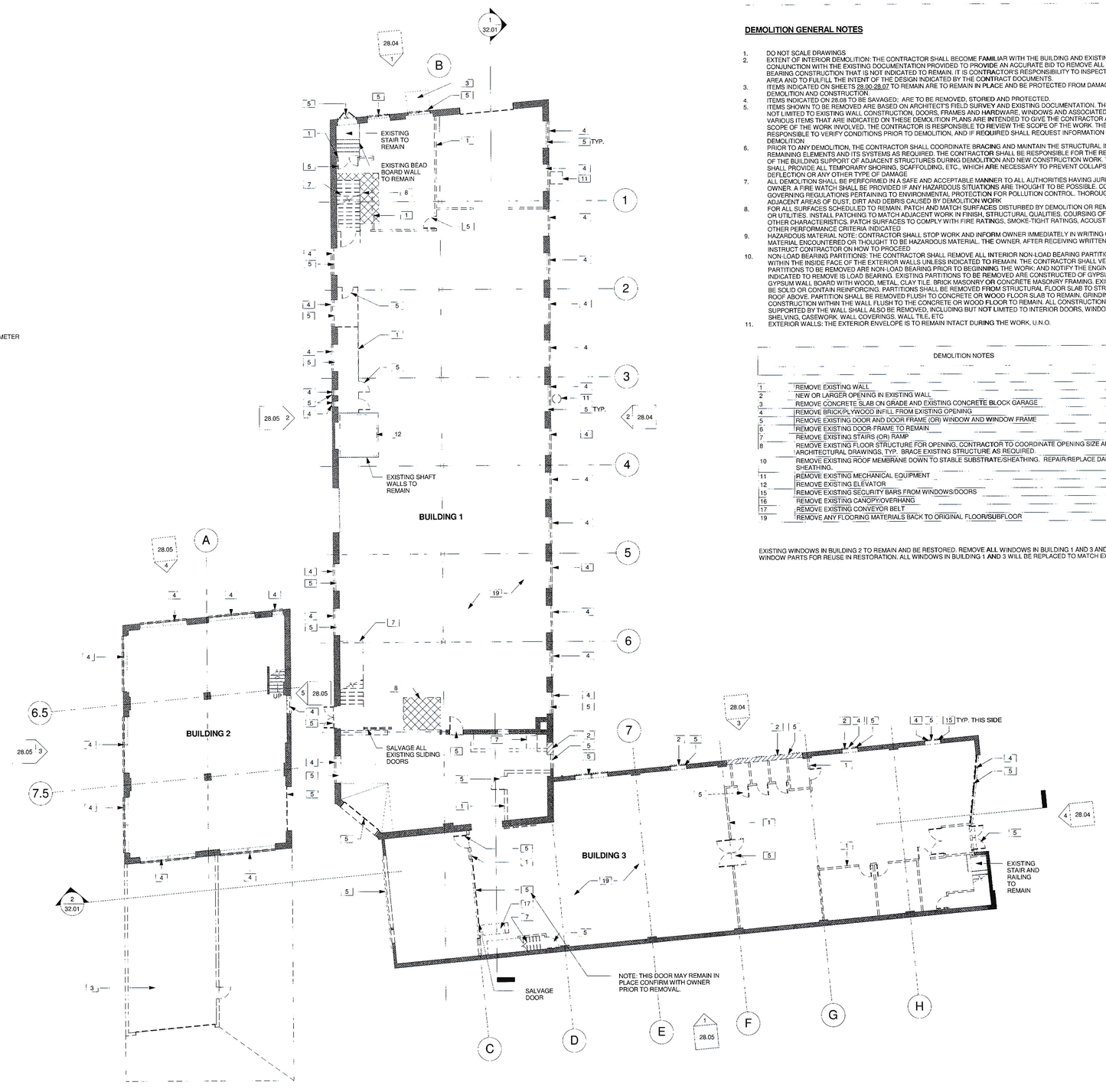



1 / 28.00 BASEMENT DEMO PLAN
3/32" = 1'-0"




2 / 28.00 FIRST FLOOR DEMO PLAN
3/32" = 1'-0"

**DEMOLITION LEGEND**

- TO BE REMOVED
- EXISTING DOOR, DOOR FRAME & HARDWARE TO BE REMOVED
- TO REMAIN
- NEW OR ENLARGED OPENING IN EXISTING WALL
- NEW FLOOR OPENING

**DEMOLITION GENERAL NOTES**

1. DO NOT SCALE DRAWINGS
2. EXTENT OF INTERIOR DEMOLITION- THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE BUILDING AND EXISTING CONDITIONS IN CONJUNCTION WITH THE EXISTING DOCUMENTATION PROVIDED TO PROVIDE AN ACCURATE BID TO REMOVE ALL INTERIOR NON-LOAD BEARING CONSTRUCTION THAT IS NOT INDICATED TO REMAIN. IT IS CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ASSESS EACH AREA AND TO FULFILL THE INTENT OF THE DESIGN INDICATED BY THE CONTRACT DOCUMENTS.
3. ITEMS INDICATED ON SHEETS 28.00-28.07 TO REMAIN ARE TO REMAIN IN PLACE AND BE PROTECTED FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
4. ITEMS INDICATED ON 28.08 TO BE SAVAGED; ARE TO BE REMOVED, STORED AND PROTECTED.
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DEMOLITION NOTES

| | |
|---|---|
| 1 | REMOVE EXISTING WALL |
| 2 | NEW OR LARGER OPENING IN EXISTING WALL |
| 3 | REMOVE CONCRETE SLAB ON GRADE AND EXISTING CONCRETE BLOCK GARAGE |
| 4 | REMOVE BRICK/PLYWOOD INFILL FROM EXISTING OPENING |
| 5 | REMOVE EXISTING DOOR AND DOOR FRAME (OR) WINDOW AND WINDOW FRAME |
| 6 | REMOVE EXISTING DOOR-FRAME TO REMAIN |
| 7 | REMOVE EXISTING STAIRS (OR) RAMP |
| 8 | REMOVE EXISTING FLOOR STRUCTURE FOR OPENING. CONTRACTOR TO COORDINATE OPENING SIZE AND LOCATION PER ARCHITECTURAL DRAWINGS, TYP. BRACE EXISTING STRUCTURE AS REQUIRED. |
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MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

CERTIFIED

Union Brothers Furniture Company
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**BASEMENT AND FIRST FLOOR DEMO PLANS**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: LR | Checked by: NL |
| NPS/MHT SUBMISSION | 06/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**

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**28.00**

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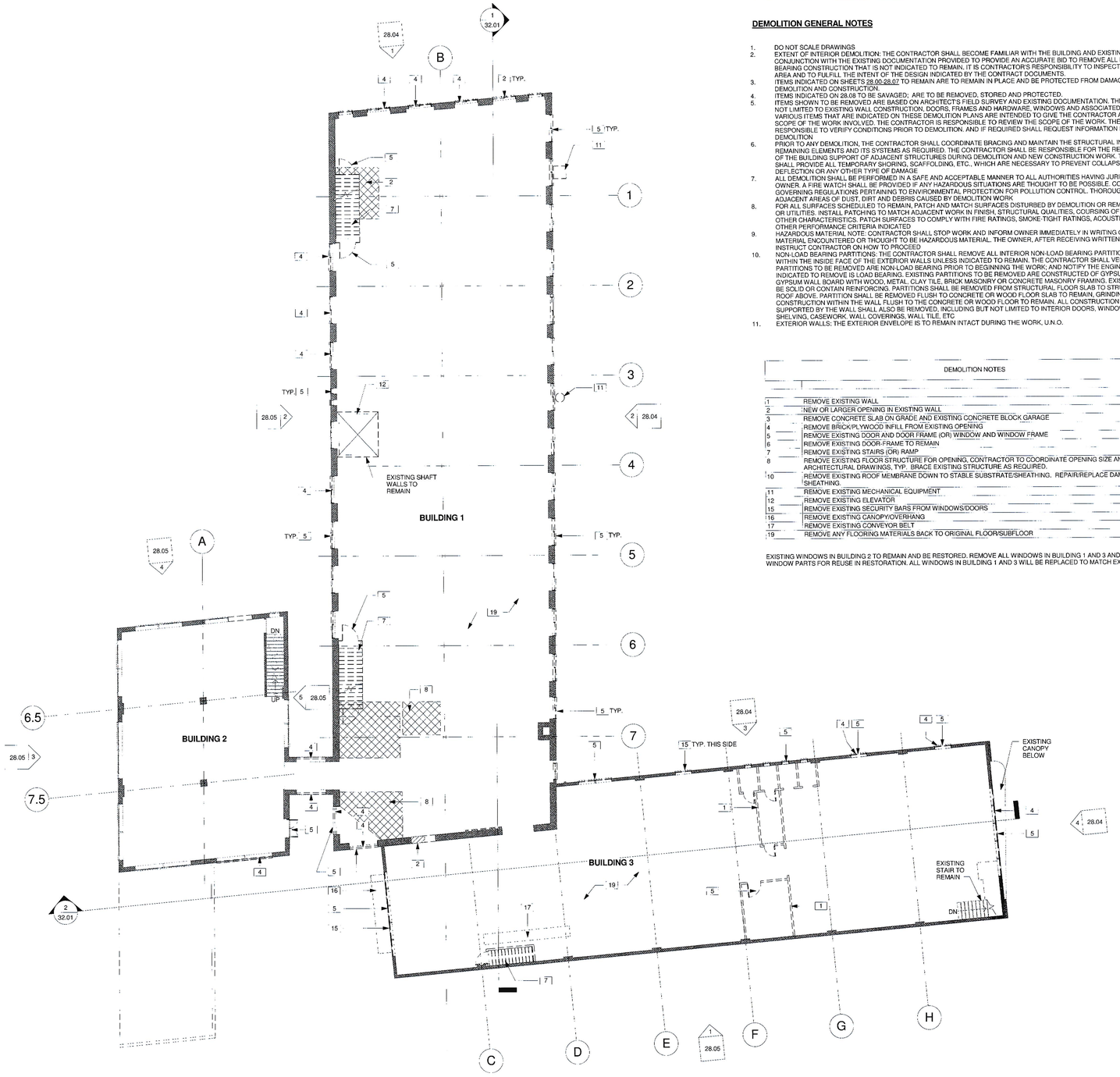


1 / 28.01 SECOND FLOOR DEMO PLAN
3/32" = 1'-0"

## DEMOLITION LEGEND

- TO BE REMOVED
- TO REMAIN
- NEW OR ENLARGED OPENING IN EXISTING WALL
- EXISTING DOOR, DOOR FRAME & HARDWARE TO BE REMOVED
- NEW FLOOR OPENING

## DEMOLITION GENERAL NOTES

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CERTIFIED

**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# SECOND FLOOR DEMO PLAN

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: LR | Checked by: NL |
| NPS/MHT SUBMISSION | 09/26/18 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**

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**28.01**

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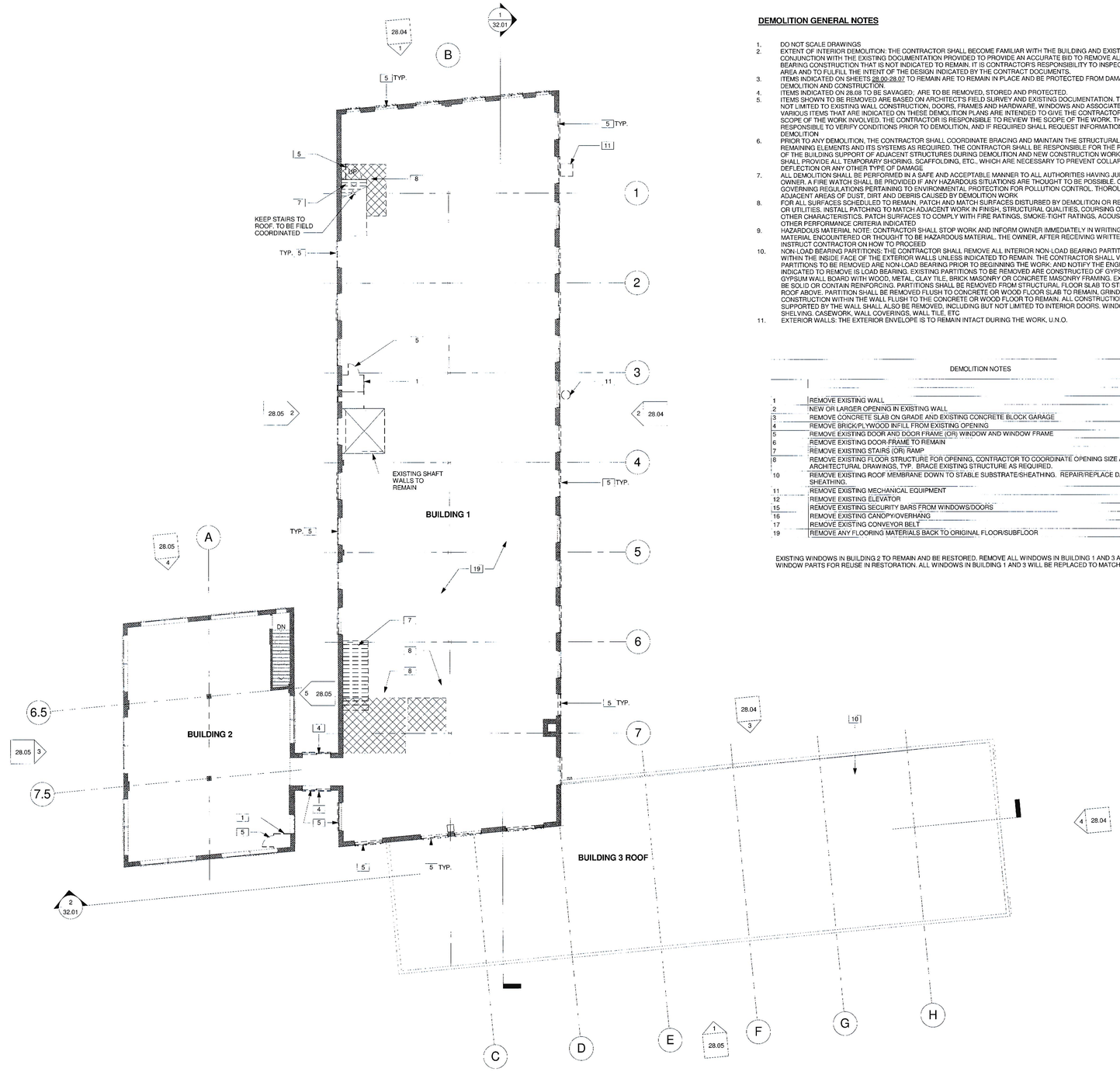


1 THIRD FLOOR DEMO PLAN
28.02 3/32" = 1'-0"

## DEMOLITION LEGEND

- TO BE REMOVED
- EXISTING DOOR, DOOR FRAME & HARDWARE TO BE REMOVED
- TO REMAIN
- NEW OR ENLARGED OPENING IN EXISTING WALL
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CERTIFIED

**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# THIRD FLOOR DEMO PLAN

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: LR | Checked by: NL |
| NPS/MHT SUBMISSION | 06/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**

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**28.02**

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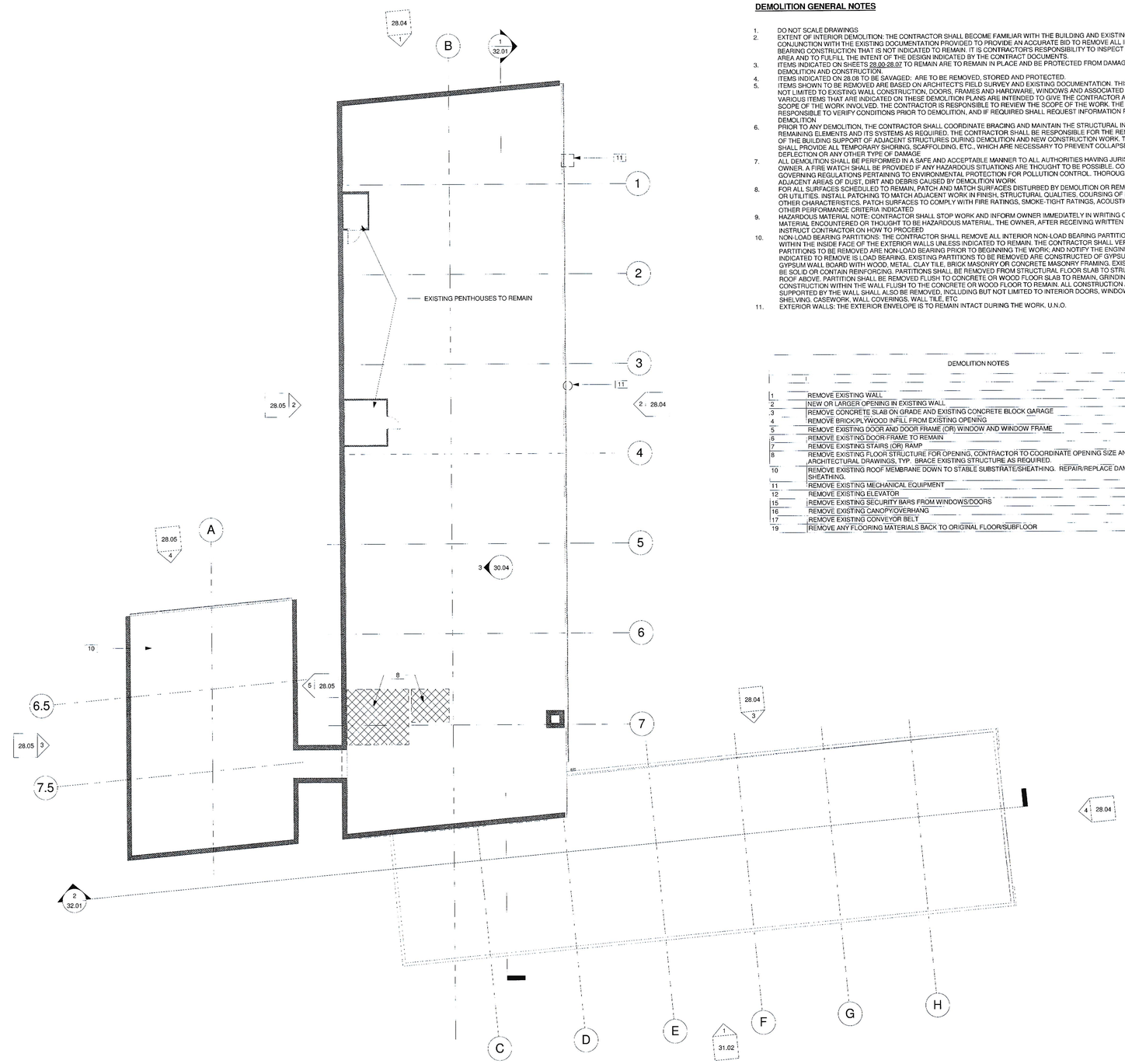


2 / 28.03 ROOF DEMO PLAN
3/32" = 1'-0"

**DEMOLITION LEGEND**

- TO BE REMOVED
- EXISTING DOOR, DOOR FRAME & HARDWARE TO BE REMOVED
- TO REMAIN
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| 4 | REMOVE BRICK/PLYWOOD INFILL FROM EXISTING OPENING |
| 5 | REMOVE EXISTING DOOR AND DOOR FRAME (OR) WINDOW AND WINDOW FRAME |
| 6 | REMOVE EXISTING DOOR FRAME TO REMAIN |
| 7 | REMOVE EXISTING STAIRS (OR) RAMP |
| 8 | REMOVE EXISTING FLOOR STRUCTURE FOR OPENING, CONTRACTOR TO COORDINATE OPENING SIZE AND LOCATION PER ARCHITECTURAL DRAWINGS, TYP. BRACE EXISTING STRUCTURE AS REQUIRED. |
| 10 | REMOVE EXISTING ROOF MEMBRANE DOWN TO STABLE SUBSTRATE/SHEATHING. REPAIR/REPLACE DAMAGED AND MISSING SHEATHING. |
| 11 | REMOVE EXISTING MECHANICAL EQUIPMENT |
| 12 | REMOVE EXISTING ELEVATOR |
| 15 | REMOVE EXISTING SECURITY BARS FROM WINDOWS/DOORS |
| 16 | REMOVE EXISTING CANOPY/OVERHANG |
| 17 | REMOVE EXISTING CONVEYOR BELT |
| 19 | REMOVE ANY FLOORING MATERIALS BACK TO ORIGINAL FLOOR/SUBFLOOR |

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

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**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**ROOF DEMO PLAN**

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: LR | Checked by: NL |

| Num. | Description | Date |
|---|---|---|
| | NPS/MHT SUBMISSION | 08/30/16 |

**PERMIT / CONSTRUCTION 10/05/17**

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**28.03**

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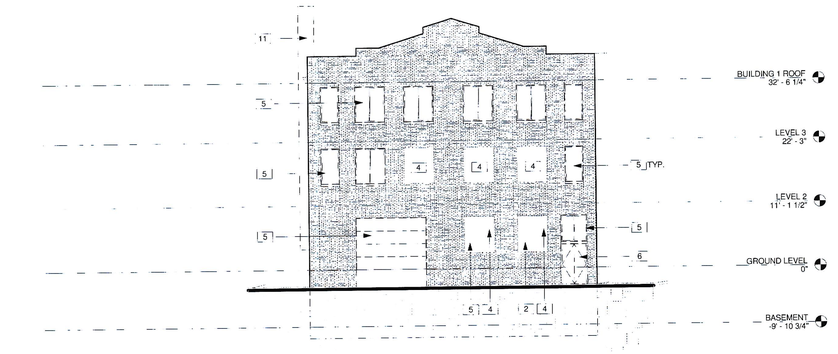
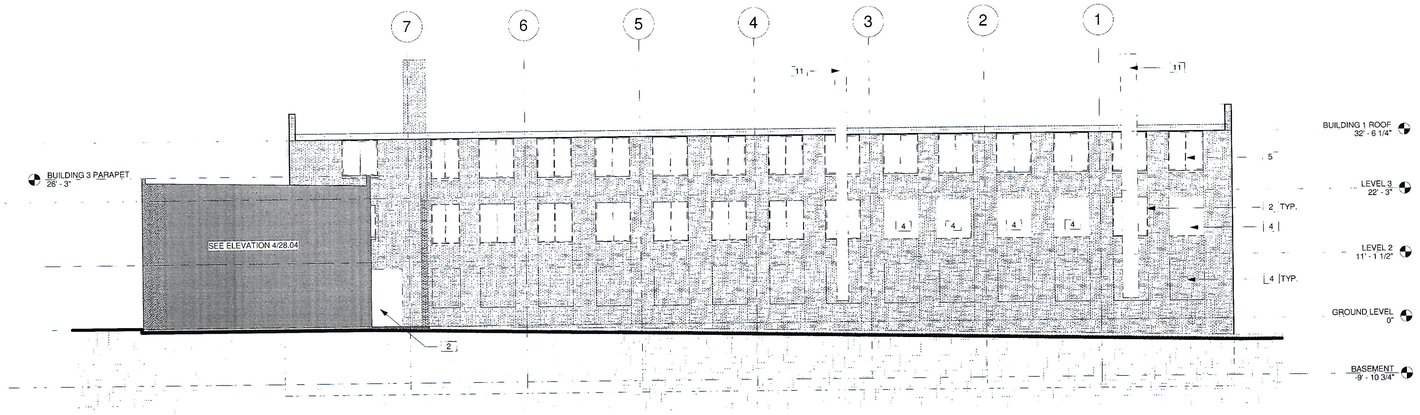
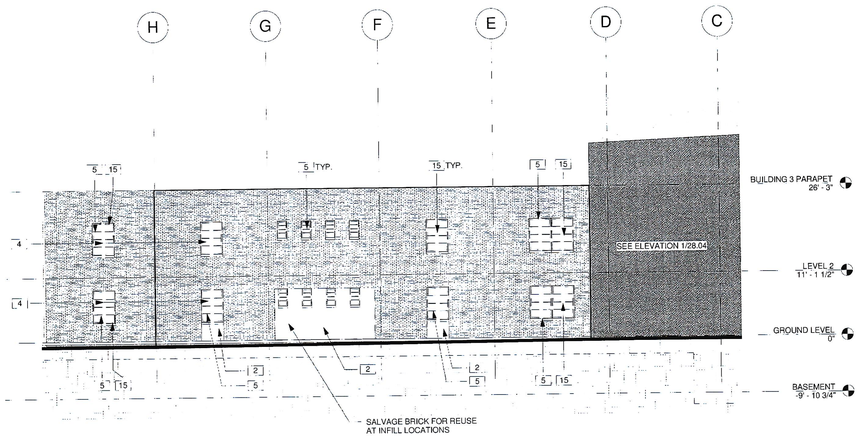


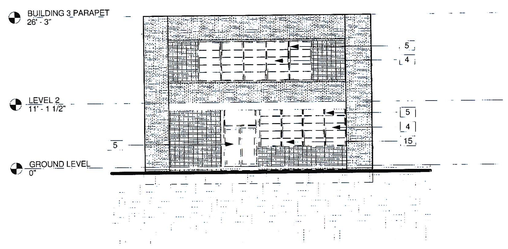

1 / 28.04 NORTH ELEVATION PART A - DEMO
3/32" = 1'-0"




2 / 28.04 EAST ELEVATION PART A - DEMO
3/32" = 1'-0"




3 / 28.04 NORTH ELEVATION PART B - DEMO
3/32" = 1'-0"




4 / 28.04 EAST ELEVATION PART B - DEMO
3/32" = 1'-0"

## DEMOLITION GENERAL NOTES

1. DO NOT SCALE DRAWINGS
2. EXTENT OF INTERIOR DEMOLITION: THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE BUILDING AND EXISTING CONDITIONS IN CONJUNCTION WITH THE EXISTING DOCUMENTATION PROVIDED TO PROVIDE AN ACCURATE BID TO REMOVE ALL INTERIOR NON-LOAD BEARING CONSTRUCTION THAT IS NOT INDICATED TO REMAIN. IT IS CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ASSESS EACH AREA AND TO FULFILL THE INTENT OF THE DESIGN INDICATED BY THE CONTRACT DOCUMENTS.
3. ITEMS INDICATED ON SHEETS 28.00-28.07 TO REMAIN ARE TO REMAIN IN PLACE AND BE PROTECTED FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
4. ITEMS INDICATED ON 28.06 TO BE SAVAGED; ARE TO BE REMOVED, STORED AND PROTECTED.
5. ITEMS SHOWN TO BE REMOVED ARE BASED ON ARCHITECT'S FIELD SURVEY AND EXISTING DOCUMENTATION. THIS INCLUDES, BUT IS NOT LIMITED TO EXISTING WALL CONSTRUCTION, DOORS, FRAMES AND HARDWARE, WINDOWS AND ASSOCIATED FRAMING. THE VARIOUS ITEMS THAT ARE INDICATED ON THESE DEMOLITION PLANS ARE INTENDED TO GIVE THE CONTRACTOR AN OVERVIEW OF THE SCOPE OF THE WORK INVOLVED. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE SCOPE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE TO VERIFY CONDITIONS PRIOR TO DEMOLITION, AND IF REQUIRED SHALL REQUEST INFORMATION PRIOR TO DEMOLITION
6. PRIOR TO ANY DEMOLITION, THE CONTRACTOR SHALL COORDINATE BRACING AND MAINTAIN THE STRUCTURAL INTEGRITY OF THE REMAINING ELEMENTS AND ITS SYSTEMS AS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMAINING ELEMENTS OF THE BUILDING SUPPORT OF ADJACENT STRUCTURES DURING DEMOLITION AND NEW CONSTRUCTION WORK. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, SCAFFOLDING, ETC., WHICH ARE NECESSARY TO PREVENT COLLAPSE, SUBSIDENCE, DEFLECTION OR ANY OTHER TYPE OF DAMAGE
7. ALL DEMOLITION SHALL BE PERFORMED IN A SAFE AND ACCEPTABLE MANNER TO ALL AUTHORITIES HAVING JURISDICTION AND THE OWNER. A FIRE WATCH SHALL BE PROVIDED IF ANY HAZARDOUS SITUATIONS ARE THOUGHT TO BE POSSIBLE. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION FOR POLLUTION CONTROL. THOROUGHLY CLEAN ADJACENT AREAS OF DUST, DIRT AND DEBRIS CAUSED BY DEMOLITION WORK
8. FOR ALL SURFACES SCHEDULED TO REMAIN, PATCH AND MATCH SURFACES DISTURBED BY DEMOLITION OR REMOVAL OF EQUIPMENT OR UTILITIES. INSTALL PATCHING TO MATCH ADJACENT WORK IN FINISH, STRUCTURAL QUALITIES, COURSING OF MASONRY, AND OTHER CHARACTERISTICS. PATCH SURFACES TO COMPLY WITH FIRE RATINGS, SMOKE-TIGHT RATINGS, ACOUSTICAL CRITERIA AND OTHER PERFORMANCE CRITERIA INDICATED
9. HAZARDOUS MATERIAL NOTE: CONTRACTOR SHALL STOP WORK AND INFORM OWNER IMMEDIATELY IN WRITING OF ANY HAZARDOUS MATERIAL ENCOUNTERED OR THOUGHT TO BE HAZARDOUS MATERIAL. THE OWNER, AFTER RECEIVING WRITTEN NOTICE SHALL INSTRUCT CONTRACTOR ON HOW TO PROCEED
10. NON-LOAD BEARING PARTITIONS: THE CONTRACTOR SHALL REMOVE ALL INTERIOR NON-LOAD BEARING PARTITIONS AND DOORS WITHIN THE INSIDE FACE OF THE EXTERIOR WALLS UNLESS INDICATED TO REMAIN. THE CONTRACTOR SHALL VERIFY THAT PARTITIONS TO BE REMOVED ARE NON-LOAD BEARING PRIOR TO BEGINNING THE WORK AND NOTIFY THE ENGINEER IF PARTITION INDICATED TO REMOVE IS LOAD BEARING. EXISTING PARTITIONS TO BE REMOVED ARE CONSTRUCTED OF GYPSUM PLASTER OR GYPSUM WALL BOARD WITH WOOD, METAL, CLAY TILE, BRICK MASONRY OR CONCRETE MASONRY FRAMING. EXISTING PARTITIONS MAY BE SOLID OR CONTAIN REINFORCING. PARTITIONS SHALL BE REMOVED FROM STRUCTURAL FLOOR SLAB TO STRUCTURAL FLOOR OR ROOF ABOVE. PARTITION SHALL BE REMOVED FLUSH TO CONCRETE OR WOOD FLOOR SLAB TO REMAIN, GRINDING ANY CONSTRUCTION WITHIN THE WALL FLUSH TO THE CONCRETE OR WOOD FLOOR TO REMAIN. ALL CONSTRUCTION ATTACHED TO OR SUPPORTED BY THE WALL SHALL ALSO BE REMOVED, INCLUDING BUT NOT LIMITED TO INTERIOR DOORS, WINDOWS, FRAMES, SHELVING, CASEWORK, WALL COVERINGS, WALL TILE, ETC
11. EXTERIOR WALLS: THE EXTERIOR ENVELOPE IS TO REMAIN INTACT DURING THE WORK, U.N.O.

| DEMOLITION NOTES | |
|---|---|
| 1 | REMOVE EXISTING WALL |
| 2 | NEW OR LARGER OPENING IN EXISTING WALL |
| 3 | REMOVE CONCRETE SLAB ON GRADE AND EXISTING CONCRETE BLOCK GARAGE |
| 4 | REMOVE BRICK/PLYWOOD INFILL FROM EXISTING OPENING |
| 5 | REMOVE EXISTING DOOR AND DOOR FRAME (OR) WINDOW AND WINDOW FRAME |
| 6 | REMOVE EXISTING DOOR-FRAME TO REMAIN |
| 7 | REMOVE EXISTING STAIRS (OR) RAMP |
| 8 | REMOVE EXISTING FLOOR STRUCTURE FOR OPENING, CONTRACTOR TO COORDINATE OPENING SIZE AND LOCATION PER ARCHITECTURAL DRAWINGS, TYP. BRACE EXISTING STRUCTURE AS REQUIRED. |
| 10 | REMOVE EXISTING ROOF MEMBRANE DOWN TO STABLE SUBSTRATE/SHEATHING. REPAIR/REPLACE DAMAGED AND MISSING SHEATHING. |
| 11 | REMOVE EXISTING MECHANICAL EQUIPMENT |
| 12 | REMOVE EXISTING ELEVATOR |
| 15 | REMOVE EXISTING SECURITY BARS FROM WINDOWS/DOORS |
| 16 | REMOVE EXISTING CANOPY/OVERHANG |
| 17 | REMOVE EXISTING CONVEYOR BELT |
| 19 | REMOVE ANY FLOORING MATERIALS BACK TO ORIGINAL FLOOR/SUBFLOOR |

EXISTING WINDOWS IN BUILDING 2 TO REMAIN AND BE RESTORED. REMOVE ALL WINDOWS IN BUILDING 1 AND 3 AND SALVAGE HISTORIC WINDOW PARTS FOR REUSE IN RESTORATION. ALL WINDOWS IN BUILDING 1 AND 3 WILL BE REPLACED TO MATCH EXISTING /HISTORIC.

MARKS, THOMAS ARCHITECTS
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**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# EXTERIOR DEMO ELEVATIONS

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: LR | Checked by: NL |
| NPS/MHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**

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28.04

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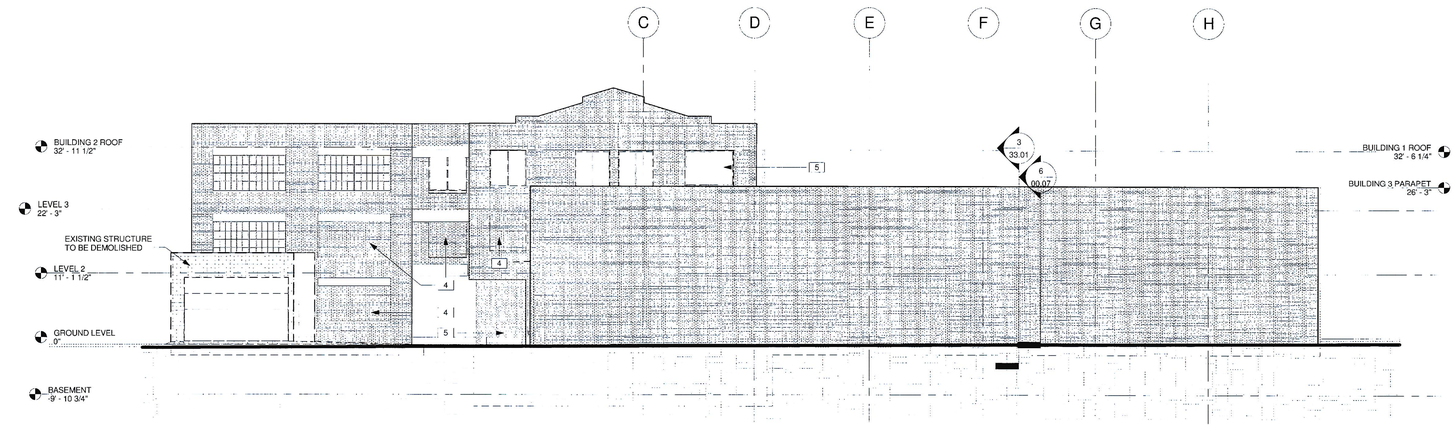
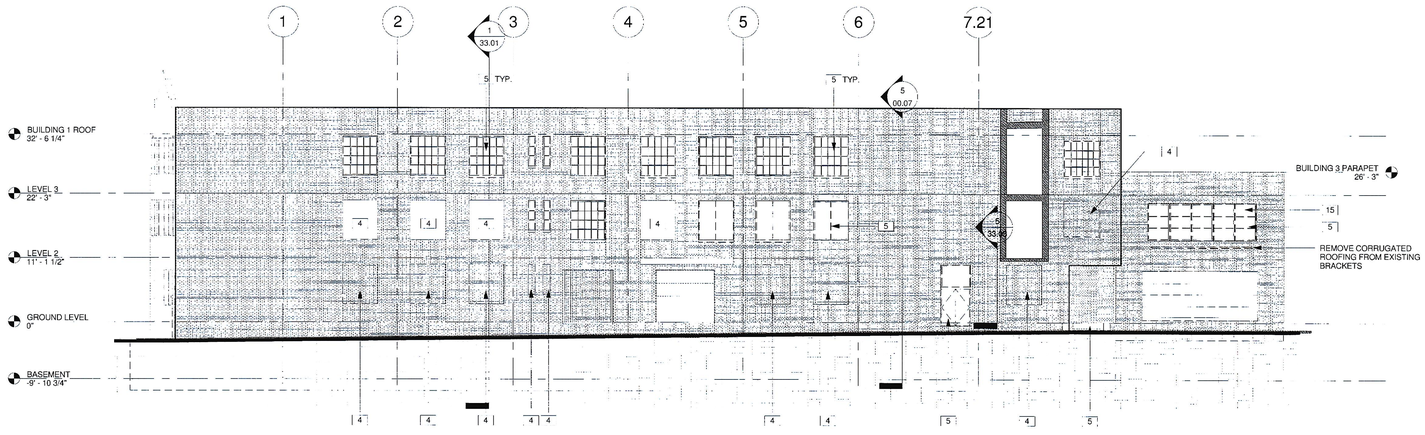
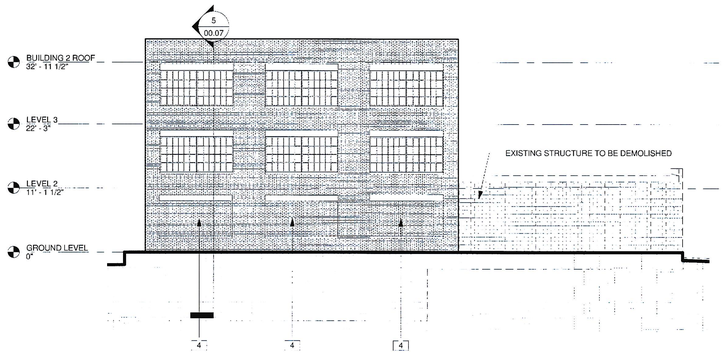


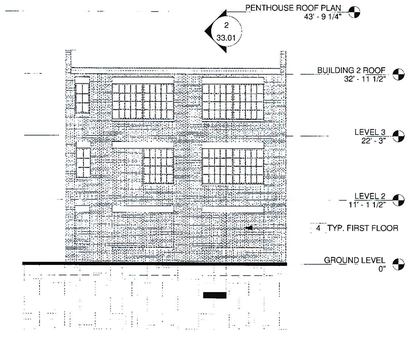

1 28.05 SOUTH ELEVATION - DEMO
3/32" = 1'-0"



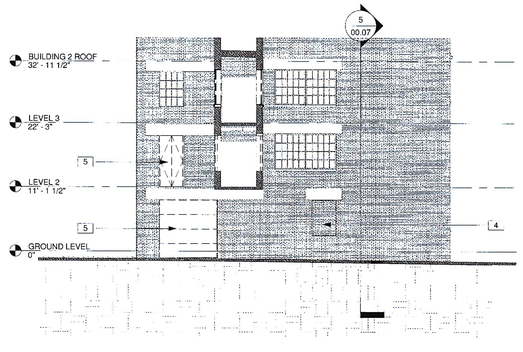

2 28.05 WEST ELEVATION PART A - DEMO
3/32" = 1'-0"




3 28.05 WEST ELEVATION PART B - DEMO
3/32" = 1'-0"




4 28.05 NORTH ELEVATION PART C - DEMO
3/32" = 1'-0"




5 28.05 DEMOLITION EAST ELEVATION BUILDING 2
3/32" = 1'-0"

## DEMOLITION GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. EXTENT OF INTERIOR DEMOLITION: THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE BUILDING AND EXISTING CONDITIONS IN CONJUNCTION WITH THE EXISTING DOCUMENTATION PROVIDED TO PROVIDE AN ACCURATE BID TO REMOVE ALL INTERIOR NON-LOAD BEARING CONSTRUCTION THAT IS NOT INDICATED TO REMAIN. IT IS CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ASSESS EACH AREA AND TO FULFILL THE INTENT OF THE DESIGN INDICATED BY THE CONTRACT DOCUMENTS.
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| DEMOLITION NOTES | |
|---|---|
| 1 | REMOVE EXISTING WALL |
| 2 | NEW OR LARGER OPENING IN EXISTING WALL |
| 3 | REMOVE CONCRETE SLAB ON GRADE AND EXISTING CONCRETE BLOCK GARAGE |
| 4 | REMOVE BRICK/PLYWOOD INFILL FROM EXISTING OPENING |
| 5 | REMOVE EXISTING DOOR AND DOOR FRAME (OR) WINDOW AND WINDOW FRAME |
| 6 | REMOVE EXISTING DOOR/FRAME TO REMAIN |
| 7 | REMOVE EXISTING STAIRS (OR) RAMP |
| 8 | REMOVE EXISTING FLOOR STRUCTURE FOR OPENING, CONTRACTOR TO COORDINATE OPENING SIZE AND LOCATION PER ARCHITECTURAL DRAWINGS, TYP. BRACE EXISTING STRUCTURE AS REQUIRED. |
| 10 | REMOVE EXISTING ROOF MEMBRANE DOWN TO STABLE SUBSTRATE/SHEATHING. REPAIR/REPLACE DAMAGED AND MISSING SHEATHING. |
| 11 | REMOVE EXISTING MECHANICAL EQUIPMENT |
| 12 | REMOVE EXISTING ELEVATOR |
| 15 | REMOVE EXISTING SECURITY BARS FROM WINDOWS/DOORS |
| 16 | REMOVE EXISTING CANOPY/OVERHANG |
| 17 | REMOVE EXISTING CONVEYOR BELT |
| 19 | REMOVE ANY FLOORING MATERIALS BACK TO ORIGINAL FLOOR/SUBFLOOR |

EXISTING WINDOWS IN BUILDING 2 TO REMAIN AND BE RESTORED. REMOVE ALL WINDOWS IN BUILDING 1 AND 3 AND SALVAGE HISTORIC WINDOW PARTS FOR REUSE IN RESTORATION. ALL WINDOWS IN BUILDING 1 AND 3 WILL BE REPLACED TO MATCH EXISTING /HISTORIC.


MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660


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**Union Brothers Furniture Company**

37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**EXTERIOR DEMO ELEVATIONS**

| Project Number | 16225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by | LR | Checked by | NL |

NPS/MHT SUBMISSION 09/30/16

| Num. | Description | Date |
|---|---|---|

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**28.05**

10/11/2017 5:01:21 PM

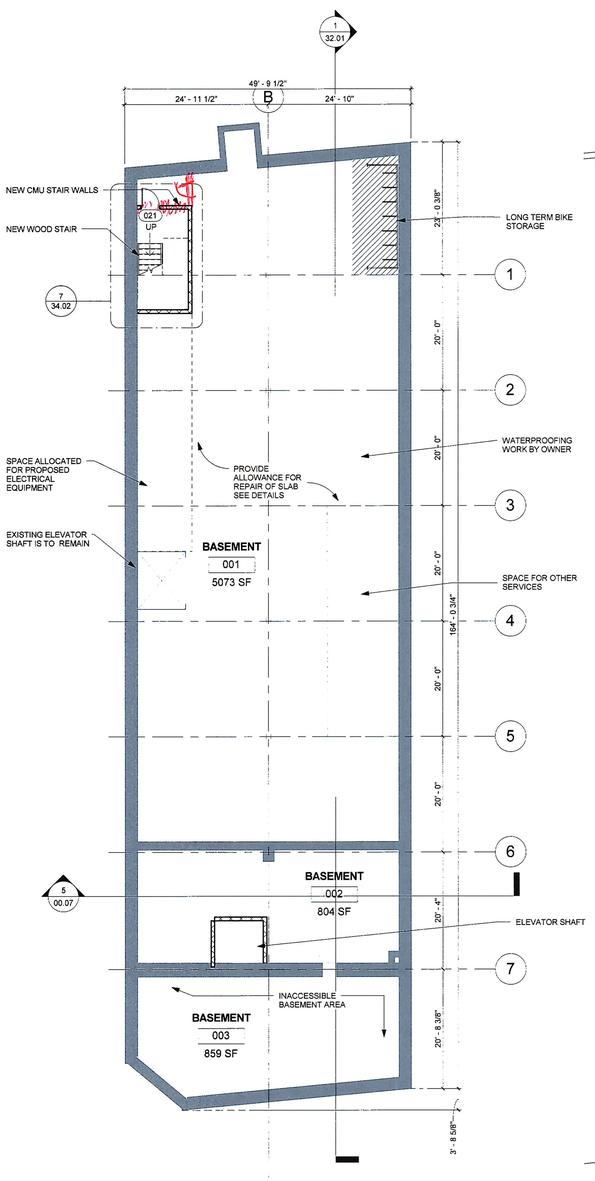
**LEGEND**

NEW WALL

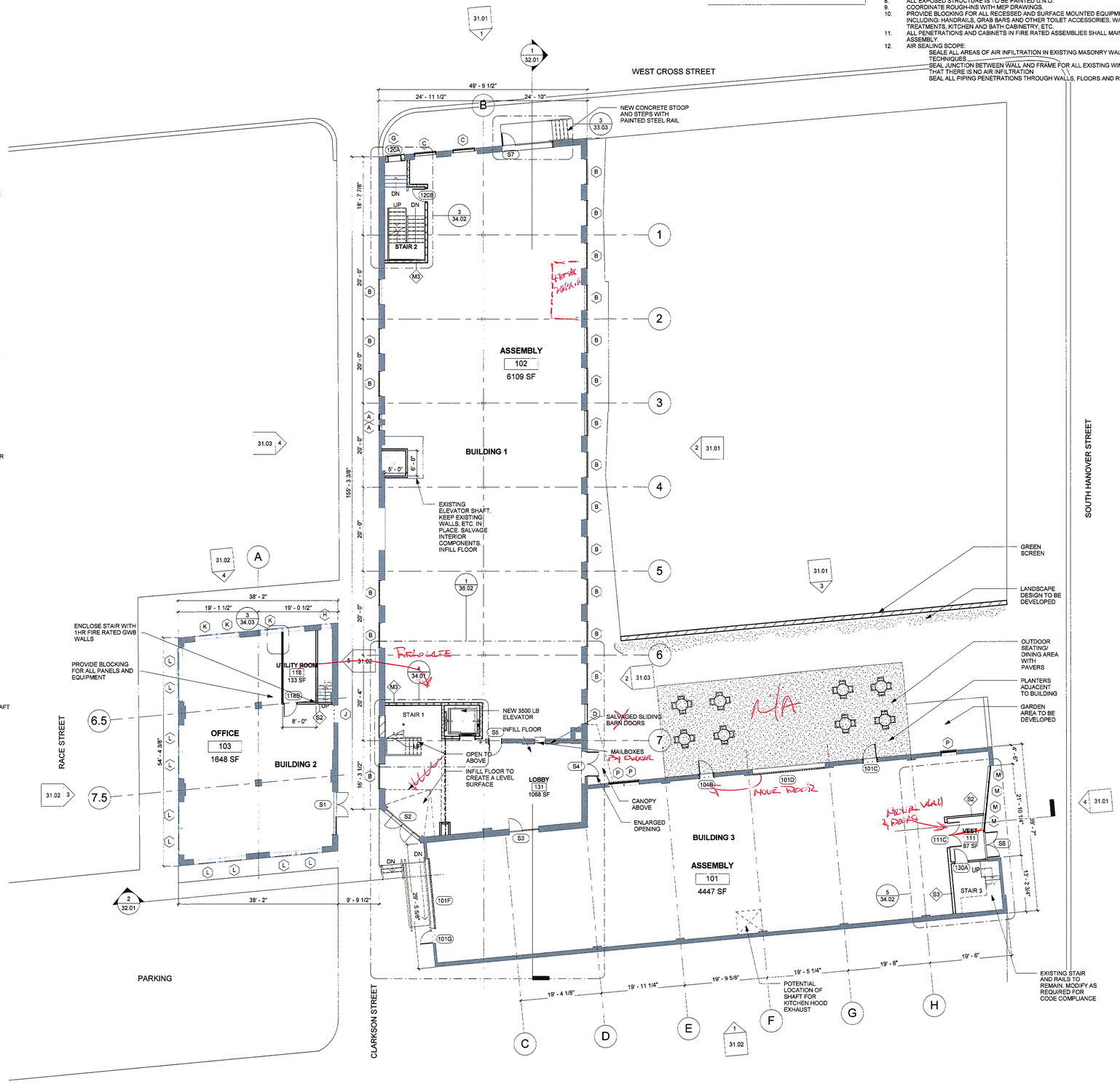
EXISTING WALL

**PLAN NOTES**

1. DO NOT SCALE DRAWINGS
2. DUE TO EXISTING CONDITIONS INFORM ARCHITECT IMMEDIATELY OF DISCREPANCIES GREATER THAN 3" FOUND IN THE DIMENSIONS SHOWN.
3. ALL INTERIOR DIMENSIONS ARE TO FACE OF STUD U.N.O.
4. SEE CODE REVIEW SHEET 00.01 FOR SUMMARY OF BUILDING CODE PROVISIONS AND REQUIREMENTS.
5. SEE SHEET 35.01 FOR WALL TYPE SCHEDULE.
6. SEE ENLARGED FLOOR PLANS FOR ADDITIONAL DIMENSIONS AND DETAILS OF STAIRS, ELEVATOR, TOILET ROOMS, ETC.
7. ALL PIPING, DUCTWORK, AND CONDUIT IN FINISH SPACES SHALL BE CONCEALED IN WALLS, CHASES, BUILKHEADS, OR ABOVE CEILINGS U.N.O.
8. ALL EXPOSED STRUCTURE IS TO BE PAINTED U.N.O.
9. COORDINATE ROUGH-INS WITH MEP DRAWINGS.
10. PROVIDE BLOCKING FOR ALL RECESSED AND SURFACE MOUNTED EQUIPMENT AND ACCESSORIES, INCLUDING: HANDRAILS, GRAB BARS AND OTHER TOILET ACCESSORIES, WALL BUMPERS, WINDOW TREATMENTS, KITCHEN AND BATH CABINETRY, ETC.
11. ALL PENETRATIONS AND CABINETS IN FIRE RATED ASSEMBLIES SHALL MAINTAIN THE RATING OF THE ASSEMBLY.
12. AIR SEALING SCOPE:
    - SEALE ALL AREAS OF AIR INFILTRATION IN EXISTING MASONRY WALL USING REPOINTING TECHNIQUES
    - SEAL JUNCTION BETWEEN WALL AND FRAME FOR ALL EXISTING WINDOWS TO ENSURE THAT THERE IS NO AIR INFILTRATION
    - SEAL ALL PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF




1 BASEMENT PLAN
30.01 3/32" = 1'-0"




2 FIRST FLOOR PLAN
30.01 3/32" = 1'-0"


MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660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Union Brothers Furniture Company
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**BASEMENT AND FIRST FLOOR PLAN**

| Project Number | 16225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by: | LR | Checked by: | NL |

| Num. | Description | Date |
|---|---|---|
| | NPS/MHT SUBMISSION | 09/30/16 |

**PERMIT / CONSTRUCTION 10/05/17**


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**30.01**

10/11/2017 5:01:32 PM

**LEGEND**

NEW WALL

EXISTING WALL

**PLAN NOTES**

1. DO NOT SCALE DRAWINGS
2. DUE TO EXISTING CONDITIONS INFORM ARCHITECT IMMEDIATELY OF DISCREPANCIES GREATER THAN 3" FOUND IN THE DIMENSIONS SHOWN.
3. ALL INTERIOR DIMENSIONS ARE TO FACE OF STUD U.N.O.
4. SEE CODE REVIEW SHEET 00.01 FOR SUMMARY OF BUILDING CODE PROVISIONS AND REQUIREMENTS.
5. SEE SHEET 35.01 FOR WALL TYPE SCHEDULE.
6. SEE ENLARGED FLOOR PLANS FOR ADDITIONAL DIMENSIONS AND DETAILS OF STAIRS, ELEVATOR, TOILET ROOMS, ETC.
7. ALL PIPING, DUCTWORK, AND CONDUIT IN FINISH SPACES SHALL BE CONCEALED IN WALLS, CHASES, BUILKHEADS, OR ABOVE CEILINGS U.N.O.
8. ALL EXPOSED STRUCTURE IS TO BE PAINTED U.N.O.
9. COORDINATE ROUGH-INS WITH MEP DRAWINGS.
10. PROVIDE BLOCKING FOR ALL RECESSED AND SURFACE MOUNTED EQUIPMENT AND ACCESSORIES, INCLUDING: HANDRAILS, GRAB BARS AND OTHER TOILET ACCESSORIES, WALL BUMPERS, WINDOW TREATMENTS, KITCHEN AND BATH CABINETRY, ETC.
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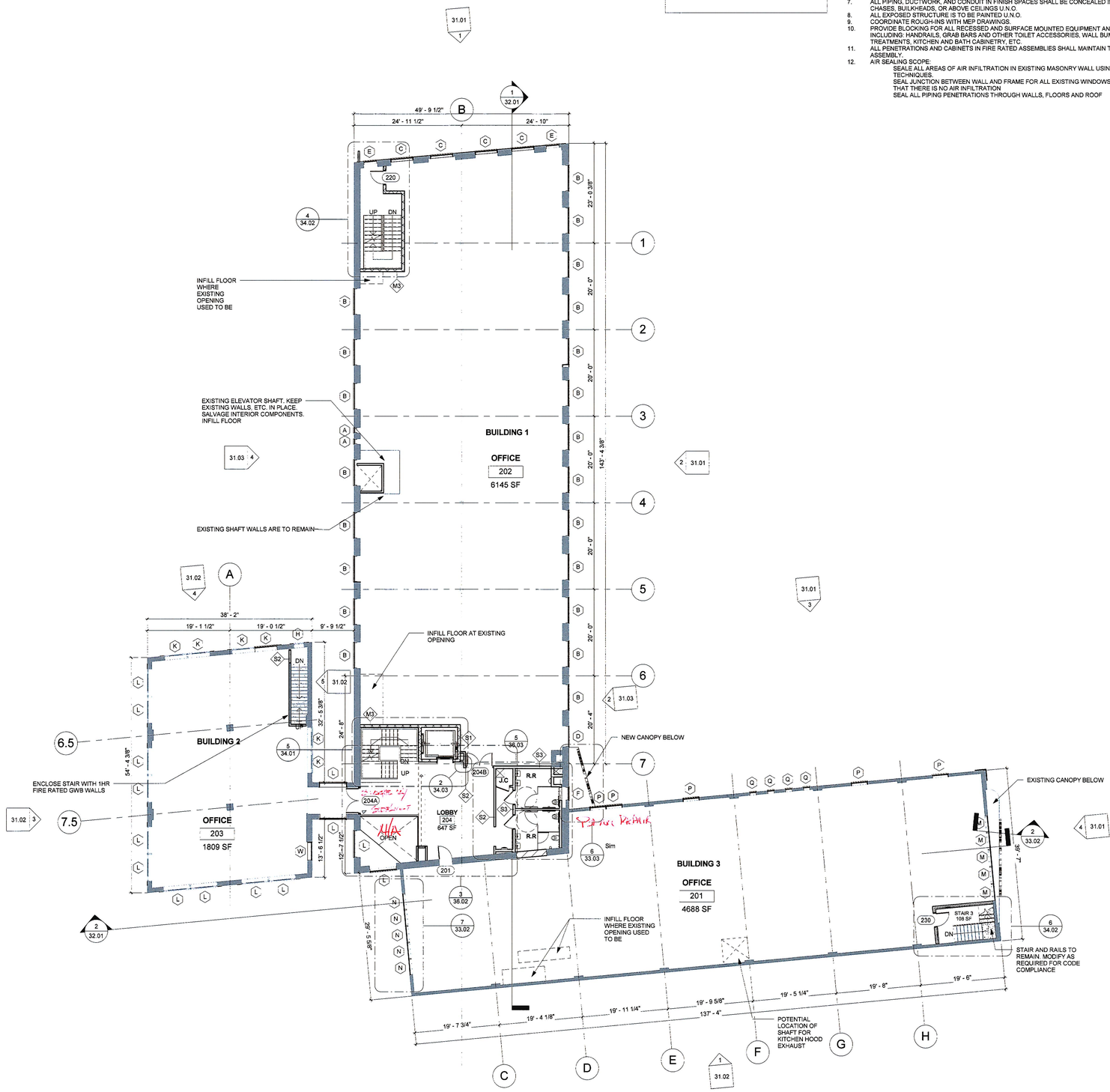
    - SEAL JUNCTION BETWEEN WALL AND FRAME FOR ALL EXISTING WINDOWS TO ENSURE THAT THERE IS NO AIR INFILTRATION
    - SEAL ALL PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF




1 / 30.02 SECOND FLOOR PLAN
3/32" = 1'-0"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1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660


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**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**SECOND FLOOR PLAN**

| Project Number: | Date: |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: LR | Checked by: NL |
| NFS/MHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

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**30.02**

10/11/2017 5:01:33 PM

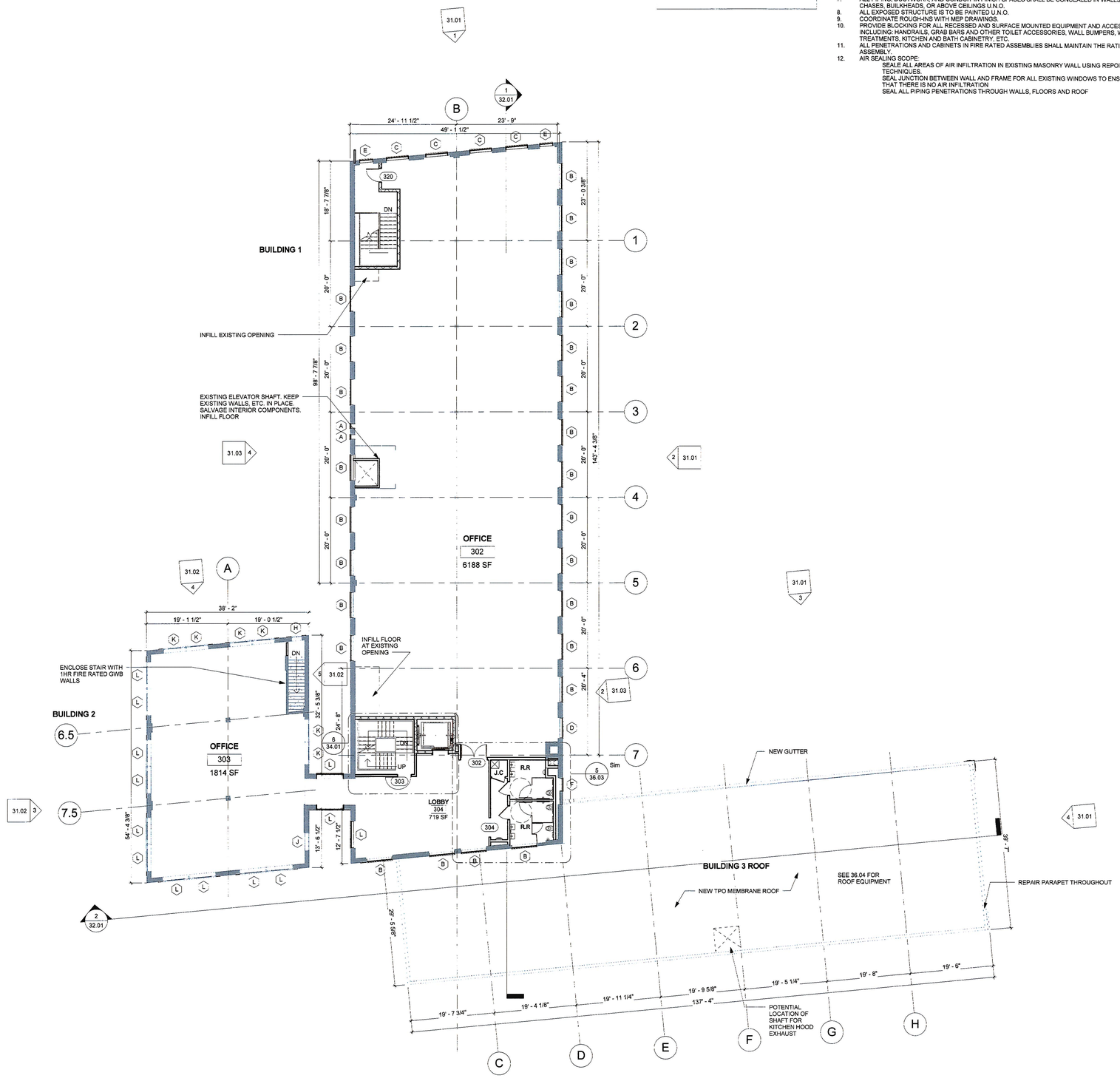
**LEGEND**

NEW WALL

EXISTING WALL

**PLAN NOTES**

1. DO NOT SCALE DRAWINGS
2. DUE TO EXISTING CONDITIONS INFORM ARCHITECT IMMEDIATELY OF DISCREPANCIES GREATER THAN 3" FOUND IN THE DIMENSIONS SHOWN.
3. ALL INTERIOR DIMENSIONS ARE TO FACE OF STUD U.N.O.
4. SEE CODE REVIEW SHEET 00.01 FOR SUMMARY OF BUILDING CODE PROVISIONS AND REQUIREMENTS.
5. SEE SHEET 35.01 FOR WALL TYPE SCHEDULE.
6. SEE ENLARGED FLOOR PLANS FOR ADDITIONAL DIMENSIONS AND DETAILS OF STAIRS, ELEVATOR, TOILET ROOMS, ETC.
7. ALL PIPING, DUCTWORK, AND CONDUIT IN FINISH SPACES SHALL BE CONCEALED IN WALLS, CHASES, BUILKHEADS, OR ABOVE CEILINGS U.N.O.
8. ALL EXPOSED STRUCTURE IS TO BE PAINTED U.N.O.
9. COORDINATE ROUGH-INS WITH MEP DRAWINGS.
10. PROVIDE BLOCKING FOR ALL RECESSED AND SURFACE MOUNTED EQUIPMENT AND ACCESSORIES, INCLUDING: HANDRAILS, GRAB BARS AND OTHER TOILET ACCESSORIES, WALL BUMPERS, WINDOW TREATMENTS, KITCHEN AND BATH CABINETRY, ETC.
11. ALL PENETRATIONS AND CABINETS IN FIRE RATED ASSEMBLIES SHALL MAINTAIN THE RATING OF THE ASSEMBLY.
12. AIR SEALING SCOPE:
    SEALE ALL AREAS OF AIR INFILTRATION IN EXISTING MASONRY WALL USING REPOINTING TECHNIQUES.
    SEAL JUNCTION BETWEEN WALL AND FRAME FOR ALL EXISTING WINDOWS TO ENSURE THAT THERE IS NO AIR INFILTRATION
    SEAL ALL PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF




1 / 30.03 THIRD FLOOR PLAN
3/32" = 1'-0"


MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660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**Union Brothers Furniture Company**
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SHEET TITLE

# THIRD FLOOR PLAN

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: LR | Checked by: NL |

| NPS/MHT SUBMISSION | 09/30/16 |
|---|---|

| Num. | Description | Date |
|---|---|---|

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**30.03**

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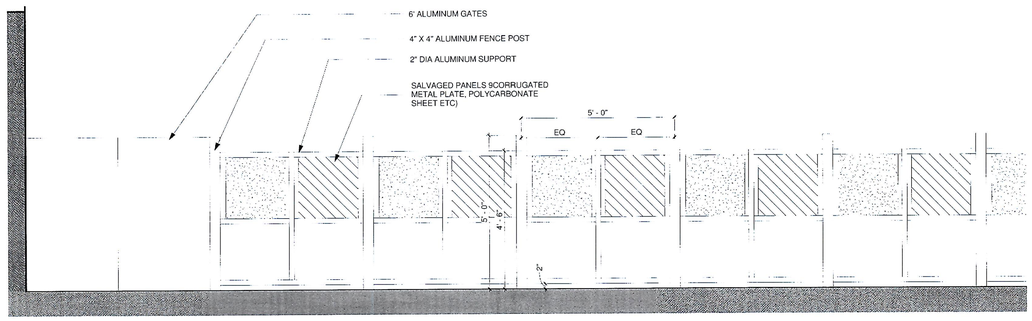
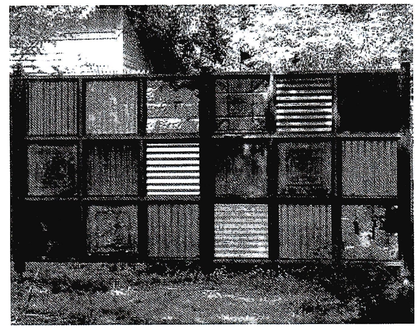



3 / 30.04 ROOF TERRACE FENCING DETAIL
1/2" = 1'-0"



REFERENCE IMAGE FOR TERRACE FENCE

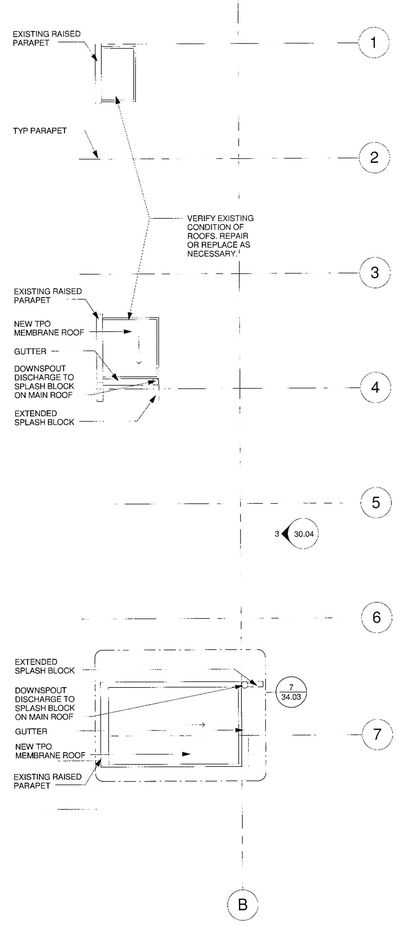
## ROOF PLAN NOTES

1. DO NOT SCALE DRAWINGS
2. SEE MEP DRAWINGS FOR EXACT LOCATION OF MECHANICAL AND ELECTRICAL EQUIPMENT
3. DOWNSPOUTS ARE TO HAVE OVERFLOW BOXES
4. SEE PLUMBING DRAWINGS FOR VENT LOCATIONS. COORDINATE INSTALL OF VENTS WITH GREEN ROOF TRAYS
5. SEEPLUMBING FOR HOSE BIBB LOCATIONS
6. REPAIR EXISTING PARAPETS AS REQUIRED (CAPS, FLASHINGS,ETC)
7. REPOINT BRICK AT ROOF (CHIMNEY, PARAPETS, ETC) AS REQUIRED
8. DISCHARGE DOWNSPOUT TO SPLASH BLOCKS AT GRADE OR THROUGH CRUB AS APPLICABLE.

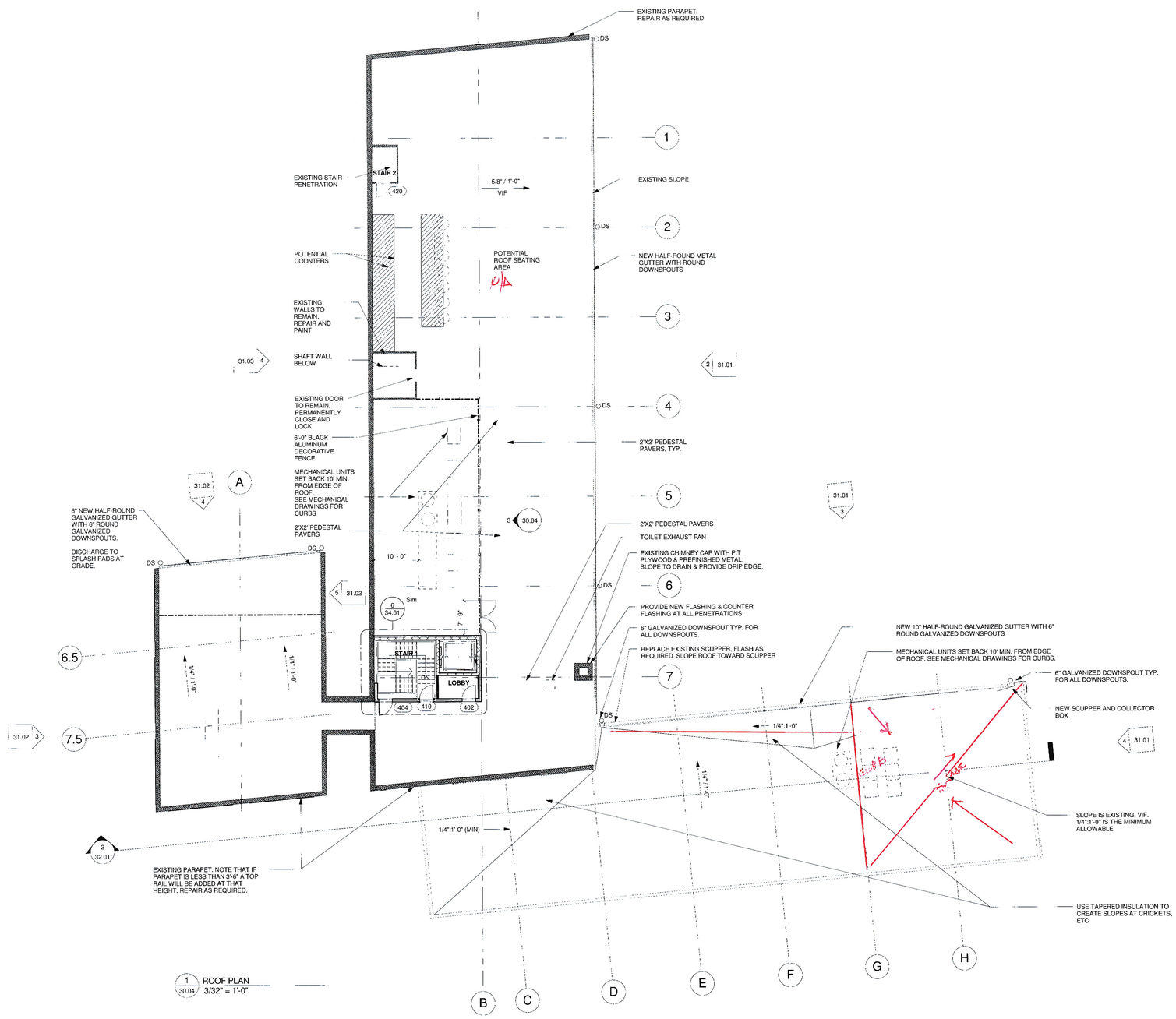
**LEGEND**

NEW WALL

EXISTING WALL




2 / 30.04 PENTHOUSE ROOF PLAN
3/32" = 1'-0"




1 / 30.04 ROOF PLAN
3/32" = 1'-0"

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SHEET TITLE

**ROOF PLAN**

| Project Number: | 16225 | Date: | 10/05/17 |
|---|---|---|---|
| Drawn by: | LR | Checked by: | NL |

NPS MHT SUBMISSION 08/30/16

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|---|---|---|

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**30.04**

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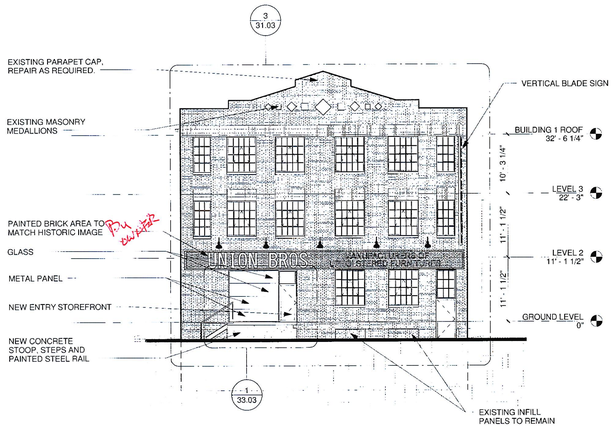
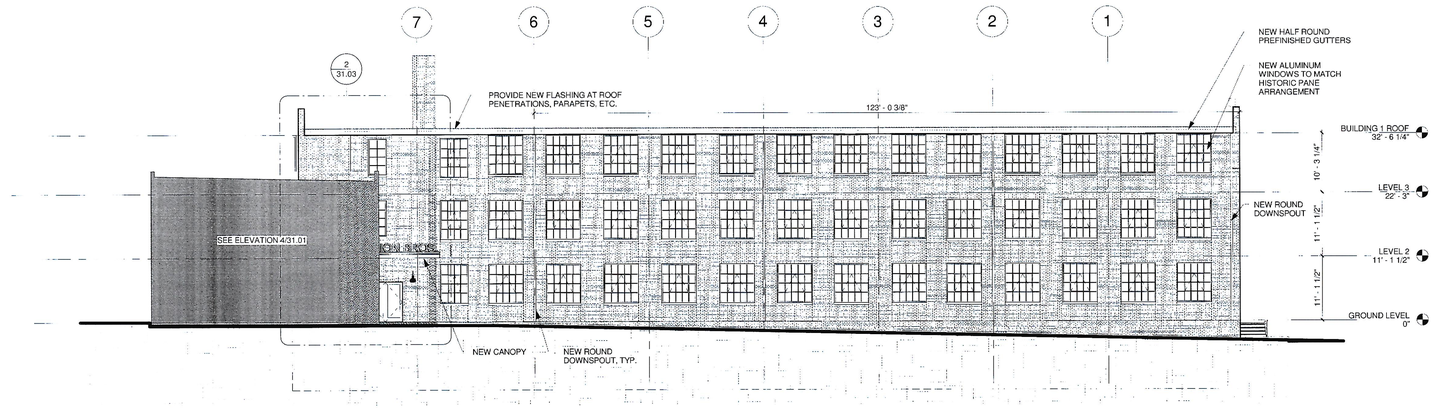
## GENERAL ELEVATIONS NOTES

1. DO NOT SCALE DRAWINGS
2. CLEAN, REPAIR, AND REPOINT BRICK AS REQUIRED. SEE MASONRY REPORT.
3. ALL VERTICAL DIMENSIONS SHOULD BE VERIFIED IN THE FIELD

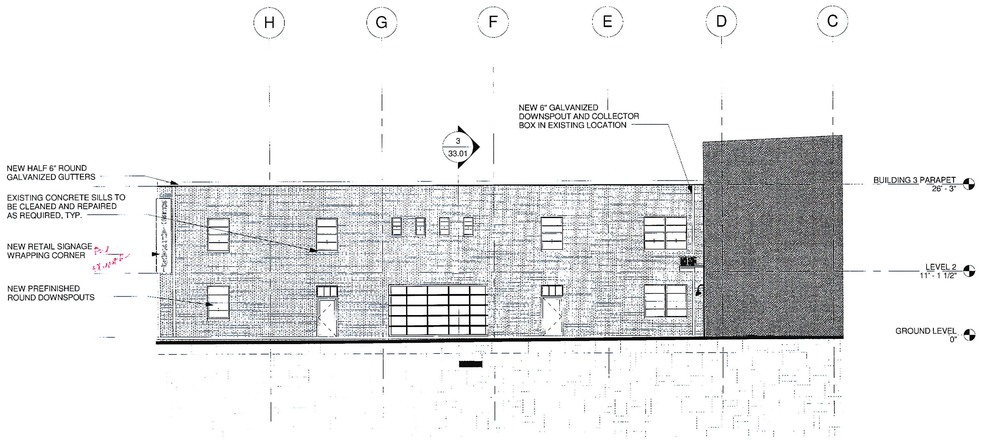



1 31.01 NORTH ELEVATION - PART A
3/32" = 1'-0"

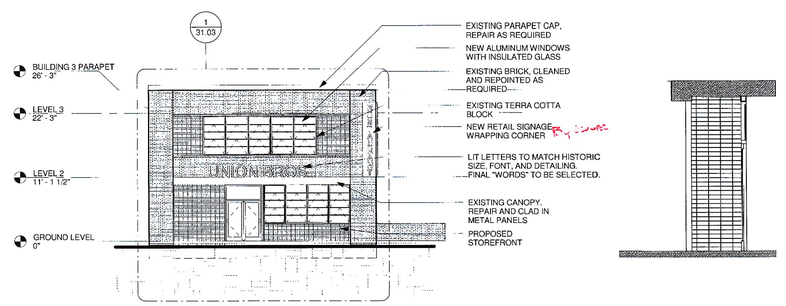
HISTORIC PHOTO FOR REFERENCE




2 31.01 EAST ELEVATION - PART A
3/32" = 1'-0"




3 31.01 NORTH ELEVATION - PART B
3/32" = 1'-0"




4 31.01 EAST ELEVATION - PART B
3/32" = 1'-0"

5 31.01 Elevation 2 - a
1/4" = 1'-0"

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SHEET TITLE

# EXTERIOR ELEVATIONS

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: LR | Checked by: NL |
| NPS/MHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

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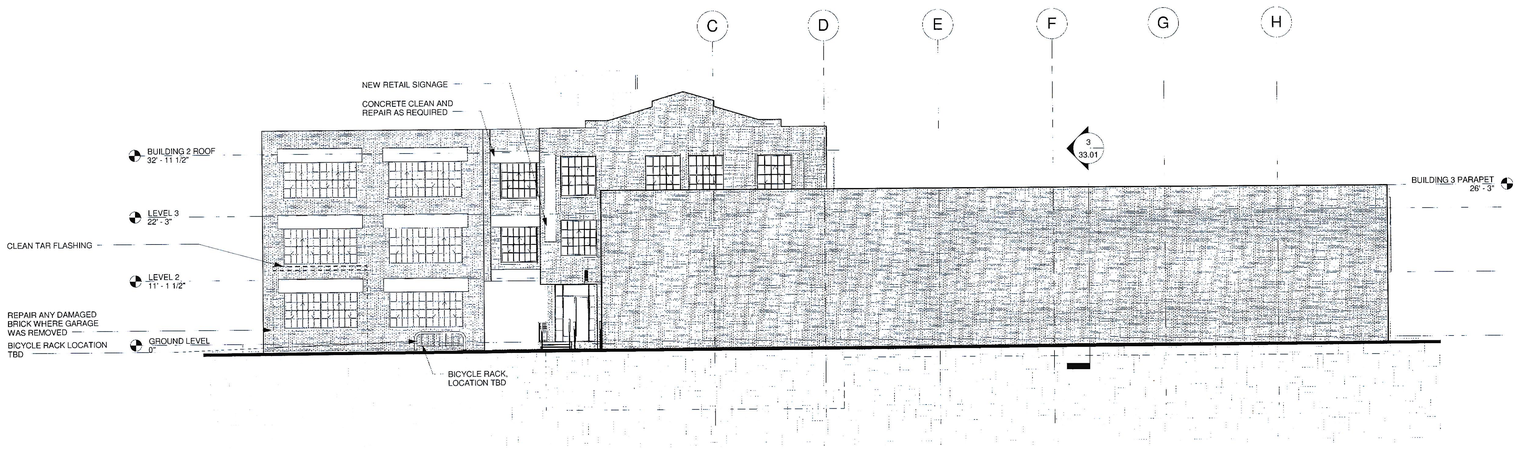
31.01

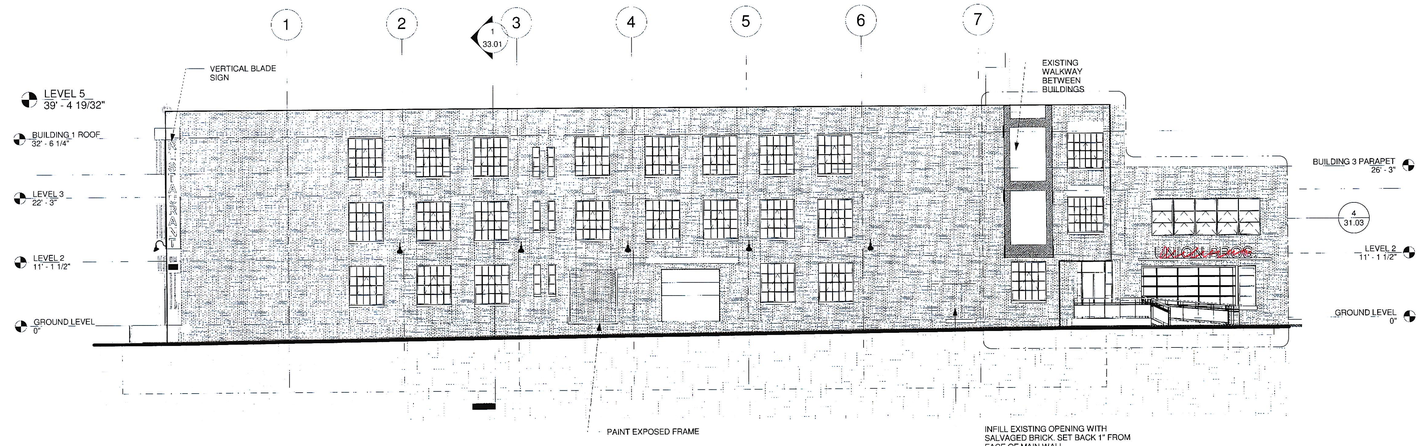
10/11/2017 5:01:41 PM

## GENERAL ELEVATIONS NOTES

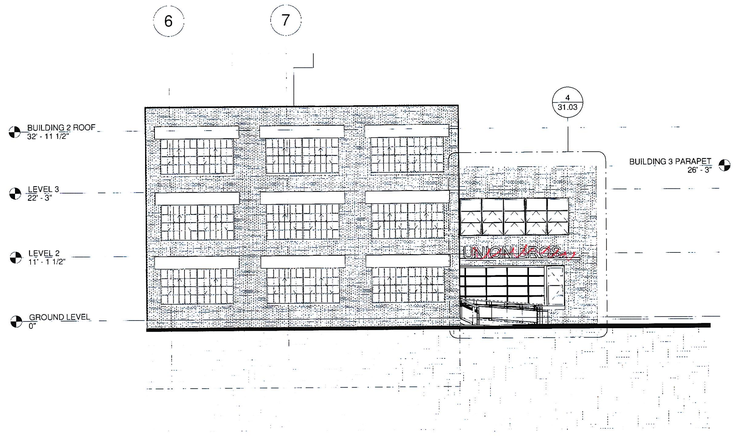
1. DO NOT SCALE DRAWINGS
2. CLEAN, REPAIR, AND REPOINT BRICK AS REQUIRED, SEE MASONRY REPORT.
3. ALL VERTICAL DIMENSIONS SHOULD BE VERIFIED IN THE FIELD



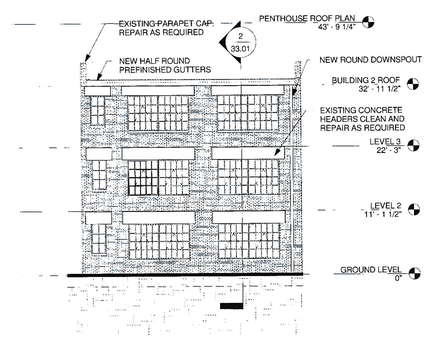

1 31.02 SOUTH ELEVATION
3/32" = 1'-0"



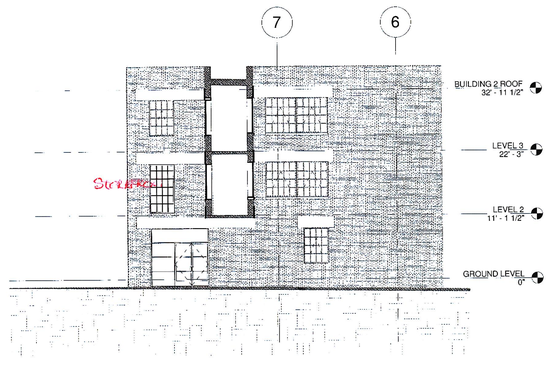

2 31.02 WEST ELEVATION - PART A
3/32" = 1'-0"




3 31.02 WEST ELEVATION - PART B
3/32" = 1'-0"




4 31.02 NORTH ELEVATION - PART C
3/32" = 1'-0"




5 31.02 EAST ELEVATION - BUILDING 2
3/32" = 1'-0"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37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# EXTERIOR ELEVATIONS

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: LR | Checked by: NL |

NPS/MHT SUBMISSION 09/20/18

| Num. | Description | Date |
|---|---|---|

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**31.02**

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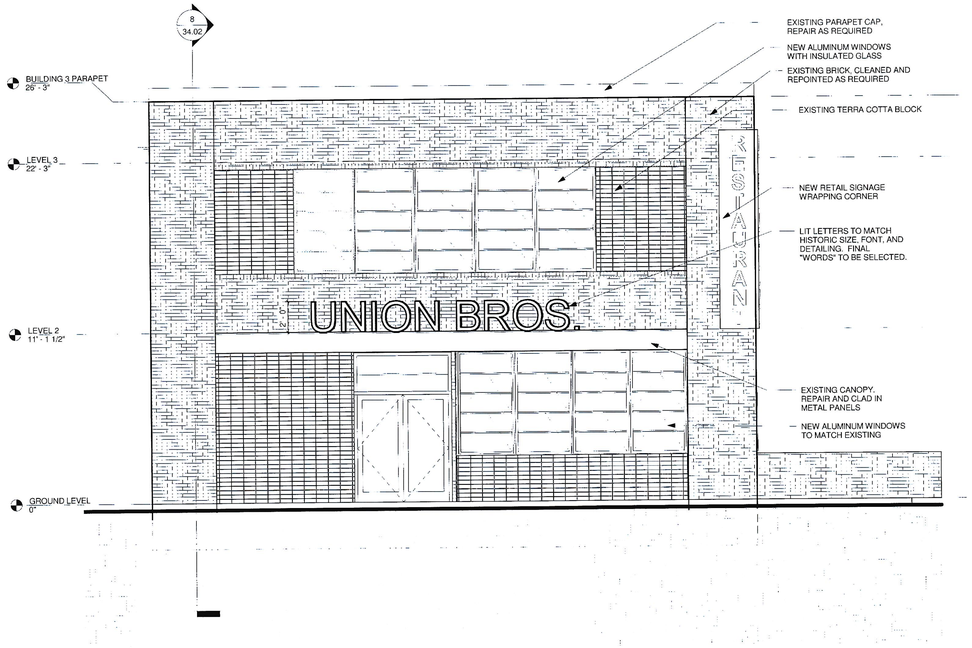
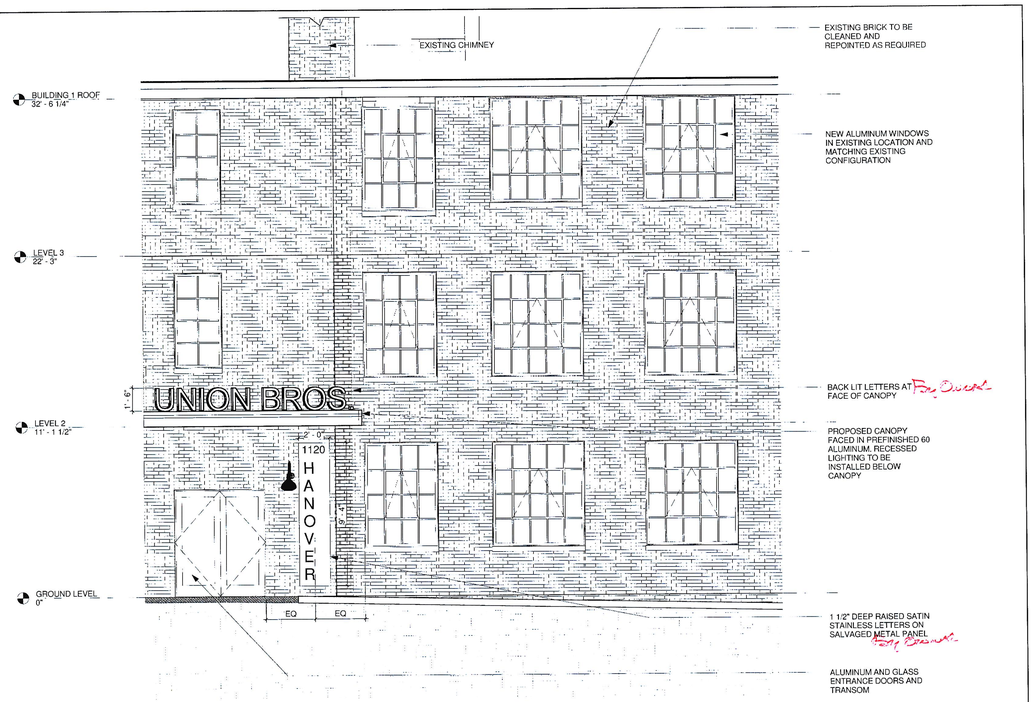
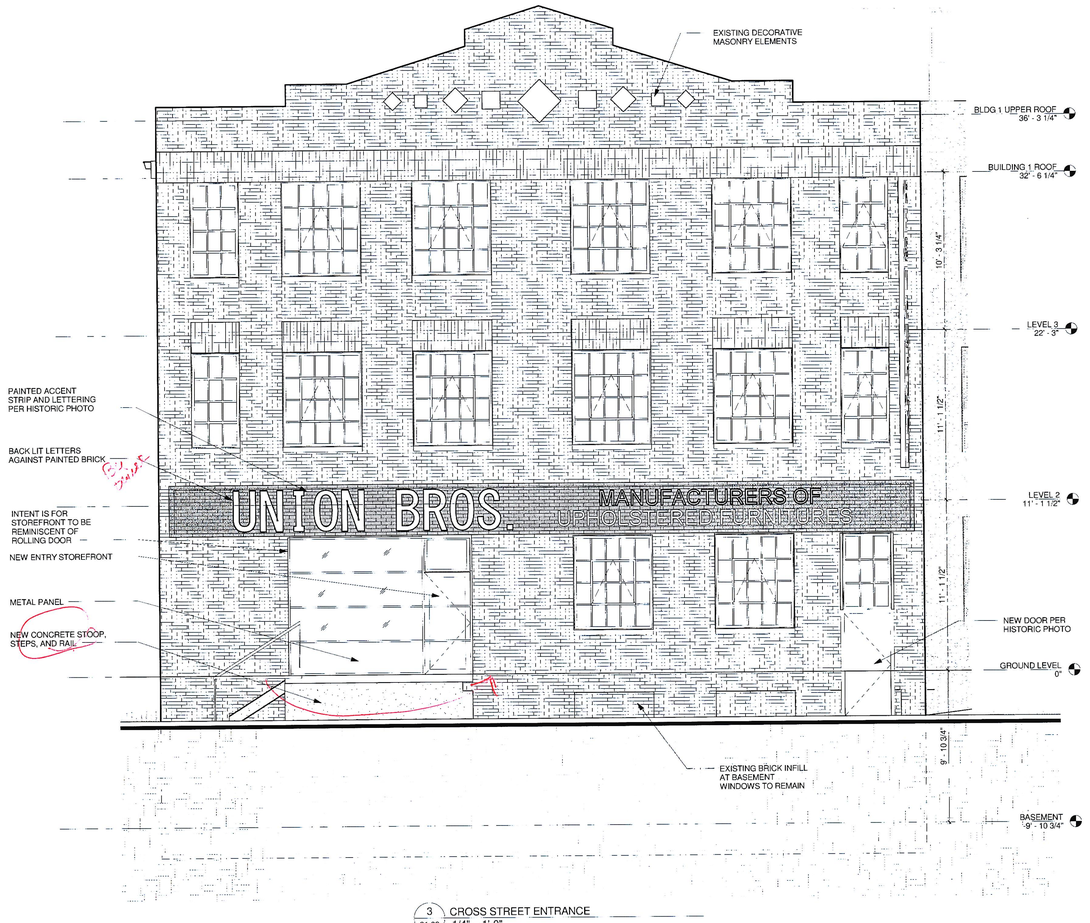


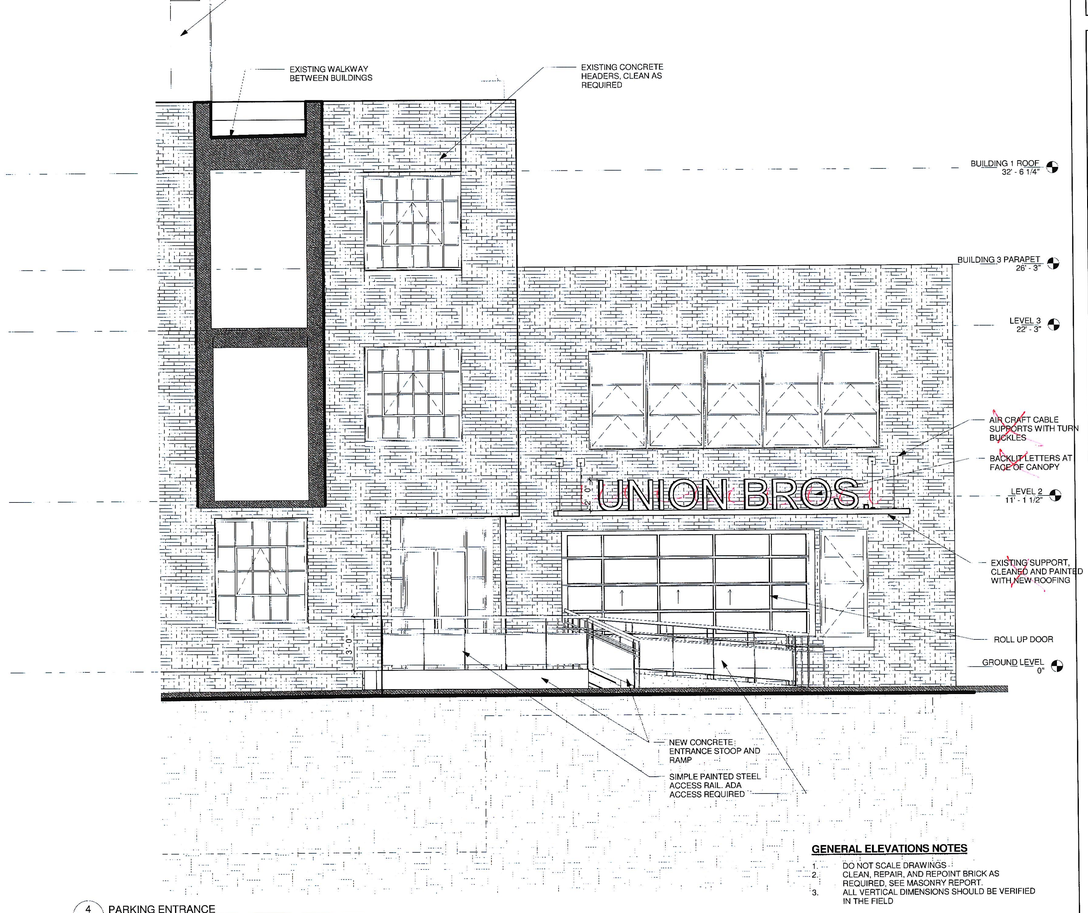

1 31.03 HANOVER STREET ENTRANCE
1/4" = 1'-0"




2 31.03 CORNER ENTRANCE NEAR CAFE
1/4" = 1'-0"




3 31.03 CROSS STREET ENTRANCE
1/4" = 1'-0"




4 31.03 PARKING ENTRANCE
1/4" = 1'-0"

**GENERAL ELEVATIONS NOTES**

1. DO NOT SCALE DRAWINGS
2. CLEAN, REPAIR, AND REPOINT BRICK AS REQUIRED, SEE MASONRY REPORT.
3. ALL VERTICAL DIMENSIONS SHOULD BE VERIFIED IN THE FIELD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BALTIMORE, MD 21230

SHEET TITLE

**ENLARGED ENTRANCE ELEVATIONS**

| Project Number: 15225 | Date: 10/05/17 |
|---|---|
| Drawn by: GH | Checked by: NL |

NPS/MHT SUBMISSION 09/30/16

| Num. | Description | Date |
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**31.03**

10/11/2017 5:01:53 PM

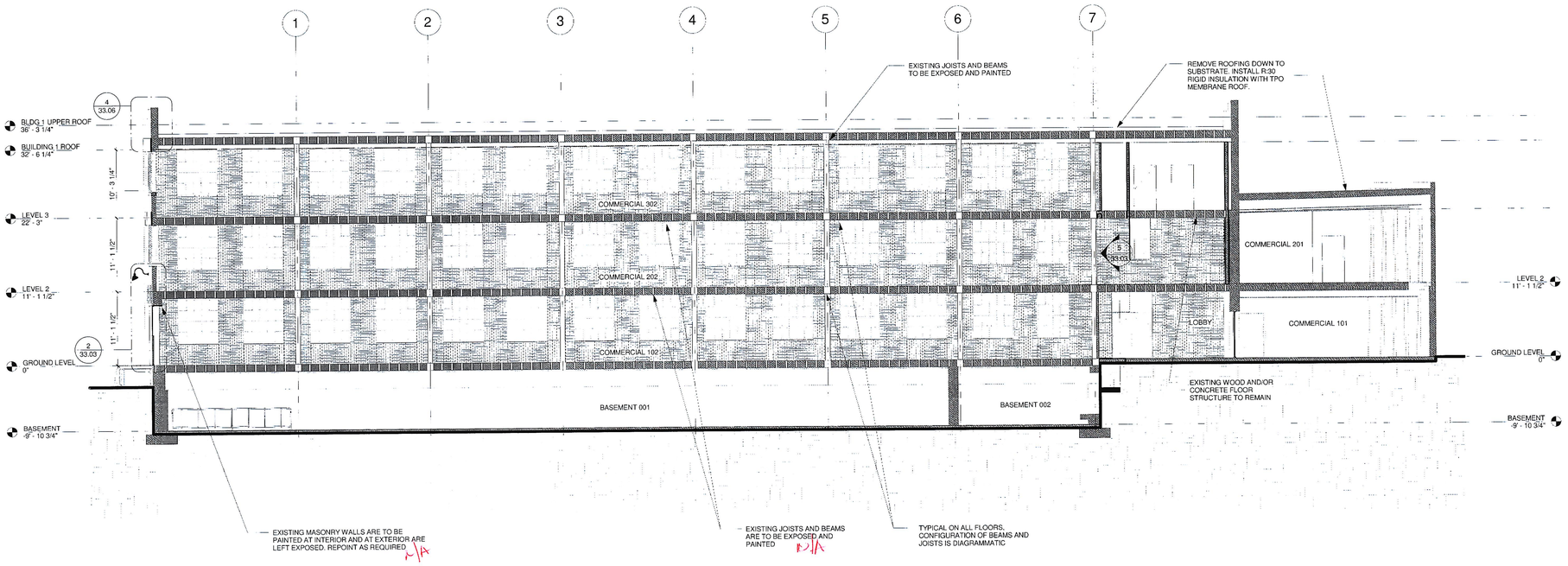
## GENERAL SECTION NOTES

1. DO NOT SCALE DRAWINGS.
2. BUILDING SECTIONS ARE FOR GENERAL INFORMATION ONLY. SEE DETAILED ELEVATIONS AND WALL SECTIONS FOR ADDITIONAL INFORMATION.
3. FOOTINGS ARE EXISTING AND ARE APPROXIMATED.

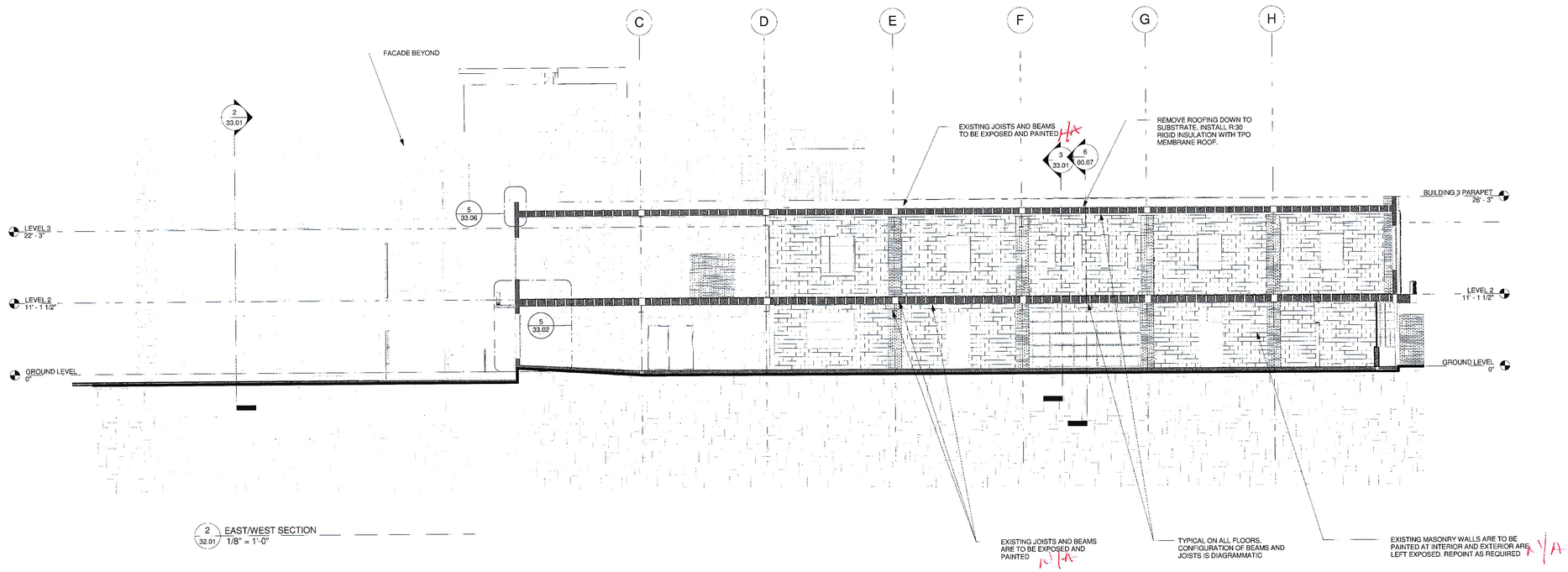
**LEGEND**

NEW WALL

EXISTING WALL




1 / 32.01 NORTH/SOUTH SECTION
1/8" = 1'-0"




2 / 32.01 EAST/WEST SECTION
1/8" = 1'-0"

10/11/2017 5:01:57 PM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1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**BUILDING SECTIONS**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: LR | Checked by: NL |
| NPS/MHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

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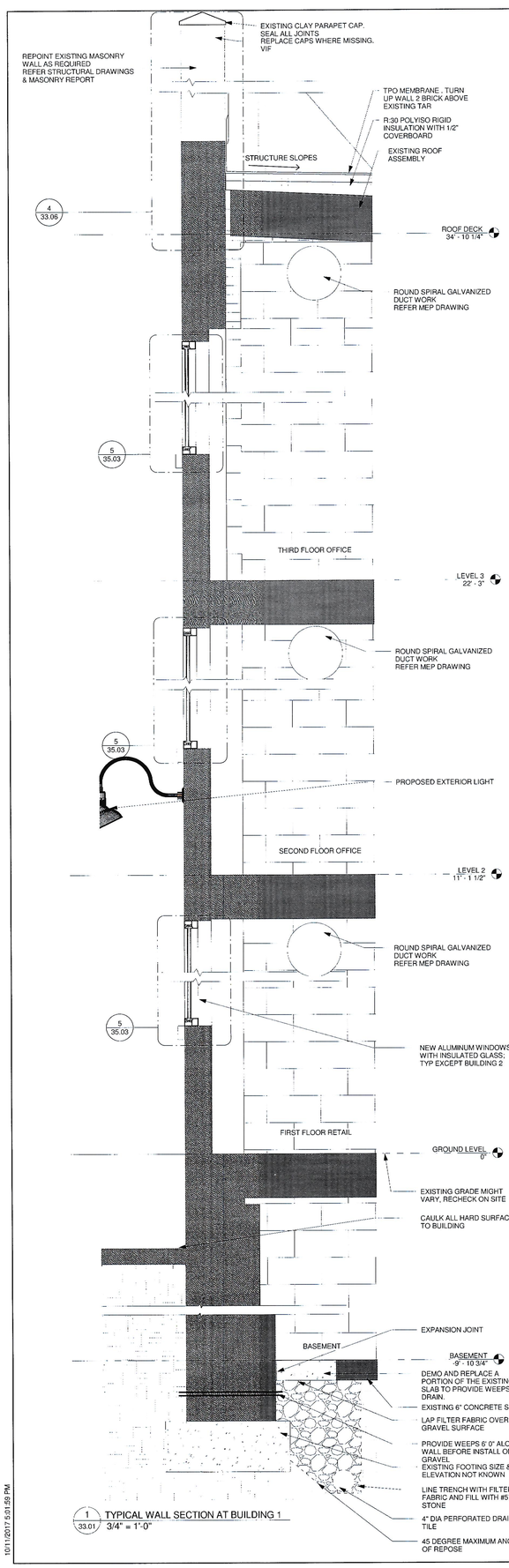
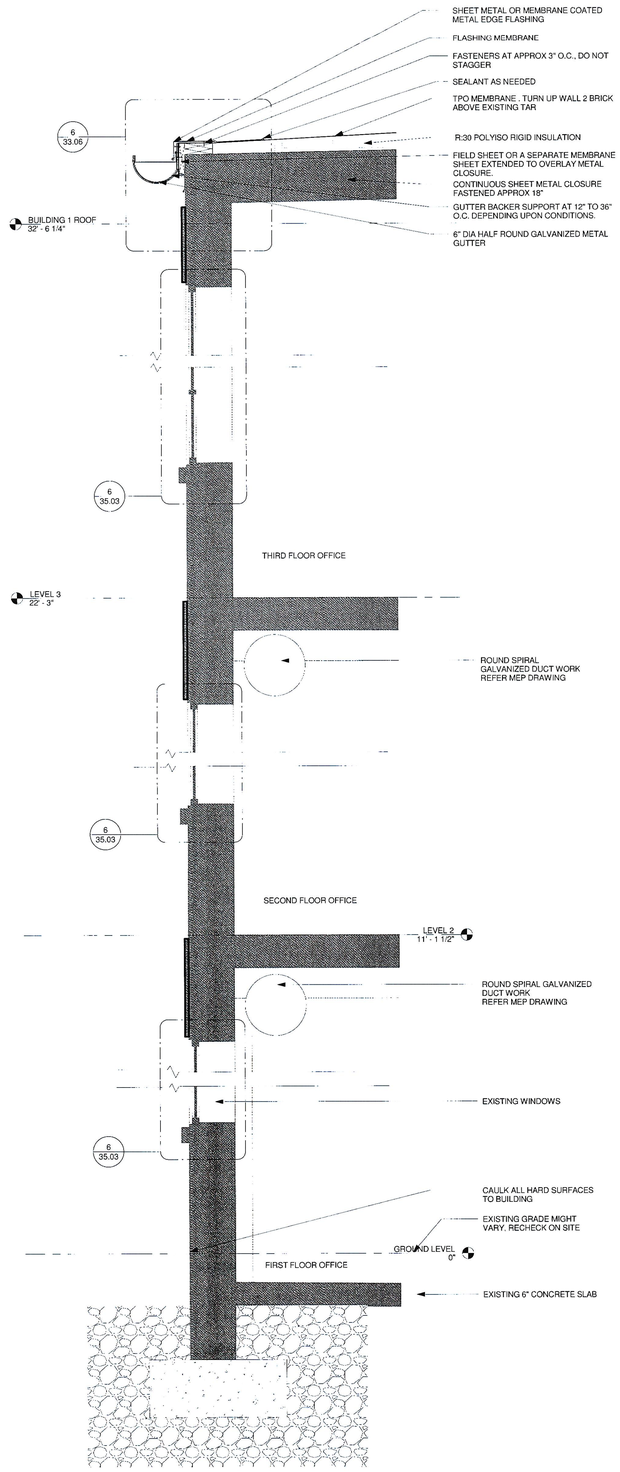
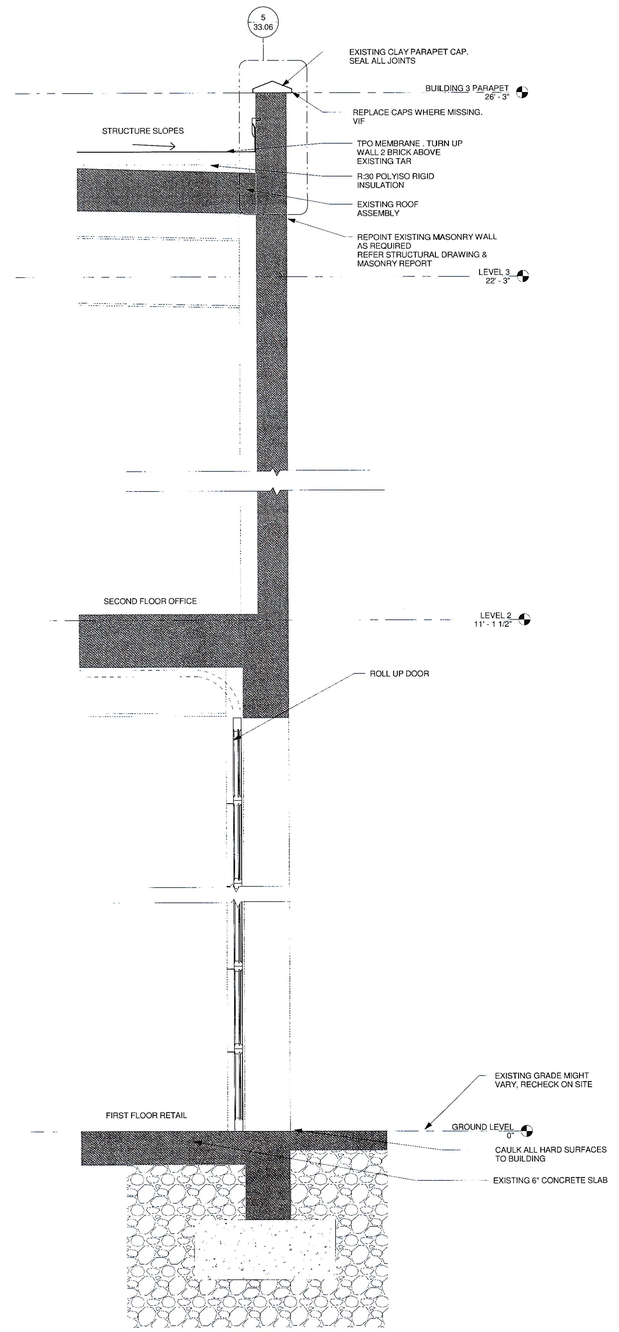
**32.01**




1 / 33.01 TYPICAL WALL SECTION AT BUILDING 1
3/4" = 1'-0"




2 / 33.01 WALL SECTION AT BUILDING 2
3/4" = 1'-0"




3 / 33.01 TYPICAL WALL SECTION DETAIL AT BUILDING 3
3/4" = 1'-0"

10/11/2017 5:01:59 PM

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37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# WALL SECTIONS

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by | Checked by |
| GH | NL |

NPS/MH-1 SUBMISSION 09/20/16

| Num. | Description | Date |
|---|---|---|

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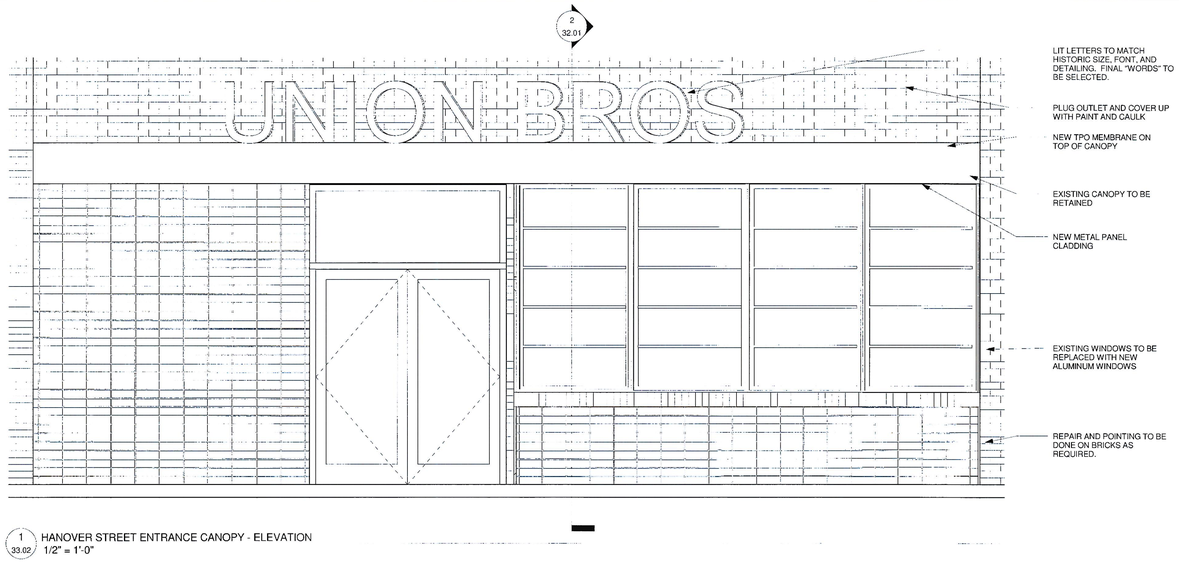
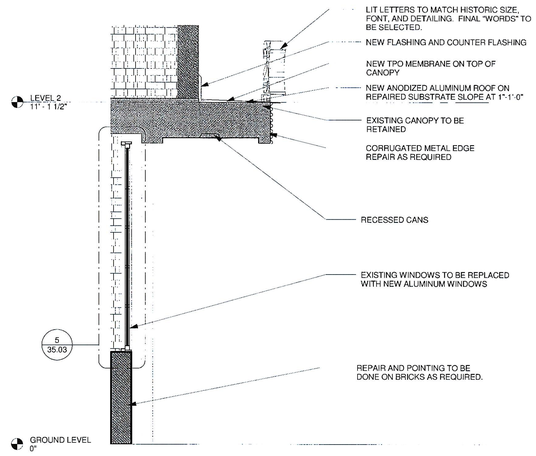
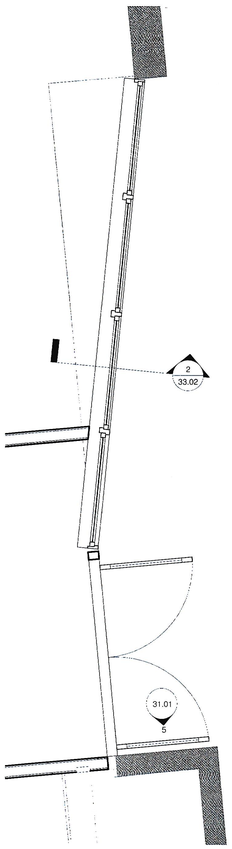
**33.01**




1 / 33.02 HANOVER STREET ENTRANCE CANOPY - ELEVATION
1/2" = 1'-0"



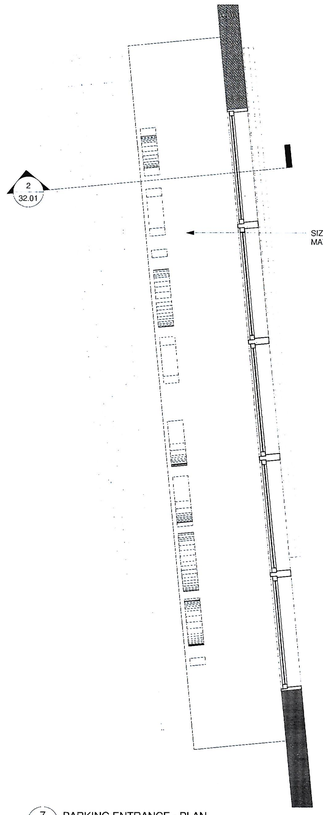

2 / 33.02 HANOVER STREET ENTRANCE CANOPY - SECTION
1/2" = 1'-0"



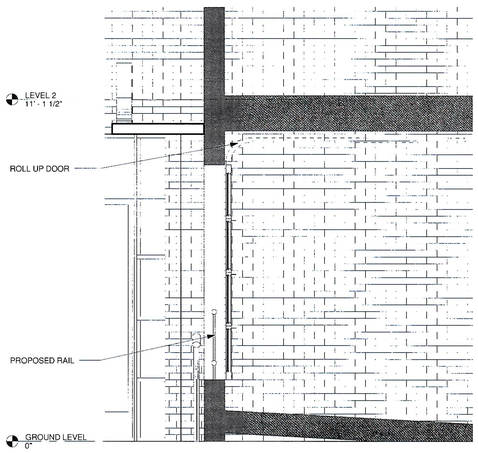

3 / 33.02 HANOVER STREET ENTRANCE CANOPY - PLAN
1/2" = 1'-0"

HISTORIC PHOTO FOR REFERENCE

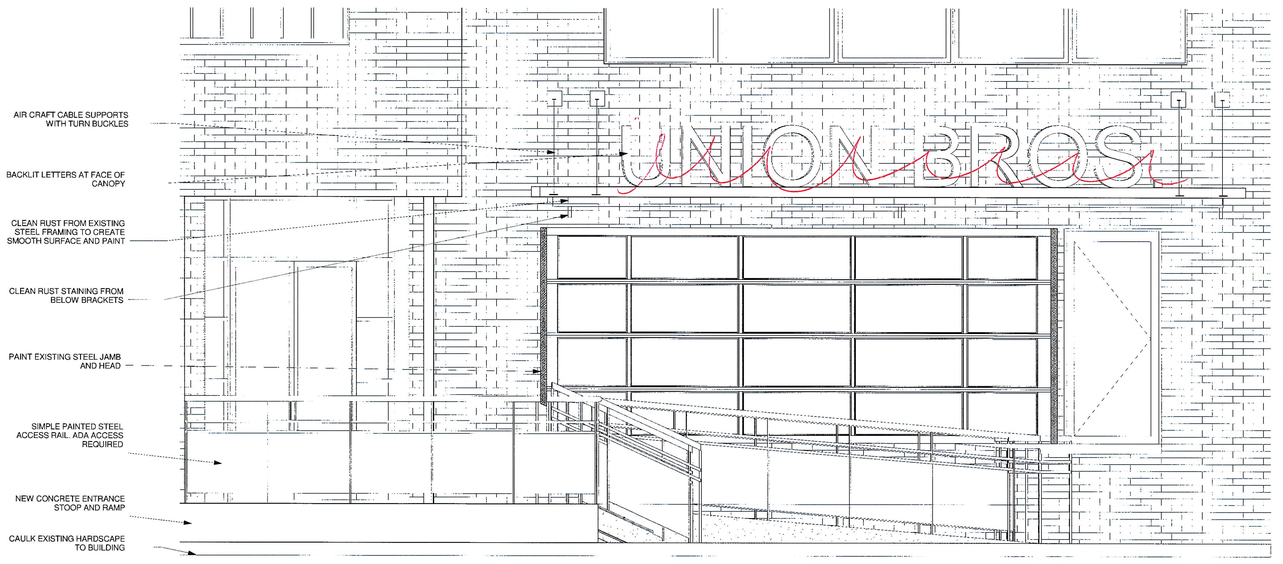
EXISTING CANOPY @ HANOVER STREET




7 / 33.02 PARKING ENTRANCE - PLAN
1/2" = 1'-0"




5 / 33.02 PARKING ENTRANCE - SECTION
1/2" = 1'-0"




6 / 33.02 PARKING ENTRANCE - ELEVATION
1/2" = 1'-0"

**GENERAL ELEVATIONS NOTES**

1. DO NOT SCALE DRAWINGS
2. CLEAN, REPAIR, AND REPOINT BRICK AS REQUIRED, SEE MASONRY REPORT.
3. ALL VERTICAL DIMENSIONS SHOULD BE VERIFIED IN THE FIELD

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37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# CANOPY & ENTRANCE DETAILS

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: GH | Checked by: NL |

| Num. | Description | Date |
|---|---|---|
| | NPS/MHT SUBMISSION | 06/30/16 |

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**33.02**

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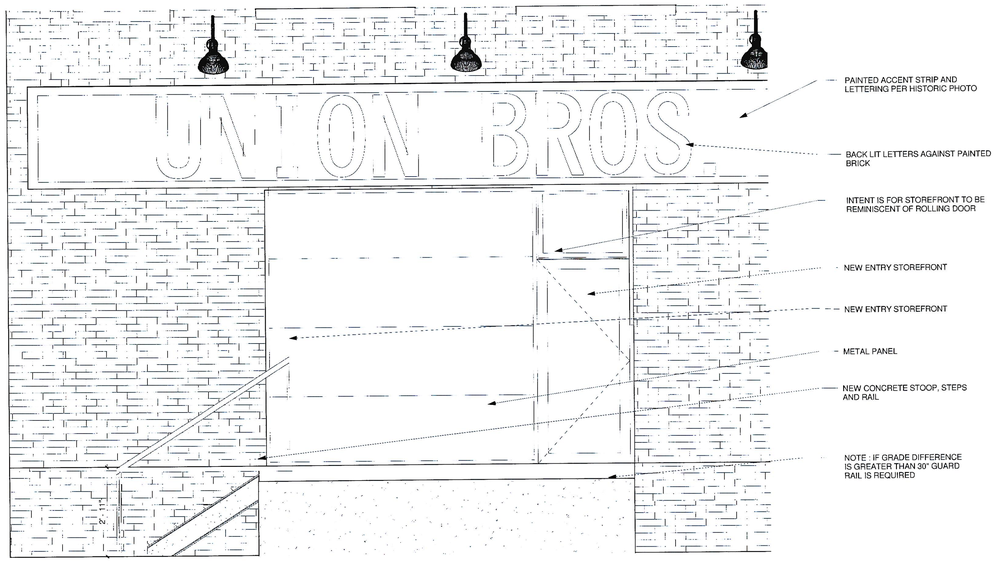
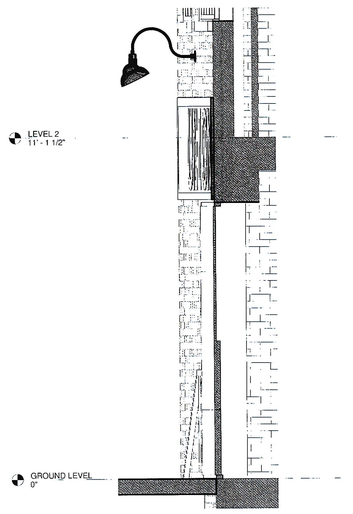
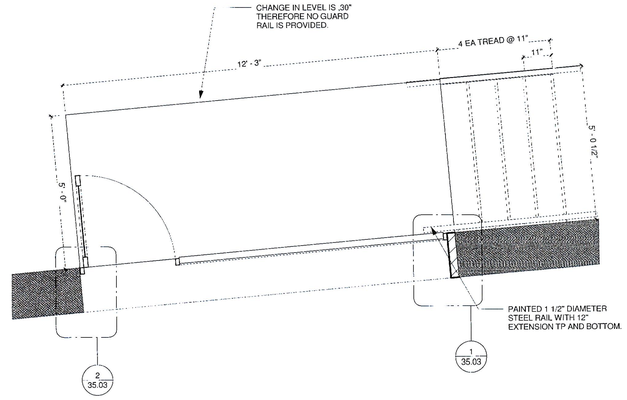


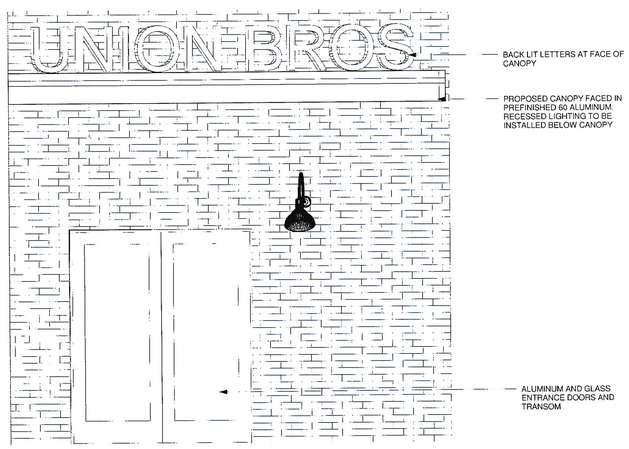

1 / 33.03 CROSS STREET ENTRANCE DETAILS
1/2" = 1'-0"



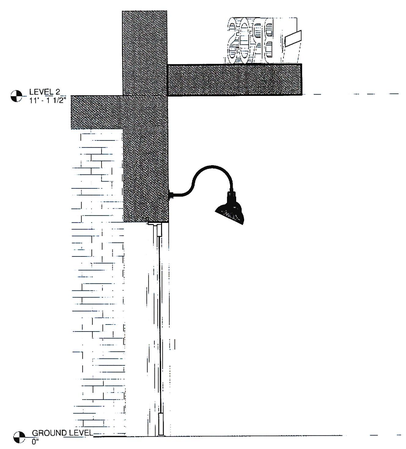

2 / 33.03 CROSS STREET ENTRANCE SECTIONS
1/2" = 1'-0"



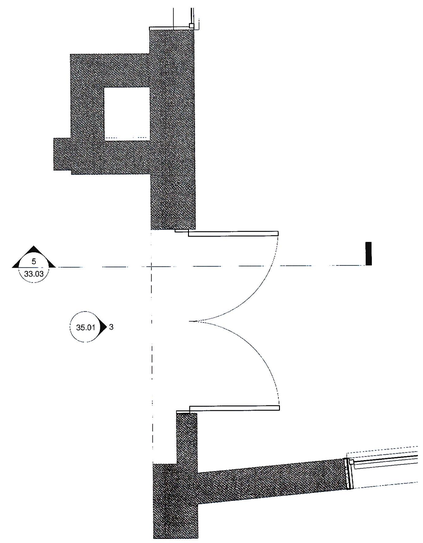

3 / 33.03 CROSS STREET ENTRANCE PLAN
1/2" = 1'-0"




4 / 33.03 CORNER ENTRANCE NEAR CAFE - ELEVATION
1/2" = 1'-0"




5 / 33.03 CORNER ENTRANCE NEAR CAFE - SECTION
1/2" = 1'-0"




6 / 33.03 CORNER ENTRANCE NEAR CAFE - PLAN
1/2" = 1'-0"

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1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# CANOPY & ENTRANCE DETAILS

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: GH | Checked by: NL |

NPS/MHT SUBMISSION 08/30 "-6

| Num. | Description | Date |
|---|---|---|

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33.03

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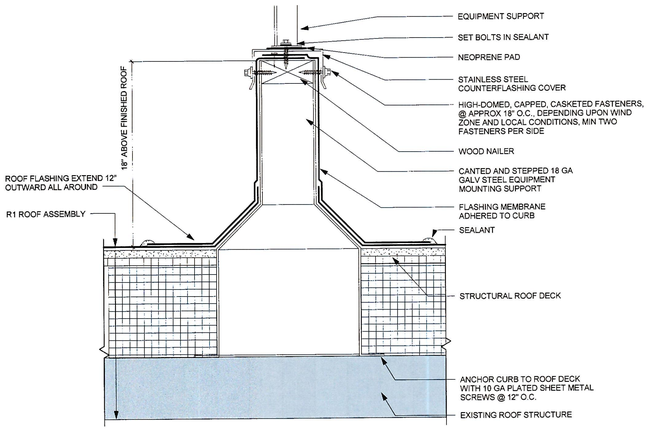
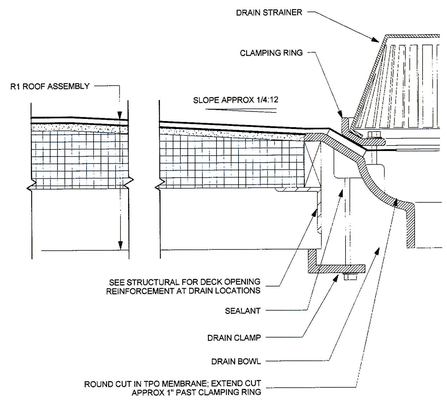
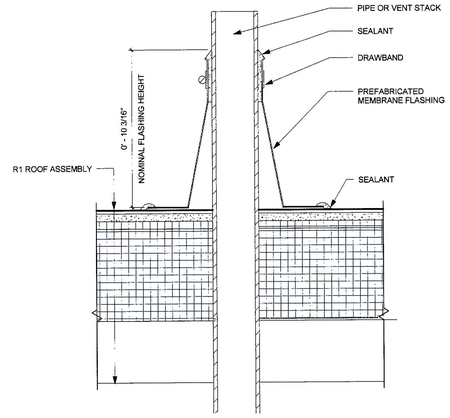


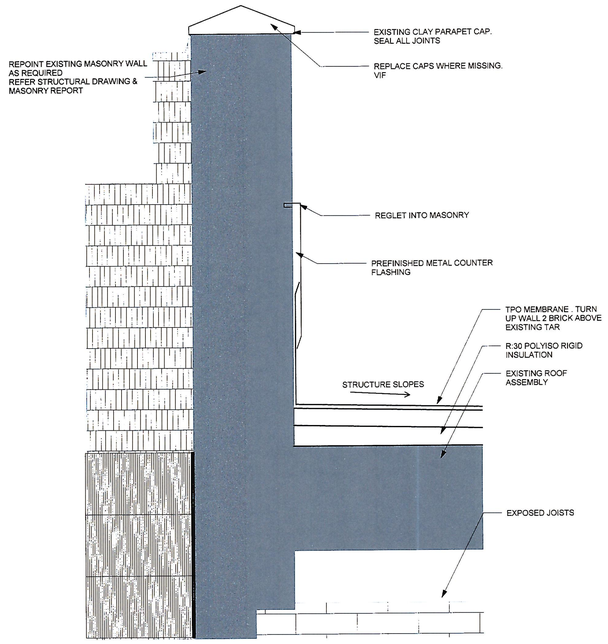

1 / 33.06 EQUIPMENT CURB DETAIL
3" = 1'-0"



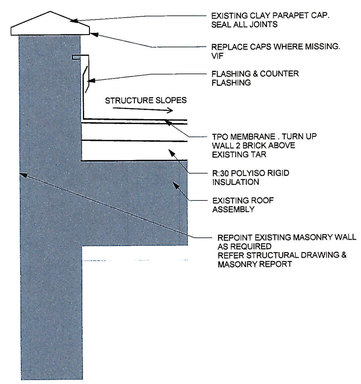

2 / 33.06 ROOF DRAIN DETAIL
3" = 1'-0"



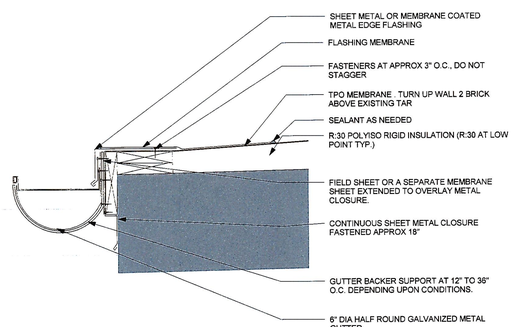

3 / 33.06 SINGLE PIPE/VENT FLASHING DETAIL
3" = 1'-0"




4 / 33.06 TYPICAL PARAPET DETAIL AT BUILDING 1
1 1/2" = 1'-0"




5 / 33.06 TYPICAL PARAPET DETAIL AT BUILDING 3
1 1/2" = 1'-0"




6 / 33.06 TYPICAL PARAPET DETAIL AT SCRUPPER
1 1/2" = 1'-0"

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37 WEST CROSS STREET, LLC
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BALTIMORE, MD 21230

SHEET TITLE

**ROOF DETAILS**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: GH | Checked by: NL |
| NPS/M-T SUBMISSION | 09/30/18 |

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33.06

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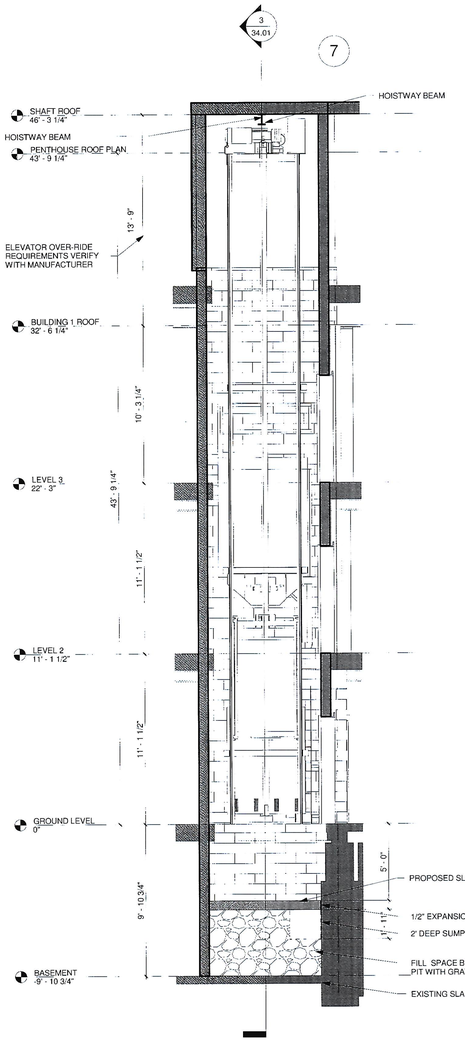
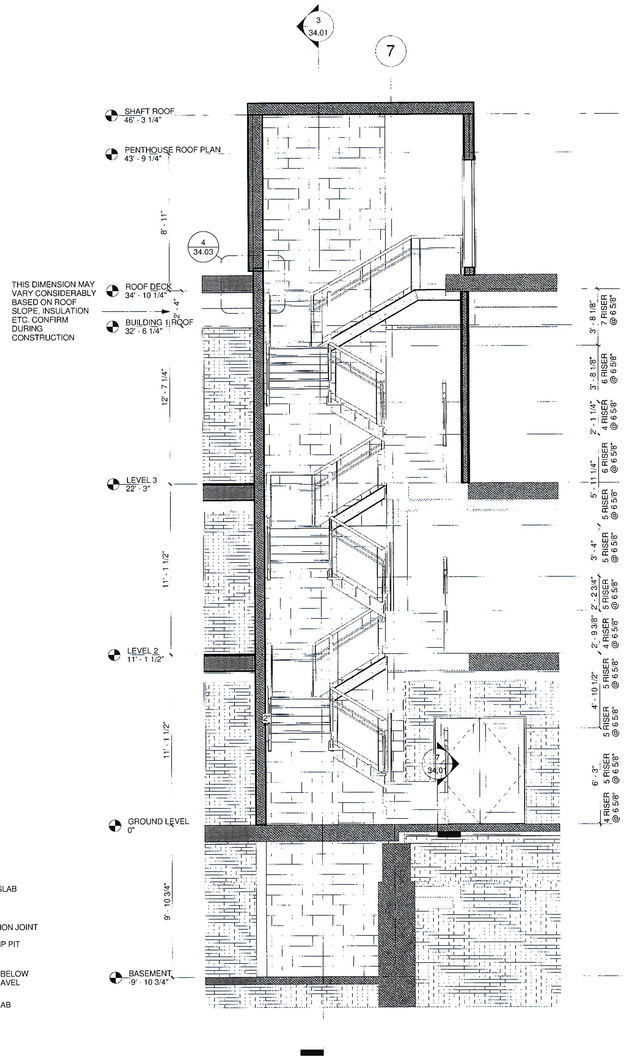
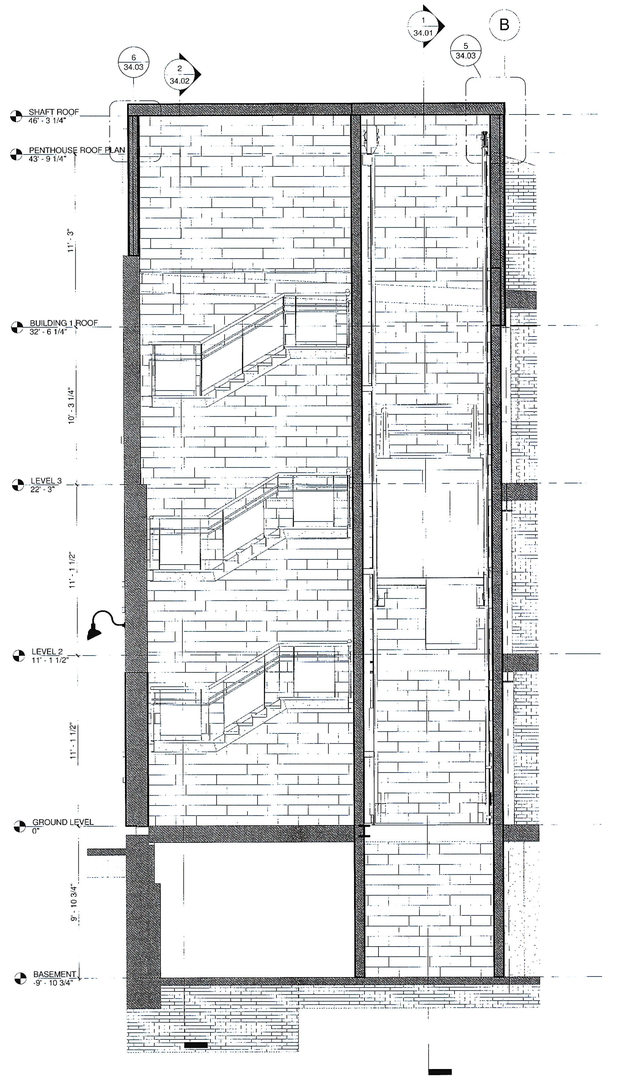



1 34.01 DETAILED SECTION ELEVATOR
1/4" = 1'-0"



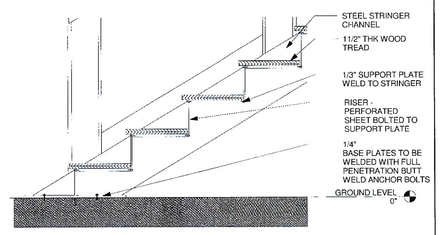

2 34.01 DETAILED SECTION STAIR 1
1/4" = 1'-0"



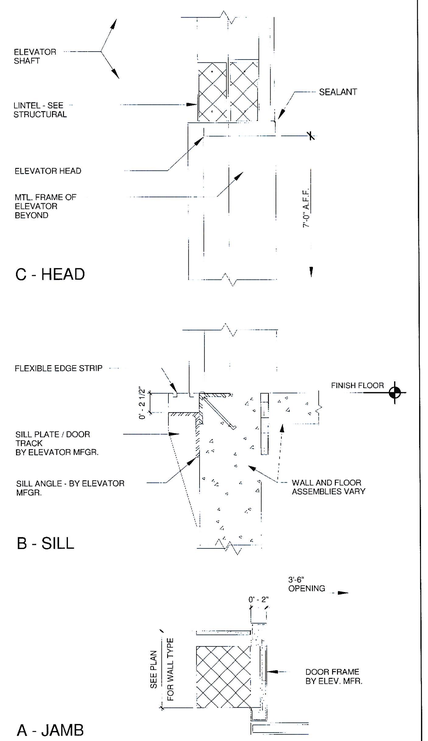

3 34.01 DETAILED SECTION STAIR 1 & ELEVATOR
1/4" = 1'-0"

ELEVATOR NOTES:

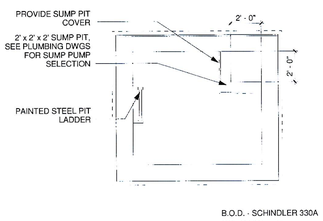
HOISTWAY SIZE MAY BE CHANGED BASED ON ELEVATOR SELECTION. CONFIRM WITH DESIGN AND OWNERSHIP TEAM PRIOR TO START OF CONSTRUCTION.
FLOOR TO FLOOR HEIGHT ARE EXISTING AND MUST BE FIELD VERIFIED. THIS WILL AFFECT RISER HEIGHT AND ELEVATOR TRAVEL DISTANCE.



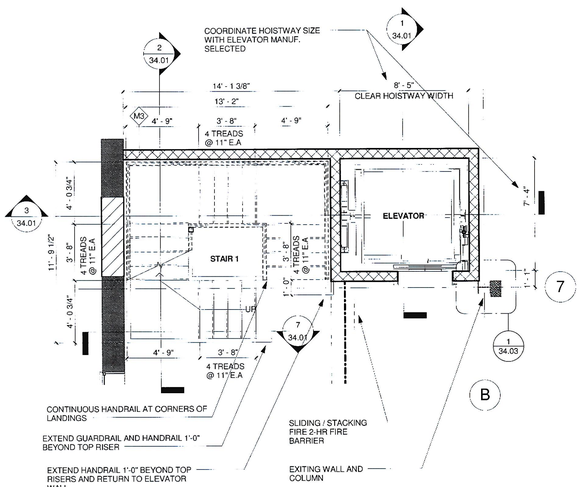

7 34.01 DETAIL AT TREAD
1" = 1'-0"



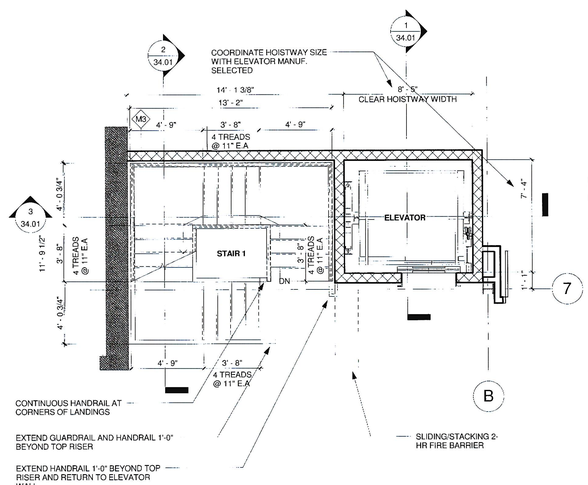

10 34.01 ELEVATOR DETAIL
1 1/2" = 1'-0"



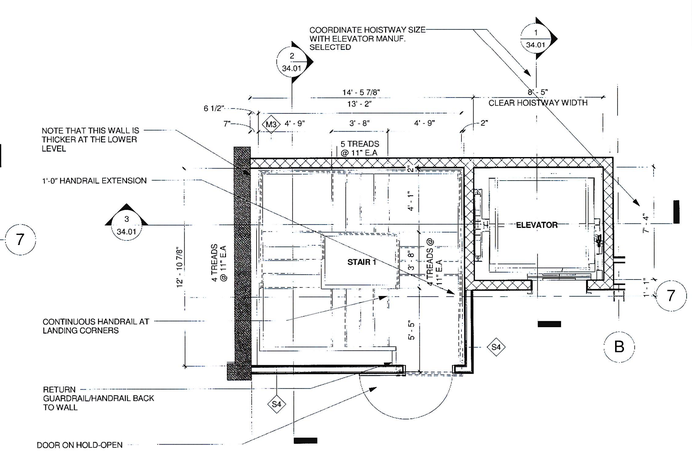

11 34.01 ELEVATOR PIT PLAN
1/4" = 1'-0"




4 34.01 STAIR 1 & ELEVATOR PLAN - GROUND LEVEL
1/4" = 1'-0"




5 34.01 STAIR 1 & ELEVATOR PLAN - LEVEL 2
1/4" = 1'-0"




6 34.01 STAIR 1 & ELEVATOR PLAN - LEVEL 3
1/4" = 1'-0"

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1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# STAIRCASE 1 & ELEVATOR PLANS & DETAILS

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: GH | Checked by: NL |

NP/SMT SUBMISSION 05/30/16

| Num. | Description | Date |
|---|---|---|

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**34.01**

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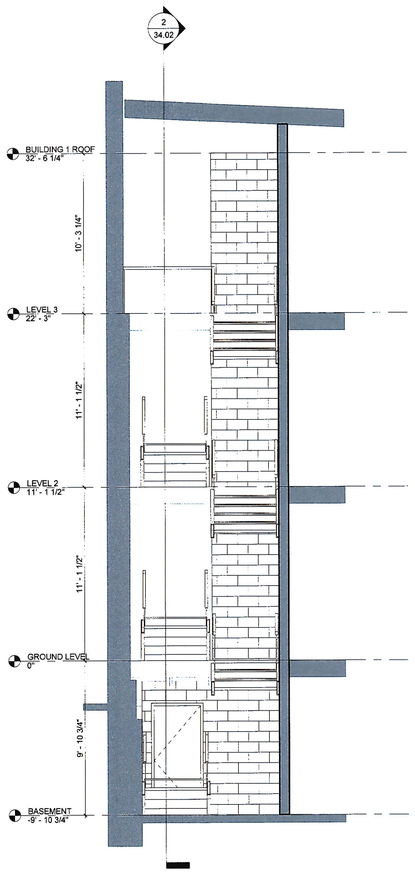
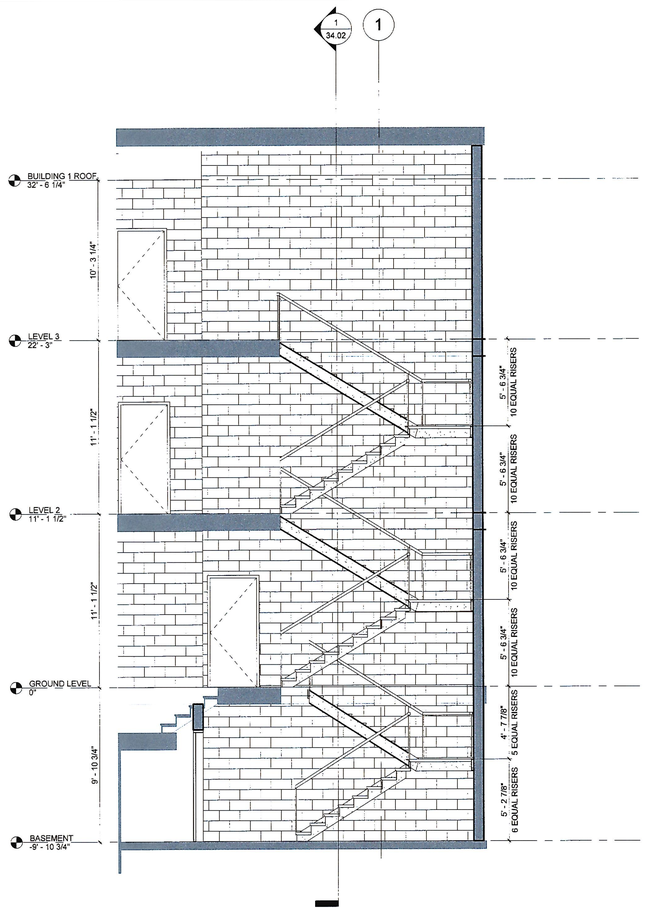
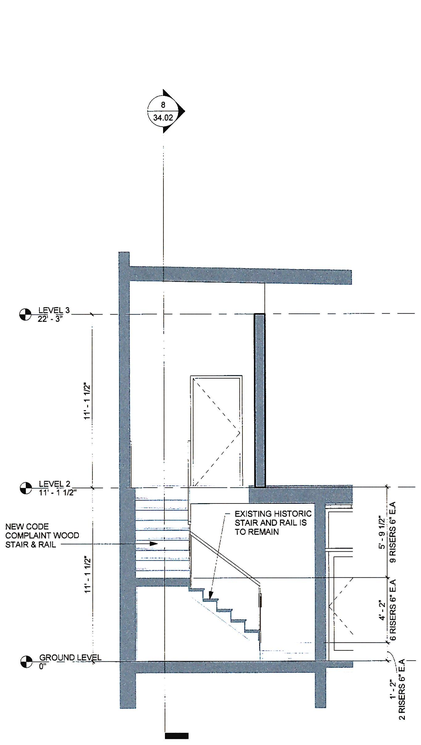


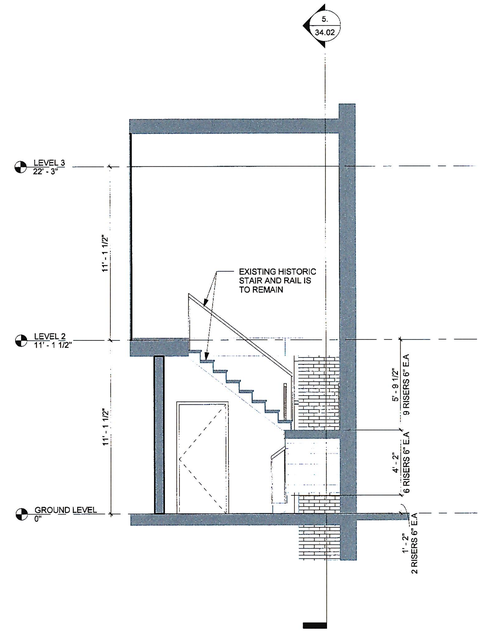

1 / 34.02 Section 2
1/4" = 1'-0"



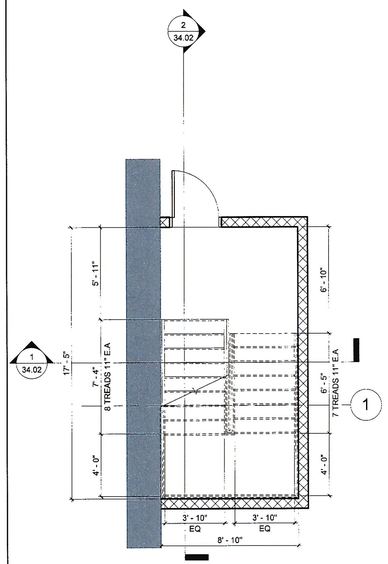

2 / 34.02 Section 3
1/4" = 1'-0"



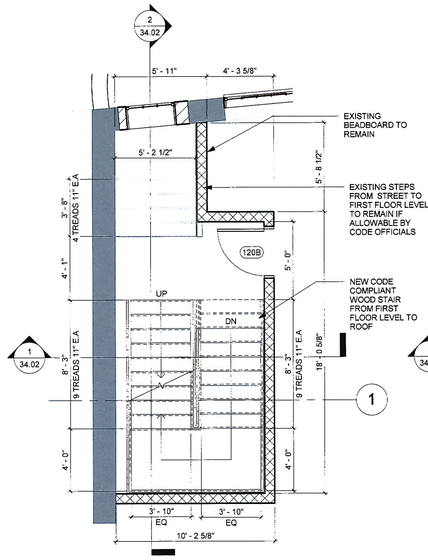

5 / 34.02 Section 4
1/4" = 1'-0"



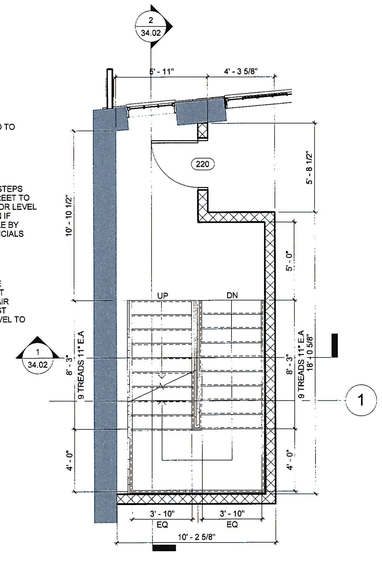

8 / 34.02 Section 5
1/4" = 1'-0"



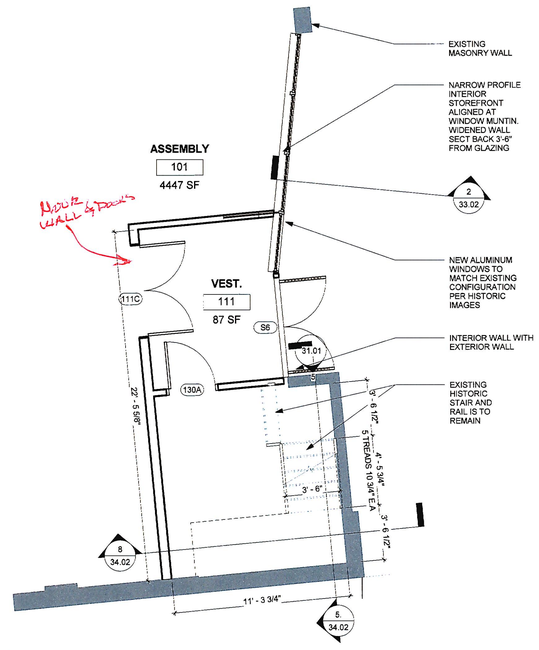

7 / 34.02 BASEMENT FLOOR PLAN - Callout 1
1/4" = 1'-0"



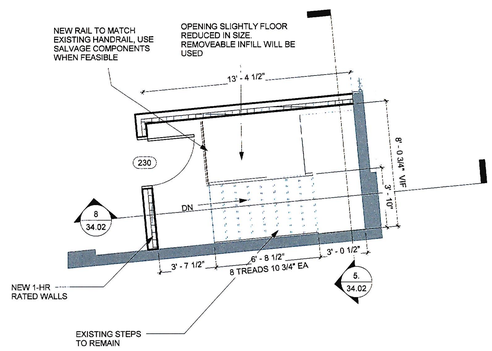

3 / 34.02 ENLARGED FIRST FLOOR STAIR 2 PLAN
1/4" = 1'-0"




4 / 34.02 ENLARGED SECOND FLOOR STAIR 2 PLAN
1/4" = 1'-0"




5 / 34.02 ENLARGED STAIR 3 PLAN AND VESTIBULE
1/4" = 1'-0"




6 / 34.02 ENLARGED STAIR PLAB
1/4" = 1'-0"

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37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# STAIRCASE 2 & 3 PLANS & DETAILS

| | |
|---|---|
| Project Number: 16225 | Date: 10/05/17 |
| Drawn by: GH | Checked by: NL |
| HPSA/HT SUBMISSION | 06/30/16 |

| Num. | Description | Date |
|---|---|---|

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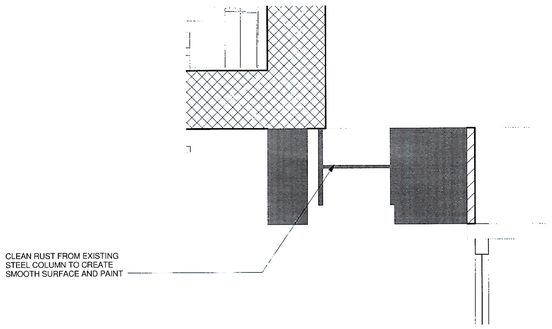
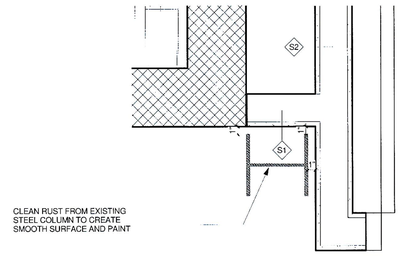
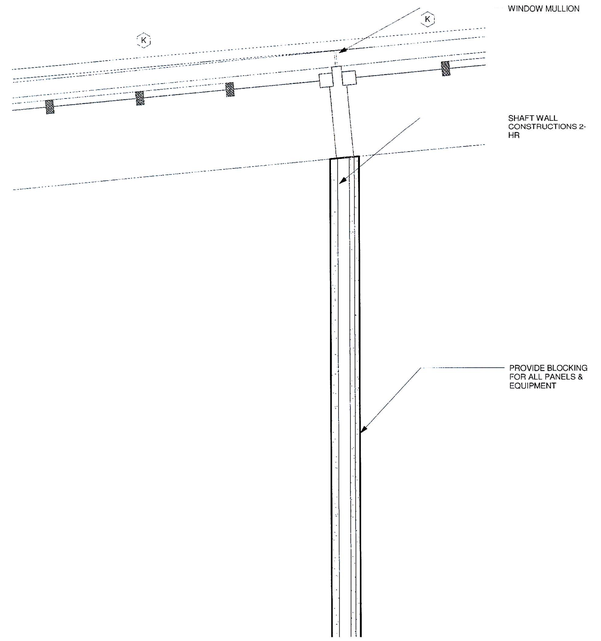
**34.02**



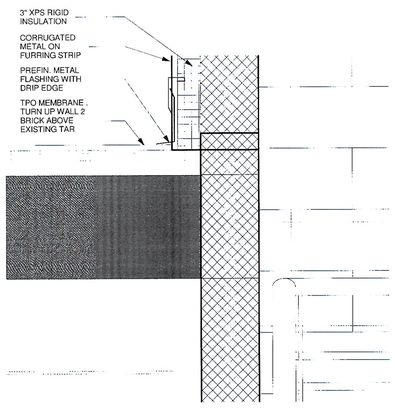

1 / 34.03 DETAIL OF STEEL COLUMN & WALL @ FIRST FLOOR
1 1/2" = 1'-0"



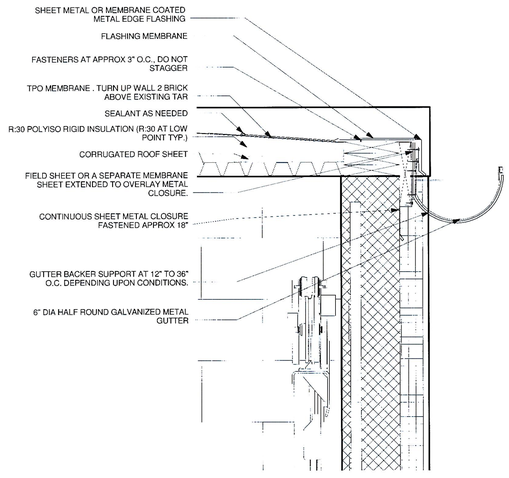

2 / 34.03 DETAIL OF STEEL COLUMN @ SECOND & THIRD FLOOR
1 1/2" = 1'-0"



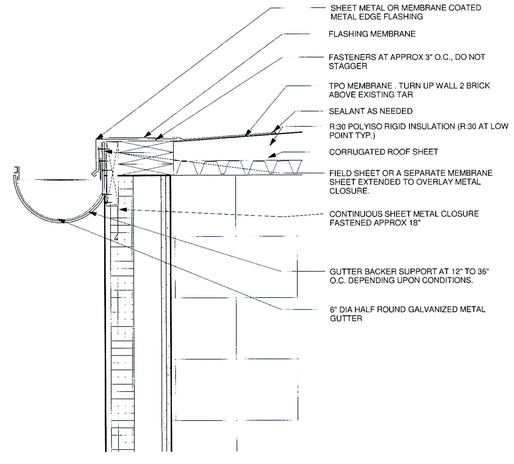

3 / 34.03 DETAIL AT UTILITY ROOM DOOR @ FIRST FLOOR
1 1/2" = 1'-0"



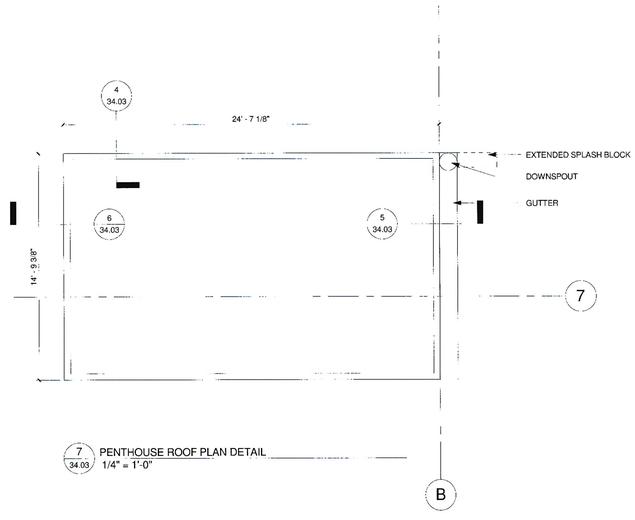

4 / 34.03 DETAIL AT STAIR 1 & ROOF DECK
1 1/2" = 1'-0"




5 / 34.03 DETAIL AT ELEVATOR SHAFT ROOF
1 1/2" = 1'-0"




6 / 34.03 DETAIL AT STAIR 1 PENTHOUSE ROOF
1 1/2" = 1'-0"




7 / 34.03 PENTHOUSE ROOF PLAN DETAIL
1/4" = 1'-0"

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1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

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1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**WALL DETAILS**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: GH | Checked By: NIL |
| NPS/MHT SUBMISSION | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**

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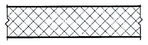
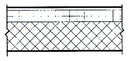
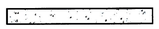
**34.03**

10/11/2017 5:02:19 PM

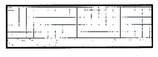
## WALL SCHEDULE

| NO. | HORIZONTAL SECTION | DESCRIPTION | U.L. DESIGNATION |
|---|---|---|---|
| M1 | | **TYPICAL EXTERIOR WALL**<br>EXISTING MASONRY TO REMAIN<br>CLEAN AND REPOINT AT EXTERIOR AND INTERIOR AS REQUIRED<br>PAINT MASONRY WALLS AT INTERIOR | **2-HR** |
| M2 | | **BASIC WALL AT INFILL LOCTATIONS, ETC.)**<br>SOLID BRICK MASONRY (WIDTH VARIES) | **2-HR** |
| M3 |  | **TYPICAL NEW INTERNAL STAIR AND ELEVATOR WALL**<br>8" CONCRETE MASONRY UNITS | |
| M4 |  | **NEW STAIR AND ELEVATOR WALL AT ROOF**<br>8" CONCRETE MASONRY UNITS<br>3" RIGID INSULATION R-15<br>AIR BARRIER<br>GALVANISED CORRUGATED METAL WALL PANELS ON FURRING | |
| S1 | | **PLUMBING WALLS**<br>5/8" GYPSUM WALLBOARD<br>3 5/8" METAL STUDS | |
| S2 | | **NEW TYPICAL INTERIOR WALLS**<br>5/8" GYPSUM WALLBOARD<br>3 5/8" METAL STUDS<br>5/8" GYPSUM WALLBOARD | |
| S3 | | **NEW PLUMBING WALLS**<br>5/8" GYPSUM WALLBOARD<br>6" METAL STUDS<br>5/8" GYPSUM WALLBOARD | |
| S4 | | **FIRE RATED WALL**<br>2 LAYERS 5/8" GWB<br>3 5/8" METAL STUDS<br>2 LAYERS 5/8" Fire-rated GWB | UL U-301<br>**2-HR** |
| S5 | | **SHAFT WALL**<br>1" Fire-rated Gypsum Panels<br>2 1/2" C-T Studs<br>2 layers 5/8" Fire-rated GWB | UL U-428<br>**2-HR** |

## FLOOR CEILING SCHEDULE

| NO. | HORIZONTAL SECTION | DESCRIPTION | U.L. DESIGNATION |
|---|---|---|---|
| F1 |  | **BASEMENT FLOOR**<br>EXISTING CONCRETE. ANY REQUIRED REPAIR TO BE DONE BY OWNER | |
| F2 | | **BUILDING 1 FLOOR CEILING ASSEMBLY**<br>EXISTING WOOD FLOOR, REPAIRED AS REQUIRED.<br>STAIN PAINTED WOOD STRUCTURE | |
| F3 | | **BUILDING 2 FLOOR CEILING ASSEMBLY**<br>EXISTING CONCRETE, CLEANED, SEALED & STAINED | |
| F4 | | **BUILDING 3 FLOOR CEILING ASSEMBLY** | |

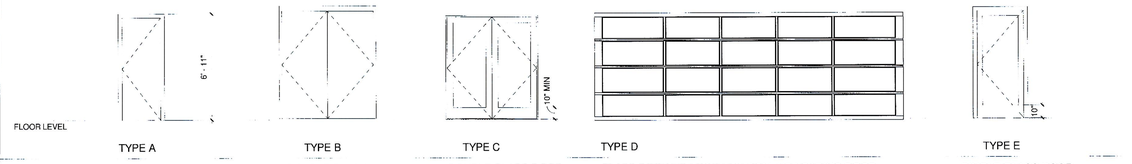
## ROOF CEILING SCHEDULE

| NO. | HORIZONTAL SECTION | DESCRIPTION | U.L. DESIGNATION |
|---|---|---|---|
| R1 | | **BUILDING 1**<br>TPO MEMBRANE<br>R:30 POLYISO RIGID INSULATION SLOPED TO GUTTER<br>VAPOR BARRIER<br>EXISTING WOOD SHEATHING REPAIR / REPLACE AS REQUIRED; SEE STRUCTURAL DRAWING FOR ADDITIONAL INFORMATION. | |
| R2 |  | **BUILDING 2 ROOF ASSEMBLY**<br>TPO MEMBRANE<br>1/2" PROTECTION BOARD<br>R:30 POLU ISO RIGID INSULATION SLOPED TO GUTTER<br>VAPOUR BARRIER<br>EXISTING CONCRETE STRUCTURE; INSPECT FOR DAMAGE | |
| R3 | | **BUILDING 3 ROOF ASSEMBLY**<br>TPO MEMBRANE<br>R:30 POLU ISO RIGID INSULATION SLOPED TO GUTTER<br>VAPOUR BARRIER<br>EXISTING WOOD SHEATHINF REPLAIRES/ REPLACED AS REQUIRED; SEE STRUCTURAL DRAWING FOR ADDITIONAL INFORMATION. | |
| R4 | | **ELEVATOR AND NEW STAIR ROOF ASSEMBLY**<br>TPO MEMBRANE<br>1/2" PROTECTON BOARD<br>R:30 POLU ISO RIGID INSULATION SLOPED TO GUTTER | |

## Door Schedule

| Door No | Location | Width | Height | Thickness | Door Type | Door Material | Door Finish | Door Glass | Frame Type | Frame Material | Frame Finish | Fire Rating | Hardware Set | Details | Comments | Type Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 021 | BASEMENT | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | | HM | PTD | | | | | |
| 101B | ASSEMBLY | 3' - 3" | 6' - 8" | 0' - 1 3/4" | E | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | WITH TRANSOM, HISTORIC MUNTIN PATTERN | |
| 101C | ASSEMBLY | 3' - 3" | 6' - 8" | 0' - 1 3/4" | E | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | WITH TRANSOM, HISTORIC MUNTIN PATTERN | |
| 101D | ASSEMBLY | 17' - 4" | 9' - 0" | 0' - 2 1/8" | D | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | ROLL-UP DOOR | |
| 101F | ASSEMBLY | 16' - 6" | 7' - 0" | 0' - 2 1/8" | | | | TEMP | A | | | N/A | TBD | | GLASS DOOR | |
| 101G | ASSEMBLY | 3' - 0" | 6' - 11" | 0' - 1 3/4" | E | ALUM | PREFIN | | | ALUM | PREFIN | | | | | |
| 111C | VEST. | 5' - 10" | 6' - 8" | 0' - 1 3/4" | C | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | WITH POSSIBLE TRANSOM AND SIDELITE | |
| 118B | UTILITY ROOM | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | | HM | PTD | | | | | |
| 120A | STAIR 2 | 3' - 0" | 6' - 8" | 0' - 1 3/4" | | ALUM | PREFIN | | A | ALUM | PREFIN | N/A | TBD | | INSULATED EXTERIOR, MATCH HISTORIC PHOTO | |
| 120B | ASSEMBLY | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | A | HM | PTD | 90 MIN | TBD | | | |
| 130A | VEST. | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | A | HM | PTD | 60 MIN | TBD | | TO HISTORIC STAIR | |
| 201 | OFFICE | 3' - 0" | 7' - 0" | 0' - 1 3/4" | E | WD | STD | TEMP | A | WD | STD | N/A | TBD | | EXISTING OPENING | |
| 204A | LOBBY | 5' - 8" | 6' - 8" | 0' - 1 3/4" | A | HM | PTD | | | HM | PTD | | | | | |
| 204B | OFFICE | 6' - 0" | 6' - 8" | 0' - 1 3/4" | C | WD | PTD | TEMP | A | WD | PTD | N/A | TBD | | | |
| 204C | LOBBY | 4' - 6" | 7' - 0" | 0' - 0 3/4" | | | | | | | | | | | | |
| 205 | J.C | 3' - 0" | 6' - 8" | 0' - 1 3/4" | A | WD | PTD | | A | HM | PTD | N/A | TBD | | | |
| 206 | MEN'S REST ROOM | 3' - 0" | 6' - 8" | 0' - 1 3/4" | A | WD | PTD | | A | HM | PTD | N/A | TBD | | | |
| 207 | WOMEN'S RESTROOM | 3' - 0" | 6' - 8" | 0' - 1 3/4" | A | WD | PTD | | A | HM | PTD | N/A | TBD | | | |
| 220 | STAIR 2 | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | A | HM | PTD | 60 MIN | TBD | | | |
| 230 | STAIR 3 | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | A | HM | PTD | N/A | TBD | | | |
| 302 | LOBBY | 6' - 0" | 6' - 8" | 0' - 1 3/4" | C | WD | PTD | TEMP | A | WD | PTD | N/A | TBD | | | |
| 303 | LOBBY | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | A | HM | PTD | 90 | TBD | | | |
| 304 | LOBBY | 4' - 6" | 7' - 0" | 0' - 0 3/4" | | | | | | | | | | | | |
| 305 | J.C | 3' - 0" | 6' - 8" | 0' - 1 3/4" | A | WD | PTD | | A | HM | PTD | N/A | TBD | | | |
| 306 | MEN'S REST ROOM | 3' - 0" | 6' - 8" | 0' - 1 3/4" | A | WD | PTD | | A | HM | PTD | N/A | TBD | | | |
| 307 | WOMEN'S RESTROOM | 3' - 0" | 6' - 8" | 0' - 1 3/4" | A | WD | PTD | | A | HM | PTD | N/A | TBD | | | |
| 320 | STAIR 2 | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | A | HM | PTD | | | | | |
| 402 | LOBBY | 3' - 0" | 6' - 11" | 0' - 1 3/4" | E | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | EXTERIOR INSULATED, GLAZED | |
| 404 | LOBBY | 3' - 0" | 7' - 0" | 0' - 1 3/4" | A | HM | PTD | | A | HM | PTD | N/A | TBD | | EXTERIOR INSULATED | |
| 410 | LOBBY | 3' - 0" | 6' - 11" | 0' - 1 3/4" | E | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | EXTERIOR INSULATED, GLAZED | |
| S1 | OFFICE | 5' - 9 1/2" | 7' - 4 3/4" | 0' - 1 3/4" | C | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | BY MANUF | | STOREFRONT TO APPEAR AS LOADING DOOR | |
| S2 | LOBBY | 6' - 3 3/4" | 7' - 9 3/16" | 0' - 1 3/4" | C | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | WITHIN STOREFRONT | |
| S3 | LOBBY | 3' - 0" | 6' - 9" | 0' - 1 3/4" | SF | | | | | | | N/A | TBD | | IN HISTORIC OPENING, VIF | |
| S4 | LOBBY | 5' - 10" | 6' - 11" | 0' - 1 3/4" | C | ALUM | PREFIN | TEMP | A | | | N/A | TBD | | EXISTING OPENING, ENLARGED, VIF | |
| S5 | ASSEMBLY | 3' - 0" | 6' - 8" | 0' - 1 3/4" | E | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | IN HISTORIC OPENING, VIF | |
| S6 | VEST. | 6' - 5" | 10' - 0" | 0' - 1 3/4" | C | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | EXTERIOR, WITHIN HISTORIC WINDOW PATTERN | |
| S7 | ASSEMBLY | 3' - 0" | 6' - 8" | 0' - 1 3/4" | E | ALUM | PREFIN | TEMP | A | ALUM | PREFIN | N/A | TBD | | STOREFRONT TO APPEAR AS LOADING DOOR | |

## DOOR TYPES



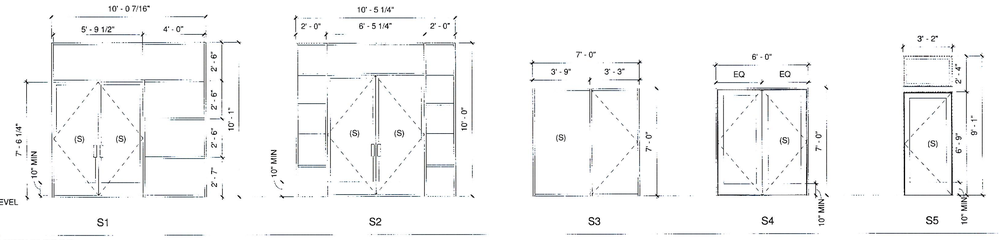

TYPE A — SINGLE FLUSH

TYPE B — DOUBLE FLUSH

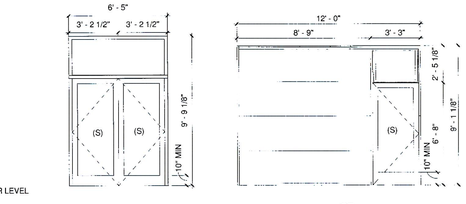
TYPE C — DOUBLE GLASS DOOR

TYPE D — GLASS DOOR TO LOOK LIKE ROLL UP LOADING DOOR SIZE AND CONFIGURATION VARIES; SEE 31 SERIES.

TYPE E — SINGLE GLASS DOOR




STORE FRONT DOOR




### GENERAL DOOR NOTES

1. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND.
2. PROVIDE SELF-CLOSING DEVICES ON ALL RESTROOM, JANITOR CLOSEST, AND EXTERIOR EXIT DOORS. ALL CLOSERS SHALL BE INSTALLED ON THE INTERIOR SIDE OF A ROOM.
3. ALL GLAZING IN DOORS SHALL BE TEMPERED.
4. SEAL ALL EDGES OF MILLWORK AT DOOR TRIM
5. SEAL DOOR STRIKE WITH EXPANDING FOAM
7. WEATHER-STRIPPING IS MANDATORY AT DOORS BETWEEN CONDITIONED SPACES AND THE EXTERIOR; UNCONDITIONED SPACES; AND SPACES VENTED TO THE OUTSIDE.


MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone 410.539.4300 Fax 410.539.0660


CERTIFIED

**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# WALL AND DOOR SCHEDULE

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: LR | Checked by: NL |
| NPS/MHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
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**35.01**

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## Window Schedule

| Type | Width | Height | Frame Material | Frame Finish | Operation | Description |
|---|---|---|---|---|---|---|
| A | 1' - 3" | 5' - 2" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| B | 6' - 1" | 6' - 10" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| C | 5' - 2" | 6' - 2" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| D | 4' - 10" | 6' - 10" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| E | 3' - 2" | 6' - 2 1/2" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| F | 3' - 2" | 6' - 2 1/2" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| G | 3' - 2" | 5' - 0" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| H | 2' - 6" | 5' - 2" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| J | 4' - 3" | 6' - 2" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| K | 5' - 4" | 6' - 2" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| L | | | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| M | 3' - 11 1/2" | 6' - 10" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| N | 3' - 9 5/8" | 6' - 5" | ALUM | PREFIN | AWNING | EXISTING / MATCH HISTORIC |
| P | 3' - 9" | 5' - 8" | ALUM | PREFIN | SINGLE HUNG | EXISTING / MATCH HISTORIC |
| Q | 1' - 8" | 3' - 0" | ALUM | PREFIN | SINGLE HUNG | EXISTING / MATCH HISTORIC |

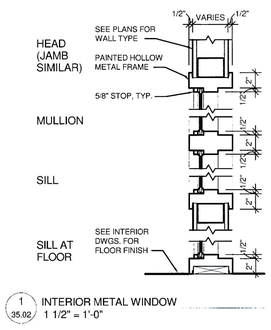
EXISTING WINDOWS WHICH ARE KEPT WILL BE:

- CLEANED AND REPAIRED AS REQUIRED
- REGLAZED WITH SINGLE PANE GLASS
- LOW PROFILE STORMS ARE TO BE ADDED, SEE SPECIFICATIONS

NEW WINDOWS ARE TO PREFINISHED ALUMINUM WITH:

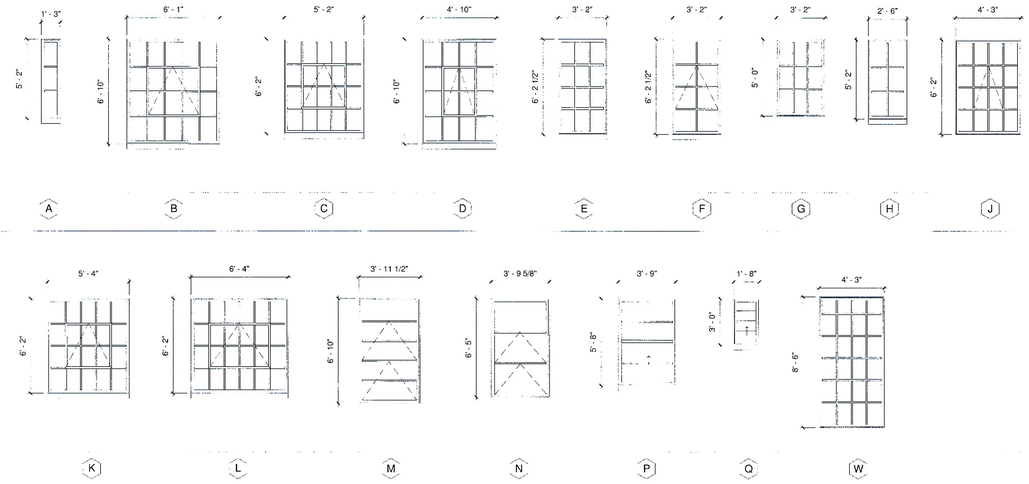
- MUNTIN PATTERNS TO MATCH HISTORIC WINDOWS
- OPERABLE AWNING LITES AS IDENTIFIED
- INSULATED GLASS WITH SIMULATED DIVIDED LITES AND SPACER BARS

ALL DIMENSIONS MUST BE FIELD VERIFIED




1 / 35.02 INTERIOR METAL WINDOW
1 1/2" = 1'-0"

## EXTERIOR WINDOW TYPES




## INTERIOR WINDOW TYPES

FLOOR LEVEL

### GENERAL WINDOW NOTES

1. MUNTIN AND OPERABLE PANEL ARRANGEMENTS ARE BASED ON HISTORIC PHOTOS AND ARE TO BE AS SHOWN
2. FOR NEW WINDOWS PROVIDE A MOCK-UP TO PORTRAY FRAME AND MUNITIN PROFILES AND TO SHOW COLOR
3. FOR EXISTING WINDOWS PROVIDE A MOCK-UP TO SHOW CLEANED AND REPAIRED CONDITION, NEW GLAZING, STORM WINDOW AND COLOR
4. WINDOW OPENINGS ARE EXISTING. VERIFY EXACT SIZES IN THE FIELD.
5. ALL NEW GLASS IS DOUBLE INSULATING LOW-E CLEAR GLASS, U.N.O.
6. EXTEND ALL FLASHING TO FORM A DRIP EDGE.
7. PROVIDE TEMPERED GLASS IN ALL WINDOWS THAT ARE NEXT TO DOORS OR ARE WITHIN 18 INCHES OF THE FLOOR OR WHERE REQUIRED BY CODE.
8. CONTRACTOR TO COORDINATE SCHEDULE WITH PLANS AND ELEVATIONS AND INFORM ARCHITECT OF ANY DISCREPANCIES.
9. U VALUE OF THE COMPLETE ASSEMBLY SHALL BE 0.35 OR LOWER.
10. SHGC OF THE COMPLETE ASSEMBLY TO BE 0.32 OR LOWER
11. ALL OPERABLE WINDOWS ARE TO HAVE LOCK MOUNTED NO MORE THAN 54" AFF. IF THE REACH DEPTH TO THE LOCK EXCEEDS 10". THE LOCK MUST BE MOUNTED NO MORE THAN 46" AFF. LOCK REQUIRES NO PINCHING, TWISTING, OR GRASPING TO OPERATE. LOCK REQUIRES NO MORE THAN 5 POUNDS OF FORCE TO OPERATE.
12. WINDOW TYPE MUST BE LABELED BY AN INDEPENDENT THIRD PARTY (E.G. NFRC). IF AN NFRC LABEL IS NOT AVAILABLE, MANUFACTURER MUST PROVIDE ASSEMBLY U-VALUES, NOT CENTER-OF-GLASS.
13. WINDOWS SHALL BE INSTALLED PROPERLY TO ENSURE WEATHER TIGHTNESS AND AIR TIGHTNESS PERFORMANCE WITHIN MANUFACTURER'S SPECIFICATIONS IN ADDITION TO PROPER OPERATION.
14. ALL JOINTS BETWEEN WINDOW FRAME AND ROUGH OPENING SHOULD BE SEALED WITH MINIMUM 20-YEAR SEALANT COMPATIBLE WITH ALL SURFACES.
15. SEE MASONRY REPORT AND STRUCTURAL DRAWINGS FOR REPAIR DETAILS AT MASONRY


MARKS, THOMAS ARCHITECTS
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SHEET TITLE

**WINDOW SCHEDULE**

| Project Number | 16225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by | LR | Checked by | NL |

NPS/MHT SUBMISSION 06/30/16

| Num. | Description | Date |
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**35.02**

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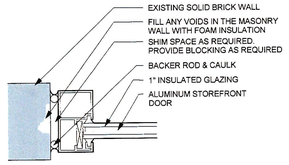
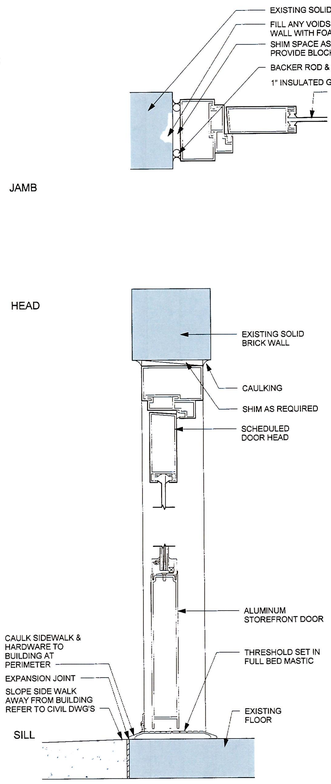
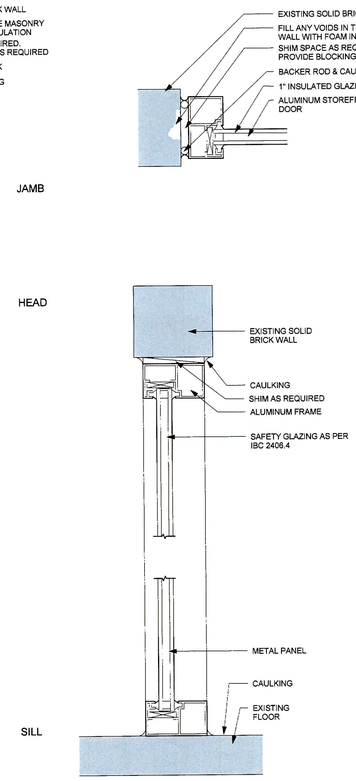


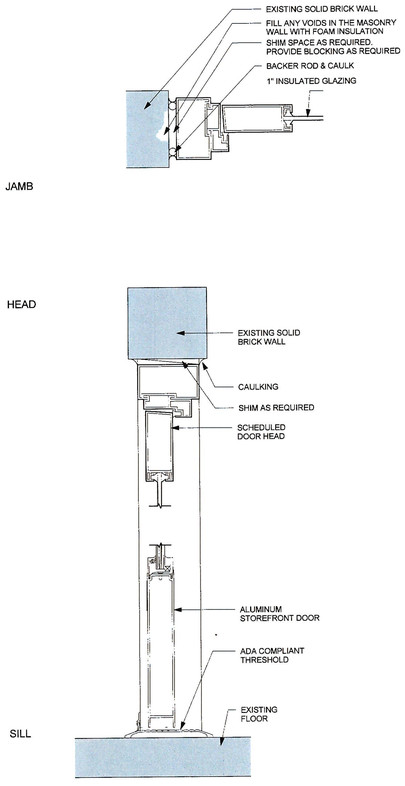

1 35.03 EXTERIOR STOREFRONT DEATILS
3" = 1'-0"



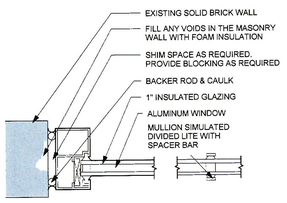

2 35.03 EXTERIOR STOREFRONT DOOR DETAILS
3" = 1'-0"



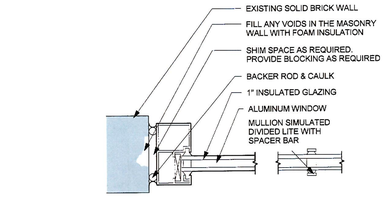

3 35.03 INTERIOR STOREFRONT DEATILS
3" = 1'-0"



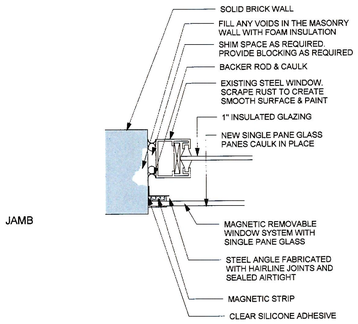

4 35.03 INTERIOR STOREFRONT DOOR DETAILS
3" = 1'-0"




5 35.03 NEW ALUMINUN WINDOW DETAILS AT CONCRETE SILL
3" = 1'-0"




7 35.03 NEW ALUMINUN WINDOW DETAILS AT BRICK ROW LOCK
3" = 1'-0"




6 35.03 NEW STORM WINDOW AT EXISTING STEEL WINDOW
3" = 1'-0"

## GENERAL WINDOW NOTES

1. MUNTIN AND OPERABLE PANEL ARRANGEMENTS ARE BASED ON HISTORIC PHOTOS AND ARE TO BE AS SHOWN
2. FOR NEW WINDOWS PROVIDE A MOCK-UP TO PORTRAY FRAME AND MUNITIN PROFILES AND TO SHOW COLOR
3. FOR EXISTING WINDOWS PROVIDE A MOCK-UP TO SHOW CLEANED AND REPAIRED CONDITION, NEW GLAZING, STORM WINDOW AND COLOR
4. WINDOW OPENINGS ARE EXISTING. VERIFY EXACT SIZES IN THE FIELD.
5. ALL NEW GLASS IS DOUBLE INSULATING LOW-E CLEAR GLASS, U.N.O.
6. EXTEND ALL FLASHING TO FORM A DRIP EDGE.
7. PROVIDE TEMPERED GLASS IN ALL WINDOWS THAT ARE NEXT TO DOORS OR ARE WITHIN 18 INCHES OF THE FLOOR OR WHERE REQUIRED BY CODE.
8. CONTRACTOR TO COORDINATE SCHEDULE WITH PLANS AND ELEVATIONS AND INFORM ARCHITECT OF ANY DISCREPANCIES.
9. U VALUE OF THE COMPLETE ASSEMBLY SHALL BE 0.35 OR LOWER.
10. SHGC OF THE COMPLETE ASSEMBLY TO BE 0.32 OR LOWER.
11. ALL OPERABLE WINDOWS ARE TO HAVE LOCK MOUNTED NO MORE THAN 54" AFF. IF THE REACH DEPTH TO THE LOCK EXCEEDS 10", THE LOCK MUST BE MOUNTED NO MORE THAN 48" AFF. LOCK REQUIRES NO PINCHING, TWISTING, OR GRASPING TO OPERATE. LOCK REQUIRES NO MORE THAN 5 POUNDS OF FORCE TO OPERATE.
12. WINDOW TYPE MUST BE LABELED BY AN INDEPENDENT THIRD PARTY (E.G. NFRC). IF AN NFRC LABEL IS NOT AVAILABLE, MANUFACTURER MUST PROVIDE ASSEMBLY U-VALUES, NOT CENTER-OF-GLASS.
13. WINDOWS SHALL BE INSTALLED PROPERLY TO ENSURE WEATHER TIGHTNESS AND AIR TIGHTNESS PERFORMANCE WITHIN MANUFACTURER'S SPECIFICATIONS IN ADDITION TO PROPER OPERATION.
14. ALL JOINTS BETWEEN WINDOW FRAME AND ROUGH OPENING SHOULD BE SEALED WITH MINIMUM 20-YEAR SEALANT COMPATIBLE WITH ALL SURFACES.
15. SEE MASONRY REPORT AND STRUCTURAL DRAWINGS FOR REPAIR DETAILS AT MASONRY.


MARKS, THOMAS ARCHITECTS
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BALTIMORE, MD 21230

SHEET TITLE

**WINDOW DETAILS**

| Project Number | 16225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by: | GH | Checked by: | NL |

NPS/MHT SUBMISSION 08/30/16

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|---|---|---|

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**35.03**

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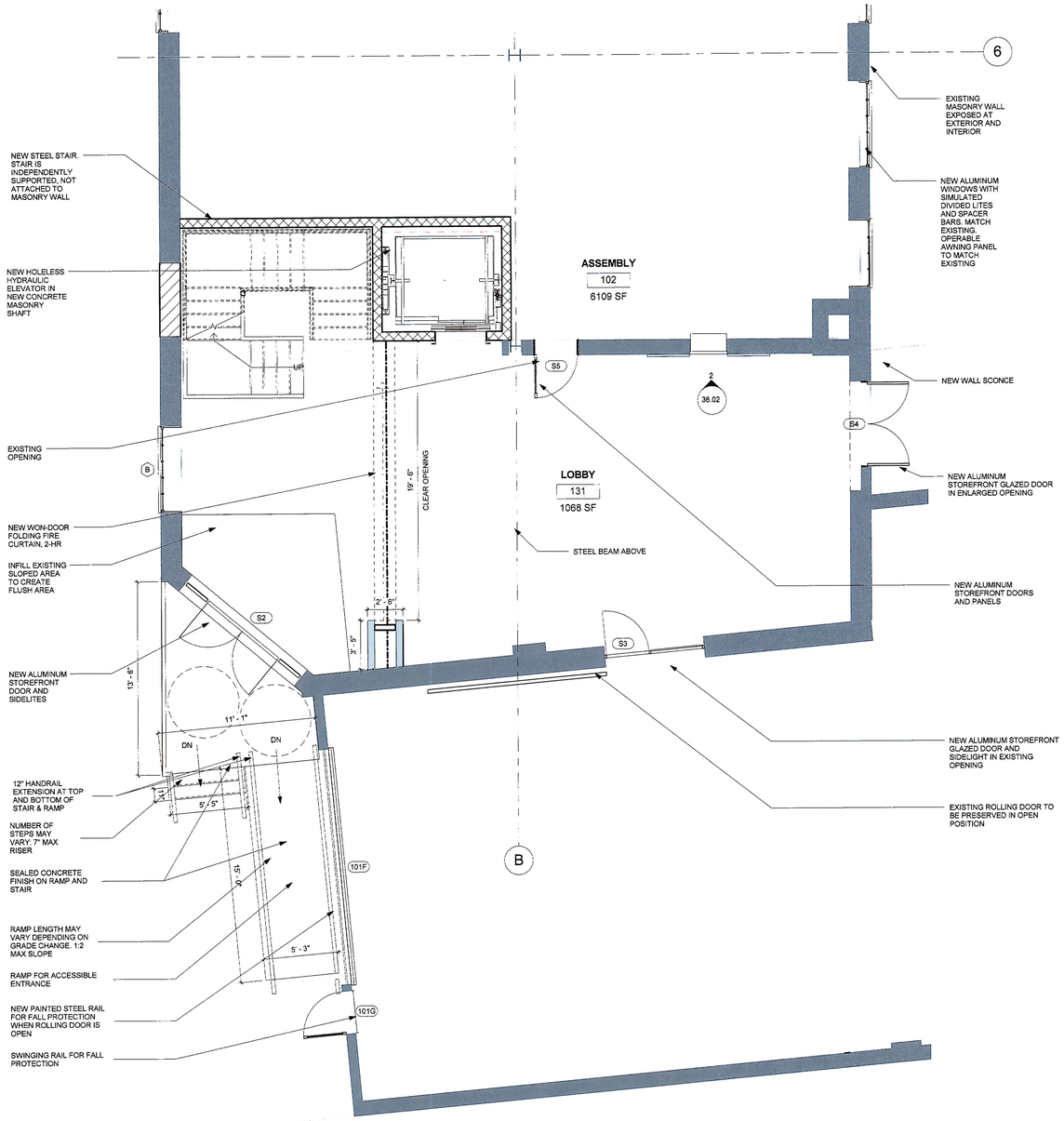
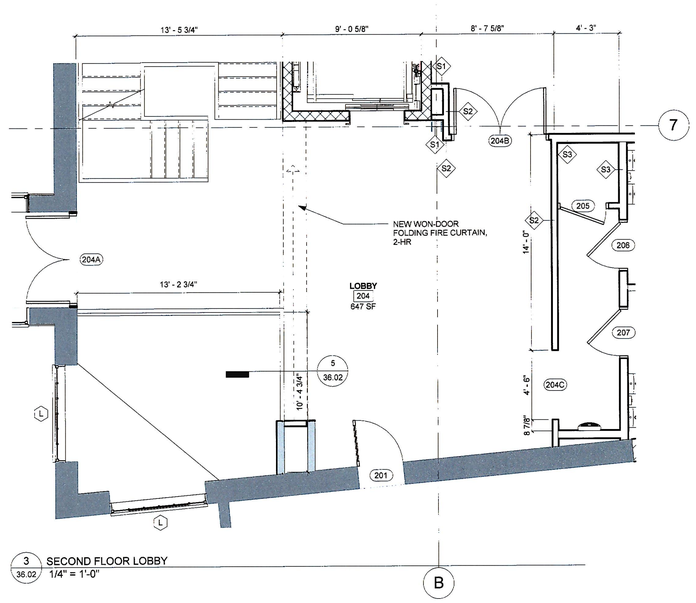



1 / 36.02 FIRST FLOOR ENLARGED CIRCULATION CORE
1/4" = 1'-0"




3 / 36.02 SECOND FLOOR LOBBY
1/4" = 1'-0"

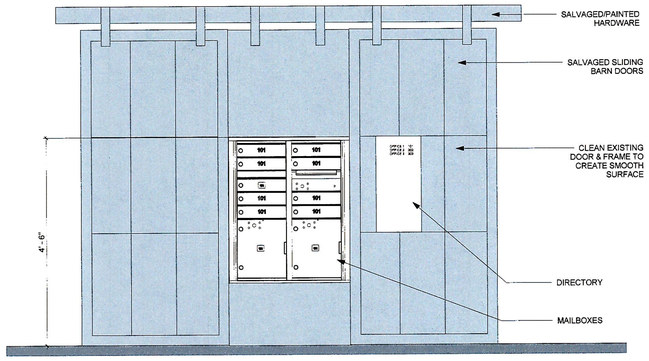
**LEGEND**

NEW WALL

EXISTING WALL

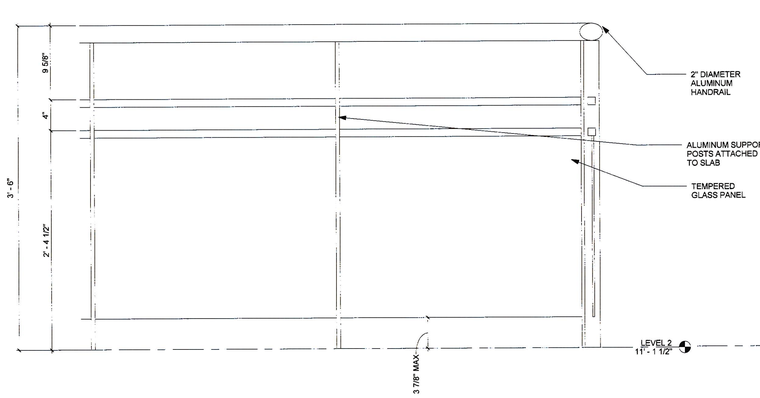
**GENERAL ENLARGED PLAN NOTES**

1. DO NOT SCALE DRAWINGS
2. CLEAN, REPAIR, AND REPOINT BRICK AS REQUIRED.
3. NEW STAIRS ARE TO BE INDEPENDENTLY SUPPORTED AND NOT ATTACHED TO EXITING WALLS.
4. PROVIDE BLOCKING FOR ALL BATHROOM ACCESORIES AND COUNTERS.
5. INSTALL ALL BATHROOM ACCESORIES AT ADA COMPLAINT HEIGHTS.

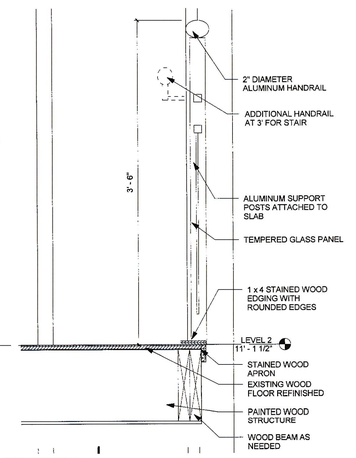



2 / 36.02 MAIL BOX DESIGN
3/4" = 1'-0"

IMAGE OF SALVAGED SLIDING BARN DOOR




4 / 36.02 RAILING DEATIL
1 1/2" = 1'-0"




5 / 36.02 FLOOR OPENING EDGE
1 1/2" = 1'-0"

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SHEET TITLE

**LOBBY DETAILS**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: GH | Checked by: NL |
| NPS/MHT SUBMISSION | 09/30/16 |

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**36.02**

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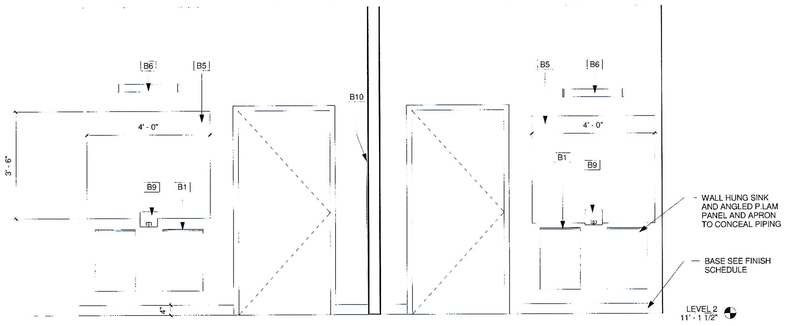
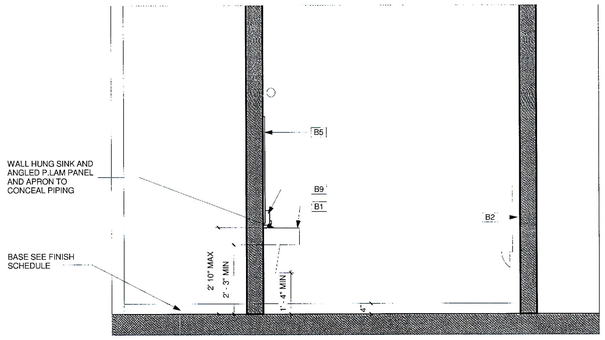


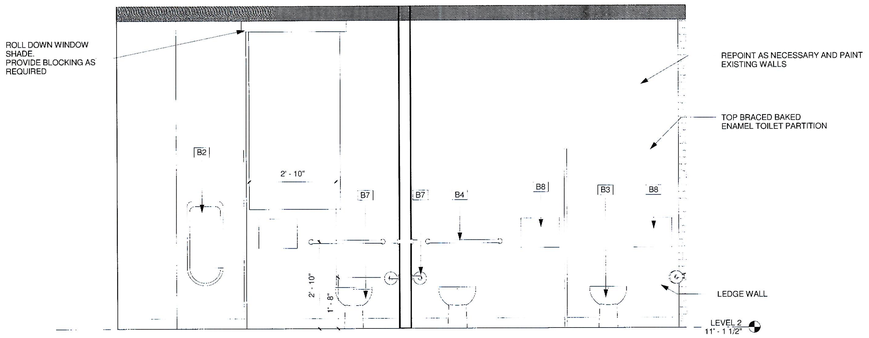

1 / 36.03 Elevation 1 - d
1/2" = 1'-0"



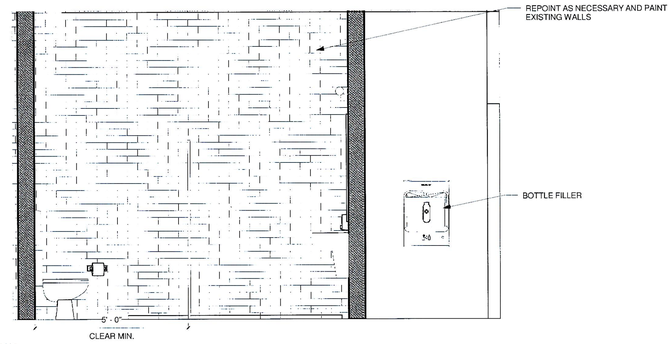

2 / 36.03 WATER FOUNTAIN ELEVATION
1/2" = 1'-0"

**GENERAL ENLARGED PLAN NOTES**

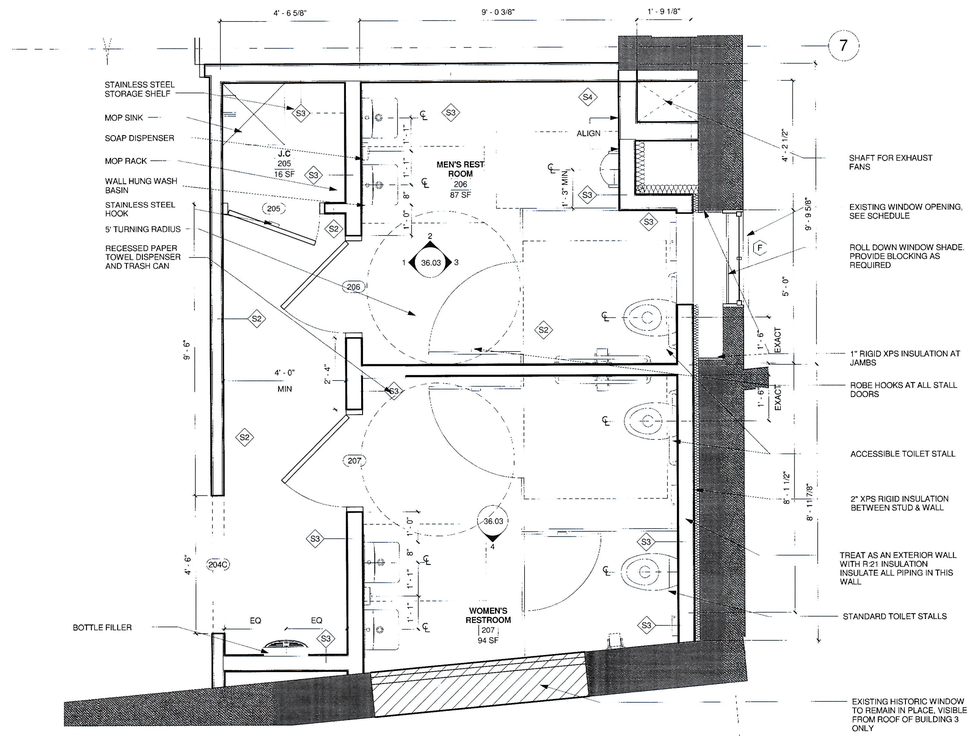
1. DO NOT SCALE DRAWINGS
2. CLEAN, REPAIR, AND REPOINT BRICK AS REQUIRED.
3. NEW STAIRS ARE TO BE INDEPENDENTLY SUPPORTED AND NOT ATTACHED TO EXITING WALLS. PROVIDE BLOCKING FOR ALL BATHROOM ACCESORIES AND COUNTERS.
4. INSTALL ALL BATHROOM ACCESORIES AT ADA COMPLAINT HEIGHTS.



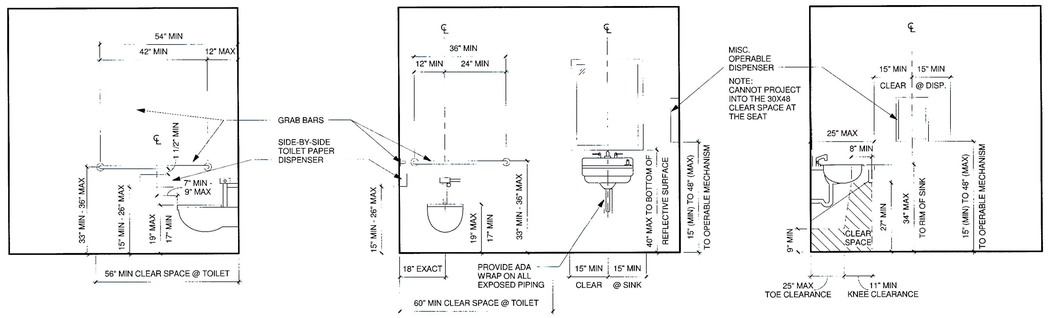

3 / 36.03 Elevation 1 - b
1/2" = 1'-0"




4 / 36.03 MEN'S RESTROOM ELEV.
1/2" = 1'-0"




5 / 36.03 COMMON RESTROOM PLAN - SECOND & THIRD LEVEL
1/2" = 1'-0"




6 / 36.03 STANDARD ADA CLEARNACES
1/2" = 1'-0"

THIS DIAGRAM IS FOR INDICATING CLEARANCES ONLY

**LEGEND**

NEW WALL

EXISTING WALL

BATHROOM ACCESORIES LEGEND

| Key Value | Keynote Text |
|---|---|
| B1 | WALL HUNG SINK |
| B2 | WALL MOUNTED URINAL |
| B3 | TOILET |
| B4 | GRAB BAR, LENGTH AS NOTED - SECURE TO STUDS OR WALL BLOCKING |
| B5 | FRAMELESS PLATE MIRROR |
| B6 | WALL-MOUNTED VANITY LIGHT - SEE ELECTRICAL PLANS |
| B7 | WALL-MOUNTED TOILET PAPER HOLDER |
| B8 | RECESSED SEAT COVER DISPENSER |
| B9 | SURFACE-MOUNTED SOAP DISPENSER |
| B10 | RECESSED PAPER TOWEL DISPENSER & WASTE RECEPTACLE |

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BALTIMORE, MD 21230

SHEET TITLE

**ENLARGED RESTROOMS**

| Project Number: 16225 | Date: 10/05/17 |
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| Drawn by: GH | Checked by: NL |
| NPS/MHT SUBMISSION | 06/30/16 |

| Num. | Description | Date |
|---|---|---|

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**36.03**

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STRUCTURAL GENERAL NOTES:

MAJOR CODES AND STANDARDS

1. INTERNATIONAL BUILDING CODE (IBC 2015).
2. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE 7-10).
3. AMERICAN CONCRETE INSTITUTE (ACI 318-11).
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC STEEL CONSTRUCTION MANUAL. 13TH EDITION).

GENERAL

1. THESE NOTES ARE FOR INFORMATION ONLY, AND HIGHLIGHT RATHER THAN REPLACE THE SPECIFICATIONS CONTAINED IN THE PROJECT MANUAL. CONSULT THE SPECIFICATIONS AND NOTIFY THE ENGINEER OF ANY CONFLICTS.
2. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DRAWING FILES.
3. FIELD DIMENSIONS. IF STRUCTURAL DRAWINGS ARE USED FOR LAYING OUT COLUMN CENTERS AND WALL LINES, ALL DIMENSIONS SHALL FIRST BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS. LAYOUT SHALL BE CLOSED AND CHECKED BEFORE WORK IS BEGUN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ACCURATELY LOCATE ALL EXISTING COLUMNS. BEARING WALLS AND OTHER STRUCTURAL MEMBERS BEFORE BEGINNING WORK OR PREPARING SHOP DRAWINGS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIALS. SCHEDULE AND DIMENSIONS BETWEEN TRADES AND SUB-CONTRACTORS.
5. CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ARCHITECT AND ENGINEER ANY DIMENSIONAL DISCREPANCIES IN THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH THE WORK.
6. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING, BULKHEADS AND PROTECTION AS NECESSARY TO SUPPORT AND PROTECT THE EXISTING STRUCTURES AND ASSEMBLIES AS REQUIRED DURING THE COURSE OF THE WORK AND PROTECT AND OCCUPY USE OF SPACES.
7. IF CONDITIONS DISCLOSED DURING DEMOLITION DO NOT AGREE WITH INFORMATION SHOWN ON CONTRACT DRAWINGS, CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER OF THESE DISCREPANCIES.
8. CONTRACTOR SHALL SUBMIT SCHEDULE AND PLAN OF OPERATION TO THE OWNER, ARCHITECT, AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. FOR LOCATION AND SIZE OF SLEEVES, CONDUITS, AND OTHER MINOR OPENINGS, SEE OTHER DRAWINGS IN THIS PROJECT.
10. SECTIONS AND DETAILS SHOWN. WHILE DRAWN FOR SPECIFIC LOCATIONS, ARE INTENDED TO ESTABLISH THE GENERAL TYPES OF DETAILS TO BE USED THROUGHOUT.
11. THE ENGINEER'S REVIEW OF A SHOP DRAWING SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO FOLLOW THE INTENT OF THE CONTRACT DRAWINGS.
12. CONTRACTOR SHALL USE ARCHITECTURAL AND OTHER PROJECT DRAWINGS IN CONJUNCTION WITH THE STRUCTURAL SET TO PROPERLY PERFORM THE WORK.
13. UTMOST CARE SHALL BE EXERCISED AT ALL TIMES WHEN WORKING ON AND AROUND EXISTING STRUCTURAL MEMBERS TO AVOID IMPAIRING THE CARRYING CAPACITY OF THE EXISTING STRUCTURAL SYSTEM. ENGINEER SHALL BE NOTIFIED BEFORE CUTTING OR REMOVAL OF ANY PART OF THE EXISTING STRUCTURE (INCLUDING ALL MASONRY WALLS) NOT INDICATED TO BE DEMOLISHED.
14. STRUCTURAL STABILITY IS ACHIEVED IN THE FINISHED CONSTRUCTION INSTALLED IN ENTIRETY. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINISHED STATE.
15. LOADINGS OF EQUIPMENT ARE BASED ON WEIGHTS OF ASSUMED EQUIPMENT, IN ADDITION TO WEIGHTS OF CONCRETE PADS WHERE INDICATED ON STRUCTURAL DRAWINGS, BUT NOT LESS THAN THE LOADS LISTED IN LIVE LOADS. CONTRACTOR SHALL REPORT ANY CHANGES IN TYPE, SIZE, LOCATION OR NUMBER OF PIECES OF EQUIPMENT TO ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO ANY ACTION.
16. STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATORY EQUIPMENT. UNLESS NOTED OTHERWISE. PLACE VIBRATORY EQUIPMENT ON VIBRATION ISOLATORS.
17. TYPICAL DETAILS INDICATE GENERAL CRITERIA FOR DESIGN AND DETAILING OF CONNECTIONS. TYPICAL DETAILS ARE NOT INTENDED TO CONVEY COMPLETE CONNECTOR SIZES, PLATE SIZES, WELD SIZES, NUMBER OF BOLTS OR ANY OTHER SPECIFIC INFORMATION THAT IS OBTAINED THROUGH DESIGNING OF AN INDIVIDUAL CONNECTION FOR A GIVEN SET OF LOADS. DETAILS THAT CONVEY SPECIFIC COMPONENT INFORMATION ESTABLISH MINIMUM REQUIREMENTS AND ARE NOT INTENDED TO CONVEY COMPLETED DESIGN.

CONTRACTOR RESPONSIBILITIES AND COORDINATION:

1. THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS FOR SUCCESSFUL COMPLETION OF THIS PROJECT.
2. THE DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION, UNLESS NOTED OTHERWISE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATION OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE STRUCTURAL WORK, DURING CONSTRUCTION, WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DOCUMENTS, AS WELL AS ANY OTHER DISCIPLINES AND APPLICABLE TRADES. IN CASE OF CONFLICT BETWEEN THE STRUCTURAL WORK AND WORK RELATED TO OTHER TRADES, THE CONTRACTOR SHALL MAKE ALLOWANCES IN HIS BID FOR THE MORE SEVERE REQUIREMENTS, AND/OR SHALL NOTIFY RELEVANT PARTIES OF THE CONFLICT.
4. ALL WORK NECESSARY TO SUPPORT ELEMENTS OF THE PERMANENT CONSTRUCTION THAT ARE NOT SELF-SUPPORTING AND ARE NOT PART OF THE BASE BUILDING STRUCTURE SHALL BE PROVIDED BY THE CONTRACTOR. THESE ELEMENTS INCLUDE BUT ARE NOT LIMITED TO: ALL FINISHES, GLAZING, CEILINGS, PARTITIONS, EQUIPMENT, PIPING, DUCTWORK, CONDUITS, ETC. SUPPORT WILL INCLUDE, BUT NOT LIMITED TO: MISCELLANEOUS FRAMING, HANGERS, BRACES, ANCHORS, CONNECTIONS, AND THE SUPPORT THEREOF ATTACHED TO STRUCTURAL ELEMENTS. UNLESS SPECIFICALLY INDICATED OTHERWISE DESIGN OF SUPPORTING MEMBERS, INCLUDING ALL ANCHORS, SHALL BE PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT JURISDICTION, AND SHALL BE SUBMITTED FOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER ALONG WITH THE ELEMENTS BEING SUPPORTED.

MODIFICATIONS TO THE EXISTING STRUCTURE:

1. ALL EXISTING FRAMING IS INDICATED FOR REFERENCE ONLY AND IS TO BE FIELD VERIFIED BY THE CONTRACTOR. THE EXACT EXTENT OF DEMOLITION SHALL BE VERIFIED AT THE SITE. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE DRAWINGS WITH THE EXISTING CONSTRUCTION.
2. EXISTING STRUCTURAL ELEMENTS SHALL NOT BE OVERSTRESSED BY TEMPORARY CONSTRUCTION LOADS AND STAGING AND BY ALTERATIONS OR THE ADDITIONAL PERMANENT LOADS IMPOSED BY SUPPORTING ELEMENTS (SUPPLEMENTAL FRAMING, HANGERS, ETC.).
3. ALL EXISTING BEAMS, COLUMNS, LINTELS, ANGLES, JOISTS AND OTHER STRUCTURAL ELEMENTS TO REMAIN INTACT AND BRACED UNLESS SPECIFICALLY NOTED TO BE REMOVED OR MODIFIED BY MOST RECENT DEMOLITION DOCUMENTS OR OTHERWISE NOTED ON THESE DRAWINGS. EXISTING STRUCTURAL ELEMENTS TO BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. ANY CORRECTIVE WORK TO REPAIR DAMAGED ELEMENTS IS TO BE DONE BY CONTRACTOR AND SUBMITTED FOR REVIEW AND APPROVAL BY ENGINEER.
4. INFORMATION PROVIDED ON THESE DRAWINGS RELATED TO EXISTING CONDITIONS IS BASED ON AVAILABLE DOCUMENTS AND SELECT FIELD OBSERVATIONS. ACTUAL DIMENSIONS MAY VARY: VERIFY IN FIELD (VIF).
5. FIELD VERIFY ALL NEW PENETRATIONS THROUGH EXISTING STRUCTURE. PENETRATIONS SHALL NOT BE LOCATED THROUGH BEAMS OR WALL OPENING FRAMING. CORES THROUGH CONCRETE SLABS SHALL BE INVESTIGATED WITH NON-DESTRUCTIVE TESTING TO AVOID EMBEDDED SLAB REINFORCEMENT.
6. THE PORTIONS OF THE BUILDING THAT ARE SHOWN TO BE STRUCTURALLY MODIFIED HAVE BEEN DESIGNED IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRACTICE. WE CANNOT ASSUME RESPONSIBILITY FOR ANY DAMAGE THAT MAY ARISE OR EXISTING CONDITIONS FOR ANY PORTION OF THE BUILDING NOT REDESIGNED, ALTERED OR CONSTRUCTED UNDER THIS SET OF DESIGN DRAWINGS OR FOR DEFICIENCIES IN THE CONDITION OF THE BUILDING PRIOR TO RENOVATION AND NOT AFFECTED BY THE NEW WORK.

PERFORMANCE ITEMS:

1. EMPLOY OR RETAIN A LICENSED PROFESSIONAL ENGINEER IN THE PROJECT JURISDICTION TO DESIGN AND DETAIL THE FOLLOWING PERFORMANCE SPECIFIED STRUCTURAL COMPONENTS.

   CONCRETE MIX DESIGN
   STRUCTURAL STEEL CONNECTIONS
   SHORING / SCAFFOLDING
   COLD FORMED STEEL FRAMING

SUBMITTALS

1. PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR ARCHITECT AND STRUCTURAL ENGINEER REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR PRIOR TO FINALIZING SCHEDULE. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE. THE STRUCTURAL ENGINEER WILL HAVE TEN WORK DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING AND WILL INTEND ON RETURNING THE SHOP DRAWINGS WITHIN TEN DAYS.
2. THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER.
3. FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE SUPPLIER, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER'S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE SUPPLIER'S ENGINEER. SUBMITTAL TO BE SIGNED AND SEALED BY SUPPLIER'S ENGINEER. CALCULATIONS SHALL BE PROVIDED AS REQUESTED BY ENGINEER OF RECORD.
4. FOR ALL PRODUCTS SUBMITTED AS "EQUIVALENT" TO SPECIFIED PRODUCT, CONTRACTOR SHALL PROVIDE ALL NECESSARY DOCUMENTATION INDICATING SUPPLIED PRODUCT IS EQUIVALENT OR BETTER AND MEETS THE DESIGN INTENT.

REINFORCED CONCRETE

1. CONCRETE CONSTRUCTION SHALL FOLLOW REQUIREMENTS OF ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE."
2. REINFORCING FOR CONCRETE SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE PROVISIONS SET FORTH BY THE AMERICAN CONCRETE INSTITUTE AND THE CRSI "MANUAL OF STANDARD PRACTICE."
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. ALL REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
   - CONCRETE REINFORCING SHALL CONFORM TO THE FOLLOWING DESIGNATIONS:

     | | |
     |---|---|
     | DEFORMED BARS | ASTM A615, GRADE 60 |
     | DEFORMED BARS (WELDABLE) | ASTM A706 |
     | DEFORMED BARS (EPOXY-COATED) | ASTM A775 & A615, GRADE 60 |
     | WELDED WIRE MESH | ASTM A185 |

   - FABRICATE AND PROVIDE STANDARD SUPPORTING ACCESSORIES IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. ACI 315.
   - UNLESS NOTED OTHERWISE, REINFORCING SHALL BE CONTINUOUS WITH CLASS B LAP SPLICES. HOOKS SHALL BE STANDARD HOOKS, AND WALL INTERSECTIONS SHALL HAVE CORNER/L-BARS. LAP WELD WIRE MESH SUCH THAT THE OVERLAP OF THE OUTERMOST CROSS-WIRES OF EACH ADJOINING SHEET IS NOT LESS THAN THE SPACING OF THE CROSS-WIRES PLUS 2 IN., UNO. REFER TO TYPICAL DETAILS FOR ADDITIONAL DETAILING REQUIREMENTS.
   - ALL TOP REINFORCING STEEL AND STIRRUPS IN WEATHER-EXPOSED LOCATIONS SHALL BE EPOXY COATED. ALL REINFORCEMENT IN BELOW GRADE STRUCTURES SHALL BE EPOXY COATED.
4. ALL CONCRETE SHALL BE CONTROLLED CONCRETE, NORMAL WEIGHT (UNLESS OTHERWISE NOTED) WITH COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

   | | |
   |---|---|
   | ALL CONCRETE COMPONENTS U.O.N. | F'C = 4,000 PSI |
   | GROUT FOR CMU WALLS | F'C = 3,000 PSI |

5. SEE OTHER DRAWINGS IN THIS PROJECT FOR SIZE AND LOCATION OF EQUIPMENT PADS. CURBS. INSERTS, EMBEDDED ITEMS.
6. CONTRACTOR SHALL NOTIFY OWNER'S INSPECTION AGENCY BEFORE PLACEMENT OF CONCRETE TO ALLOW INSPECTION OF REINFORCEMENT PRIOR TO CONCRETE PLACEMENT.
7. REFER TO SPECIAL INSPECTIONS TABLE AND PROJECT SPECIFICATIONS AND ACI 301 FOR TESTING REQUIREMENTS.
8. OWNER SHALL RETAIN THE SERVICES OF A QUALIFIED TESTING AGENCY TO PROVIDE TESTING OF CONCRETE TO INCLUDE COMPRESSIVE STRENGTH, TEMPERATURE, SLUMP AND AIR ENTRAINMENT. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQ. FT OF SURFACE AREA OF SLABS OR WALLS. EACH SAMPLE SHALL INCLUDE THE FOLLOWING:
   - (2) 7 DAY LAB CURED 6"X12" CYLINDER BREAKS
   - (2) 28 DAY LAB CURED 6"X12" CYLINDER BREAKS
   - (2) 28 DAY FIELD CURED 6"X12" CYLINDER BREAKS
   - CONTRACTOR SHALL OBTAIN ADDITIONAL FIELD CURED CYLINDERS AS NECESSARY TO MEET FORMWORK AND SHORING REMOVAL REQUIREMENTS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). MATERIALS, ERECTION, CONNECTIONS, ETC. SHALL BE INSPECTED IN ACCORDANCE WITH IBC.
2. THE STRUCTURAL STEEL DETAILER SHALL DEVELOP ALL ELEVATIONS, PLANS, AND SECTIONS WITHOUT REPRODUCING SAME FROM THE DESIGN DRAWINGS. DETAILER SHALL USE THE SAME SECTIONS AND MARKS AS SHOWN ON THE DESIGN DRAWINGS OR ADEQUATELY CROSS REFERENCE TO THE SATISFACTION OF THE ENGINEER.
3. MATERIALS SHALL CONFORM TO THE FOLLOWING:

   | | |
   |---|---|
   | BARS, RODS AND PLATES | ASTM A36 |
   | W-SHAPES | ASTM A992 |
   | ALL OTHER STRUCTURAL SHAPES | ASTM A36 |
   | PIPES | ASTM A53, GRADE B |
   | HOLLOW STRUCTURAL SECTIONS | ASTM A500, GRADE B |
   | HIGH STRENGTH BOLTS | ASTM A325 |
   | ANCHOR RODS | ASTM A1554 |
   | WELDING ELECTRODES | AWS: A5.1 E70XX |
   | ALL OTHER STRUCTURAL SHAPES | ASTM A36 |

4. CONNECTIONS:
   A. CONNECTIONS FOR NEW STEEL WORK SHALL BE STANDARD AISC CONNECTIONS USING 3/4" DIA. HIGH-STRENGTH BEARING, TYPE N BOLTS, U.O.N. PROVIDE SLIP CRITICAL CONNECTIONS WHERE INDICATED ON DRAWINGS.
   B. ELECTRODES SHALL BE SUITED TO GRADE AND METALLURGICAL COMPOSITION OF BASE METAL.
   C. STRUCTURAL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.
   D. ALL CONNECTIONS. UNLESS INDICATED AS BEING FULLY DESIGNED ON THE STRUCTURAL DRAWINGS, SHALL BE DESIGNED AND DETAILED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT JURISDICTION. THE DESIGN AND DETAILING SHALL COMPLY WITH ALL APPLICABLE CODES AND SPECIFICATIONSECTIONS.
   E. SEE PLANS AND DETAILS FOR CONNECTION DESIGN FORCES. UNLESS NOTED OR DETAILED ALL BEAM CONNECTIONS SHALL BE SIMPLE SHEAR CONNECTIONS. WHERE NO REACTION IS PROVIDED THE BEAM SHALL BE ASSUMED TO CARRY A MINIMUM OF 120% OF ALLOWABLE UNIFORM LOAD IN KIPS FOR BEAMS LATERALLY SUPPORTED AS GIVEN IN THE AISC STEEL CONSTRUCTION MANUAL.
5. STEEL FRAMING SHALL BE PROPERLY GUYED UNTIL AFTER FINAL CONNECTIONS ARE MADE.
6. STEEL FRAME SHALL BE ALIGNED AND PLUMBED WITHIN AISC TOLERANCES BEFORE PROCEEDING WITH FINAL CONNECTIONS.
7. PROVIDE 1/4" SETTING PLATES UNDER ALL STEEL COLUMNS, UNLESS OTHERWISE NOTED.
8. BASE PLATES SHALL BE SHOP WELDED TO COLUMNS AND POSTS.
9. ALL CAP PLATES SHALL MATCH THICKNESS OF BEAM FLANGE ABOVE (1/2" MINIMUM) FOR BEAMS BEARING ON COLUMNS.
10. UNLESS OTHERWISE NOTED. ALL TUBULAR (PIPE) COLUMNS SHALL BE CAPPED WITH 1/4" PLATE.
11. PROVIDE MASONRY ANCHORS AT 16" O.C. ON BEAMS AND COLUMNS WITHIN, OR ADJACENT TO, MASONRY WALLS.
12. HOLES FOR ARCHITECTURAL (MECHANICAL) DETAILS SHALL BE PUNCHED OR DRILLED IN SHOP. SEE OTHER DRAWINGS FOR LOCATION.
13. FIELD CUTTING OR BURNING OF STRUCTURAL STEEL IS PROHIBITED EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.
14. STEEL DECK SHALL BE MANUFACTURED BY A MEMBER FIRM OF THE STEEL DECK INSTITUTE (SDI) AND SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH SDI SPECIFICATIONS.
15. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISCELLANEOUS STEEL NOT SHOWN ON STRUCTURAL DRAWINGS. ALL MISCELLANEOUS METAL NOT SPECIFICALLY DESIGNED IN STRUCTURAL DRAWINGS SHALL BE PERFORMANCE SPECIFICED AND DESIGNED BY THE CONTRACTOR TO MEET REQUIRED LOADS APPLIED TO ASSEMBLY
16. HOT-DIP GALVANIZING FOR ALL EXTERIOR EXPOSED STEELS SHALL CONFORM TO ASTM A_123. REPAIR SCRATCHED OR ABRADED GALVANIZED SURFACES WITH ZINC-RICH PAINT. AFTER GALVANIZING, STRAIGHTEN MEMBERS TO MEET AISC STANDARD MILL TOLERANCES.
17. GALVANIZING FOR EXTERIOR EXPOSED STEEL SHALL CONFORM TO ASTM A-123. REPAIR SCRATCHED OR ABRADED GALVANIZED METAL SURFACES WITH ZINC-RICH COATING. AFTER GALVANIZING, STRAIGHTEN MEMBERS TO MEET AISC STANDARD MILL TOLERANCES.
18. ALL LINTELS, SHELF ANGLES, BEAMS AND PLATES INCLUDING THEIR ASSOCIATED SHIMS AND ACCESSORIES IN DIRECT CONTACT WITH THE EXTERIOR WYTHE OF MASONRY SHALL BE HOT-DIP GALVANIZED. BOLTS FOR THESE MEMBERS SHALL BE MECHANICALLY GALVANIZED. ADDITIONAL MEMBERS/ASSEMBLIES TO BE HOT-DIP GALVANIZED WHERE NOTED ON THE DRAWINGS. WHERE GALVANIZED PLATES, ANGLES OR OTHER MISCELLANEOUS MEMBERS REQUIRE WELDING (EITHER FIELD OR SHOP) TO NON-GALVANIZED BEAMS OR COLUMNS, MASK POINTS TO BE WELDED AND TOUCH-UP WITH ZINC-RICH PAINT AFTER WELDING.
19. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
20. PROVIDE ADJUSTABLE CONNECTIONS FOR ALL MEMBERS DESIGNATED AS AESS TO FACILITATE ADJUSTMENT TO ACHIEVE THE SPECIFIED TOLERANCE.
21. ALL MOMENT CONNECTIONS AND FULL PENETRATION WELDS ARE TO BE INSPECTED AND TESTED.
22. PRIOR TO DETAILING CONNECTIONS FOR THE STRUCTURAL STEEL, THE STEEL FABRICATOR SHALL SUBMIT FOR APPROVAL REPRESENTATIVE DETAILS AND CALCULATIONS FOR EACH TYPE OF STRUCTURAL STEEL CONNECTION TO BE UTILIZED. DETAILS SHALL INCLUDE DESIGN CAPACITIES. CONNECTION CALCULATIONS SHALL BE PROVIDED NO LATER THAN SUBMITTAL OF SHOP DRAWINGS. STEEL SHOP DRAWING REVIEW IS CONTINGENT UPON RECEIPT OF CALCULATIONS.
23. GROUT UNDER STEEL PLATES SHALL BE NONMETALLIC, SHRINKAGE RESISTANT GROUT CONFORMING TO ASTM C1107 HAVING A MINIMUM DESIGN COMPRESSIVE STRENGTH OF 5,000 PSI.
24. SPLICING AND PENETRATIONS OF STRUCTURAL STEEL MEMBERS IS NOT PERMITTED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER. PROPOSED SPLICING OF MEMBERS SHALL BE COORDINATED AND DESIGNED BY CONTRACTOR WITH SUPPORTING DESIGN CALCULATIONS AS PART OF THE SHOP DRAWING SUBMITTAL.
25. STEEL SHALL BE FINISHED/PROTECTED AS FOLLOWS, UNO:
   A. HOT DIPPED GALVANIZED IN ACCORDANCE TO ASTM A123
      EXTERIOR STEEL EXPOSED TO WEATHER
      LINTELS IN EXTERIOR WALL CAVITIES
      BRICK RELIEF/SHELF ANGLES
   B. PAINT WITH ONE COAT OF STANDARD PRIMER PAINT
      ALL STRUCTURAL STEEL EXCEPT THOSE TO BE GALVANIZED, AREAS TO BE FIELD WELDED, AREAS TO RECEIVE FIRE-PROOFING AND AREAS TO BE EMBEDDED IN CONCRETE

CONTRACTOR OPTION TO SUBSTITUTE MAB PLYMASTIC EPOXY PAINT AS AN ALTERNATIVE TO GALVANIZED STEEL WHERE SIGNIFICANT FIELD WELDING IS REQUIRED AND/OR HUNG STEEL PLATES SUBJECT TO WARPING EXIST.

MISCELLANEOUS METALS

1. METAL STAIRS. LADDERS, HANDRAILS, GUARDRAILS AND OTHER MISCELLANEOUS METALS SHALL BE DESIGNED AND DETAILED BY FABRICATOR AND CAPABLE OF WITHSTANDING THE LISTED DESIGN CRITERIA LOADS INCLUDING COMBINED LOAD EFFECTS OF DEAD, LIVE AND SEISMIC LOADS. DESIGNER SHALL USE THE APPLICABLE LOAD COMBINATIONS OF ASCE 7 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES".
2. ENGAGE A QUALIFIED PROFESSIONAL ENGINEERG TO DESIGN ALL MISCELLANOUS METAL COMPONENTS NOT SPECIFICALLY DESIGNED AND DETAILED ON THE STRUCTURAL DOCUMENTS.
3. SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR ENGINEER REVIEW SHOWING FABRICATION AND INSTALLATION DETAILS, INCLUDING PLANS, ELEVATIONS, AND SECTIONS OF METAL FABRICATIONS AND THEIR CONNECTIONS.
4. MINIMUM DESIGN CAPACITY TO BE EQUIVALENT TO REQUIRED FLOOR LIVE LOAD CAPACITY. DESIGNS TO MEET MINIMUM REQUIRED LOADS FOR SIMILAR CONSTRUCTED ASSEMBLIES.
5. PRIOR TO FABRICATION, MISC. METALS FABRICATOR SHALL SUBMIT SHOP DRAWINGS INCLUDING ATTACHMENTS TO BASE STRUCTURE WITH SIGNED AND SEALED CALCULATIONS FOR APPROVAL.
6. REFER TO ARCHITECTURAL DRAWINGS. TYPICAL DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. MISCELLANEOUS METAL FABRICATIONS ARE NOT TYPICALLY INCLUDED ON STRUCTURAL DRAWINGS.
7. ALL LOCATIONS WHERE MISCELLANEOUS METALS ARE REQUIRED ARE NOT SHOWN ON STRUCTURAL DRAWINGS. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

MASONRY

1. MASONRY SHALL BE CONSTRUCTED IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530 AND "SPECIFICATIONS FOR MASONRY STRUCTURES" ACI 530.1.
2. ALL CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90.
3. COMPRESSIVE STRENGTH (F'M) OF ALL CONCRETE UNIT MASONRY ASSEMBLIES SHALL BE 2,000 PSI AT 28 DAYS. GROUT SHALL ACHIEVE A MIN COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
4. CONCRETE UNIT MASONRY STRENGTH: COMPRESSIVE STRENGTH OF CONCRETE UNIT MASONRY (F'M) MAY BE DETERMINED EITHER BY STRENGTH OR INDIVIDUAL UNITS. GROUT STRENGTH, AND MORTAR TYPE IN ACCORDANCE WITH ACI 530.1 ARTICLE 1.4.B.2.B OR BY PRISM TEST METHOD IN ACCORDANCE WITH ACI 530.1 ARTICLE 1.4.B.3. SUBMIT DATA AND TEST RESULTS TO VALIDATE MASONRY SYSTEM STRENGTH VIA ONE OF THE TWO REFERENCED METHODS.
5. MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY UNIT SHALL BE:
   A. TYPICAL: 1900 PSI (MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY, F'M SHALL BE 1500 PSI)
   B. AS NOTED: 2800 PSI (MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY, F'M SHALL BE 2000 PSI)
   C. AS NOTED: 3750 PSI (MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY, F'M SHALL BE 2500 PSI)
6. METAL REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO THE FOLLOWING STANDARDS:

   | | | |
   |---|---|---|
   | A. | DEFORMED BARS | ASTM A615, GRADE 60 |
   | B. | DEFORMED BARS (WELDABLE) | ASTM A706 |
   | C. | JOINT REINFORCEMENT | ASTM A951 |
   | D. | DEFORMED WIRE | ASTM A496 |
   | E. | WIRE FABRIC | ASTM A185 |
   | F. | ANCHORS, TIES AND ACCESSORIES | |
   | | STRUCTURAL STEEL | ASTM A36 |
   | | PLAIN STEEL WIRE | ASTM A82 |
   | | COLD-ROLLED CARBON STL SHEET | ASTM A366 |
   | G. | STAINLESS STEEL | ASTM A167, TYPE 304 |

7. MORTAR FOR USE BELOW GRADE SHALL CONFORM TO ASTM C270, TYPE S.
8. MORTAR FOR USE ABOVE GRADE SHALL CONFORM TO ASTM C270, TYPE N.
9. MORTAR FOR USE IN SPECIAL REINF MASONRY WALLS SHALL CONFORM TO ASTM C270. TYPE M.
10. LAY CMU IN PIERS, COLUMNS, PEDESTALS AND PARTIALLY-GROUTED WALLS WITH FACE SHELLS AND WEBS FULLY BEDDED IN MORTAR. ALIGN VERTICAL CELLS TO BE GROUTED. FULLY-GROUTED WALLS MAY BE BEDDED WITH FACE SHELLS ONLY.
11. ALL CMU BEARING MASONRY WALL AND SHEAR WALL CONSTRUCTION SHALL HAVE FULLY BEDED MORTAR JOINTS, INCLUDING FACE SHELLS, HEADS, AND WEBS.
12. SEE SPECIFICATIONS FOR POINTING MORTAR.
13. GROUT FOR MASONRY SHALL CONFORM TO ASTM C476.
14. SEE ARCHITECTURAL DRAWINGS FOR OTHER MASONRY REQUIREMENTS.
15. LINTELS FOR NON-BEARING WALLS ARE SHOWN IN LOOSE LINTEL SCHEDULE.
16. LINTELS FOR LOAD BEARING WALLS ARE SHOWN ON PLAN.
17. GROUT CELLS SOLID UNDER BEARING FOR BEAM AND COLUMN. BOND BEAMS, AT BOLTS FOR WALL ANCHORAGE.
18. PROVIDE CONTINUOUS BOND BEAM AT TOP OF CMU WALLS, AT FLOOR AND BELOW BEARING FOR JOISTS. REINFORCED WITH 2-#5 CONTINUOUS.
19. INSTALL LADDER-TYPE JOINT REINFORCEMENT AT 16" O.C. DISCONTINUE JOINT REINFORCING AT CONTROL OINTS. USE TRUSS-TYPE REINFORCING FOR UNREINFORCED MASONRY; SPACE REINFORCING AT 8" O.C. FOR PARAPETS.
20. PROVIDE ADJUSTABLE WALL TIES TO TIE FACE WYTHE TO MASONRY.
21. PROVIDE 2-#6 VERTICAL REINFORCEMENT FULL HEIGHT OF WALL AT ALL JAMB LOCATIONS.
22. ALL CMU BEARING WALLS AND EXTERIOR CMU WALLS SHALL BE REINFORCED WITH #5@24" O.C. LOCATED IN THE CENTER OF THE CMU BACK-UP UNLESS NOTED OTHERWISE.
23. ALL CMU REINFORCING SPLICE MUST BE 48 DIAMETERS LONG.
24. CONTROL AND EXPANSION JOINTS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS. AND SHALL BE IN ACCORDANCE WITH THE BRICK INDUSTRY ASSOCIATION AND THE NATIONAL CONCRETE MASONRY ASSOCIATION GUIDELINES.
25. PROVIDE SHOP DRAWINGS SHOWING FULL INFORMATION FOR STEEL PLACEMENT.
   A. REINFORCING STEEL DETAILER SHALL USE THE SAME SECTIONS AND MARKS AS SHOWN ON THE DESIGN DRAWINGS OR SHALL ADEQUATELY CROSS REFERENCE TO THE SATISFACTION OF THE ENGINEER.
   B. REINFORCING STEEL DETAILER SHALL DEVELOP ALL WALL ELEVATIONS AND SECTIONS WITH PERTINENT ELEVATIONS GIVEN, TO CLEARLY INDICATE THE POSITION OF THE REINFORCEMENT AND CONSTRUCTION JOINTS, WITHOUT REPRODUCING SECTIONS, PLANS, OR ELEVATIONS FROM THE DESIGN DRAWINGS.
26. TIES, ANCHORS, METAL ACCESSORIES AND JOINT REINFORCEMENT SHALL BE PROTECTED FROM CORROSION AS FOLLOWS:
   A. JOINT REINF GALVANIZED IN ACCORDANCE WITH ASTM A951
   B. METAL ACCESSORIES IN EXTERIOR WALLS HOT DIPPED GALVANIZED WITH 1.5 OUNCES PER SQ. FOOT MINIMUM COATING IN ACCORDANCE WITH ASTM A153
   C. METAL ACCESSORIES IN

COLD-FORMED METAL FRAMING

1. STRUCTURAL MEMBERS USED IN THESE DRAWINGS ARE THOSE PUBLISHED BY THE STEEL STUD MANUFACTURERS ASSOCIATION.
2. ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A ZINC COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM A525.
3. PROVIDE COLD-FORMED FRAMING MEMBERS, TRACK, BRIDGING, CLIPS, AND ACCESSORIES FORMED FROM STEEL CORRESPONDING TO A TYPE LISTED IN THE A.I.S.I. SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
4. ALL MEMBERS 16 GAGE (54-MIL.) AND HEAVIER, CLIPS AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL HAVING A MINIMUM YIELD STRENGTH OF 50KSI. ALL MEMBERS 18 GAGE (43-MIL) AND LIGHTER, AND BRIDGING , SHALL BE FORMED FROM STEEL HAVING A MINIMUM YIELD STRENGTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.
5. ALL FRAMING MEMBERS, TRACK BRIDGING, AND MISCELLANEOUS ACCESSORIES SHALL HAVE A MINIMUM G60 ZINC COATING UNLESS NOTED OTHERWISE. ALL DRIFT AND DEFLECTION CLIPS SHALL HAVE A MINIMUM G90 ZINC COATING, UNLESS NOTED OTHERWISE.
6. ADHESIVE ANCHORS SHALL BE 5/16" HY-70 AS MANUFACTURED BY HILTI INC. POWDER ACTUATED FASTENERS (PAFS) SHALL BE 0.157 X-U AS MANUFACTURED BY HILTI. USE 1-INCH MINIMUM EMBEDMENT FOR EACH POWDER DRIVEN FASTENER UNLESS NOTED OTHERWISE. TEK SCREWS SHALL BE AS MANUFACTURED BY ITW BUILDEX, INC.
7. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
8. PROVIDE TEMPORARY ERECTION BRACING AS REQUIRED TO HOLD COLD-FORMED FRAMING SECURELY IN POSITION. IT SHALL NOT BE REMOVED UNTIL PERMANENT BRACING IS INSTALLED AND/OR FINAL CONNECTIONS ARE MADE.
9. ALL FIELD CUTTING OF STUDS MUST BE PERFORMED BY SAWING OR SHEARING. TORCH CUTTING OF COLD-FORMED FRAMING IS NOT PERMITTED
10. ENSURE ALIGNMENT OF STUD 'PUNCHOUTS' FOR PROPER BRIDGING INSTALLATION WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH.
11. THERE SHALL BE NO SPLICING OF STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS WITHOUT PRIOR REVIEW AND ACCEPTANCE BY THE ENGINEER.

POST-INSTALLED ANCHORS:

1. DRILL AND INSTALL POST-INSTALLED ANCHORS ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CURRENT ICBO AND ICC-ES REPORTS.
2. NON-DESTRUCTIVE TESTING SHALL BE PERFORMED PRIOR TO INSTALLATION OF POST INSTALLED ANCHORS INTO EXISTING REINFORCED CONCRETE BEAMS OR COLUMNS TO DETERMINE REINFORCEMENT BAR LOCATIONS. ADJUST ANCHOR PLATE BOLT SPACING AS REQUIRED TO ACCOUNT FOR REBAR LOCATIONS.
3. EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT 3 TZ OR APPROVED EQUIAL.
4. ADHESIVE ANCHORS IN CONCRETE SHALL BE: HILTI HIT HY200 OR APPROVED EQUAL OR APPROVED EQUAL AND SHALL HAVE FOLLOWING MINIMUM CAPACITIES.
   V = 2500 LBS.
   T = 2500 LBS.
5. ADHESIVE ANCHORS IN MASONRY SHALL HAVE THE FOLLOWING CAPACITIES: HILTI HIT HY70 OR APPROVED EQUAL AND SHALL HAVE THE FOLLOWING MINIMUM CAPACITIES:
   V = 1500 LBS.
   T = 2000 LBS.
6. NON DESTRUCTIVE TESTING SHALL BE PERFORMED PRIOR TO INSTALLATION OF POST INSTALLED ANCHORS INTO EXISTING REINFORCED CONCRETE BEAMS OR COLUMNS TO DETERMINE REINFORCEMENT BAR LOCATIONS. ADJUST ANCHOR PLATE BOLT SPACING AS REQUIRED TO ACCOUNT FOR REBAR LOCATIONS.
7. ANCHORS TO BE INSTALLED IN MASONRY SHALL BE ADHESIVE ANCHORS AND SHALL USE SCREEN TUBES.

SHORING/SCAFFOLDING

1. THE CONTRACTOR SHALL SUBMIT SHORING SHOP DRAWINGS PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROJECT JURISDICTION.
2. SHORING AND SCAFFOLDING SHALL COMPLY WITH O.S.H.A. REGULATIONS.
3. ALL TEMPORARY EXCAVATION SUPPORT SYSTEMS ARE NOT TO BE DRIVEN.
4. THE STRUCTURAL ENGINEER WILL REVIEW SHORING SUBMITTALS ONLY FOR LOADS TRANSMITTED TO THE BUILDING STRUCTURE. SUBMITTALS SHALL CLEARLY INDICATE THE LOCATION AND MAGNITUDE OF ALL LOADS APPLIED TO THE BUILDING. THE CONTRACTOR IS RESPONSIBLE FOR DESIGN AND PERFORMANCE OF THE SHORING/SCAFFOLD SYSTEM.

JOINTS AND WATERPROOFING

1. PROVIDE CONTINUOUS WATERSTOPS, AS DESCRIBED IN THE SPECIFICATIONS, AT EACH CONSTRUCTION JOINT OF ANY CONCRETE ELEMENT EXPOSED TO SOIL OR WATER, INCLUDING THE PERIMETER WALLS, AND INTERFACES BETWEEN WALLS AND UNDERPINNING. PROVIDE WATERSTOPS, EXTENDING FROM TOP OF FOOTING TO 4'-0" BELOW GRADE. PROVIDE A 11/2" BY 31/2" CONTINUOUS KEY AT EACH JOINT REQUIRING WATERSTOP. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

## LEGEND

DEMO. EXIST. NEW

FOUNDATION
UNDERPINNING
CONCRETE
BRICK
STONE
C.M.U.
BEARING WALL (ANY MAT'L.) BEL.
STEEL BEAM/COL.
JOIST
CONC. BM. BELOW
SLAB (ON GRADE OR SUPPORTED)
STUD BEARING WALL

WORK SHOWN IS TYPICALLY NEW U.N.O. AS (E) = EXISTING.
SEE ALSO ABBREVIATIONS.

## SYMBOLS:

- MOMENT CONNECTION (TYPE 1)
- MOMENT CONNECTION (TYPE 2)
- FLOOR/ROOF CONSTRUCTION AND SPAN DIRECTION
- SPAN DIRECTION
- 3/4" DIA COMPOSITE BEAM SHEAR STUD QUANTITY (TOTAL PER BEAM DISTRIBUTED EVENLY ALONG LENGTH UNO)
- EMBEDDED PLATE CONNECTION (SEE SCHEDULE)
- BASE OF DISCONTINUOUS COLUMN
- TOP OF DISCONTINUOUS COLUMN
- PIER MARK
- DIAMETER
- LINTEL (LOAD-BEARING)

## STANDARD ABBREVIATIONS

| | |
|---|---|
| AB | ANCHOR BOLT |
| ABV | ABOVE |
| ADH | ADHESIVE |
| AFF | ABOVE FINISHED FLOOR |
| ANCH | ANCHOR |
| ARCH | ARCHITECTURAL |
| B | BOTTOM |
| B/ | BOTTOM OF |
| BEL | BELOW |
| BLDG | BUILDING |
| BM | BEAM |
| BPL | BASE PLATE |
| BR | BRACE |
| BRDG | BRIDGING |
| BRG | BEARING |
| BRKT | BRACKET |
| BS | BOTH SIDES |
| CAP. | CAPACITY |
| C-C | CENTER TO CENTER |
| CIP | CAST IN PLACE |
| CHAM | CHAMFER |
| CJ | CONTROL JOINT, CONTRACTION JOINT |
| CL | CENTERLINE |
| CLG | CEILING |
| CLR | CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| COL | COLUMN |
| CONC | CONCRETE |
| CONN | CONNECTION |
| CONT | CONTINUOUS |
| CONTR | CONTRACTOR |
| COORD | COORDINATE |
| DBL | DOUBLE |
| DET | DETAIL |
| DIA | DIAMETER |
| DIAG | DIAGONAL |
| DIM. | DIMENSION |
| DIR | DIRECTION |
| DL | DEAD LOAD |
| DN | DOWN |
| DWG(S) | DRAWING(S) |
| DWL | DOWEL |
| EA | EACH |
| EF | EACH FACE |
| EJ | EXPANSION JOINT |
| EL | ELEVATION |
| EMBED | EMBEDMENT |
| ENGR | ENGINEER |
| EOD | EDGE OF DECK |
| EOS | EDGE OF SLAB |
| EQ | EQUAL |
| EQP | EQUIPMENT |
| EXCAV | EXCAVATE/EXCAVATION |
| EXP | EXPANSION |
| EXT | EXTERIOR |
| EW | EACH WAY |
| FDN | FOUNDATION |
| F/ | FACE OF |
| FL | FLOOR |
| FP | FIREPROOFING |
| FS | FAR SIDE |
| FTG | FOOTING |
| GA | GAGE |
| GALV | GALVANIZED |
| HK | HOOK(ED) |
| HORIZ | HORIZONTAL |
| HSB | HIGH STRENGTH BOLT |
| HSS | HOLLOW STRUCTURAL SECTION |
| HT | HEIGHT |
| JT | JOINT |
| K | KIP (THOUSAND POUNDS) |
| KB | KNEE BRACE |
| LB | POUND |
| LEN | LENGTH |
| LG | LONG |
| LL | LIVE LOAD |
| LLH | LONG LEG HORIZONTAL |
| LLV | LONG LEG VERTICAL |
| LONGIT | LONGITUDINAL |
| LP | LOW POINT |
| LTL | LINTEL |
| LVL | LAMINATED VENEER LUMBER |
| LW | LONG WAY |
| LWC | LIGHTWEIGHT CONCRETE |
| M | MOMENT |
| MAS | MASONRY |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MO | MASONRY OPENING |
| MONO | MONOLITHIC |
| MTL | METAL |
| N | NORTH |
| NF | NEAR FACE |
| NIC | NOT IN CONTRACT |
| NO | NUMBER |
| NOM | NOMINAL |
| NS | NEAR SIDE |
| NTS | NOT TO SCALE |
| NWC | NORMAL WEIGHT CONCRETE |
| OC | ON CENTERS |
| OD | OUTSIDE DIAMETER |
| O.F. | OUTSIDE FACE |
| O-O | OUT TO OUT |
| OPG | OPENING |
| OPP | OPPOSITE |
| OSL | OUTSTANDING LEG |
| OVS | OVERSIZE HOLE |
| PAF | POWDER ACTUATED FASTENER |
| PC | PIECE, PRECAST CONCRETE |
| PCF | POUNDS PER CUBIC FOOT |
| PED | PEDESTAL |
| PERP | PERPENDICULAR |
| PREFAB | PREFABRICATED |
| PL | PLATE |
| PLF | POUNDS PER LINEAL FOOT |
| PLYWD | PLYWOOD |
| PMF | PREMOLDED FILLER |
| PROJ | PROJECT(ION) |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PT | PRESERVATIVE TREATED, POST-TENSIONED |
| PVC | POLYVINYL CHLORIDE |
| QTY | QUANTITY |
| RCMU | REINFORCED CONCRETE MASONRY UNIT |
| REINF | REINFORCE(D), REINFORCEMENT |
| REQD | REQUIRED |
| RET | RETAINING |
| REV | REVISE(D)/REVISION |
| RO | ROUGH OPENING |
| SC | SLIP-CRITICAL (CONNECTION) |
| SCHED | SCHEDULE |
| SECT | SECTION |
| SF | SQUARE FOOT |
| SHTHG | SHEATHING |
| SIM | SIMILAR |
| SL | SLOPED |
| SOG | SLAB ON GRADE |
| SPEC | SPECIFICATION |
| SQ | SQUARE |
| STD | STANDARD |
| STIFF | STIFFENER |
| STIR. | STIRRUP |
| STL | STEEL |
| STRUC | STRUCTURAL |
| SUPT | SUPPORT |
| SYM | SYMMETRICAL |
| T | TOP |
| T/ | TOP OF |
| T&B | TOP AND BOTTOM |
| TEMP | TEMPORARY |
| THD | THREADED |
| THK | THICK(NESS) |
| TYP | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| VB | VAPOR BARRIER |
| VEF | VERTICAL EACH FACE |
| VERT | VERTICAL |
| VIF | VERTICAL INSIDE FACE OR VERIFY IN FIELD |
| VOF | VERTICAL OUTSIDE FACE |
| VR | VAPOR RETARDER |
| W/ | WITH |
| W/O | WITHOUT |
| WD | WOOD |
| WI | WROUGHT IRON |
| WP | WORK POINT, WATERPROOFING |
| WT | WEIGHT |
| WWF | WELDED WIRE FABRIC |

## DESIGN LOADS AND FACTORS

DESIGN CODE: IBC 2015

| LIVE LOAD DATA | | SNOW LOAD DATA | | WIND LOAD DATA | | EARTHQUAKE DESIGN DATA | |
|---|---|---|---|---|---|---|---|
| FLOOR OR ROOF AREA | LOAD (psf) | ROOF AREA | LOAD (psf) | FACTOR | VALUE | FACTOR | VALUE |
| DESIGN CAPACITY | | FLAT SNOW LOAD (PF) | 19 | BASIC WIND SPEED (MPH. 3-S GUST) | 120 | OCCUPANCY CATEGORY | II |
| ASSEMBLY | 100 | MIN SNOW LOAD | 30 | BASIC WIND EXPOSURE CATEGORY | B | SEISMIC SITE CLASS | D |
| CORRIDORS | 100 | | | RISK CATEGORY | III | SEISMIC IMPORTANCE FACTOR, I | 1.25 |
| CORRIDORS ABOVE 1ST FLR | 80 | | | | | ACCELERATION, SHORT PERIOD. Ss | 0.130 |
| OFFICE | 50 | | | | | ACCELERATION. 1 SECOND, S1 | 0.052 |
| PARTITIONS | 20 | | | | | SITE COEFF., SHORT PERIOD, Fa | 1.6 |
| FIXED SEATING ASSEMBLY | 60 | | | | | SITE COEFF., 1 SECOND, Fv | 2.4 |
| | | | | | | SEISMIC DESIGN CATEGORY | B |
| LIVE LOAD REDUCTION APPLIED TO: | | FACTOR | VALUE | | | RESPONSE MODIFICATION FACTOR, R | 3 |
| ☐ COLUMNS | | GROUND SNOW LD ($P_g$) | 25 | | | BASIC STRUCTURAL SYSTEM/SEISMIC RESISTING SYSTEM: ORDINARY REINFORCED CMU SHEAR WALL | |
| ☐ GIRDERS | | SNOW EXPOSURE ($C_e$) | 1.0 | | | | |
| ☐ BEAMS | | SNOW IMPORTANCE (I) | 1.1 | | | ANALYSIS PROCEDURE: | |
| ☐ 2-WAY SLABS | | | | | | ☒ EQUIVALENT LATERAL FORCE | |
| SPECIAL LOADING: | | SPECIAL SNOW CONSIDERATIONS: | | SPECIAL WIND CONSIDERATIONS: | | SPECIAL SEISMIC CONSIDERATIONS: | |
| | | | | | | ORDINARY REINFORCED CMU SHEAR WALL | |
| ☒ LIVE LOAD GOVERNS ROOF DESIGN | | ☐ GOVERNS ROOF DESIGN | | ☒ GOVERNS LATERAL DESIGN | | ☐ GOVERNS LATERAL DESIGN | |


MARKS, THOMAS ARCHITECTS
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**Union Brothers Furniture Company**

37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**General Notes**

| Project Number: 16225 | Date: 05/08/17 |
|---|---|
| Drawn by: SR | Checked by: JT |
| NPS/MHT SUBMISSION | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

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Field & Tung Structural Engineers
2031 Florida AVenue NW
Third Floor
Washington, DC 20009


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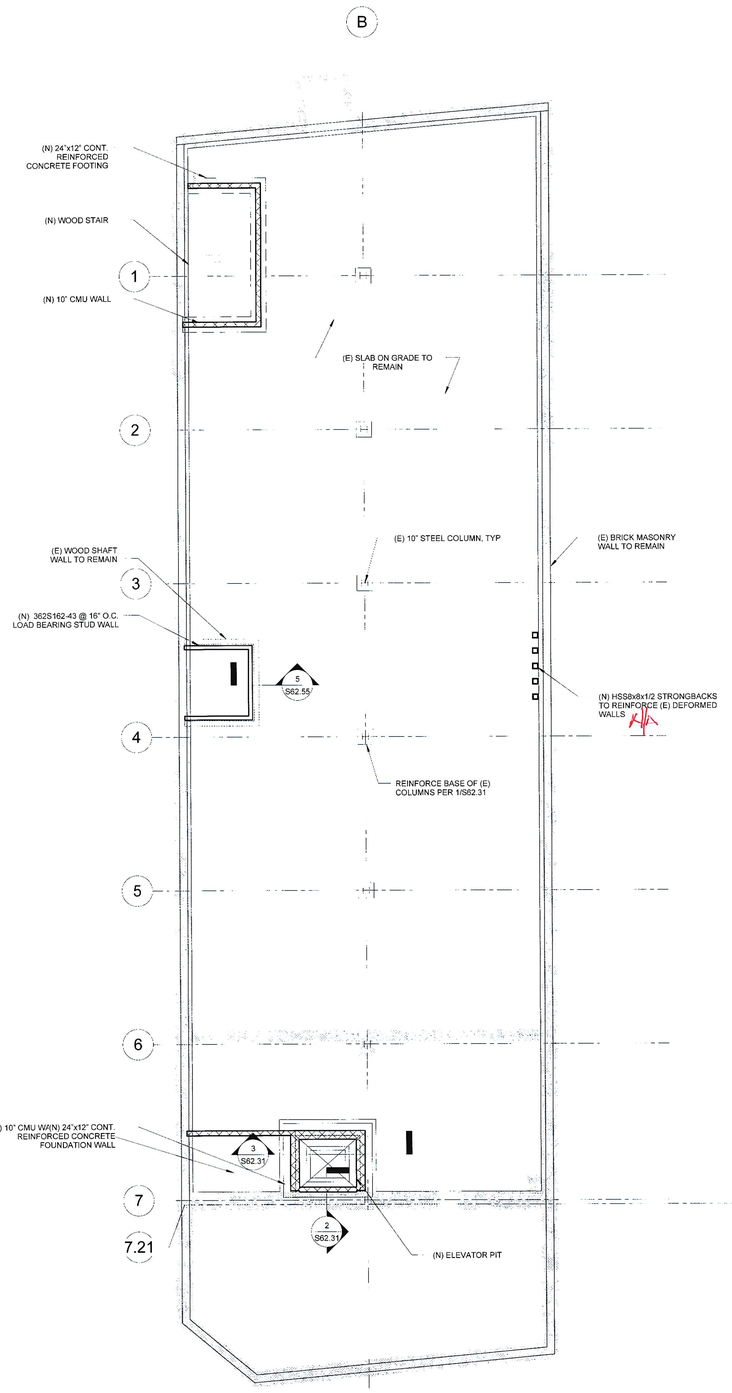


PLAN NOTES:

1. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND OPENINGS WITH ARCH / MECH DWGS.
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1 / S61.00 FOUNDATION & BASEMENT PLAN
1/8" = 1'-0"

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CERTIFIED

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37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Foundation & Basement Plan**

| Project Number | Date |
|---|---|
| 16225 | 05/01/17 |
| Drawn by: SR | Checked by: JT |
| NRS/MHT SUBMISSION | 08/30/18 |

| Num. | Description | Date |
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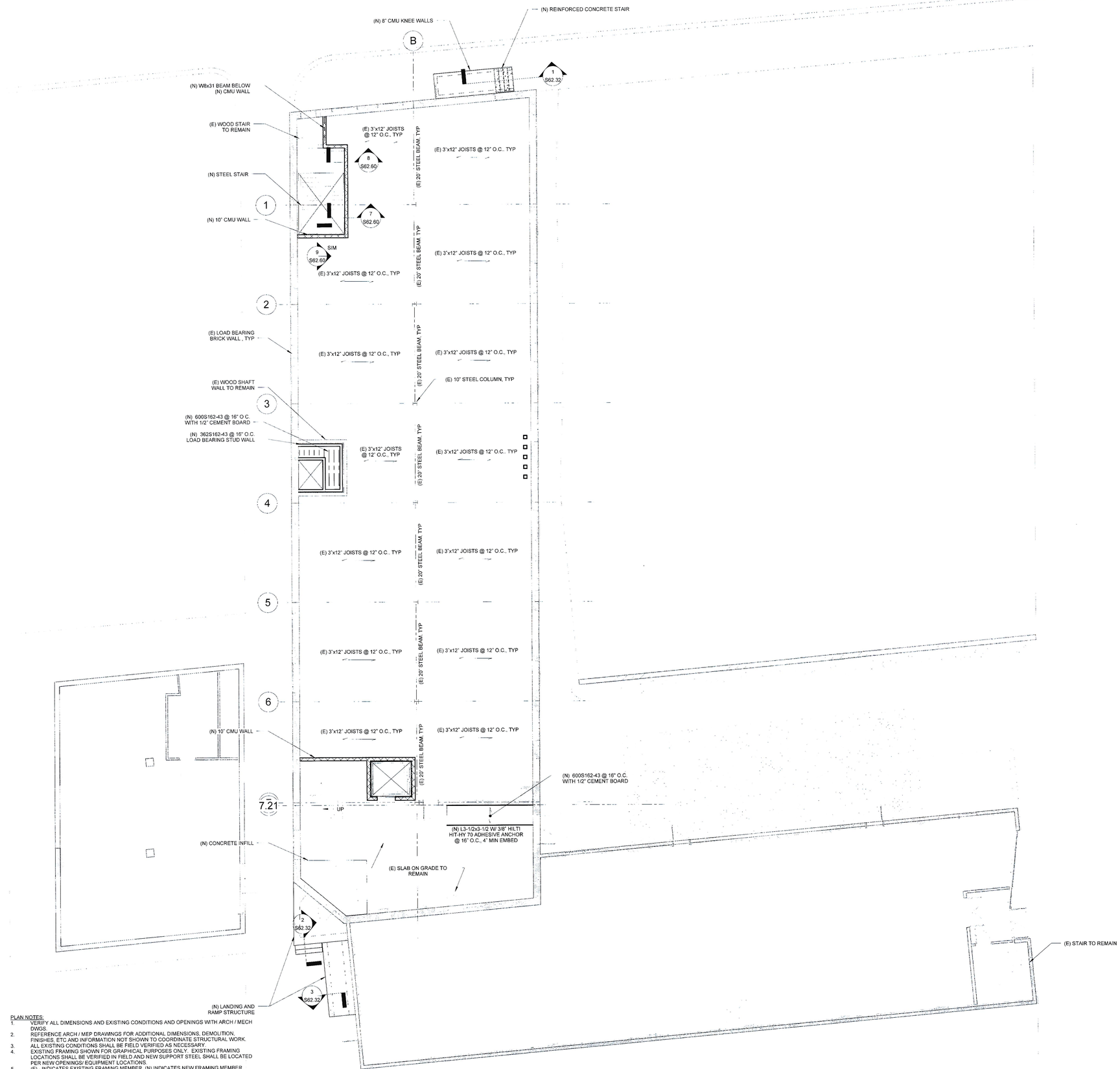


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1 S61.01 FIRST FLOOR FRAMING PLAN
1/8" = 1'-0"


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37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**First Floor Framing Plan**

| Project Number: 16225 | Date: 05/01/17 |
|---|---|
| Drawn by: SR | Checked by: JT |
| NPS/MHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

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No. 25862
PROFESSIONAL ENGINEER
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1 / S61.02 SECOND FLOOR FRAMING PLAN
1/8" = 1'-0"


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37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Second Floor Framing Plan**

| Project Number | Date |
|---|---|
| 16225 | 05/01/17 |
| Drawn by: SR | Checked by: JT |
| NPS/MHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

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STATE OF MARYLAND — JAN HORNG TUNG — PROFESSIONAL ENGINEER — No. 25862 — 10-5-17


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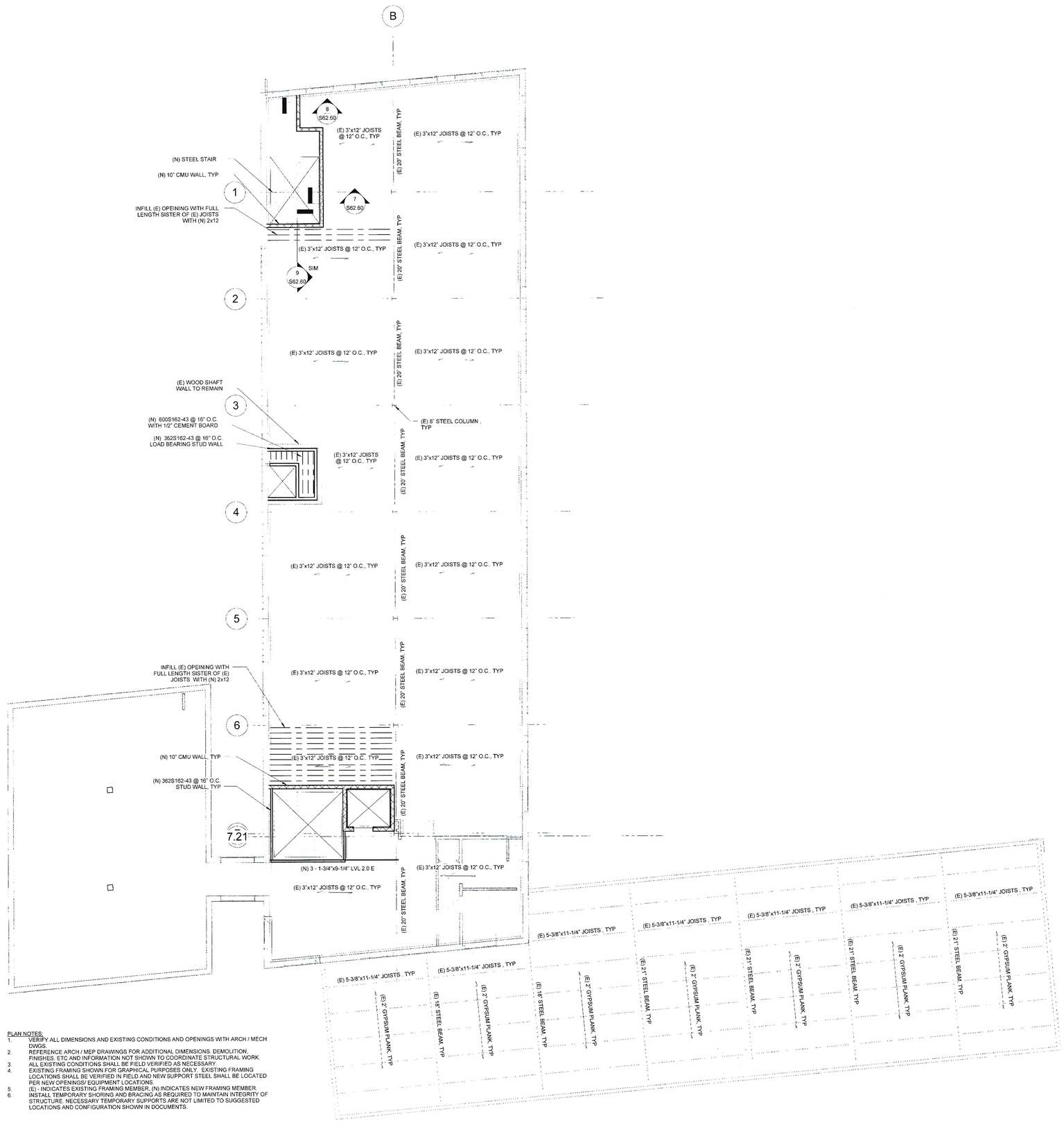


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1 / S61.03 THIRD FLOOR FRAMING PLAN
1/8" = 1'-0"

10/4/2017 7:28:21 AM

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1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Third Floor Framing Plan**

| Project Number: 16225 | Date: 05/01/17 |
|---|---|
| Drawn by: SR | Checked by: JT |
| NTS/MHT SUBMISSION | 9/6/'16 |

| Num. | Description | Date |
|---|---|---|

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EXPIRATION DATE: 02/05/2019

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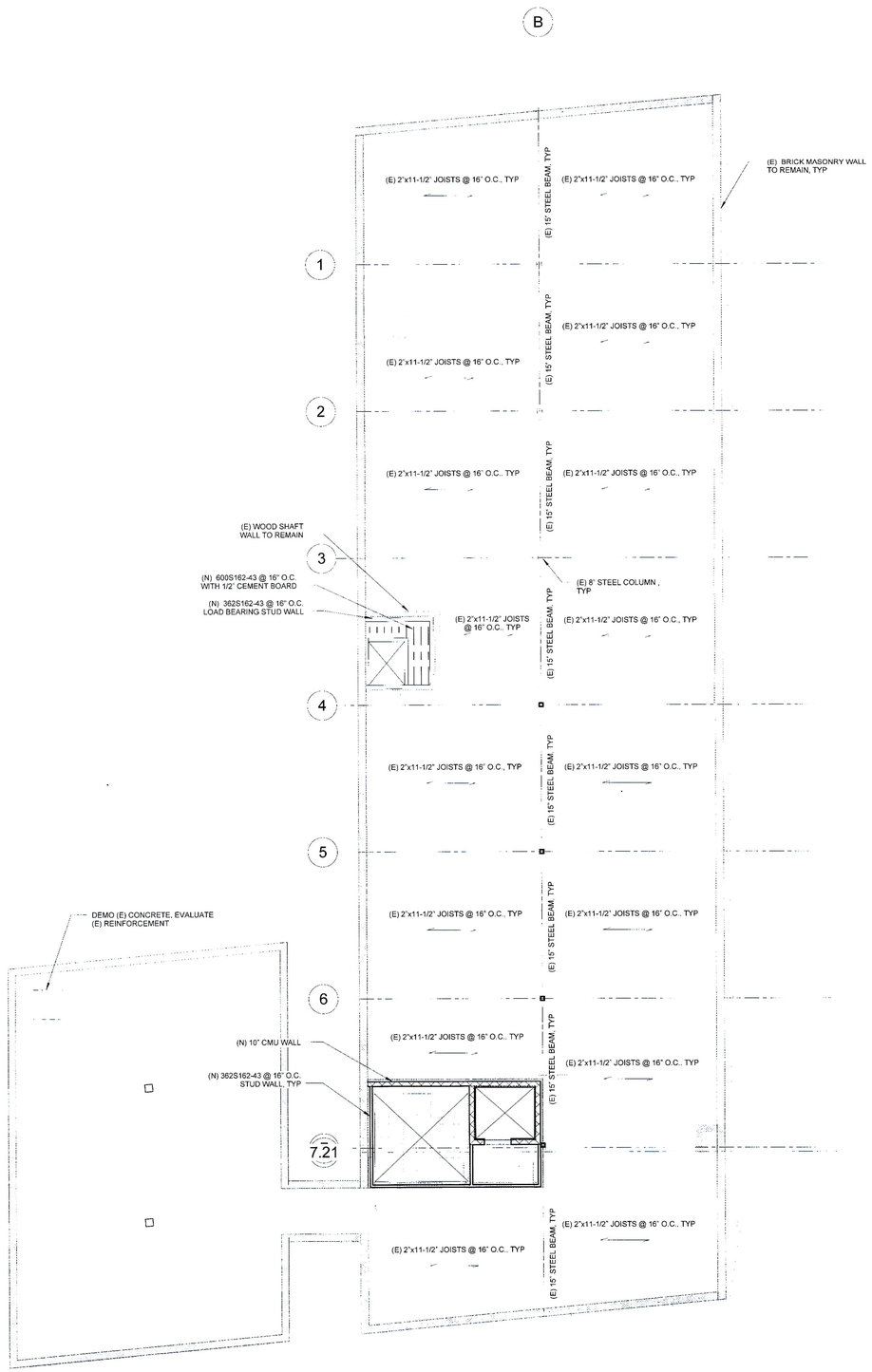


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1 S61.04 ROOF FRAMING PLAN
1/8" = 1'-0"

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1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Roof Framing Plan**

| Project Number: 16225 | Date: 05/01/17 |
|---|---|
| Drawn by: SR | Checked by: JT |
| NPS/MHI SUBMISSION | 09/30/16 |

| Num. | Description | Date |
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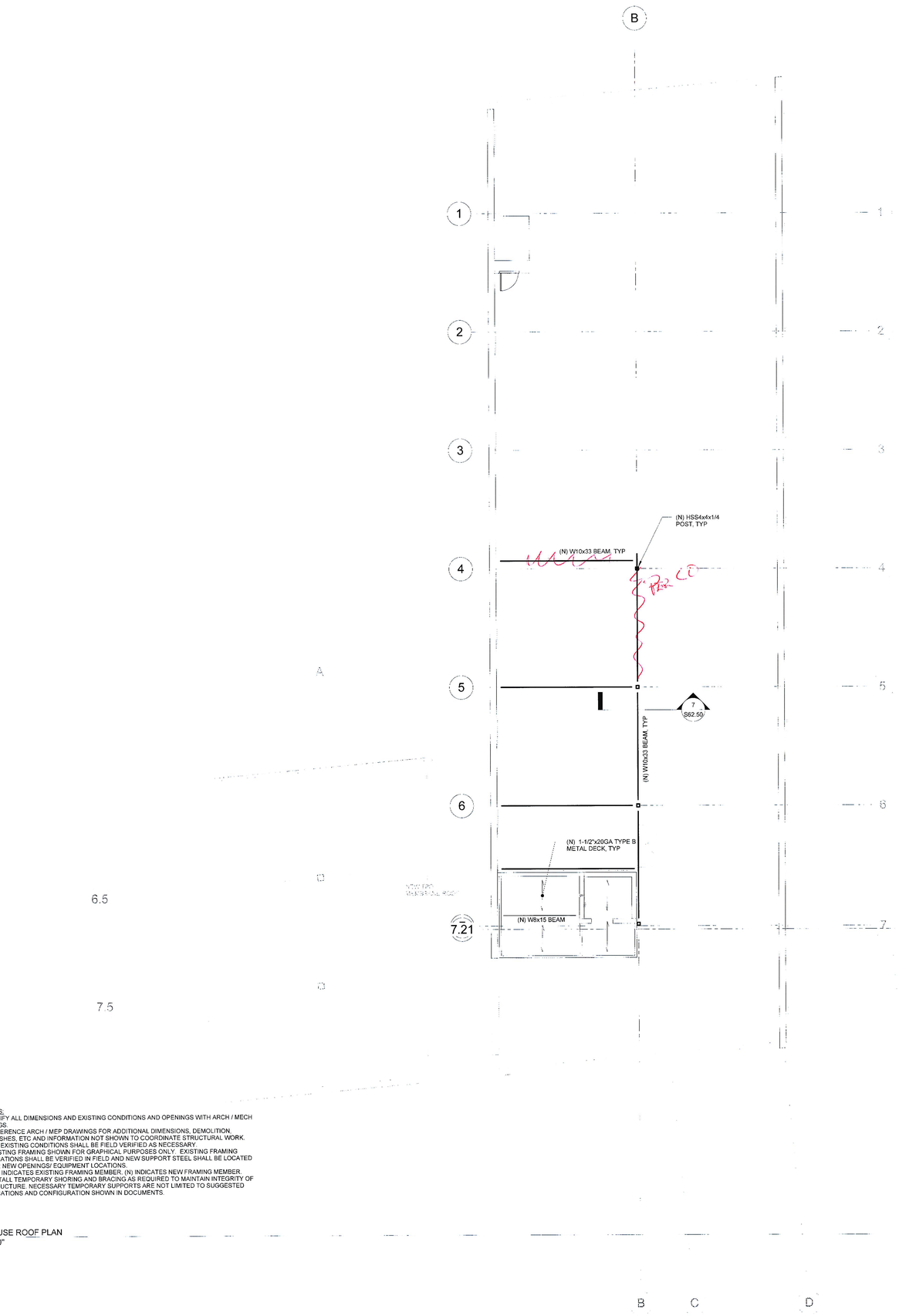


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1 / S61.05 PENTHOUSE ROOF PLAN
1/8" = 1'-0"

10/4/2017 7:28:23 AM

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BALTIMORE, MD 21230

SHEET TITLE

**Penthouse Roof Framing Plan**

| Project Number: 16225 | Date: 06/14/17 |
|---|---|
| Drawn by: Author | Checked by: Checker |
| NPS/MHT SUBMISSION | 05/30/16 |

| Num. | Description | Date |
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10/5/17

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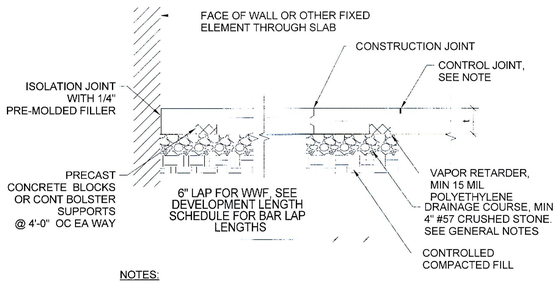
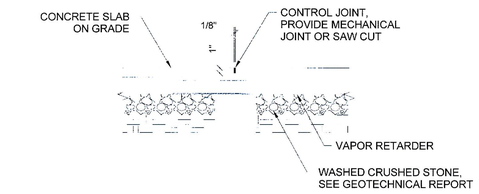



NOTES:

1. CONTROL JOINT SPACING MAX OF 36 x "t". SEE ARCHITECTURAL DRAWINGS FOR LAYOUT.
2. t = SLAB THICKNESS - SEE PLAN

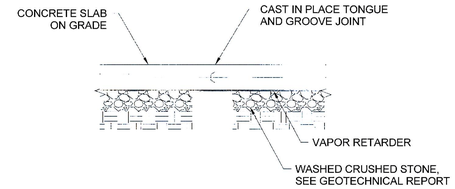
1 S62.30 TYPICAL SLAB ON GRADE DETAIL 1" = 1'-0"



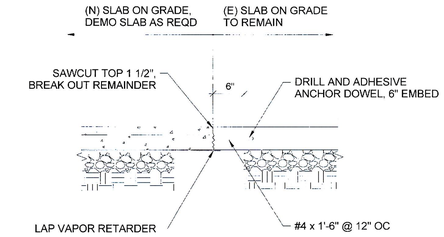

NOTES:

1. PROVIDE CONTROL JOINT @ 15'-0" O.C. MAX.
2. CUT JOINTS WITHIN 4 HRS OF FINISHING

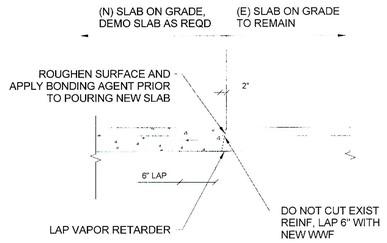
2 S62.30 TYPICAL SLAB ON GRADE JOINT DETAIL 1" = 1'-0"



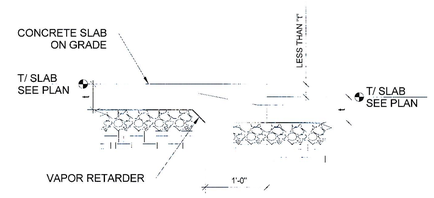

3 S62.30 TYPICAL SLAB ON GRADE CONSTRUCTION JOINT 1" = 1'-0"




4 S62.30 TYPICAL SLAB ON GRADE DETAIL 1" = 1'-0"

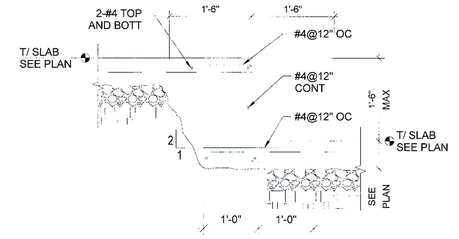



5 S62.30 TYPICAL SLAB ON GRADE DETAIL 1" = 1'-0"



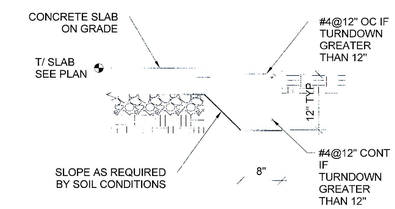

TYPICAL DEPRESSION IN SLAB LESS THAN OR EQUAL TO SLAB THICKNESS

6 S62.30 TYPICAL SLAB ON GRADE DEPRESSION 1" = 1'-0"

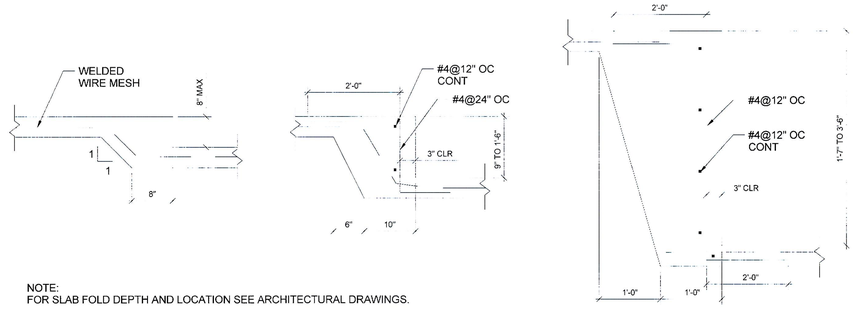



SLAB DEPRESSION GREATER THAN SLAB THICKNESS

7 S62.30 TYPICAL SLAB ON GRADE DEPRESSION 1" = 1'-0"

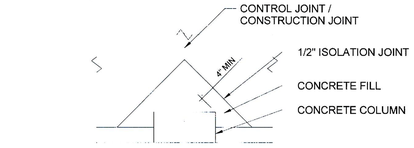


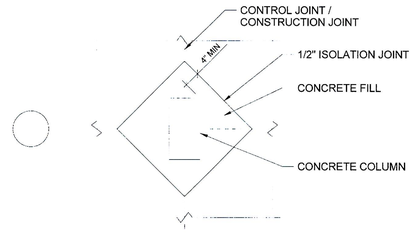

8 S62.30 TYPICAL SLAB ON GRADE TURNDOWN 1" = 1'-0"




NOTE:
FOR SLAB FOLD DEPTH AND LOCATION SEE ARCHITECTURAL DRAWINGS.

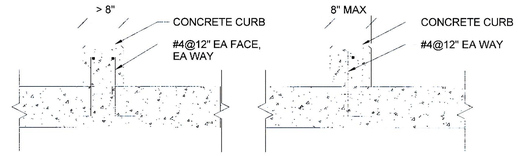
9 S62.30 TYPICAL SLAB ON GRADE FOLD 1" = 1'-0"




NOTE:
CONCRETE FILL SHALL BE PLACED SEPARATELY FROM SLAB ON GRADE CONCRETE PLACEMENT

10 S62.30 TYPICAL COLUMN ISOLATION JOINT 1" = 1'-0"




NOTES:

1. IT IS THE CONTRACTOR'S OPTION TO DRILL THE CURB DOWELS INTO THE SLAB AND SECURE WITH CHEMICAL ADHESIVE IN LIEU OF CASTING THE DOWELS INTO THE SLAB AS SHOWN
2. REFER TO THE ARCHITECTURAL DRAWINGS FOR CURB LOCATIONS AND ELEVATIONS. CURB HEIGHTS SHALL NOT EXCEED 24"

11 S62.30 TYPICAL CONCRETE CURB REINFORCEMENT DETAILS 1" = 1'-0"

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

CERTIFIED

**Union Brothers Furniture Company**

37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Concrete Details**

| Project Number | 16225 | Date | 06/12/17 |
|---|---|---|---|
| Drawn by: | SR | Checked by: | JT |

MPS/MHT SUBMISSION 09/30/16

| Num. | Description | Date |
|---|---|---|

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STATE OF MARYLAND · JIAN MORNG TUNG · PROFESSIONAL ENGINEER · No. 25862 · 10/5/17

**Field & Tung Structural Engineers**
**2031 Florida AVenue NW**
**Third Floor**
**Washington, DC 20009**

**PROFESSIONAL CERTIFICATION**

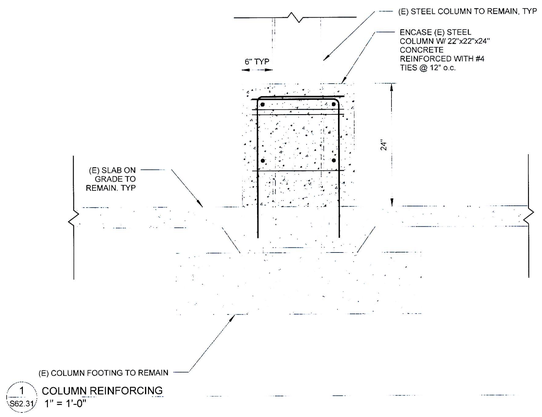
"I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND."

**LICENSE NO.: 25862**

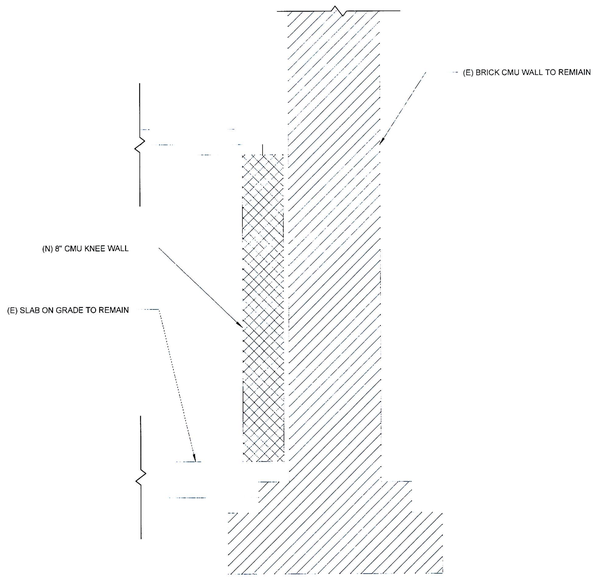
EXPIRATION DATE: 02/05/2019

**S62.30**

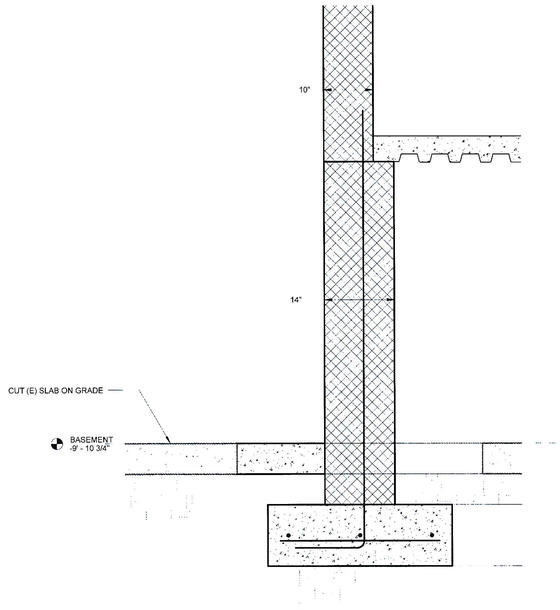
10/4/2017 7:28:25 AM




1 S62.31 COLUMN REINFORCING
1" = 1'-0"




2 S62.31 SECTION
1" = 1'-0"




3 S62.31 SECTION
1" = 1'-0"

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

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**Union Brothers Furniture Company**

37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Concrete Details**

| Project Number | | Date | |
|---|---|---|---|
| | 16225 | | 06/14/17 |
| Drawn by: | Author | Checked By: | Checker |
| AFFIDAVIT SUBMISSION | | | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

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STATE OF MARYLAND
JAW HORNG TUNG
25862
REGISTERED PROFESSIONAL ENGINEER
10/5/17

**Field & Tung Structural Engineers**
**2031 Florida AVenue NW**
**Third Floor**
**Washington, DC 20009**

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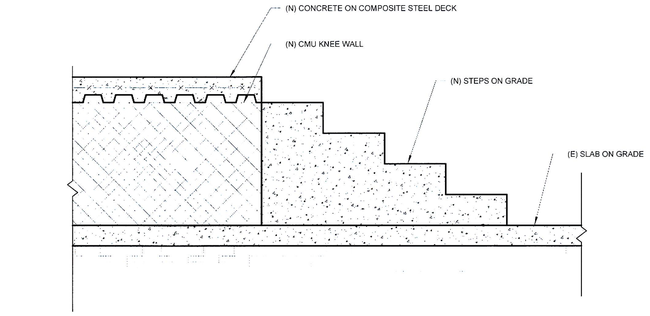
**LICENSE NO.: 25862**

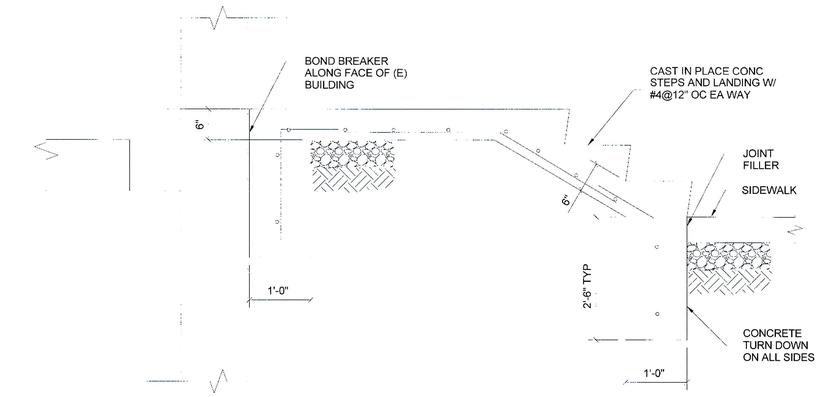
EXPIRATION DATE: 02/05/2019

**S62.31**

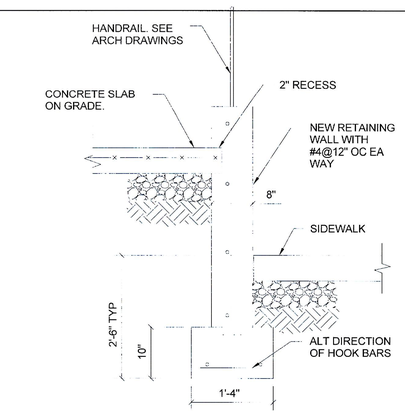
10/4/2017 7:28:26 AM




1 S62.32 STAIRS ON GRADE WITH LANDING ON CMU KNEE WALL
1" = 1'-0"




2 S62.32 RAMP SECTION
1" = 1'-0"




3 S62.32 RAMP SECTION 2
1" = 1'-0"

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

CERTIFIED

**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

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STATE OF MARYLAND
JAN HORNG TUNG
No. 25862
PROFESSIONAL ENGINEER
10/5/17

**Field & Tung Structural Engineers**
**2031 Florida AVenue NW**
**Third Floor**
**Washington, DC 20009**

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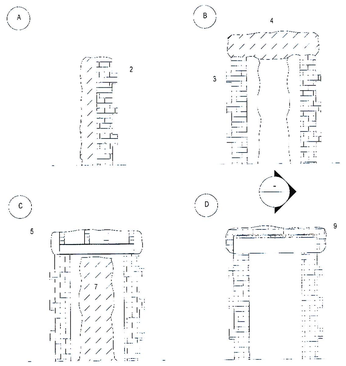
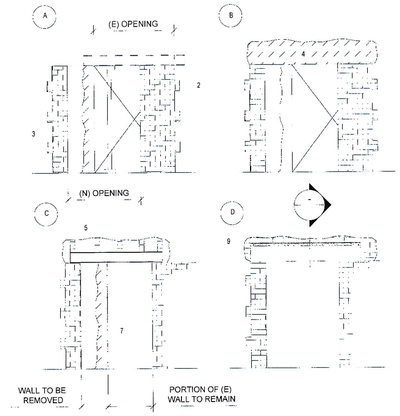



WALL ELEVATIONS

1 S62.40 NEW OPENING IN (E) BRICK BEARING WALL
1" = 1'-0"

SUGGESTED LINTEL INSTALLATION PROCEDURE #1

1. ANY ADJACENT OPENINGS WHICH ARE TO BE INFILLED SHOULD BE INFILLED PRIOR TO ANY DEMOLITION.
2. REMOVE A FULL HEIGHT SECTION OF THE EXISTING MASONRY WALL STRADDLING THE JAMB LINE OF THE NEW MASONRY OPENING. THIS SECTION WILL BE APPROXIMATELY 2'-0" WIDE x FULL WALL THICKNESS. REBUILD JAMB IN BRICK MASONRY, FORMING A MINIMUM 12" SOLID MASONRY JAMB, FULLY TOOTHED INTO THE EXISTING MASONRY. NEW MASONRY JAMBS ARE TO BEAR ON THE EXISTING WALL BELOW.
3. REPEAT STEP 2 ON THE OPPOSITE JAMB.
4. REMOVE A HORIZONTAL BAND OF MASONRY APPROXIMATELY 1'-6" HIGH. BY ONE HALF THE WALL THICKNESS AT THE HEAD OF THE NEW OPENING.
5. BOLT (2) BEAMS TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" DIA A36 THREADED RODS. (OMIT IF IT IS A TWO BEAM LINTEL.) INSTALL THE (2) BEAMS BOLTED TOGETHER AND TEMPORARY BLOCKING AT 2'-0" BETWEEN TOP FLANGES AND UNDERSIDE OF EXISTING MASONRY AS NECESSARY. (SEE LINTEL SCHEDULE FOR LINTEL SIZES AND REQ BEARING). DRY-PACK BEARING ENDS OF BEAMS AND ANY VOIDS BETWEEN BLOCKING AND MASONRY ABOVE WITH NON-SHRINK GROUT. ALLOW GROUT TO CURE 24 HOURS.
6. REPEAT STEPS 4 AND 5 ON THE OPPOSITE FACE OF THE WALL.
7. DEMOLISH REMAINING MASONRY NECESSARY TO COMPLETE NEW OPENING.
8. FOR TWO BEAM LINTELS ONLY, BOLT TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" DIA A36 THREADED RODS.
9. ENCASE LINTELS IN CONCRETE, LEAVING A 2"(+) GAP BETWEEN TOP OF CONCRETE AND THE UNDERSIDE OF THE EXISTING MASONRY. DRY-PACK THIS GAP WITH NON-SHRINK GROUT AND REBUILD INFILL MASONRY ABOVE LINTEL AS NECESSARY WITH BRICK.
10. WHEN CUTTING NEW OPENING INTO AN EXIST. MASONRY WALL WITH EXIST. FLOOR FRAMING BEARING ONTO WALL, SHORE FRAMING TO THE FLOOR BELOW.
11. USE SIMILAR PROCEDURES WHEN USING PRECAST CMU LINTELS.

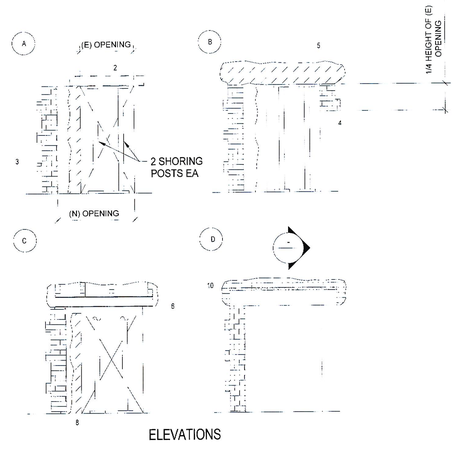



WALL ELEVATIONS

2 S62.40 RELOCATED OPNG IN (E) BRICK BEARING WALL
1" = 1'-0"

SUGGESTED LINTEL INSTALLATION PROCEDURE #2
(SIMILAR FOR INSTALLING AN ADJACENT LINTEL AND NEW ELEVATION)

1. ANY ADJACENT OPENINGS WHICH ARE TO BE INFILLED SHOULD BE INFILLED PRIOR TO ANY DEMOLITION.
2. INSTALL (2) SHORING POSTS WITHIN THE EXSIT. WIDTH OF WALL OPENING. IF EXIST. LINTELS ARE STEEL BEAMS, REMOVE EXIST. LINTELS & INFILL PORTION OF EXISTING OPENING. IF THERE IS AN EXIST. OPENING IN WALL BELOW, CONTINUE THE SHORING DOWN UNTIL THERE IS A SOLID WALL BELOW OPENING.
3. REMOVE A FULL HEIGHT SECTION OF THE EXISTING MASONRY WALL STRADDLING THE JAMB LINE OF THE NEW MASONRY OPENING. THIS SECTION WILL BE APPROXIMATELY 2'-0" WIDE x FULL WALL THICKNESS. REBUILD JAMB IN BRICK MASONRY, FORMING A MINIMUM 12" SOLID MASONRY JAMB, FULLY TOOTHED INTO THE EXISTING MASONRY. NEW MASONRY JAMBS ARE TO BEAR ON THE EXISTING WALL BELOW.
4. REMOVE A HORIZONTAL BAND OF MASONRY APPROXIMATELY 1'-6" HIGH BY ONE HALF THE WALL THICKNESS AT THE HEAD OF THE NEW OPENING.
5. BOLT (2) BEAMS TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" DIA A36 THREADED RODS. (OMIT IF IT IS A TWO BEAM LINTEL.) INSTALL THE (2) BEAMS BOLTED TOGETHER AND TEMPORARY BLOCKING AT 2'-0" BETWEEN TOP FLANGES AND UNDERSIDE OF EXISTING MASONRY AS NECESSARY. (SEE LINTEL SCHEDULE FOR LINTEL SIZES AND REQ BEARING). DRY-PACK BEARING ENDS OF BEAMS AND ANY VOIDS BETWEEN BLOCKING AND MASONRY ABOVE WITH NON-SHRINK GROUT. ALLOW GROUT TO CURE 24 HOURS.
6. REPEAT STEPS 4 AND 5 ON THE OPPOSITE FACE OF THE WALL.
7. DEMOLISH REMAINING MASONRY NECESSARY TO COMPLETE NEW OPENING.
8. FOR TWO BEAM LINTELS ONLY, BOLT TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" DIA A36 THREADED RODS.
9. ENCASE LINTELS IN CONCRETE, LEAVING A 2"(+) GAP BETWEEN TOP OF CONCRETE AND THE UNDERSIDE OF THE EXISTING MASONRY. DRY-PACK THIS GAP WITH NON-SHRINK GROUT AND REBUILD INFILL MASONRY ABOVE LINTEL AS NECESSARY WITH BRICK.
10. WHEN CUTTING NEW OPENING INTO AN EXIST. MASONRY WALL WITH EXIST. FLOOR FRAMING BEARING ONTO WALL, SHORE FRAMING TO THE FLOOR BELOW.
11. USE SIMILAR PROCEDURES WHEN USING PRECAST CMU LINTELS.



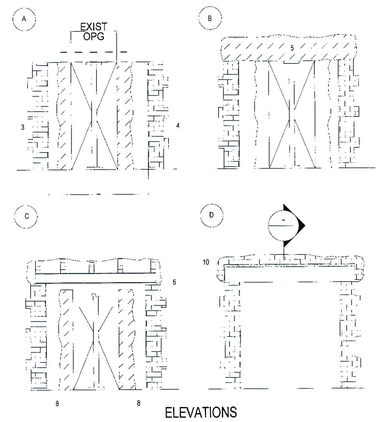

ELEVATIONS

NOTE: WIDENED ONE SIDE ONLY.

3 S62.40 WIDENING OPENING IN (E) BRICK BEARING WALL
1" = 1'-0"

SUGGESTED LINTEL INSTALLATION PROCEDURE #4

1. ANY ADJACENT OPENINGS WHICH ARE TO BE INFILLED SHOLUD BE INFILLED PRIOR TO ANY DEMOLITION.
2. INSTALL (4) SHORING POSTS WITHIN WIDTH OF WALL OPENING. IF EXIST. LINTELS ARE STEEL BEAMS, REMOVE EXIST. LINTELS. IF THERE IS AN EXISTING OPENING IN WALL BELOW, CONTINUE THE SHORING DOWN UNTIL THERE IS A SOLID WALL BELOW OPENING.
3. REMOVE A FULL HEIGHT SECTION OF THE EXISTING MASONRY WALL STRADDLING THE JAMB LINE OF THE NEW MASONRY OPENING. THIS SECTION WILL BE APPROXIMATELY 2'-0" WIDE x FULL WALL THICKNESS. REBUILD JAMB IN BRICK MASONRY, FORMING A MINIMUM 12" SOLID MASONRY JAMB, FULLY TOOTHED INTO THE EXISTING MASONRY. NEW MASONRY JAMBS ARE TO BEAR ON THE EXISTING WALL BELOW.
4. REPEAT STEP 3 FOR PARTIAL REBUILD OF OPPOSITE JAMB.
5. REMOVE A HORIZONTAL BAND OF MASONRY APPROXIMATELY 1'-6" HIGH BY ONE HALF THE WALL THICKNESS AT THE HEAD OF THE NEW OPENING.
6. BOLT (2) BEAMS TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" DIA A36 THREADED RODS. (OMIT IF IT IS A TWO BEAM LINTEL.) INSTALL THE (2) BEAMS BOLTED TOGETHER AND TEMPORARY BLOCKING AT 2'-0" BETWEEN TOP FLANGES AND UNDERSIDE OF EXISTING MASONRY AS NECESSARY. (SEE LINTEL SCHEDULE FOR LINTEL SIZES AND REQ BEARING). DRY-PACK BEARING ENDS OF BEAMS AND ANY VOIDS BETWEEN BLOCKING AND MASONRY ABOVE WITH NON-SHRINK GROUT. ALLOW GROUT TO CURE 24 HOURS.
7. REPEAT STEPS 5 AND 6 ON THE OPPOSITE FACE OF THE WALL.
8. DEMOLISH REMAINING MASONRY NECESSARY TO COMPLETE NEW OPENING.
9. FOR TWO BEAM LINTELS ONLY, BOLT TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" DIA A36 THREADED RODS.
10. ENCASE LINTELS IN CONCRETE, LEAVING A 2"(+) GAP BETWEEN TOP OF CONCRETE AND THE UNDERSIDE OF THE EXISTING MASONRY. DRY-PACK THIS GAP WITH NON-SHRINK GROUT AND REBUILD INFILL MASONRY ABOVE LINTEL AS NECESSARY WITH BRICK.
11. WHEN CUTTING NEW OPENING INTO AN EXIST. MASONRY WALL WITH EXIST. FLOOR FRAMING BEARING ONTO WALL, SHORE FRAMING TO THE FLOOR BELOW.
12. USE SIMILAR PROCEDURES WHEN USING PRECAST CMU LINTELS.



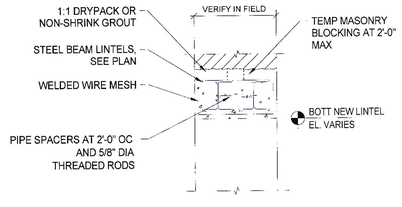

ELEVATIONS

NOTE: WIDENED BOTH SIDES.

4 S62.40 WIDENING OPENING IN (E) BRICK BRG WALL
1" = 1'-0"

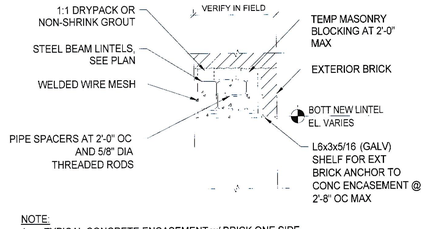
SUGGESTED LINTEL INSTALLATION PROCEDURE #3

1. ANY ADJACENT OPENING WHICH ARE TO BE INFILLED SHOULD BE INFILLED PRIOR TO ANY DEMOLITION.
2. INSTALL (2) SHORING POSTS WITHIN THE EXIST. WIDTH OF WALL OPENING. IF EXIST. LINTELS ARE STELL BEAMS, REMOVE EXIST. LINTELS. IF THERE IS AN EXIST. OPENING IN WALL BELOW, CONTINUE THE SHORING DOWN UNTIL THERE IS A SOLID WALL BELOW OPENING.
3. REMOVE A FULL HEIGHT SECTION OF THE EXISTING MASONRY WALL STRADDLING THE JAMB LINE OF THE NEW MASONRY OPENING. THIS SECTION WILL BE APPROXIMATELY 2'-0" WIDE x FULL WALL THICKNESS. REBUILD JAMB IN BRICK MASONRY, FORMING A MINIMUM 12" SOLID MASONRY JAMB, FULLY TOOTHED INTO THE EXISTING MASONRY. NEW MASONRY JAMBS ARE TO BEAR ON THE EXISTING WALL BELOW.
4. REPEAT STEP 3 ON THE OPPOSITE JAMB.
5. REMOVE A HORIZONTAL BAND OF MASONRY APPROXIMATELY 1'-6" HIGH BY ONE HALF THE WALL THICKNESS AT THE HEAD OF THE NEW OPENING.
6. BOLT (2) BEAMS TOGETHER AT ENDS AND AT 2'-0" O.C. WITH ⅝" _ A36 THREADED RODS. (OMIT IF IT IS A TWO BEAM LINTEL.) INSTALL THE (2) BEAMS BOLTED TOGETHER AND TEMPORARY BLOCKING AT 2'-0" BETWEEN TOP FLANGES AND UNDERSIDE OF EXISTING MASONRY AS NECESSARY. (SEE LINTEL SCHEDULE FOR LINTEL SIZES AND REQ BEARING). DRY-PACK BEARING ENDS OF BEAMS AND ANY VOIDS BETWEEN BLOCKING AND MASONRY ABOVE WITH NON-SHRINK GROUT. ALLOW GROUT TO CURE 24 HOURS.
7. REPEAT STEPS 5 AND 6 ON THE OPPOSITE FACE OF THE WALL.
8. DEMOLISH REMAINING MASONRY NECESSARY TO COMPLETE NEW OPENING.
9. FOR TWO BEAM LINTELS ONLY, BOLT TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8 "" A36 THREADED RODS.
10. ENCASE LINTELS IN CONCRETE, LEAVING A 2"(+) GAP BETWEEN TOP OF CONCRETE AND THE UNDERSIDE OF THE EXISTING MASONRY. DRY-PACK THIS GAP WITH NON-SHRINK GROUT AND REBUILD INFILL MASONRY ABOVE LINTEL AS NECESSARY WITH BRICK.
11. WHEN CUTTING NEW OPENING INTO AN EXIST. MASONRY WALL WITH EXIST. FLOOR FRAMING BEARING ONTO WALL, SHORE FRAMING TO THE FLOOR BELOW.
12. USE SIMILAR PROCEDURES WHEN USING PRECAST CMU LINTELS.



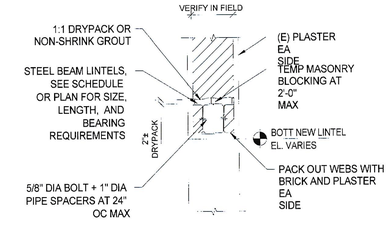

NOTE:
1. PROVIDE MIN 1" THICK GROUT PADS FOR FULL BEARING AREA.

5 S62.40 TYPICAL BEAM HEADER - CONC ENCASEMENT
1" = 1'-0"



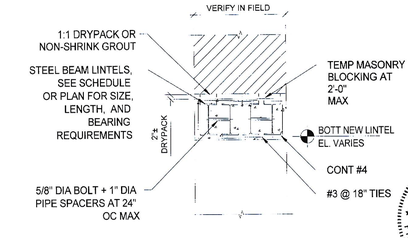

NOTE:
1. TYPICAL CONCRETE ENCASEMENT w/ BRICK ONE SIDE
2. PROVIDE MIN 1" THICK GROUT PADS FOR FULL BEARING AREA.

6 S62.40 TYPICAL BEAM HEADER - CONCRETE ENCASEMENT
1" = 1'-0"




NOTE:
1. TYPICAL INTERIOR BRICK BEARING WALL LINTEL WITH PLASTER.
2. PROVIDE MIN 1" THICK GROUT PADS FOR FULL BEARING AREA.

7 S62.40 TYPICAL BEAM HEADER
1" = 1'-0"




NOTE:
1. PROVIDE MIN 1" THICK GROUT PADS FOR FULL BEARING AREA.

8 S62.40 TYPICAL BEAM HEADER
1" = 1'-0"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| Drawn by: SR | Checked by: JT |
| NPS/ART SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT/ CONSTRUCTION 10-05-17**


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**S62.40**

STATE OF MARYLAND — JAMES HORNG TUNG — PROFESSIONAL ENGINEER — 25862 — 10-05-17


Field & Tung Structural Engineers
2031 Florida AVenue NW
Third Floor
Washington, DC 20009

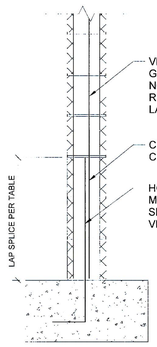

**PROFESSIONAL CERTIFICATION**

"I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND."

**LICENSE NO.: 25862**

EXPIRATION DATE: 02/05/2019

10/4/2017 7:28:30 AM

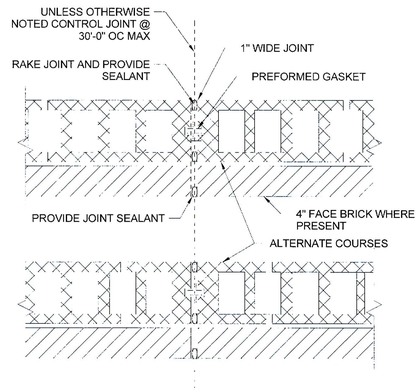



MASONRY WALL REINF LAP SPLICES

| GRADE 60 (CENTERED) | 8" CMU (CENTERED) | 10" AND 12" CMU |
|---|---|---|
| #3 | 19" | 19" |
| #4 | 25" | 25" |
| #5 | 31" | 31" |
| #6 | MECH SPLICE | 52" |
| #7 | MECH SPLICE | MECH SPLICE |
| #8 | MECH SPLICE | MECH SPLICE |

NOTE:
1. IT IS THE CONTRACTOR'S OPTION TO PROVIDE MECHANICAL SPLICES IN LIEU OF SPECIFIED LAP SPLICE LENGTHS.

1 S62.41 TYPICAL MASONRY WALL REINFORCING LAP SPLICE
1" = 1'-0"

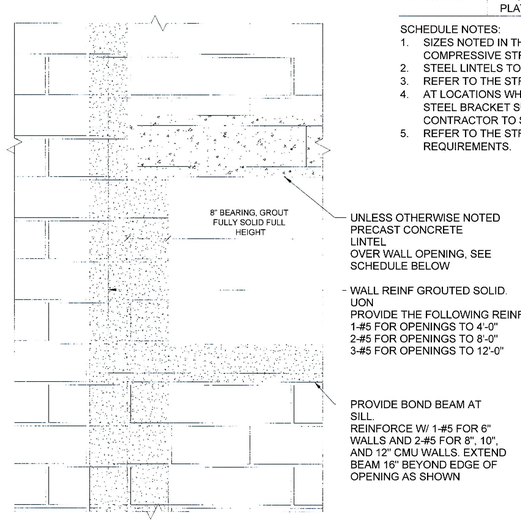



2 S62.41 TYPICAL MASONRY WALL CONTROL JOINT DETAIL
1" = 1'-0"

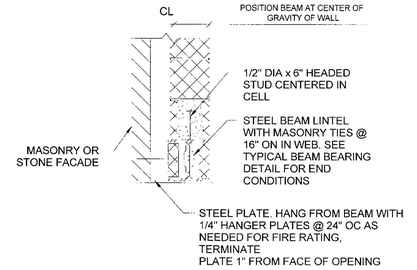
NON LOAD BEARING CMU WALL LINTEL SCHEDULE

| OPNG WIDTH | 6" CMU | 8" CMU | 12" CMU |
|---|---|---|---|
| UP TO 4'-0" | 6"x8" W/ 1-#4 T&B | 2-4"x8" W/ 1-#4 T&B | 3-4"x8" W/ 1-#4 T&B |
| UP TO 8'-0" | 6"x8" W/ 1-#5 T&B | 2-4"x8" W/ 1-#5 T&B | 3-4"x8" W/ 1-#5 T&B |
| UP TO 12'-0" | N/A, USE 8" CMU PLATE | W8x18 W/ 3/8" HUNG | W8x28 W/ 3/8" HUNG PLATE |

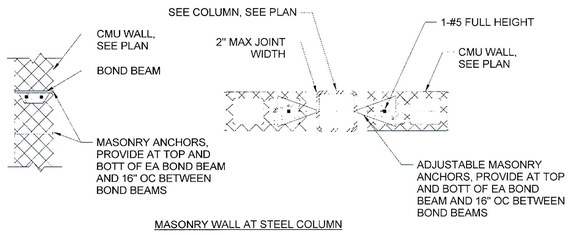
SCHEDULE NOTES:
1. SIZES NOTED IN THE SCHEDULE ARE FOR PRECAST CONCRETE LINTELS WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI
2. STEEL LINTELS TO BE HOT DIPPED GALVANIZED
3. REFER TO THE STRUCTURAL NOTES FOR LOOSE LINTEL SIZES FOR THE BRICK FACADE
4. AT LOCATIONS WHERE MASONRY OPENING IS DIRECTLY ADJACENT TO A CONCRETE WALL, PROVIDE A STEEL BRACKET SUPPORT BOLTED TO THE CONCRETE WALL TO SUPPORT THE MASONRY LINTELS. CONTRACTOR TO SUPPORT BRACKET SHOP DRAWINGS FOR REVIEW.
5. REFER TO THE STRUCTURAL NOTES AND / OR SPECIFICATIONS FOR JOINT REINFORCING REQUIREMENTS.



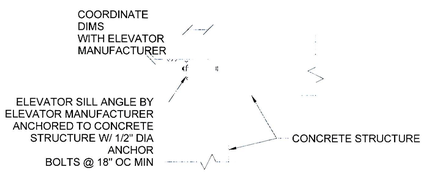

3 S62.41 TYPICAL NON LOAD BEARING CMU WALL OPENING DETAIL
1" = 1'-0"



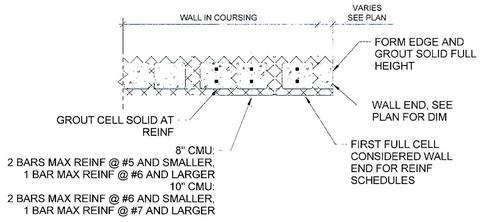

STEEL BEAM LINTEL DETAIL




MASONRY WALL AT STEEL COLUMN

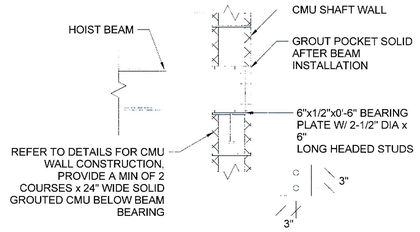



SILL ANGLE DETAIL AT CONCRETE




MASONRY WALL REINFORCING

4 S62.41 TYPICAL MASONRY WALL REINFORCING
1" = 1'-0"



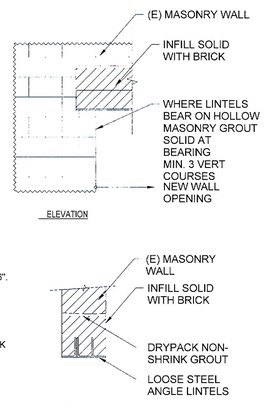

HOIST BEAM ATTACHMENT TO CMU WALL

5 S62.41 TYPICAL ELEVATOR HOIST BEAM AND SILL DETAILS
1" = 1'-0"

LOOSE LINTEL SCHEDULE
(NON-LOADBEARING WALLS)

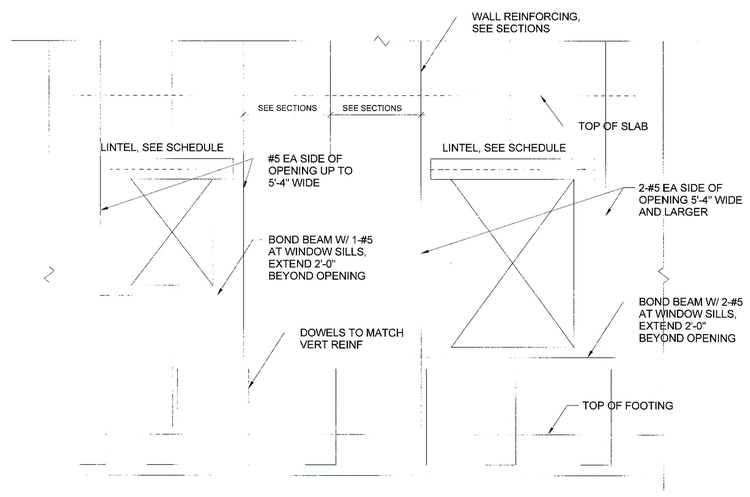
| M.O. WIDTH (MAX) | WALL THICKNESS 4" | WALL THICKNESS 6" | SECTION 4" | SECTION 6" |
|---|---|---|---|---|
| TO 3'-0" | L 3 1/2 x 3 1/2 x 1/4 | L 5 x 5 x 5/16 | L | L |
| TO 4'-0" | L 3 1/2 x 3 1/2 x 1/4 | L 5 x 5 x 5/16 | L | L |
| TO 5'-0" | L 4 x 3 1/2 x 1/4 | L 5 x 5 x 5/16 | L | L |
| TO 6'-0" | L 4 x 3 1/2 x 1/4 | L 5 x 5 x 5/16 | L | L |
| TO 7'-0" | L 5 x 3 1/2 x 1/4 | L 5 x 5 x 3/8 | L | L |
| TO 8'-0" | L 6 x 3 1/2 x 5/16 | L 6 x 6 x 3/8 | L | L |
| TO 8'-0" | 4" x 8" NOM DIMENSION PRECAST LINTEL w/ 1-#4 TOP AND BOTT | 6" x 8" NOM DIMENSION PRECAST LINTEL w/ 2-#4 TOP AND BOTT | | |
| TO 12'-0" | W6x12 WITH 1/4" HUNG PLATE | W6x12 WITH 1/4" HUNG PLATE | L | L |

BEARING AND NON-LOADBEARING WALL LINTEL SCHEDULE NOTES:
1. GALV ALL LINTELS IN EXTERIOR WALLS AND EXTERIOR WALL BACKUP.
2. MINIMUM THICKNESS OF LOOSE LINTEL ANGLES IN EXTERIOR WALLS TO BE 5/16".
3. BEARING WIDTH SHALL BE 1" PER FOOT OF CLEAR SPAN ON EACH END. MINIMUM WIDTH SHALL BE 8" IN BEARING WALLS, AND 6" IN NON-LOADBEARING WALLS, UON.
4. GROUT CMU FOR (16") x (FULL HEIGHT OF OPENING) TO UNDERSIDE OF LINTEL BEARING (TYP, UNO).
5. GROUT OPEN CELLS OF UPPER COURSES MONOLITHICALLY w/ U-SHAPED BLOCK LINTEL.
6. PRECAST CONCRETE (PC) LINTELS SHALL BE MADE OF 3000 PSI CONCRETE (MINIMUM 28 DAY COMPRESSIVE STRENGTH).
7. USE (2) 4" PC UNITS FOR 8" WALL, 4" + 6" PC UNITS FOR 10" WALL, (2) 6" OR (3) 4" PC UNITS FOR 12" WALL, ETC.
8. USE ARCHITECTURAL AND MECHANICAL DRAWINGS TO COORDINATE LINTEL ELEVATIONS WITH DOOR SCHEDULE, CEILING HEIGHTS, DUCT ELEVATIONS, ETC. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW WITH THIS INFORMATION.




NOTES: LOOSE STEEL ANGLE LINTELS NOT INTENDED TO BE USED UNDER BEAM BEARING, UON.

6 S62.41 TYPICAL LOOSE STEEL ANGLE LINTEL
1" = 1'-0"




NOTES:
1. REFERENCE NOTES AND TYPICAL DETAILS FOR LINTEL INFORMATION.
2. REFERENCE NOTES AND TYPICAL DETAILS FOR MASONRY REINFORCEMENT LAP SPLICE LENGTH.
3. REINFORCING AS SHOWN SHALL BE TYPICAL UNLESS NOTED OTHERWISE BY SPECIFIC BUILDING SECTIONS.

7 S62.41 TYPICAL WALL REINFORCING AT MASONRY OPENINGS
1" = 1'-0"

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

CERTIFIED

Union Brothers Furniture Company
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

Masonry Details

| Project Number | Date |
|---|---|
| 16225 | 05/03/17 |
| Drawn by: SR | Checked by: JT |
| NTS/MHT SUBMISSION | 09-30-16 |

| Num. | Description | Date |
|---|---|---|

PERMIT/ CONSTRUCTION 10-05-17

STATE OF MARYLAND JIAN HORNG TUNG PROFESSIONAL ENGINEER 10047

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Third Floor
Washington, DC 20009

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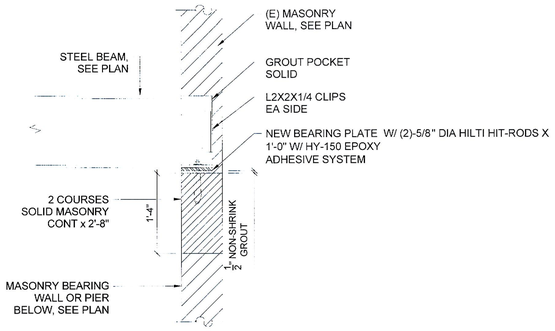
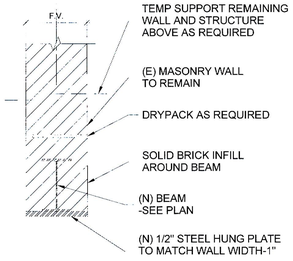
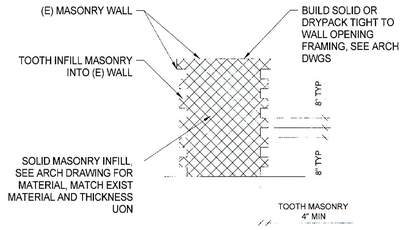



NOTES:
1. MASONRY WALL/PIER REINFORCEMENT NOT SHOWN FOR CLARITY.
2. PROVIDE 6"X8"X5/8" BEARING PLATE IF NONE IS SPECIFIED ON PLAN OR NOTES.

1 S62.42 TYPICAL STEEL BEAM BEARING, MASONRY WALL
1" = 1'-0"

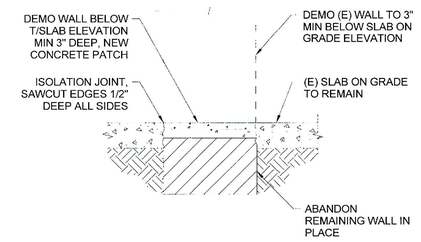



2 S62.42 TYPICAL STEEL HEADER
1" = 1'-0"

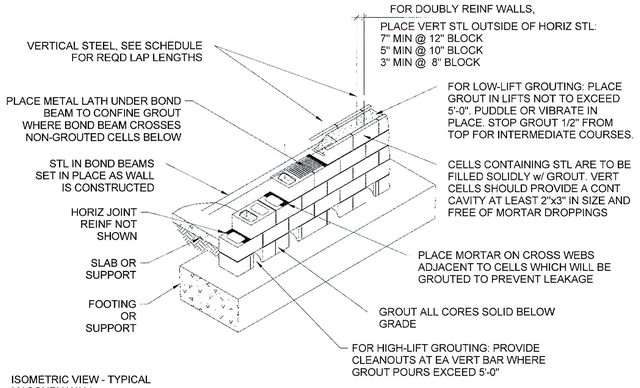



NOTE:
1. MATCH MATERIAL AND THICKNESS OF EXIST WALL.
2. SEE ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR ADDITIONAL INFORMATION.

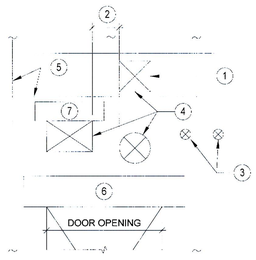
3 S62.42 TYPICAL INFILL EXISTING OPENING
1" = 1'-0"




4 S62.42 TYPICAL SLAB ON GRADE AT WALL DEMO
1" = 1'-0"



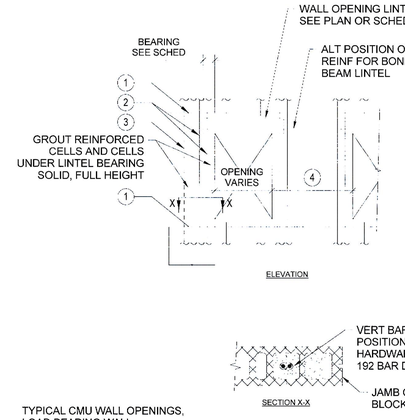

5 S62.42 ISOMETRIC VIEW - TYPICAL MASONRY WALL CONSTRUCTION
1" = 1'-0"




ELEVATION

6 S62.42 TYPICAL MECHANICAL/UTILITY UNIT CMU WALL OPENINGS
1" = 1'-0"

KEY NOTES:
1. OPENINGS LARGER THAN 12"x12" SHALL BE CONSTRUCTED WITHIN WALL, NOT CUT AFTER WALL IS BUILT.
2. PROVIDE MINIMUM 8" CLEAR BETWEEN OPENINGS LARGER THAN 10"x10" OR 10"⌀.
3. CORE HOLES PERMITTED FOR PIPES UP TO 12"⌀, BUT SHALL MEET REQUIREMENTS 1 & 2 ABOVE.
4. LOCATE OPENINGS LARGER THAN 10"x10" OR 10"⌀ ABOVE DOOR OPENINGS.
5. SEE TYPICAL DETAIL FOR ADDITIONAL REINFORCING @ CMU WALL OPENINGS.
6. PROVIDE LINTEL OVER DOORS AND CORRIDORS IN ACCORDANCE WITH PLANS & SCHEDULE.
7. PROVIDE LINTEL TYPE [X] FOR MECH/UTIL OPENINGS FROM 12" TO 18" WIDE.

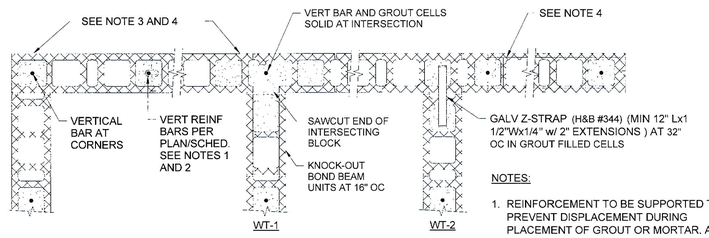



ELEVATION

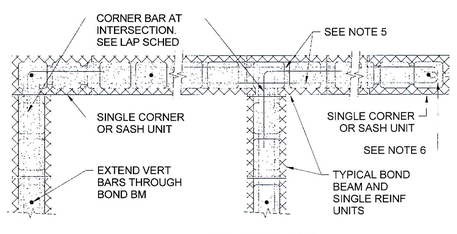
KEY NOTES:
1. HORIZ BARS: 1-#5 ABOVE AND BELOW OPENING IN BOND BEAM
2. JAMB BARS: FOR OPG's > 3'-0" WIDE, MIN (1) BAR + (½) AREA OF REINF INTERRUPTED BY OPENING FROM FLOOR TO FLOOR

   NOTE: FOR UNREINFORCED WALLS, USE MIN 1-#5 BAR FOR OPG's > 3'-0" WIDE
3. ALTERNATE JAMB BAR LOCATION POSITION TO AVOID LINTEL BEARING
4. MINIMUM DIMENSION BETWEEN ADJACENT OPENINGS SHALL BE 24", UNO

7 S62.42 TYPICAL CMU WALL OPENINGS, LOAD BEARING WALL ADDITIONAL REINFORCEMENT
1" = 1'-0"




TYPICAL CMU WALL AND REINFORCEMENT




BOND BEAM REINF LAYOUT

8 S62.42 TYPICAL ADD REINF AT WALL INTERSECTIONS
1" = 1'-0"

NOTES:
1. REINFORCEMENT TO BE SUPPORTED TO PREVENT DISPLACEMENT DURING PLACEMENT OF GROUT OR MORTAR. AS A MINIMUM PROVIDE WIRE POSITIONERS, OR SIMILAR DEVICE, AT THE TOP AND BOTTOM ENDS, AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS.
2. VERT REINF FULL WALL HEIGHT. PROVIDE FULL LAP SPLICE LENGTHS. FULLY GROUT REINF CELLS.
3. AT CORNERS AND INTERSECTIONS, BOND WALLS TOGETHER BY INTERLOCKING ALTERNATE COURSES, UNLESS NOTED OTHERWISE.
4. LADDER-TYPE HORIZONTAL JOINT REINFORCEMENT PER SPECS. USE PREFAB 'T' & 'L' SECTIONS AT INTERSECTIONS AND CORNERS.
5. RUN BOND BEAM REINF CONTINUOUS THROUGH INTERSECTIONS AND CORNERS. INTERRUPT BOND BEAM REINF @ CONTROL JOINTS, EXCEPT MAKE CONTINUOUS AT TOP OF WALLS AND FLOOR LEVELS.
6. STANDARD 180° HOOK AT END OF WALLS & AT CJ's. OPTION TO USE 90° HOOK INTO CMU CORE BELOW.

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

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1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

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| 16225 | 05/03/17 |
| Drawn by: SR | Checked by: JT |

| Num. | Description | Date |
|---|---|---|
| | PERMIT SUBMISSION | 08/30/16 |

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STATE OF MARYLAND JAN HORNG TUNG PROFESSIONAL ENGINEER 0037

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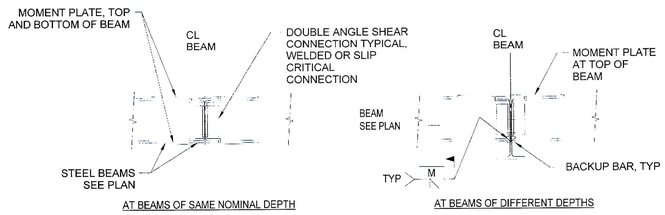
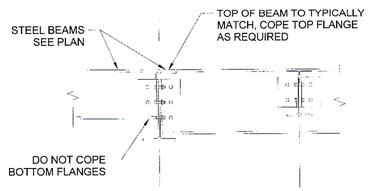


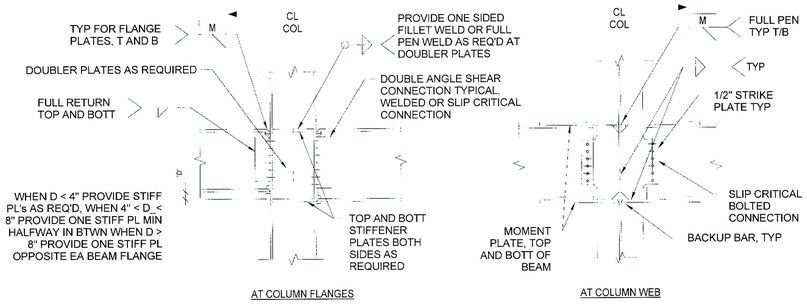

INDICATED ◄► ON PLAN FOR FULL MOMENT CONNECTIONS

1 S62.50 TYPICAL BEAM TO BEAM MOMENT CONNECTION
1" = 1'-0"

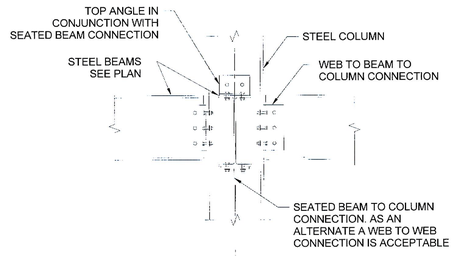



NOTES:
1. SEE PLAN FOR BEAM SIZES.
2. DESIGN CONNECTIONS AS SIMPLE SHEAR CONNECTIONS PER REACTIONS INDICATED ON PLAN OR GENERAL NOTES.

2 S62.50 TYPICAL BEAM TO BEAM SHEAR CONNECTION
1" = 1'-0"

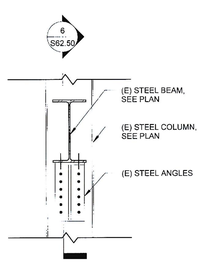



3 S62.50 TYPICAL BEAM TO COLUMN MOMENT CONNECTION
1" = 1'-0"

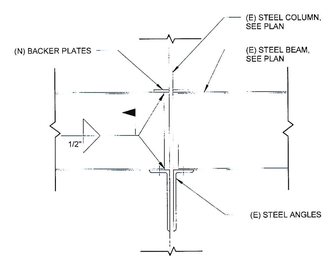



NOTES:
1. SEE PLAN FOR BEAM AND COLUMN SIZES.
2. DESIGN CONNECTIONS AS SIMPLE SHEAR CONNECTIONS PER REACTIONS INDICATED ON PLAN OR GENERAL NOTES.

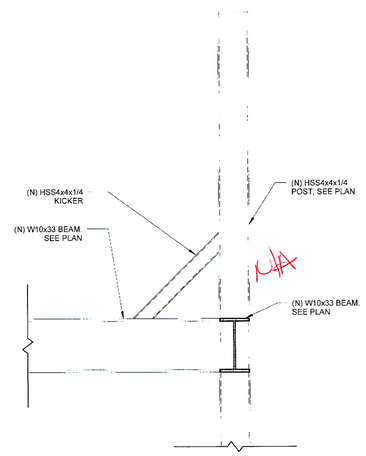
4 S62.50 TYPICAL BEAM TO COLUMN SHEAR CONNECTION
1" = 1'-0"




5 S62.50 ROOF BEAM REINFORCEMENT
1" = 1'-0"




6 S62.50 STEEL REINFORCING WELD
1" = 1'-0"




7 S62.50 Section 2
1" = 1'-0"

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

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SHEET TITLE

## Steel Details

| Project Number | 16225 | Date | 05/14/17 |
|---|---|---|---|
| Drawn by | Author | Checked by | Checker |

NPS/MHT SUBMISSION 09/30/15

| Num. | Description | Date |
|---|---|---|

**PERMIT/ CONSTRUCTION 10-05-17**

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S62.50

STATE OF MARYLAND — WAI HORNG TUNG — PROFESSIONAL ENGINEER — 10/5/17

Field & Tung Structural Engineers
2031 Florida AVenue NW
Third Floor
Washington, DC 20009

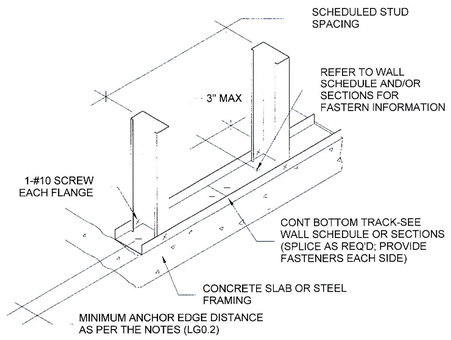
**PROFESSIONAL CERTIFICATION**

"I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND."

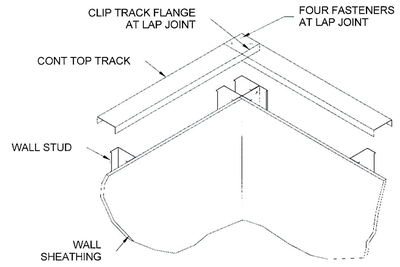
**LICENSE NO.: 25862**

EXPIRATION DATE: 02/05/2019

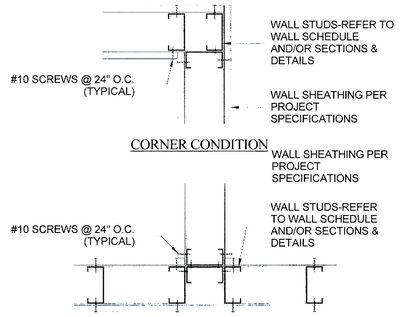
10/4/2017 7:28:35 AM



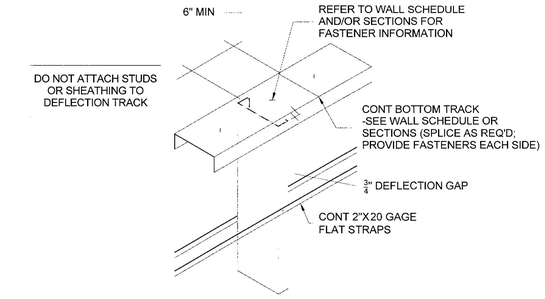

1 S62.55 TYPICAL BOTTOM TRACK ANCHORAGE DETAIL
1" = 1'-0"



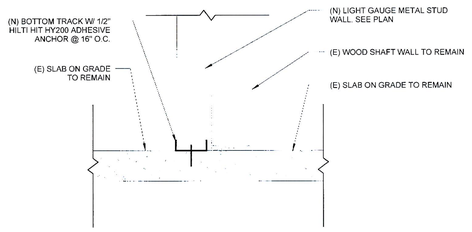

2 S62.55 TYPICAL WALL FRAMING AT CORNER
1" = 1'-0"




3 S62.55 TYPICAL JUNCTION DETAIL
1" = 1'-0"




4 S62.55 TYPICAL DEFLECTION TRACK ASSEMBLY
1" = 1'-0"




5 S62.55 Shaft Wall
1" = 1'-0"

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone 410.539.4300 Fax 410.539.0660

CERTIFIED

STATE OF MARYLAND
JAN HORNG TUNG
PROFESSIONAL ENGINEER
10/5/17

Field & Tung Structural Engineers
2031 Florida AVenue NW
Third Floor
Washington, DC 20009

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**LICENSE NO.: 25862**

EXPIRATION DATE: 02/05/2019

**Union Brothers Furniture Company**

37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Cold Formed Metal Details**

| Project Number: 16225 | Date: 05/12/17 |
|---|---|
| Drawn by: SR | Checked by: JT |
| NPS/MIT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT/ CONSTRUCTION 10-05-17**

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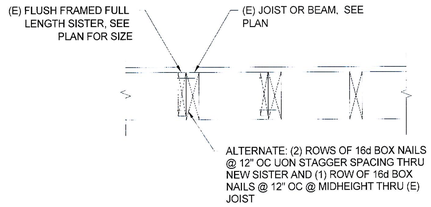
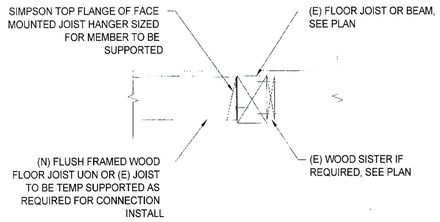
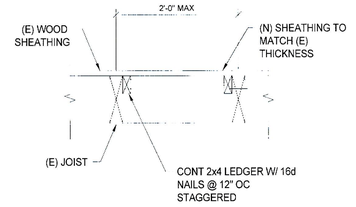


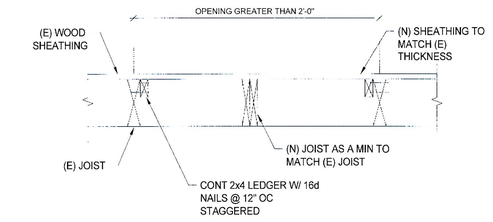

1 S62.60 TYPICAL JOIST SISTERING DETAIL
1" = 1'-0"



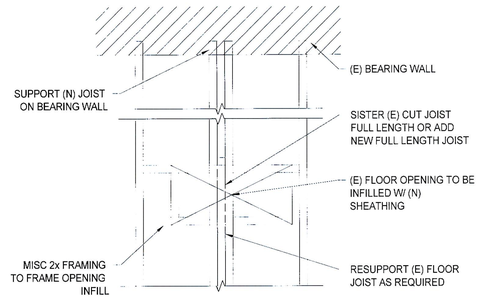

2 S62.60 TYPICAL FLOOR DETAIL
1" = 1'-0"




3 S62.60 TYPICAL WOOD DECKING INFILL
1" = 1'-0"

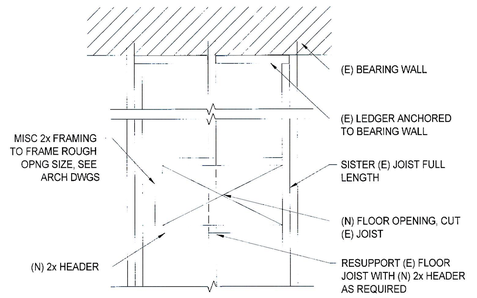



4 S62.60 TYPICAL WOOD DECKING INFILL
1" = 1'-0"



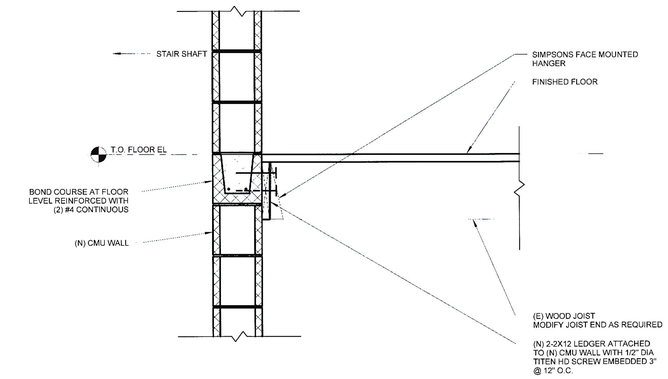

NOTES:
1. FIELD VERIFY OPENING LAYOUT RELATIVE TO (E) JOISTS.
2. SUPPORT ALL FRAMING WITH NEW JOIST HANGERS.

5 S62.60 TYPICAL FLOOR OPENING INFILL
1" = 1'-0"

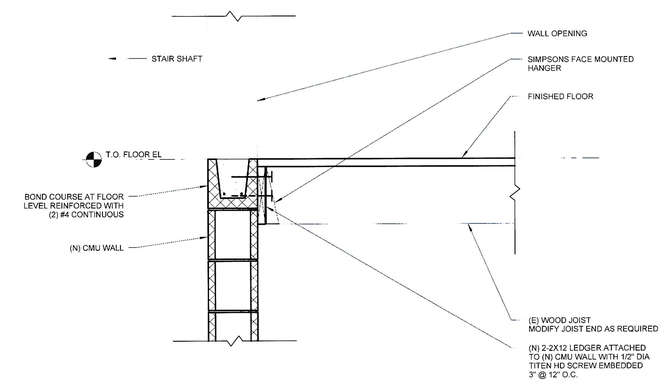



NOTES:
1. DETAIL IS INTENDED FOR RESUPPORT OF ONE JOIST AND IS NOT INTENTED TO BE USED WHERE MULTIPLE JOISTS AND AN (E) BEAM REQUIRES RESUPPORT FOR A NEW FLOOR OPENING.
2. FIELD VERIFY OPENING LAYOUT RELATIVE TO (E) JOISTS.
3. SUPPORT ALL FRAMING WITH NEW JOIST HANGERS.

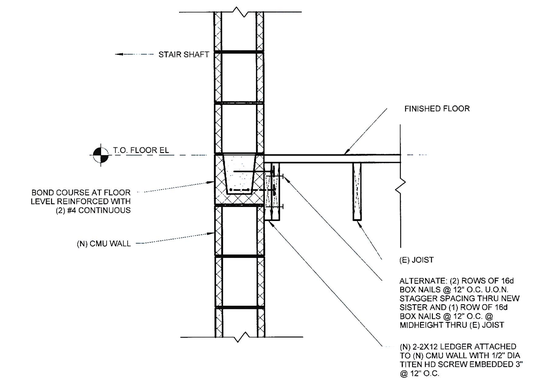
6 S62.60 TYPICAL NEW FLOOR OPENING
1" = 1'-0"




7 S62.60 TYPICAL EXIST JOIST TO NEW CMU WALL 1
1" = 1'-0"




8 S62.60 TYPICAL EXIST JOIST TO NEW CMU WALL 2
1" = 1'-0"




9 S62.60 TYPICAL EXIST JOIST TO NEW CMU WALL 3
1" = 1'-0"

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

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STATE OF MARYLAND · VAN HORING TUNG · PROFESSIONAL ENGINEER · 10/4/17

Field & Tung Structural Engineers
2031 Florida AVenue NW
Third Floor
Washington, DC 20009

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**LICENSE NO.: 25862**

EXPIRATION DATE: 02/05/2019

**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

## Wood Details

| Project Number | Date |
|---|---|
| 16225 | 05/03/17 |
| Drawn by: SR | Checked by: JT |
| NPS/MHT SUBMISSION | 09/13/16 |

| Num. | Description | Date |
|---|---|---|

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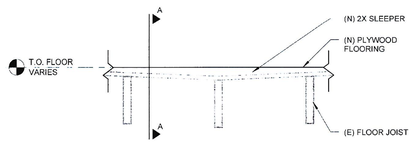
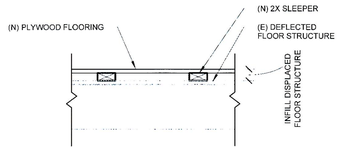
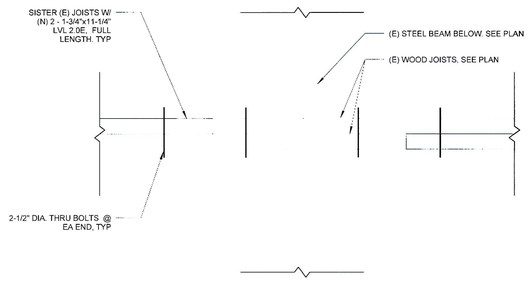



**SECTION A-A**

1 S62.61 FLOOR LEVELING DETAIL
1" = 1'-0"




2 S62.61 ROOF JOISTS SISTERING DETAIL
1" = 1'-0"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1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660


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**Field & Tung Structural Engineers**
**2031 Florida AVenue NW**
**Third Floor**
**Washington, DC 20009**


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**LICENSE NO.: 25862**

EXPIRATION DATE: 02/05/2019

**Union Brothers Furniture Company**

37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

## Wood Details

| Project Number | Date |
|---|---|
| 16225 | 06/14/17 |
| Drawn by: Author | Checked by: Checker |
| NPS/MIT SUBMISSION | 06/30/16 |

| Num. | Description | Date |
|---|---|---|

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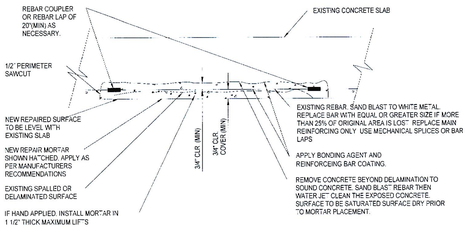
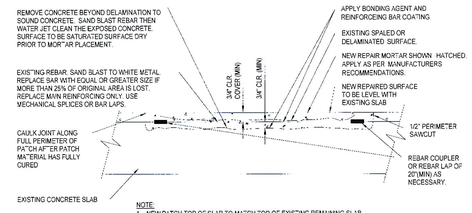


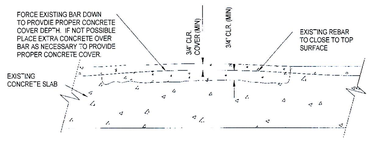

NOTE:
1. SIMILAR DETAIL APPLIES TO REPAIRS AT DROP PANELS AND CHANGES IN SLAB THICKNESS. FINISH SURFACE OF NEW PATCH SHALL MATCH EXISTING ADJACENT CONCRETE SURFACES ON ALL SIDES.
2. IF PARTIAL DEPTH PATCH EXCEED 1/2 THICKNESS OF EXISTING SLAB DEPTH, THROUGH SLAB REPAIR MAY BE PERFORMED BUT PRICE FOR WORK SHALL BE CONSIDERED A PARTIAL DEPTH REPAIR
3. REPAIR MATERIAL MAY BE HAND APPLIED, FORMED AND PUMPED, OR MACHINE APPLIED.

1 S63.30 TYPICAL CONCRETE REPAIR DETAIL-1
1" = 1'-0"



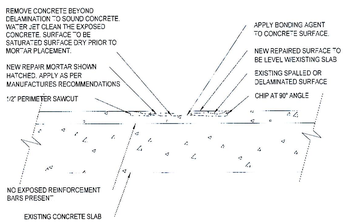

NOTE:
1. NEW PATCH TOP OF SLAB TO MATCH TOP OF EXISTING REMAINING SLAB ON ALL SIDES SLOPED TO DRAIN.
2. TYPICAL DETAIL IS APPLICABLE FOR PARTIAL DEPTH SLAB ON GRADE AND TOPPING SLAB REPAIRS.

2 S63.30 TYPICAL CONCRETE TOP SLAB REPAIR DETAIL
1" = 1'-0"



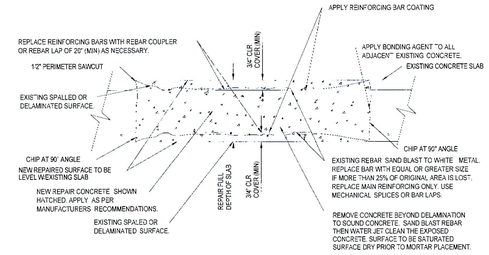

NOTE:
1. SEE DETAILS 02 AND 04 FOR TYPICAL INFORMATION NOT SHOWN. PROVIDE NEW BARS AS NECESSARY PER DETAIL 02

3 S63.30 TYPICAL CONCRETE TOP OF SLAB REPAIR 2
1" = 1'-0"



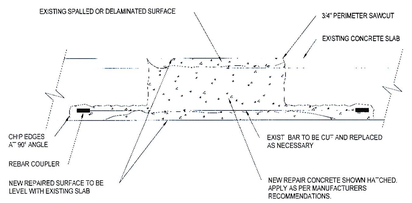

NOTE:
1. IF ANY EXISTING REINFORCEMENT BARS ARE EXPOSED, CHIP CONCRETE TO A MINIMUM OF 3/4" BEHIND REINFORCEMENT BARS. SEE DETAILS 01 AND 02 FOR TYPICAL INFORMATION NOT SHOWN.

4 S63.30 TYPICAL CONCRETE SLAB REPAIR DETAIL-4
1" = 1'-0"



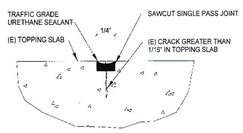

NOTE:
1. NEW PATCH TOP AND BOTTOM SURFACES TO MATCH EXISTING REMAINING SLAB ON ALL SIDES. SLOPE TOP OF SLAB TO DRAIN AS REQUIRED.

5 S63.30 TYPICAL CONCRETE THROUGH SLAB REPAIR-5
1" = 1'-0"



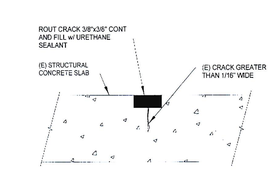

NOTE:
1. SEE DETAILS 01 AND 05 FOR TYPICAL INFORMATION NOT SHOWN

6 S63.30 TYPICAL CONCRETE SLAB REPAIR DETAIL-6
1" = 1'-0"




NOTES:
DETAIL ALSO APPLICABLE FOR CONCRETE SLAB ON GRADE.

7 S63.30 TYPICAL CONCRETE SLAB CRACK REPAIR
1" = 1'-0"




8 S63.30 TYPICAL CRACK REPAIR-8
1" = 1'-0"

CONCRETE REPAIR NOTES:

1. CONTRACTOR SHALL REPIAR ALL DETERIORATED CONCRETE WITHIN BUILDING, IN AREAS OF PREVIOUS BATHROOMS, KITCHENS, AND OTHER PORTIONS OF THE BUILDING SUBJECT TO CONCRETE DETERIORATION.
2. CONTRACTOR IS RESPONSIBLE FOR CONTAINMENT AND PROTECTION OF REMAINING STRUCTURE. ANY RUNOFF CREATED MAY ONLY BE INTRODUCED INTO THE EXISTING BUILDING DRAINAGE SYSTEM AFTER TREATMENT TO REMOVE SEDIMENT AND TO REDUCE THE PH OF THE WATER TO LIMITS ACCEPTABLE TO LOCAL CODES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A SEDIMENT AND PH CONTROL OPERATION TO TREAT THE RUNOFF IF REQUIRED. DRAINS MAY BE SEALED OFF OR PIPES DISCONNECTED OR RE-ROUTED BY CONTRACTOR IN ORDER TO DIRECT RUNOFF TO SEDIMENT AND PH CONTROL OPERATION. CONTRACTOR SHALL RECONNECT THESE DRAINS AFTER COMPLETION OF THE REPAIRS IN THAT PHASE OF WORK.
3. PROTECTION TO BE PROVIDED AT ALL EXISTING BUILDING SYSTEMS THAT MAY BE AFFECTED BY CONCRETE REPAIR SCOPE OF WORK. ANY TEMPORARY MODIFICATIONS TO BE CORRECTED AT COMPLETION OF CONCRETE REPAIR. ANY PERMANENT MODIFICATIONS TO BE DOCUMENTED BY CONTRACTOR FOR CONSTRUCTION AS BUILTS. ALL MODIFICATIONS TO BUILDING SYSTEMS TO BE PRIOR APPROVED BY OWNER.
4. SAW CUT TO A DEPTH OF 1/2" AROUND FULL PERIMETER OF REPAIR AREAS. REMOVE CONCRETE TO A MINIMUM OF 3/4" AROUND EXPOSED BARS AND REINFORCEMENT AND DEEPER AS NECESSARY. EXISTING REINFORCEMENT BARS WITHIN THE CONCRETE DEMOLITION EXTENT ARE TO REMAIN IN PLACE AND INTACT. INSTALL SUPPLEMENTAL SLAB REINFORCEMENT AS REQUIRED.
5. EXPOSED REINFORCEMENT BARS THAT HAVE LOST 20% OR MORE OF ITS CROSS SECTIONAL AREA SHALL BE SUPPLEMENTED WITH NEW BARS THAT ARE TO BE TENSION LAP SPLICED 20" EACH END OR MECHANICALLY SPLICED WITH SOUNDBARS IN SOUND CONCRETE. REPAIR AREA SHALL BE OF SUCH SIZE TO ACCOMMODATE REBAR LAP. ALL SUPPLEMENTAL REINFORCEMENT OR NEW REINFORCEMENT INSTALLED IS TO BE DOCUMENTED BY CONTRACTOR FOR CONSTRUCTION AS BUILTS.
6. SANDBLAST OR SHOTBLAST CLEAN EXPOSED REINFORCING BARS AND ADJACENT CONCRETE SURFACES, APPLY CEMENT SLURRY BONDING AGENT OR EQUIVALENT BONDING AGENT, AND PLACE FINAL REPAIR MATERIAL/CONCRETE PATCH IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. PATCH MATERIAL SHALL BE TROWELED SMOOTH TO MATCH ADJACENT SURFACES. ALL EDGES SHALL BE SQUARE AND PLUMB WITH NO FEATHERED EDGES
7. NORMAL USE ON REPAIRED SURFACES SHALL NOT BE RESUMED UNTIL THE REPAIR MATERIAL HAS FULLY CURED AND HAS ATTAINED 100% OF ITS DESIGN STRENGTH AT REPAIRED AREAS AND IS SUBJECT TO REVIEW AND APPROVAL OF ENGINEER.
8. CONTRACTOR SHALL INCLUDE ESTIMATED QUANTITY OF REPAIRS INCLUDED WITHIN BID. PROVIDE UNIT PRICES FOR REPAIRS THAT MAY EXCEED THE ESTIMATED QUANTITIES.
9. PREPARED AREAS OF REINFORCED CONCRETE REPAIR SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACEMENT OF NEW CONCRETE. REVIEW IS INTENDED TO CONFIRM EXTENT OF REPAIRS AND PROPER PREPARATION OF SURFACES AND REMAINING REINFORCEMENT AND SUPPLEMENTAL REINFORCEMENT REQUIRED FOR CONCRETE REPAIR SCOPE. ADDITIONAL REPAIR EXTENTS AND WORK REQUIRED TO MEET DESIGN INTENT IS AT THE DISCRETION OF THE ENGINEER.


MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660


CERTIFIED

Union Brothers Furniture Company
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Concrete Repair Details**

| Project Number | 16225 | Date | 05/12/17 |
|---|---|---|---|
| Drawn by | SR | Checked by | JT |

NPS/MHT SUBMISSION 06/30/10

| Num. | Description | Date |
|---|---|---|

PERMIT/ CONSTRUCTION 10-05-17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S63.30

STATE OF MARYLAND
JAW HORNG TUNG
No. 25862
PROFESSIONAL ENGINEER
10/5/17


Field & Tung Structural Engineers
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Washington, DC 20009


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**LICENSE NO.: 25862**

EXPIRATION DATE: 02/05/2019

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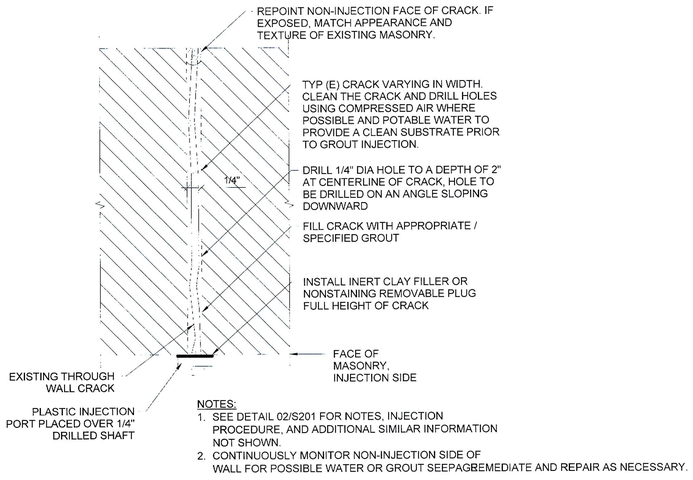
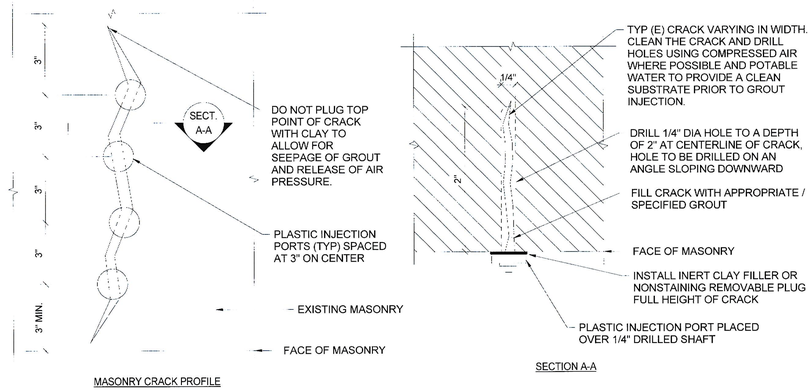



NOTES:
1. SEE DETAIL 02/S201 FOR NOTES, INJECTION PROCEDURE, AND ADDITIONAL SIMILAR INFORMATION NOT SHOWN.
2. CONTINUOUSLY MONITOR NON-INJECTION SIDE OF WALL FOR POSSIBLE WATER OR GROUT SEEPAGREMEDIATE AND REPAIR AS NECESSARY.

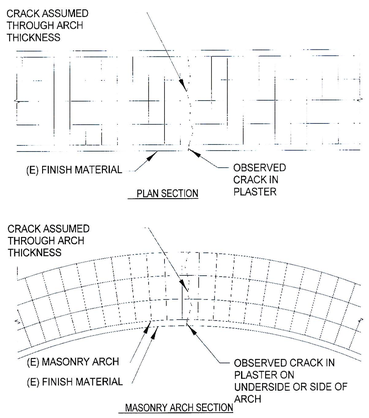
1 S63.40 TYPICAL CRACK REPAIR - FULL WALL DEPTH
1" = 1'-0"




NOTES:
1. DETAIL APPLIES TO BRICK MASONRY AND STONE.
2. REMOVE AND REINSTALL (E) FINISHES AS NECESSARY TO PERFORM THE REPAIR. REINSTALLED FINISHES SHALL MATCH (E) ADJACENT FINISHES TO THE SATISFACTION OF THE OWNER.
3. DRYPACK AND/OR TUCK POINT AS REQUIRED. FINISH EXPOSED SURFACE TO MATCH APPEARANCE OF ADJACENT MASONRY.
4. REPOINT ALL ADJACENT MORTAR JOINTS.
5. CONTRACTOR TO DETERMINE ESTIMATED VOLUME OF INJECTION MATERIAL AND PROVIDE DETAILING INFORMATION ON THIS CALCULATION. CONTRACTOR TO PERFORM EXPLORATORY DEMOLITION IF REQUIRED AND IS SOLELY RESPONSIBLE FOR VOLUME OF MATERIAL INSTALLED.

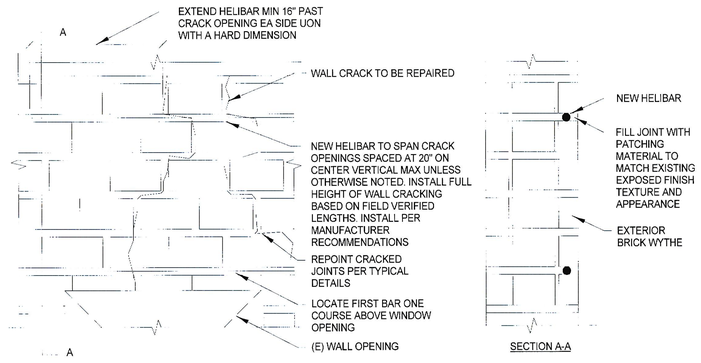
INJECTION PROCEDURE:
1. BEFORE BEGINNING GROUT INJECTION, CLEAN CRACK WITH PRESSURIZED AIR AND BLUSH WITH WATER AT ALL INJECTION PORTS, WITHIN EIGHT HOURS PRIOR TO GROUT INJECTION. FLUSH FROM TOP DOWN UNTIL WATER AT BOTTOM PORTS RUN CLEAR, UNSING AS LITTLE WATER AS NECESSARY. MONITOR POTENTIAL WATER RUN OUT INTO ADJACENT AREAS AND REMEDIATE AND REPAIR AS NECESSARY.
2. BEGIN PRESSURE INJECTION OF GROUT AT LOWEST INJECTION PORT USING HAND OR POWER OPERATED PUMP (30 PSI MAXIMUM PRESSURE, 1/2 GALLON PER MINUTE MAXIMUM CAPACITY).
3. WHEN GROUT BEGINS TO FLOW OUT OF NEXT HIGHEST PORT, PLUG LOWER PORT AND BEGIN INJECTING AT NEXT HIGHEST PORT. REPEAT PROCESS UNTIL GROUT FLOWS FROM TOP POINT OF CRACK. REMOVE INJECTION PORTS AND CLAY FILLER WHEN GROUT HAS SET.
4. CLEAN LEFTOVER CLAY AND GROUT RESIDUE FROM MASONRY. FILL THE SURFACE OF THE CRACK AND THE 1/4" DIA DRILLED SHAFT WITH PATCHING MORTAR TO MATCH THE COLOR AND TEXTURE OF EXISTING MASONRY AT VISUALLY EXPOSED LOCATIONS.

2 S63.40 TYPICAL CRACK REPAIR - PARTIAL DEPTH
1" = 1'-0"

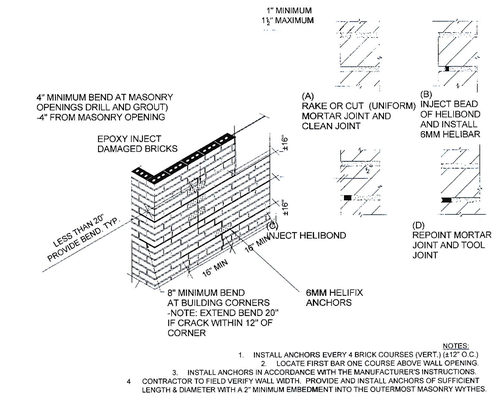



NOTES:
1. TYPICAL DETAIL SIMILARLY APPLIES TO CRACK REPAIRS OF MASONRY WALL CONDITIONS.
2. OPEN PLASTER AND FINISHES ALONG CRACK TO EXPOSE BRICK / MASONRY SUBSTRATE.
3. DETERMINE IF EXISTING SUBSTRATE IS CRACKED. IF SO, INJECT JAHN M30#31 OR M40 INTO CRACK. SEE TYPICAL CRACK REPAIR DETAILS.
4. IF NOTICABLE DISPLACEMENT (GREATER THAN 1/8") ON SIDES OF CRACK IS PRESENT, INSTALL 2-1/2" DIA STAINLESS STEEL RODS EPOXY ADHERED TO MASONRY, FOR EACH 16" OF ARCH WIDTH, ON EACH SIDE OF CRACK. INSTALL PER TYPICAL PINNED CRACK DETAIL OR GROUT SOCK DETAIL.
5. REPAIR ALL FINISHES UPON COMPLETION OF SUBSTRATE REPAIR.

3 S63.40 TYPICAL MASONRY ARCH REPAIR
1/2" = 1'-0"

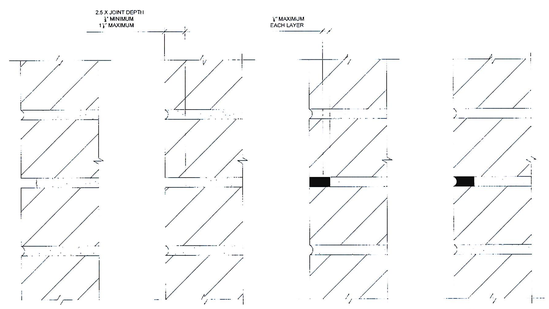



4 S63.40 TYPICAL HELIBAR REPAIR
1/2" = 1'-0"

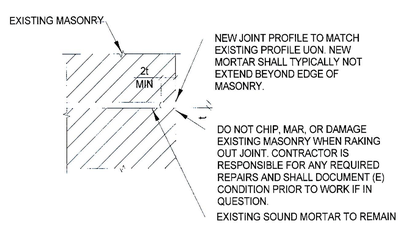



NOTES:
1. INSTALL ANCHORS EVERY 4 BRICK COURSES (VERT.) (±12" O.C.)
2. LOCATE FIRST BAR ONE COURSE ABOVE WALL OPENING.
3. INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
4. CONTRACTOR TO FIELD VERIFY WALL WIDTH. PROVIDE AND INSTALL ANCHORS OF SUFFICIENT LENGTH & DIAMETER WITH A 2" MINIMUM EMBEDMENT INTO THE OUTERMOST MASONRY WYTHES.

5 S63.40 TYPICAL HELIBAR REPAIR-2
1/2" = 1'-0"

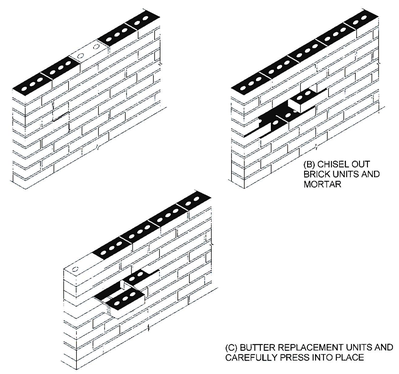



6 S63.40 TYPICAL MASONRY REPOINTING DETAIL
1/2" = 1'-0"

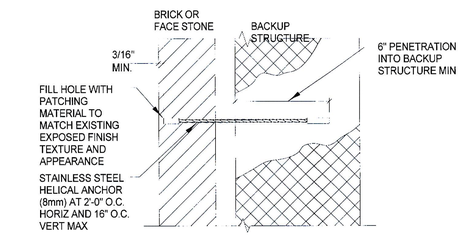



NOTE:
1. CUT BACK JOINT AT LEAST 2 TIMES THE EXISTING FIELD VERIFIED JOINT THICKNESS (1" MINIMUM) TO SOUND MATERIAL.
2. CONTACT ENGINEER IF DEPTH EXCESS 1/2 OF EXISTING MASONRY WYTHE.
3. CLEAN JOINT AND POINT WITH APPROPRIATE SELECTED POINTING MORTAR.

7 S63.40 TYPICAL MASONRY REPOINTING
1/2" = 1'-0"




8 S63.40 TYPICAL BRICK REPLACEMENT
1/2" = 1'-0"




NOTE:
CONTRACTOR TO FIELD VERIFY AND DETERMINE AND PROVIDE LENGTH OF HELICAL ANCHOR REQUIRED FOR APPLICATION.

9 S63.40 TYPICAL HELICAL ANCHOR SUPPORT
1/2" = 1'-0"

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

CERTIFIED

**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**Masonry Repair Details**

| Project Number | 16225 | Date | 05/03/17 |
|---|---|---|---|
| Drawn by | SR | Checked by | JT |
| AP&/MH SUBMISSION | | | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT/ CONSTRUCTION 10-05-17**

STATE OF MARYLAND · JIN HORNG TUNG · PROFESSIONAL ENGINEER · 10844

**Field & Tung Structural Engineers**
**2031 Florida AVenue NW**
**Third Floor**
**Washington, DC 20009**

**PROFESSIONAL CERTIFICATION**

"I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND."

**LICENSE NO.: 25862**

EXPIRATION DATE: 02/05/2019

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**S63.40**

10/4/2017 7:28:41 AM

## PLUMBING FIXTURE SCHEDULE

| DESIG. | DESCRIPTION | SAN | VENT | CW | HW | GAS | MANUFACTURER AND MODEL | TRIM & ACCESSORIES | REMARKS | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| P-1 | WATER CLOSET (FLOOR MOUNTED, FLUSH VALVE) | 4" | 2" | 1-1/4" | - | - | TOTO FLUSHOMETER TOILET MODEL CT705ENG FINISH: COTTON | SEAT: TOTO SC534 HEAVY DUTY, OPEN FRONT, LESS COVER FINISH: COTTON FLUSH VALVE: SLOAN G2 OPTIMA PLUS #8111-1.28 FINISH: BRUSHED NICKEL | 15" HEIGHT, ELONGATED BOWL, VITEROUS CHINA W/SANAGLOSS, 1.28 GPF<br>AUTOMATIC, BATTERY POWERED FLUSH VALVE | 1,2,3 |
| P-1A | WATER CLOSET - ADA COMPLIANT (FLOOR MOUNTED, FLUSH VALVE) | 4" | 2" | 1-1/4" | - | - | TOTO FLUSHOMETER TOILET MODEL CT705ELNG FINISH: COTTON | SEAT: TOTO SC534 HEAVY DUTY, OPEN FRONT, LESS COVER FINISH: COTTON FLUSH VALVE: SLOAN G2 OPTIMA PLUS #8111-1.28 FINISH: BRUSHED NICKEL | 17-1/2" HEIGHT, ELONGATED BOWL, VITEROUS CHINA W/SANAGLOSS, 1.28 GPF<br>AUTOMATIC, BATTERY POWERED FLUSH VALVE | 1,2,3 |
| P-2A | URINAL - ADA COMPLIANT | 2" | 1-1/2" | 3/4" | - | - | AMERICAN STANDARD WASHBROOK FLOWISE #6590 FINISH: WHITE | FLUSH VALVE: SLOAN ECOS #8186-0.125 FINISH: BRUSHED NICKEL | VITEROUS CHINA AUTOMATIC, BATTERY POWERED FLUSH VALVE 0.125 GPF | 1,2,3 |
| P-3 | LAVATORY (WALL MOUNT) | 1-1/2" | 1-1/2" | 1/2" | 1/2" | - | AMERICAN STANDARD LUCERNE MODEL 0356.015 FINISH: WHITE | FAUCET: KOHLER TABORET K-8211-4 FINISH: CHROME TRIM PLATE FOR 8" CENTERSET MIXING VALVE: WATTS SERIES LFMMV | VITEROUS CHINA BOWL W/8"ON CENTER FAUCET HOLES, FRONT OVERFLOW 1.5 GPM FAUCET W/0.5 GPM AERATORS PROVIDE FAUCET W/BELOW DECK THERMOSTATIC MIXING VALVE & GRID STRAINER | 1,3,4 |
| P-3A | LAVATORY - ADA COMPLIANT (WALL MOUNT) | 1-1/2" | 1-1/2" | 1/2" | 1/2" | 1/2" - | AMERICAN STANDARD LUCERNE MODEL 0356.015 FINISH: WHITE | FAUCET: KOHLER TABORET K-8211-4 FINISH: CHROME TRIM PLATE FOR 8" CENTERSET MIXING VALVE: WATTS SERIES LFMMV | VITEROUS CHINA BOWL W/8"ON CENTER FAUCET HOLES, FRONT OVERFLOW 1.5 GPM FAUCET W/0.5 GPM AERATORS PROVIDE FAUCET W/BELOW DECK THERMOSTATIC MIXING VALVE & GRID STRAINER | 1,3,4 |
| P-6 | WATER COOLER (BI-LEVEL & BARRIER-FREE) | 1-1/2" | 1-1/2" | 1/2" | - | - | WATER COOLER: HALSEY TAYLOR BI-LEVEL SERIES MODEL HVRGRN8BL-GFWF | PROVIDE WITH IN-LINE WATER FILTER. PROVIDE WITH INTEGRAL BOTTLE FILLER. | ADA COMPLIANT ELECTRICAL: 10 AMP, 120V-1PH | 1,2 |
| P-7 | SERVICE SINK (FLOOR MOUNTED) | 3" | - | 2" | 3/4" | 3/4" | SINK: FIAT MODEL MSB 2424 | FAUCET: FIAT MODEL 830-AA; ALUMINUM BUMPER GUARD, HOSE & BRACKET, MOP HANGER | 24"x24" MOLDED STONE SINK | 1,3 |
| FD-1 | FLOOR DRAIN | SEE NOTE 5 | - | - | - | - | ZURN # Z-415B-HD-P | TRAP PRIMER CONNECTION | | 1,3 |
| | | | | | | | | | | |

NOTES:
1. COORDINATE LOCATION OF PLUMBING FIXTURES WITH ARCHITECTURAL DRAWINGS.
2. COORDINATE LEFT OR RIGHT HANDED TRIP WITH THE ARCHITECTURAL DRAWINGS.
3. VERIFY ALL FINISHES AND COLORS WITH THE ARCHITECT.
4. COORDINATE SINK CENTER-SET WITH FAUCET CENTER-SET.
5. REFER TO FLOOR PLANS AND RISER DIAGRAMS FOR PIPE SIZES.

## ELECTRIC WATER HEATER AND EXPANSION TANK SCHEDULE

| WATER HEATER | | | | | | | | | | EXPANSION TANK | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESIG. | SERVING | NO. OF ELEMENTS | ELEMENT WATTAGE (WATTS) | TOTAL KW | STORAGE CAP. (GAL.) | RECOVERY RATE (GPH) | TEMP. RISE (°F) | ELECTRICAL VOLTS-PHASE | MANUFACTURER AND MODEL (BASIS OF DESIGN) | DESIG. | VOLUME (GALLONS) TANK | VOLUME (GALLONS) ACCEPT. | MANUFACTURER AND MODEL (BASIS OF DESIGN) | NOTES |
| WH-1 | CORE TOILET ROOMS | 1 | 4,500 | 4.5 | 30 | 20 | 90 | 208-1 | STATE - PCE 30 20LSA | ET-1 | 1.96 | 1.03 | STATE - ETC-2X | 1,2 |

NOTES:
1. DISCONNECT SWITCH PROVIDED UNDER DIVISION 26.
2. WATER HEATER SHALL BE PROVIDED WITH A DRAIN PAN WITH HOSE END DRAIN OUTLET.
3. WATER HEATER SHALL HAVE SIMULTANEOUS DUAL ELEMENT OPERATION.

## PUMP SCHEDULE

| DESIG. | SERVICE | TOTAL GPM | FEET OF HEAD | SUCT. SIZE | DISCH. SIZE | ELECTRICAL HP | ELECTRICAL RPM | ELECTRICAL V-PH | MANUFACTURER/ MODEL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| CP-1 | CORE TOILET ROOMS | 5 | 15 | 3/4" | 3/4" | 1/12 | 2,950 | 120-1 | BELL & GOSSETT ECOCIRC XL 20-35 | 2 |
| | | | | | | | | | | |

NOTES:
1. PUMP SHALL BE ALL BRONZE CONSTRUCTION.
2. PUMP SHALL BE INLINE CIRCULATOR TYPE.

## PLUMBING EQUIPMENT LIST

1. **SUMP PUMP NO.1 (SP-1)**
SERVING BUILDING ELEVATOR
FEDERAL PUMP MODEL 2P-1/2-4 (OR APPROVED EQUAL)
100 GPM, 13 FEET OF HEAD, 2" DISCHARGE PIPE, 1/2 HP AT 120V-1PH
PROVIDE PUMP WITH: CONTROL PANEL, FLOAT SWITCHES, HIGH WATER ALARM, GROUTING FRAMES, 20 FT. POWER CORD AND MAGNETIC STARTER.

2. **SUMP PUMP NO.2 (SP-2)**
EXISTING BASEMENT SUMP
FEDERAL PUMP MODEL 2P-1/2-4 (OR APPROVED EQUAL)
50 GPM, 20 FEET OF HEAD, 2" DISCHARGE PIPE, 1/2 HP AT 120V-1PH
PROVIDE PUMP WITH: CONTROL PANEL, FLOAT SWITCHES, HIGH WATER ALARM, GROUTING FRAMES, 20 FT. POWER CORD AND MAGNETIC STARTER.

## PLUMBING LEGEND

| SYMBOL | ABBREV | DESCRIPTION |
|---|---|---|
| SAN | SAN | SANITARY PIPE |
| LW | LW | LAB WASTE |
| CD | CD | CONDENSATE DRAIN |
| SW | SW | STORM WATER |
| CO CO | CO | CLEANOUT |
| V | V/VENT | VENT PIPE |
| CW | CW | COLD WATER |
| HW | HW | HOT WATER |
| HWR | HWR | HOT WATER RECIRCULATE |
| NPCW | NPCW | NON-POTABLE COLD WATER |
| NPHW | NPHW | NON-POTABLE HOT WATER |
| NPHWR | NPHWR | NON-POTABLE HOT WATER RECIRCULATE |
| PRCW | PRCW | PROCESS COLD WATER |
| PRHW | PRHW | PROCESS HOT WATER (CUP SINKS) |
| PRHWR | PRHWR | PROCESS HOT WATER RECIRCULATE (CUP SINKS) |
| CA | CA | COMPRESSED AIR |
| F | F | FIRE LINE |
| G | G | GAS LINE |
| | | BALL VALVE |
| | | CHECK VALVE |
| | | RELIEF VALVE |
| | | FLEXIBLE PIPE CONNECTION |
| | | PIPE TURNING UP |
| | | PIPE TURNING DOWN |
| | | TEE TURNING UP |
| | | TEE TURNING DOWN |
| | | GLOBE VALVE |
| | | CHECK VALVE |
| BWV | BWV | BACK WATER VALVE |
| | | FLOW METER FITTING |
| | | COMBINATION BALANCING SHUT-OFF VALVE |
| | | PRESSURE REDUCING VALVE |
| TP | TP | TRAP PRIMER |
| | | RELIEF VALVE |
| MAV | MAV | MANUAL AIR VALVE |
| AAV | AAV | AUTOMATIC AIR VALVE |
| | | STRAINER |
| | | UNION |
| SA | SA | SHOCK ABSORBER |
| | | MULTI-PURPOSE VALVE |
| BFP | BFP | REDUCED ZONE BACKFLOW (1013) W/ FUNNEL DRAIN |
| X | | SPECIFIC DRAWING NOTE REFERENCE |
| | | CONNECT TO EXISTING AT THIS POINT |

## GENERAL NOTES

1. COORDINATE AND LOCATE STAGING/STORAGE AREA WHERE DIRECTED BY THE OWNER PRIOR TO BEGINNING CONSTRUCTION.
2. THE SPRINKLER SYSTEM SHALL BE DESIGNED & COORDINATED WITH DUCTWORK, PIPING, LIGHTING, EQUIPMENT & ARCHITECTURAL REFLECTED CEILING PLANS.
3. UNLESS OTHERWISE INDICATED, PIPING SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE. INTERMEDIATE STRUCTURAL SUPPORTS SHALL BE PROVIDED IN AN APPROVED MANNER AS REQUIRED TO MEET MINIMUM SUPPORT SPACING REQUIRED BY THE MANUFACTURER.
4. ALL DOMESTIC WATER SYSTEM VALVING SHALL BE INSTALLED IN SUCH A MANNER SO AS TO BE ACCESSIBLE TO THE MAINTENANCE PERSONNEL.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL PLUMBING FIXTURES. DO NOT DIMENSION LOCATIONS FROM THESE DRAWINGS.
6. SANITARY PIPING SHALL RUN AT A 2% SLOPE MINIMUM UNLESS NOTED OTHERWISE. COORDINATE INSTALLATION OF PIPING WITH EXISTING CONDITIONS IN THE CEILING SPACE BELOW. COORDINATE SCHEDULING OF WORK IN TENANT SPACE WITH LANDLORD.
7. CONDENSATE DRAIN PIPING SHALL RUN AT A 2% SLOPE MINIMUM UNLESS NOTED OTHERWISE.
8. COORDINATE MOTORS AND OTHER ELECTRICAL EQUIPMENT FURNISHED UNDER DIV. 23 WITH DIV. 26. PROVIDE EQUIPMENT COORDINATION TABLE AS A SHOP DRAWING FOR REVIEW. TABLE SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION:
   A. EQUIPMENT POWER REQUIREMENTS INCLUDING AMPS & VOLTAGES.
   B. DISCONNECTING MEANS AND OVER CURRENT PROTECTION REQUIREMENTS.
   C. CONTROL REQUIREMENTS.
9. COORDINATE THE INSTALLATION OF LIGHTING FIXTURES WITH PIPING, DUCTWORK, AIR DEVICES, SPRINKLERS AND EQUIPMENT BEING INSTALLED IN THE FACILITY SUCH THAT PIPING, DUCTWORK, AIR DEVICES, AND EQUIPMENT DO NOT BLOCK OR IMPEDE LIGHTING.
10. COORDINATE THE INSTALLATION OF SUPPLY, RETURN AND EXHAUST AIR DEVICES, ETC... WITH DUCTWORK, DOMESTIC WATER, SANITARY, STORM WATER PIPING. IF THE INSTALLATION DEVIATES FROM THE CONTRACT DRAWINGS, SERVICEABILITY & MAINTENANCE MUST BE MAINTAINED TO VALVING, EQUIPMENT, ETC...
11. PROVIDE HANGERS, ANCHORS, ETC... ON PIPING PER SUPPORT MANUFACTURER'S RECOMMENDATIONS.
12. INSTALL PIPING SO THAT VALVING IS ACCESSIBLE. PROVIDE ACCESS PANELS PER SPECIFICATIONS.
13. ROUTE DOMESTIC WATER PIPING, SPRINKLER PIPING, HVAC PIPING, GAS PIPING, ETC... IN PIPE CHASES AND FURRED OUT WALLS AND ABOVE CEILINGS. NO PIPING SHALL BE EXPOSED UNLESS APPROVED BY THE ARCHITECT OR OWNER.
14. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF, WALL AND CEILING CONSTRUCTION TYPES AND DETAILS. REFER TO STRUCTURAL DRAWINGS FOR STEEL SIZES AND LOCATIONS.
15. INSTALL EQUIPMENT, IE: ROOFTOP UNITS, VAV BOXES, EXHAUST FANS, ETC... IN SUCH A MANNER AS TO PROVIDE ADEQUATE SPACE FOR MAINTENANCE AND SERVICE ACCESS.
16. PROVIDE PIPE SLEEVES AT ALL WALL, FLOOR AND ROOF PENETRATIONS, ALL EXTERIOR ROOF & WALL PIPING PENETRATIONS SHALL BE MADE WEATHER TIGHT, REFER TO DETAILS OF EXTERIOR & INTERIOR WALL PENETRATIONS FOR MORE INFORMATION.
17. FIRE STOP ALL PIPING AND DUCT PENETRATIONS THRU FIRE WALLS AND FLOORS, IN ADDITION PROVIDE FIRE DAMPERS WHERE REQUIRED BY CODE IN ALL DUCTS THAT PASS THROUGH FIRE WALLS--REFER TO ARCHITECTURAL DWG.'s FOR FIRE WALL LOCATIONS.
18. PROVIDE WEATHER TIGHT WALL & ROOF DUCT AND PIPING PENETRATIONS, ALL SEALING MATERIALS TO BE APPROVED BY THE ARCHITECT.
19. PROVIDE A 6" WATER TIGHT CONCRETE CURB AROUND ALL FLOOR PENETRATIONS.

## GENERAL MECHANICAL DEMOLITION NOTES

1. NOTIFY THE OWNER, IN WRITING, AT LEAST FOURTEEN (14) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF WATER, SEWER, FIRE PROTECTION, GAS, ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE PERFORMED BETWEEN THE HOURS OF SIX (6) P.M. AND SIX (6) A.M. OR AS DIRECTED OTHERWISE BY THE OWNER AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH WORK DAY SHUT DOWN ALL SERVICES SHALL BE RESTORED SO THAT NORMAL USE OF UTILITIES CAN CONTINUE.
2. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF EXISTING STRUCTURE AND MECHANICAL AND ELECTRICAL SERVICES WHICH SHALL REMAIN.
3. REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE ARCHITECT ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK.
4. THE EXISTING CONDITIONS (DUCTWORK, PIPING, EQUIPMENT, AND MATERIALS) SHOWN ON THE CONTRACT DOCUMENTS ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND SHALL BE CONSIDERED DIAGRAMMATIC. THE CONTRACTOR SHALL FIELD VERIFY EXACT SIZES AND LOCATIONS OF ALL DUCTWORK, PIPING, EQUIPMENT, AND MATERIALS PRIOR TO COMMENCING WITH NEW AND DEMOLITION WORK.
5. EXISTING MECHANICAL AND ELECTRICAL WORK INDICATED TO BE REMOVE: (PIPES, VALVES, DUCTS, ETC.) SHALL BE REMOVED TO A POINT BELOW THE FINISHED FLOORS OR BEHIND FINISHED WALLS AND CAPPED. TERMINATION POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.
6. EXISTING PIPING NO LONGER REQUIRED TO REMAIN IN SERVICE SHALL BE DISCONNECTED AND REMOVED BACK TO EXISTING ASSOCIATED SERVICE MAINS UNLESS OTHERWISE INDICATED OR NOTED ON THE CONTRACT DRAWINGS. REMOVE EXISTING PIPE HANGERS, SUPPORTS, VALVES, ETC. EXISTING PIPING INDICATED OR REQUIRED TO REMAIN IN SERVICE OR IN PLACE SHALL BE CAPPED, PLUGGED OR OTHERWISE SEALED. NO EXISTING PIPING SHALL BE LEFT OPEN ENDED.
7. EXISTING DUCTWORK INDICATED TO BE DISCONNECTED AND REMOVED SHALL INCLUDE RELOCATED AIR DEVICES, HANGERS, SUPPORTS, ETC. DUCTWORK SHALL BE CAPPED WITH SIMILAR GAGE SHEET METAL. SECURE CAP(S) WITH SHEET METAL SCREWS AND SEAL WITH DUCT SEALER. NO EXISTING DUCTWORK SHALL BE LEFT UNCAPPED.
8. PATCH TO MATCH EXISTING ALL NEW AND EXISTING OPENINGS IN WALLS, CEILINGS AND FLOOR SURFACES DAMAGED OR CREATED BY DEMOLITION WORK. PATCHING SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURES, MATERIALS, AND COLOR. ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE ARCHITECT AND AT NO ADDITIONAL CONTRACT COST.
9. ALL DEMOLISHED EQUIPMENT SHALL BE OFFERED TO THE OWNER PRIOR TO DISPOSAL. EQUIPMENT RETAINED BY THE OWNER SHALL BE STORED WHERE DIRECTED BY THE OWNER. ANY EQUIPMENT THE OWNER DOES NOT WISH TO RETAIN SHALL BEDISPOSED OF, OFF SITE, BY THE CONTRACTOR.

## PLUMBING ABBREVIATIONS

| ABBREV | DESCRIPTION |
|---|---|
| A.F.F. | ABOVE FINISHED FLOOR |
| AMP | AMPERES |
| ARCH. | ARCHITECTURAL |
| BTUH | BRITISH THERMAL UNITS PER HOUR |
| CAP. | CAPACITY |
| CFM | CUBIC FEET PER MINUTE |
| COMP. | COMPRESSOR |
| CLG. | CEILING |
| CONT. | CONTINUATION |
| DESIG. | DESIGNATION |
| DIV. | DIVISION |
| DR. | DRAIN |
| DWG. | DRAWING |
| ELEC. | ELECTRIC |
| ELEV. | ELEVATION |
| EQPT. | EQUIPMENT |
| F | FAHRENHEIT |
| FLR | FLOOR |
| FPM | FEET PER MINUTE |
| FT. | FEET |
| GPH | GALLONS PER HOUR |
| GAL | GALLON |
| GPM | GALLONS PER MINUTE |
| G.W.B. | GYPSUM WALL BOARD |
| HP | HORSEPOWER |
| IN. | INCHES |
| IN. W.C. | INCHES OF WATER COLUMN |
| KW | KILOWATT |
| L.A.T. | LEAVING AIR TEMPERATURE |
| LBS. | POUNDS |
| MBH | THOUSANDS OF BTU'S/HOUR |
| MCA | MINIMUM CIRCUIT AMPS |
| MECH. | MECHANICAL |
| MOCP | MAXIMUM OVERCURRENT PROTECTION |
| MIN., MAX. | MINIMUM, MAXIMUM |
| NO. | NUMBER |
| PSIG | POUNDS PER SQUARE INCH GAUGE |
| P- | PLUMBING FIXTURE DESIGNATION |
| QTY. | QUANTITY |
| R.P.M. | REVOLUTION PER MINUTE |
| RTU | ROOFTOP UNIT |
| R.L.A. | RUNNING LOAD AMPS |
| SENS. | SENSIBLE |
| STRUCT. | STRUCTURE |
| SQ.FT. | SQUARE FEET |
| TEMP. | TEMPERATURE |
| TOT. | TOTAL |
| TPL | TRAP PRIMING LINE |
| TYP. | TYPICAL |
| VAV | VARIABLE AIR VOLUME |
| VTR | VENT THROUGH ROOF |
| V/ø/Hz | VOLTS/PHASE/HERTZ |
| W.C. | WATER COLUMN |
| W/ | WITH |
| W | WATTS |
| ø | DIAMETER |

## PLUMBING DRAWING LIST

| SHEET | TITLE |
|---|---|
| 70.00 | PLUMBING LEGEND, NOTES, ABBREVIATIONS AND SCHEDULES |
| 70.01 | BASEMENT FLOOR PLAN PLUMBING DEMOLITION |
| 70.02 | SUBSLAB NEW WORK |
| 70.03 | BASEMENT FLOOR PLAN PLUMBING NEW WORK |
| 70.04 | FIRST FLOOR PLAN PLUMBING NEW WORK |
| 70.05 | SECOND FLOOR PLAN PLUMBING NEW WORK |
| 70.06 | THIRD FLOOR PLAN PLUMBING NEW WORK |
| 70.07 | ROOF PLAN PLUMBING NEW WORK |
| 75.01 | PLUMBING DETAILS |
| 75.02 | PLUMBING RISER DIAGRAM |

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SHEET TITLE

# PLUMBING LEGEND, NOTES AND ABBREVIATION

| Project Number | 16225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by: | FDD | Checked by | JRV |
| NRSAHT SUBMISSION | | | 08/30/18 |

| Num. | Description | Date |
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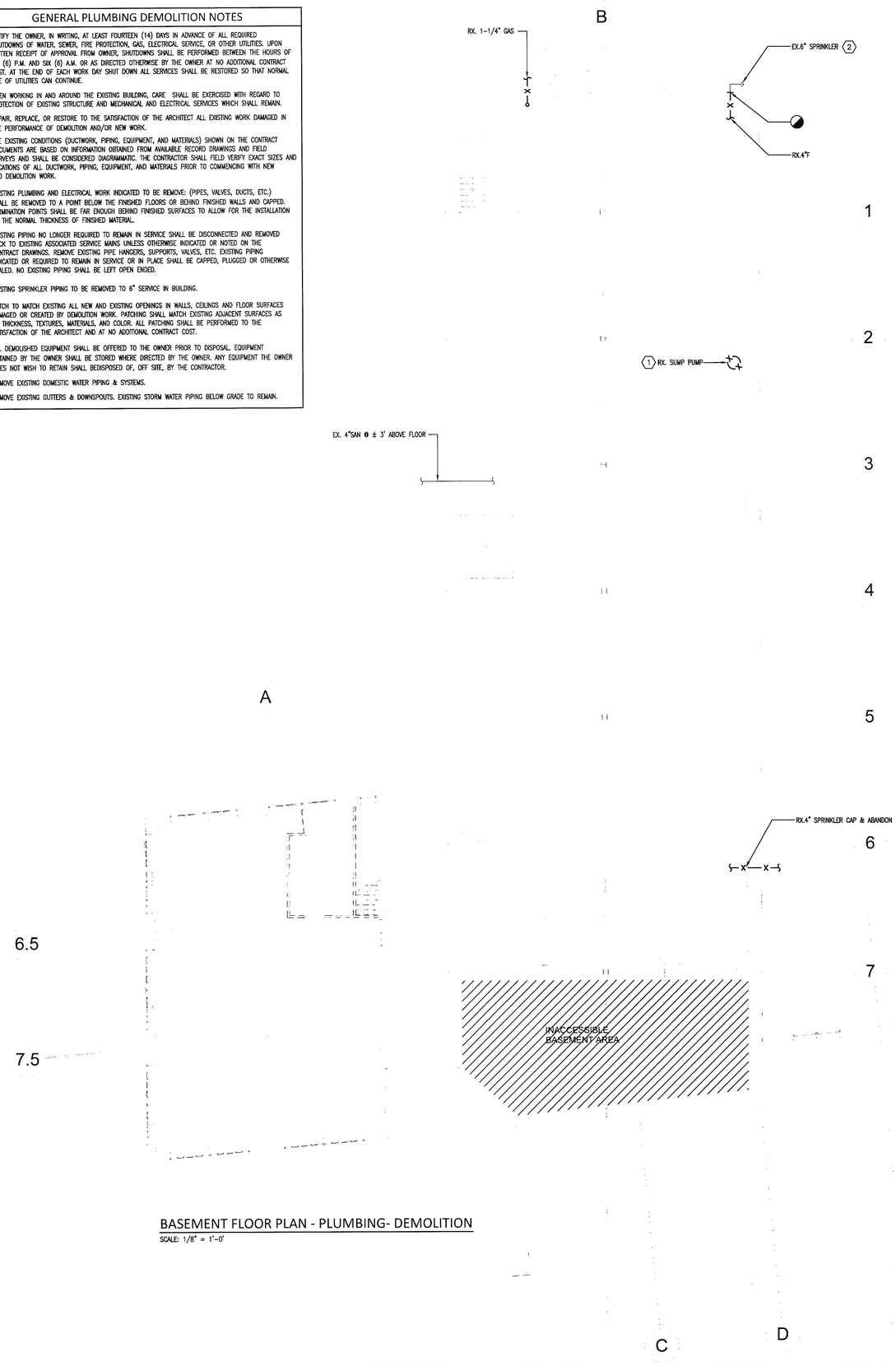
70.00

## GENERAL PLUMBING DEMOLITION NOTES

1. NOTIFY THE OWNER, IN WRITING, AT LEAST FOURTEEN (14) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF WATER, SEWER, FIRE PROTECTION, GAS, ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE PERFORMED BETWEEN THE HOURS OF SIX (6) P.M. AND SIX (6) A.M. OR AS DIRECTED OTHERWISE BY THE OWNER AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH WORK DAY SHUT DOWN ALL SERVICES SHALL BE RESTORED SO THAT NORMAL USE OF UTILITIES CAN CONTINUE.
2. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF EXISTING STRUCTURE AND MECHANICAL AND ELECTRICAL SERVICES WHICH SHALL REMAIN.
3. REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE ARCHITECT ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK.
4. THE EXISTING CONDITIONS (DUCTWORK, PIPING, EQUIPMENT, AND MATERIALS) SHOWN ON THE CONTRACT DOCUMENTS ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND SHALL BE CONSIDERED DIAGRAMMATIC. THE CONTRACTOR SHALL FIELD VERIFY EXACT SIZES AND LOCATIONS OF ALL DUCTWORK, PIPING, EQUIPMENT, AND MATERIALS PRIOR TO COMMENCING WITH NEW AND DEMOLITION WORK.
5. EXISTING PLUMBING AND ELECTRICAL WORK INDICATED TO BE REMOVE: (PIPES, VALVES, DUCTS, ETC.) SHALL BE REMOVED TO A POINT BELOW THE FINISHED FLOORS OR BEHIND FINISHED WALLS AND CAPPED. TERMINATION POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.
6. EXISTING PIPING NO LONGER REQUIRED TO REMAIN IN SERVICE SHALL BE DISCONNECTED AND REMOVED BACK TO EXISTING ASSOCIATED SERVICE MAINS UNLESS OTHERWISE INDICATED OR NOTED ON THE CONTRACT DRAWINGS. REMOVE EXISTING PIPE HANGERS, SUPPORTS, VALVES, ETC. EXISTING PIPING INDICATED OR REQUIRED TO REMAIN IN SERVICE OR IN PLACE SHALL BE CAPPED, PLUGGED OR OTHERWISE SEALED. NO EXISTING PIPING SHALL BE LEFT OPEN ENDED.
7. EXISTING SPRINKLER PIPING TO BE REMOVED TO 6" SERVICE IN BUILDING.
8. PATCH TO MATCH EXISTING ALL NEW AND EXISTING OPENINGS IN WALLS, CEILINGS AND FLOOR SURFACES DAMAGED OR CREATED BY DEMOLITION WORK. PATCHING SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURES, MATERIALS, AND COLOR. ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE ARCHITECT AND AT NO ADDITIONAL CONTRACT COST.
9. ALL DEMOLISHED EQUIPMENT SHALL BE OFFERED TO THE OWNER PRIOR TO DISPOSAL. EQUIPMENT RETAINED BY THE OWNER SHALL BE STORED WHERE DIRECTED BY THE OWNER. ANY EQUIPMENT THE OWNER DOES NOT WISH TO RETAIN SHALL BEDISPOSED OF, OFF SITE, BY THE CONTRACTOR.
10. REMOVE EXISTING DOMESTIC WATER PIPING & SYSTEMS.
11. REMOVE EXISTING GUTTERS & DOWNSPOUTS. EXISTING STORM WATER PIPING BELOW GRADE TO REMAIN.




BASEMENT FLOOR PLAN - PLUMBING- DEMOLITION
SCALE: 1/8" = 1'-0"

SPECIFIC NOTES (REFER TO 70.01 WHERE INDICATED):

(1) EXISTING SUMP PUMP. EXISTING PIT & PIPES DISCHARGING INTO SUMP PIT TO REMAIN.

(2) REMOVE SPRINKLER PIPING TO BACKFLOW PREVENTOR. PREPARE FOR NEW 4" SPRINKLER SERVICE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SHEET TITLE
**BASEMENT FLOOR PLAN PLUMBING DEMOLITION**

| Project Number: 16225 | Date: 10/05/17 |
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| Drawn by: FDD | Checked by: JRV |
| NPS/MHT SUBMISSION | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

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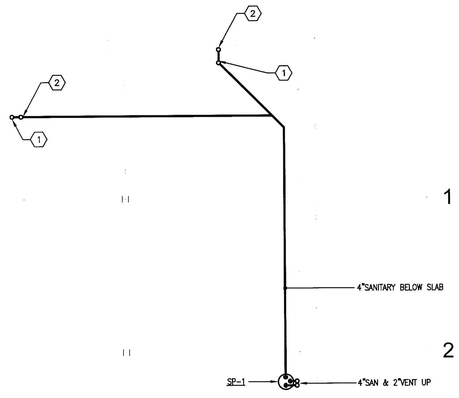
0 4' 8' 16'
SCALE: 1/8" = 1'-0"

**70.01**

B




BASEMENT
001

1

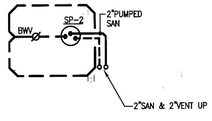
2

3

4

5

6




7

SPECIFIC NOTES (REFER TO 70.02 WHERE INDICATED):

(1) 4"SAN UP TO FD-1.

(2) 2"VENT UP.

(3) 4"SANITARY, 2"VENT, 1"CW & 3/4"HWR VALVED AND CAPPED FOR FUTURE CONNECTION.

BASEMENT FLOOR PLAN - PLUMBING - NEW WORK
SCALE: 1/8" = 1'-0'

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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SHEET TITLE
**BASEMENT FLOOR PLAN PLUMBING NEW WORK**

| Project Number: 18225 | Date: 10/05/17 |
|---|---|
| Drawn by: FDD | Checked by: JRV |
| NPDS/HIT SUBMISSION | 09/30/16 |

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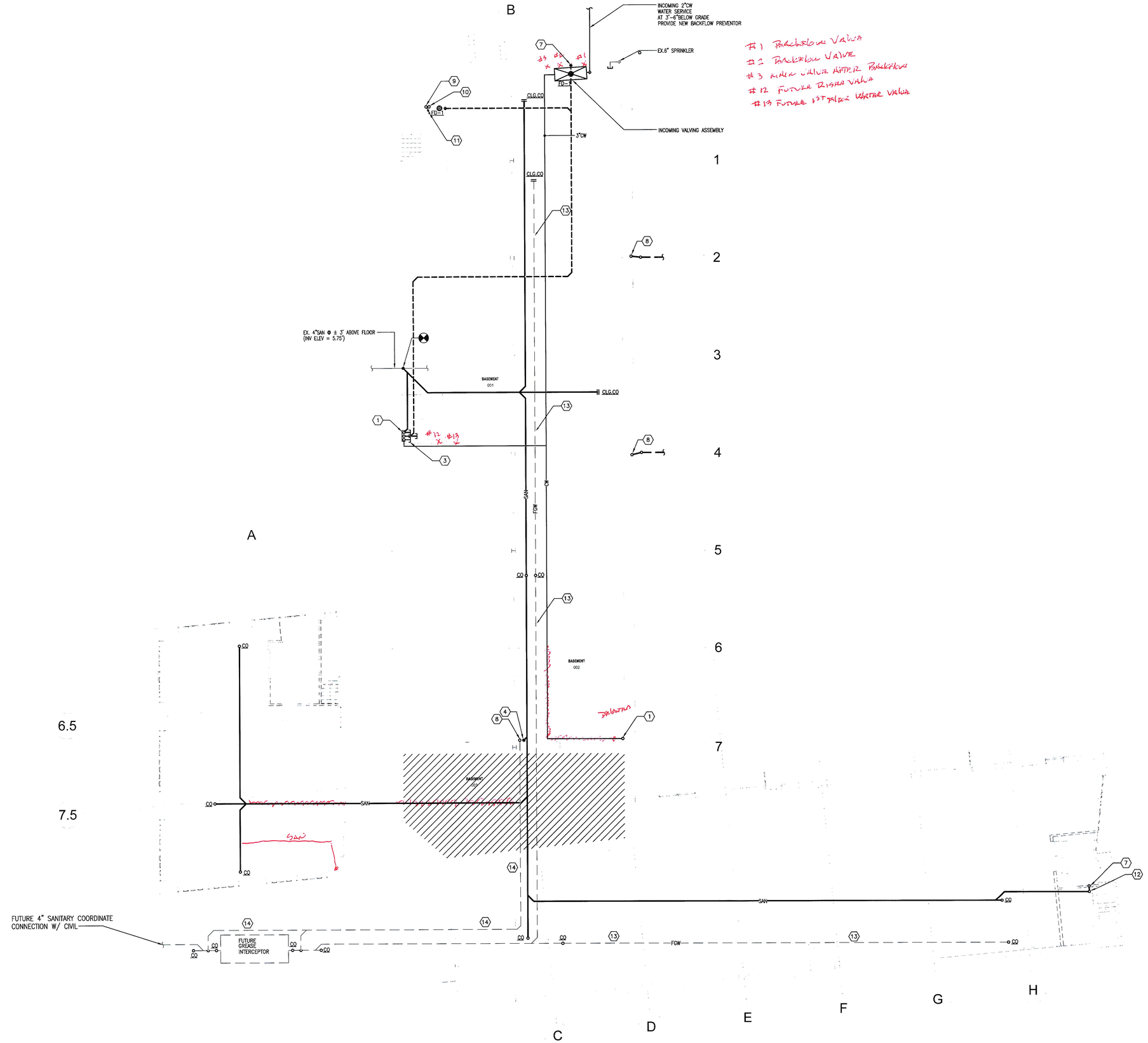
70.02




BASEMENT FLOOR PLAN - PLUMBING - NEW WORK

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

SPECIFIC NOTES (REFER TO 70.03 WHERE INDICATED):

1. 4"SANITARY, 2"VENT & 2"CW UP.
2. 2"CW UP.
3. 4"SANITARY, 2"VENT & 1"CW VALVED AND CAPPED FOR FUTURE CONNECTION.
4. 2" PUMPED SANITARY DOWN.
5. 4" PUMPED SANITARY DOWN.
6. 3" VENT DOWN.
7. 2" VENT UP.
8. 2" VENT UP.
9. STANDPIPE RISER.
10. 2" STANDPIPE DRAIN RISER.
11. FIRE DEPARTMENT CONNECTION.
12. 4"SAN UP TO FD-1.
13. FUTURE GREASE WASTE
14. FUTURE VENT

0 4' 8' 16'

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

**BASEMENT FLOOR PLAN PLUMBING NEW WORK**

| Project Number | 16225 | Date | 10/05/17 |
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| Drawn by | FDD | Checked by | JRV |
| MP&MHT SUBMISSION | | | 08/30/16 |

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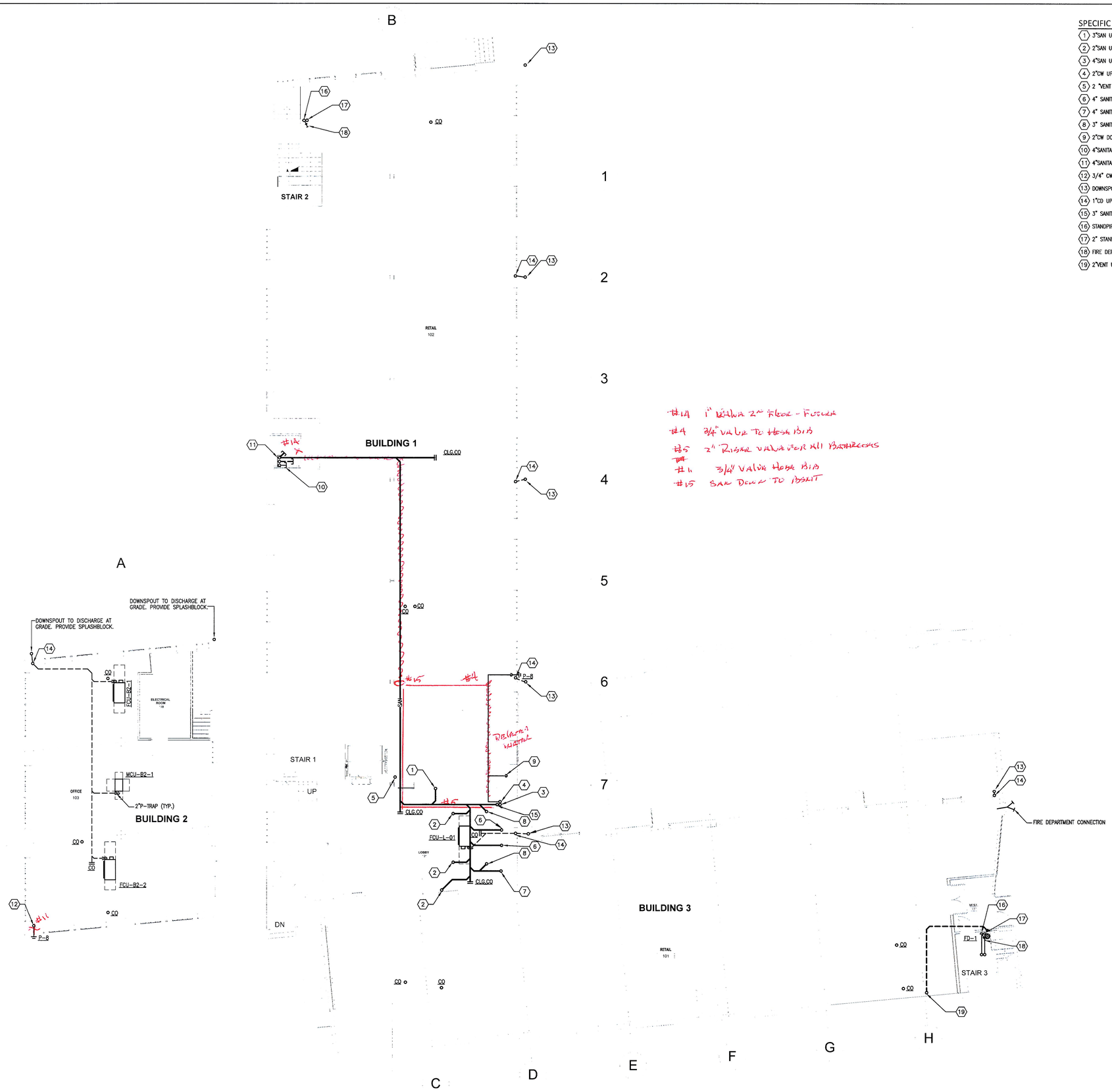
**70.03**




SPECIFIC NOTES (REFER TO 70.04 WHERE INDICATED):

1. 3"SAN UP.
2. 2"SAN UP.
3. 4"SAN UP.
4. 2"CW UP.
5. 2 "VENT UP & DOWN.
6. 4" SANITARY UP TO P-1A.
7. 4" SANITARY UP TO P-1.
8. 3" SANITARY UP TO FD-1.
9. 2"CW DOWN.
10. 4"SANITARY, 2"VENT & 1"CW VALVED AND CAPPED FOR FUTURE CONNECTION.
11. 4"SANITARY, 2"VENT & 1-1/4"CW UP. 4"SANITARY, 2"VENT & 2"CW DOWN.
12. 3/4" CW UP AND DOWN.
13. DOWNSPOUT TO CONNECT TO EX SW AT GRADE. PROVIDE CONNECTING BOOT.
14. 1"CD UP & DISCHARGE INTO DOWNSPOUT.
15. 3" SANITARY UP TO P-2.
16. STANDPIPE RISER.
17. 2" STANDPIPE DRAIN RISER.
18. FIRE DEPARTMENT CONNECTION.
19. 2"VENT UP & DOWN.

#14 1" REHUK 2ND FLOOR - FUCHEN
#4 3/4" VALVE TO HOOK BIB
#5 2" RISER VALVE FOR ALL BATHROOMS
#11 3/4" VALVE HOSE BIB
#15 SAW DOWN TO INVERT

FIRST FLOOR PLAN - PLUMBING - NEW WORK
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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SHEET TITLE
FIRST FLOOR PLAN PLUMBING NEW WORK

| Project Number | 16225 | Date | 10/05/17 |
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| Drawn by: | FDD | Checked by: | JRV |
| MP/BMIT SUBMISSION | | 00/00/16 | |

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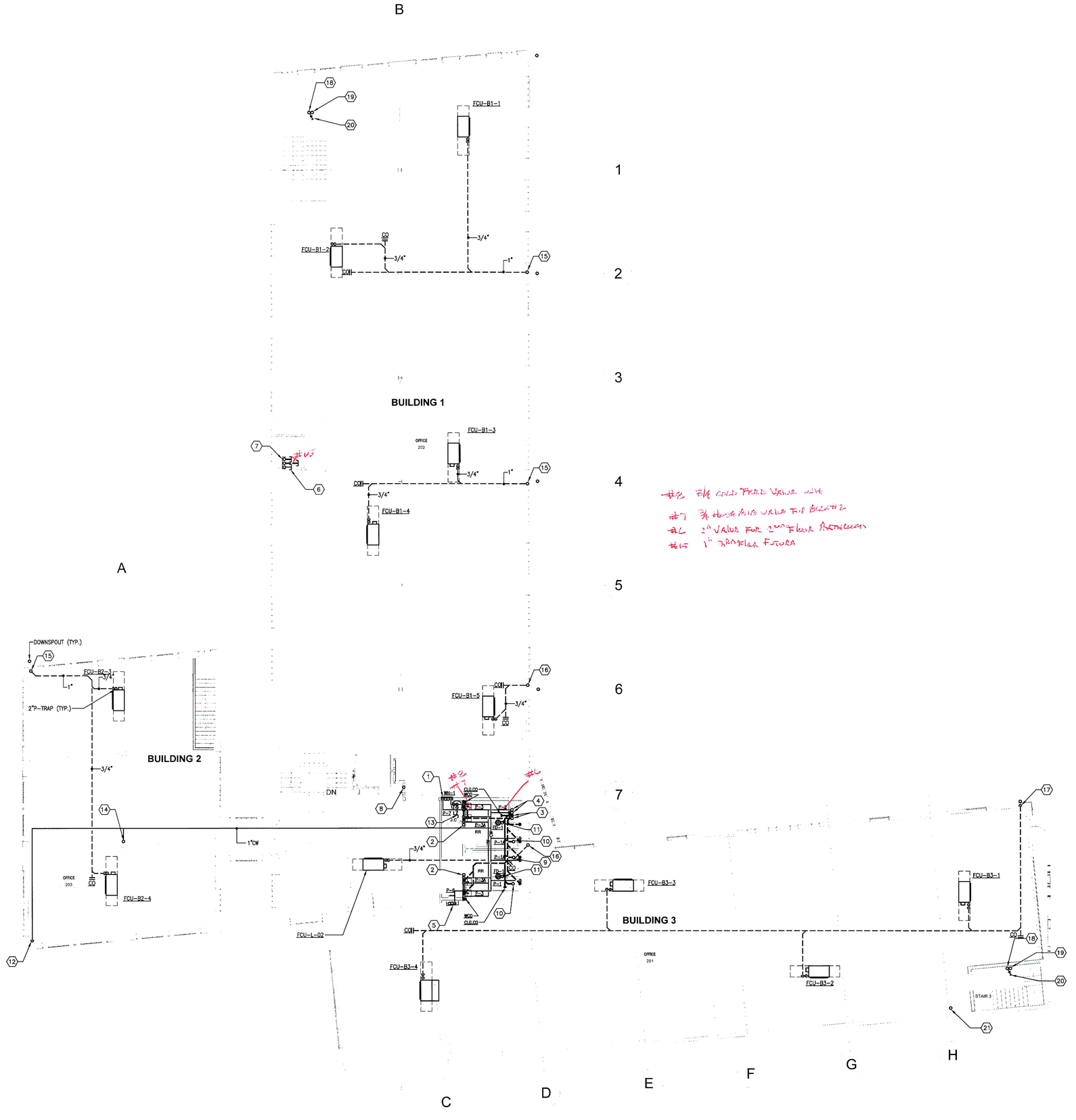
70.04




SECOND FLOOR PLAN - PLUMBING - NEW WORK

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

SPECIFIC NOTES (REFER TO 70.05 WHERE INDICATED):

1. 3"SAN, 2" VENT UP AND DOWN. 3/4" CW & HW DOWN.
2. 2"SAN UP AND DOWN.
3. 4"SAN & 3"VENT UP AND DOWN.
4. 2"CW UP & DOWN. 1"HW UP.
5. 2"SAN, 1-1/2" VENT UP AND DOWN. 1/2" CW DOWN.
6. 4"SANITARY, 2"VENT & 1"CW VALVED AND CAPPED FOR FUTURE CONNECTION.
7. 4"SANITARY, 2"VENT & 1-1/4"CW DOWN. 2"VENT & 1"CW UP.
8. 2 "VENT UP & DOWN.
9. 4" SANITARY UP TO P-1A.
10. 4" SANITARY UP TO P-1.
11. 3" SANITARY UP TO FD-1.
12. 3/4" CW DOWN.
13. HWR PIPING. REFER TO RISER FOR ROUTING AND SIZING.
14. 1/2" CW UP.
15. 1"CD UP & DOWN.
16. 3/4"CD UP & 1" CD DOWN.
17. 1" CD DOWN.
18. STANDPIPE RISER.
19. 2" STANDPIPE DRAIN RISER.
20. FIRE DEPARTMENT CONNECTION.
21. 2" VENT UP AND DOWN.

#2 F/A CHILLED WATER VALVE WITH

#1 3/4 HOSE BIB VALVE FOR BUILDING 2

#4 2" VALVE FOR 2ND FLOOR BATHROOMS

#15 1" BRANCH FUTURA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SHEET TITLE

SECOND FLOOR PLAN PLUMBING NEW WORK

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: FDD | Checked by: JRV |

| NPS/MHT SUBMISSION | 09/30/16 |
|---|---|
| Num. | Description | Date |

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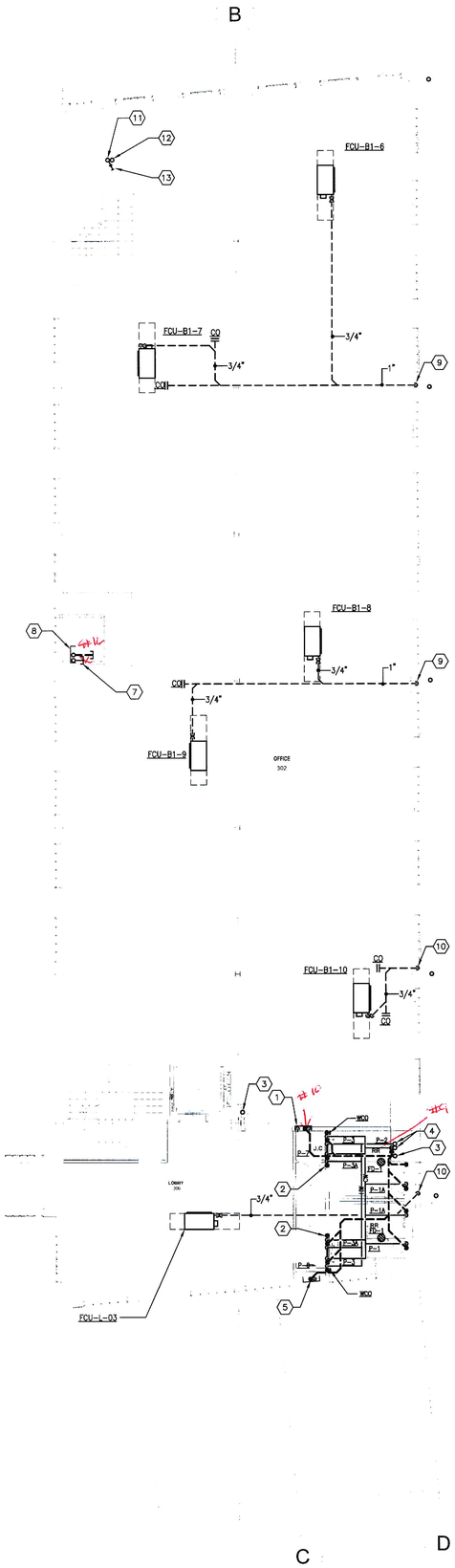
70.05

0 4' 8' 16'

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




SPECIFIC NOTES (REFER TO 70.06 WHERE INDICATED):

1. 2" VENT, 3/4" CW & HW UP DOWN.
2. 2"SAN DOWN.
3. 2" VENT DOWN & UP TO 3" VTR.
4. 2"CW & 1"HW DOWN.
5. 2"SAN, 1-1/2" VENT, 1/2" CW UP AND DOWN.
6. 1/2" CW UP AND DOWN.
7. 2"VENT & 1"CW VALVED AND CAPPED FOR FUTURE CONNECTION.
8. 3"VENT & 1"CW DOWN. 3"VENT UP TO VTR.
9. 1"CD DOWN.
10. 3/4"CD DOWN.
11. STANDPIPE RISER.
12. 2" STANDPIPE DRAIN RISER.
13. FIRE DEPARTMENT CONNECTION.
14. 2"VENT DOWN.
15. 2"VENT UP TO VTR.

#1C 1" VALVE TO FIXTURES
#1C1 2" VALVE TO 3RD FLOOR BATHROOMS
#1C 1/2" VALVE TO ZECO HOSE BIB

THIRD FLOOR PLAN - PLUMBING - NEW WORK
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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SHEET TITLE
THIRD FLOOR PLAN PLUMBING NEW WORK

| Project Number | | Date | |
|---|---|---|---|
| 16225 | | 10/05/17 | |
| Drawn by | FDD | Checked by | JRV |
| NPS/MHT SUBMISSION | | | 08/30/16 |

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70.06

SPECIFIC NOTES (REFER TO 70.07 WHERE INDICATED):

(1) 1/2" CW DOWN.

ROOF PLAN - PLUMBING - NEW WORK

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

0 4' 8' 16'

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


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SHEET TITLE

**ROOF PLAN PLUMBING NEW WORK**

| Project No./Idea: | | Date: |
|---|---|---|
| 16225 | | 10/05/17 |
| Drawn by: FDD | Checked by: JRV | |
| NPS/MHT SUBMISSION | | 05/30/16 |

| Num. | Description | Date |
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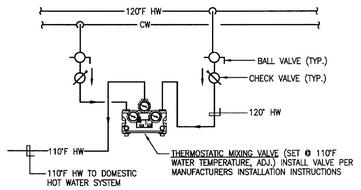
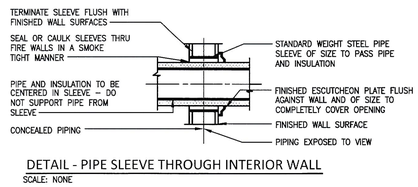
**70.07**

# PLUMBING DETAILS



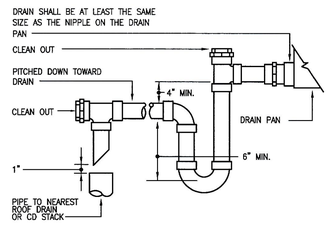

## DETAIL - DOMESTIC HOT WATER SYSTEM THERMOSTATIC MIXING VALVE PIPING

SCALE: NONE
2ND FLOOR



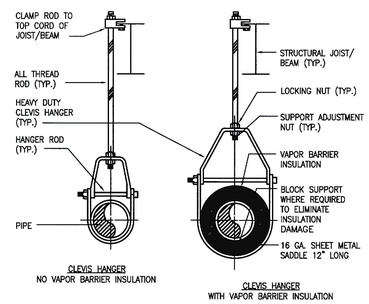

## DETAIL - PIPE SLEEVE THROUGH INTERIOR WALL

SCALE: NONE



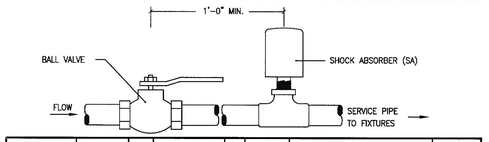

## DETAIL - CONDENSATE PIPE AND TRAP

SCALE: NONE




## DETAIL - PIPE SUPPORT

SCALE: NONE




| *DESIGNATION | A | B | C | D | E | | REMARKS |
|---|---|---|---|---|---|---|---|
| PIPE SIZE | 1/2"–3/4" | 1" | 1 1/4"–1 1/2" | 2" | 2 1/2" | REFER TO P.D.I FOR S.A. SIZE | – |

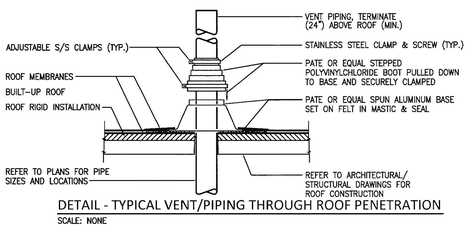
* DESIGNATION IS ESTABLISHED BY THE PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH 201 FOR SHOCK ABSORBERS.

DETAIL NOTES:

1. SHOCK ABSORBERS SHALL BE INSTALLED ON ALL BRANCH PIPING SERVICING PLUMBING FIXTURES AND WALL HYDRANTS
2. BRANCH PIPES WITH A DEVELOPED LENGTH OF 25' OR LESS ABSORBERS MAY BE REDUCED ONE SIZE
3. BRANCH PIPES WITH A DEVELOPED LENGTH OF 75' OR GREATER ABSORBERS MAY BE INCREASED ONE SIZE
4. BALL VALVE AND SHOCK ABSORBER SHALL BE ACCESSIBLE THRU A SINGLE ACCESS DOOR
5. SHOCK ABSORBER SHALL BE CERTIFIED BY THE PLUMBING DRAINAGE INSTITUTE
6. SEE FLOOR PLANS FOR PIPE SIZES AND CONTINUATION OF PIPING
7. ADHERE TO LOCAL CODE REQUIREMENTS.

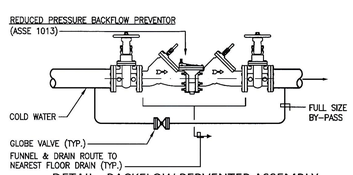
## DETAIL - TYPICAL SHOCK ABSORBER INSTALLATION

SCALE: NONE



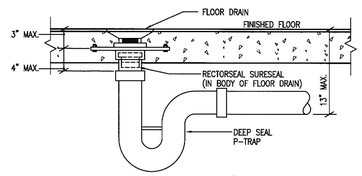

## DETAIL - TYPICAL VENT/PIPING THROUGH ROOF PENETRATION

SCALE: NONE



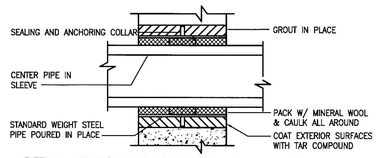

## DETAIL - BACKFLOW PERVENTER ASSEMBLY

SCALE: NONE




## DETAIL - FLOOR DRAIN W/ SURESEAL

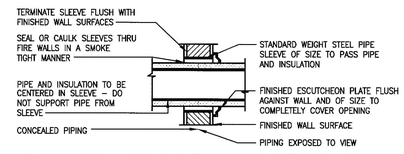
SCALE: NONE




## DETAIL - TYPICAL PIPE SLEEVE THROUGH EXTERIOR WALL

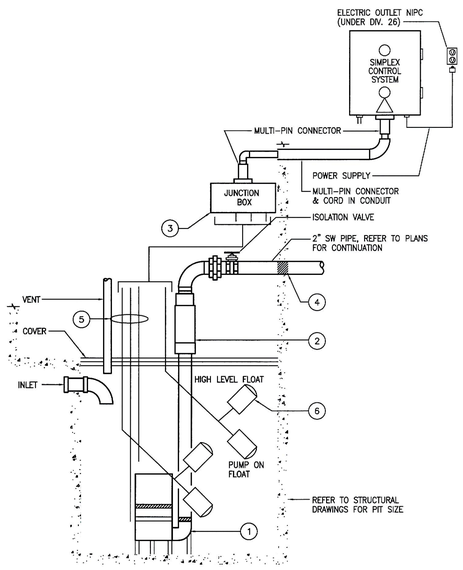
SCALE: NONE

NOTES: 1. REFER TO ARCHITECTURAL DRAWING FOR TYPES OF WALLS & THEIR CONSTRUCTION.
2. PROVIDE SLEEVES @ ALL WALL PENETRATIONS.




## DETAIL - TYPICAL PIPE SLEEVE THROUGH INTERIOR WALL

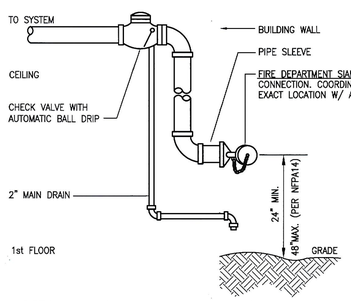
SCALE: NONE




1. SUBMERSIBLE EFFLUENT PUMP.
2. CHECK VALVE.
3. JUNCTION BOX WILL PROVIDED WITH MULTI–PIN CONNECTOR AND CORD IN LENGTHS AS REQUIRED.
4. ALL BURIED PUMP PRESSURE DISCHARGE PIPING SHALL BE PROTECTED WITH TAPECOAT CT CORROSION PROTECTION TAPE.
5. POWER CABLE, PROBE CABLE AND FLOAT CABLE (ALL 16' LONG).
6. HIGH LIQUID ALARM FLOAT WITH CLAMP DEVICE TO MOUNT TO PUMP DISCHARGE PIPING (16' LONG).

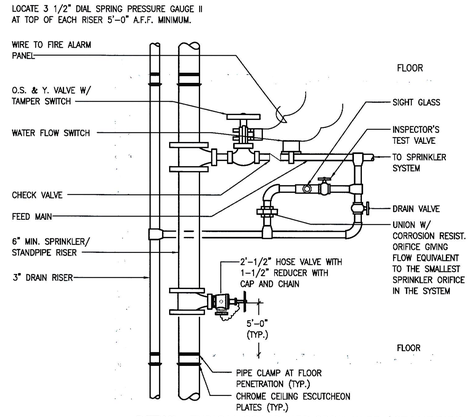
## DETAIL - SIMPLEX SUMP PUMP SYSTEM DIAGRAM

SCALE: NONE



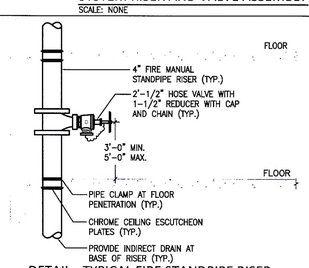

## DETAIL - TYPICAL FIRE DEPARTMENT SIAMESE CONNECTION

SCALE: NONE




## DETAIL - TYPICAL COMBINED SPRINKLER / STANDPIPE SYSTEM RISER AND VALVE ASSEMBLY

SCALE: NONE




## DETAIL - TYPICAL FIRE STANDPIPE RISER

SCALE: NONE


MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660
CERTIFIED


Professional Certification: I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland. License No: 19966 Expiration Date: 3/4/2019


JENNERIK ENGINEERING, INC.
8633 Belair Road, Suite D
Nottingham, Maryland 21236
PH: 410-870-1300
email: info@jennerikinc.com


Union Brothers Furniture Company
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE
**PLUMBING DETAILS**

| Project Number | 16225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by | FDD | Checked by | JRV |
| NFS/ANT SUBMISSION | | | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**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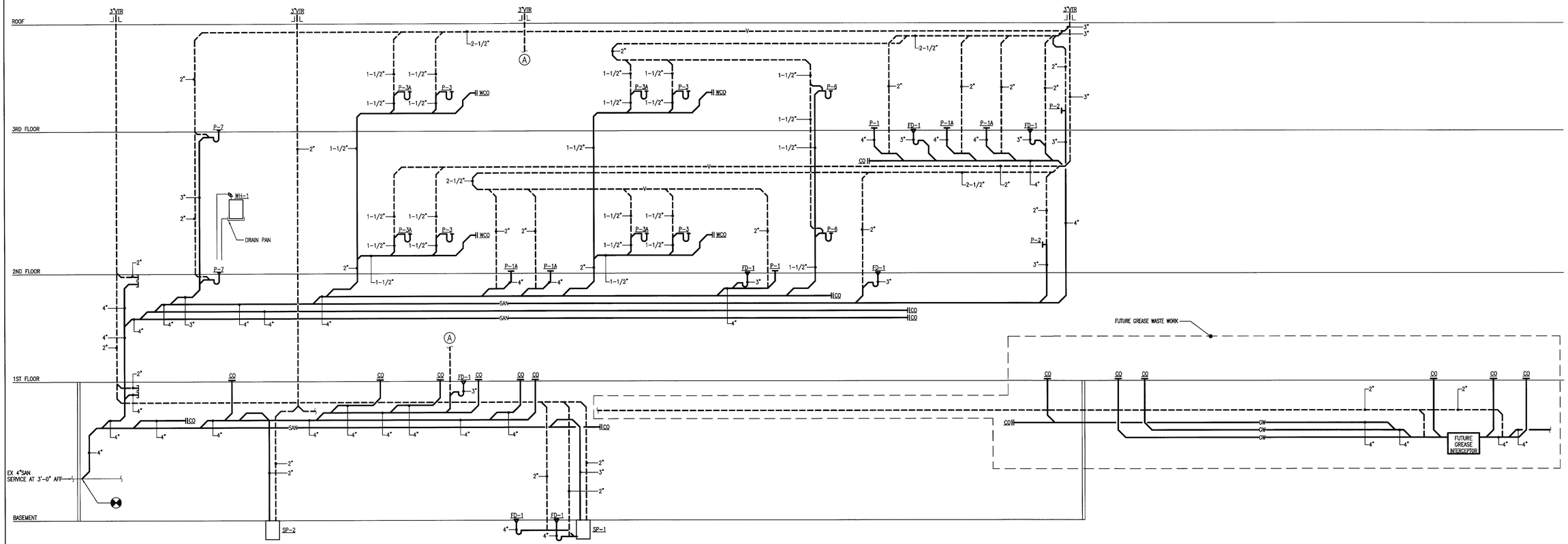
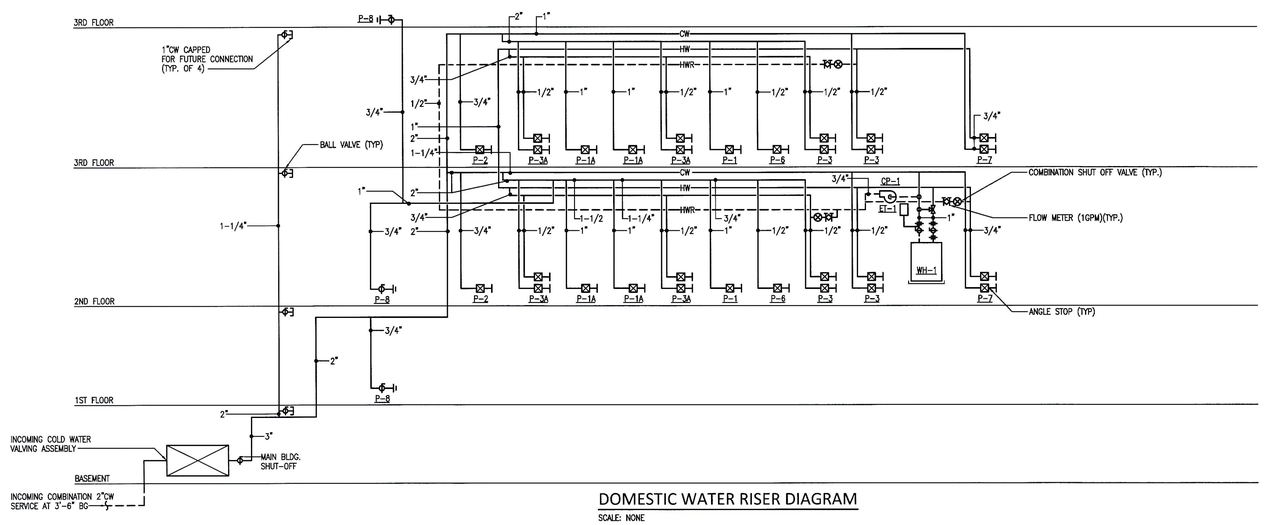
**75.01**




SANITARY RISER DIAGRAM

SCALE: NONE




DOMESTIC WATER RISER DIAGRAM

SCALE: NONE

MARKS, THOMAS ARCHITECTS
1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660

CERTIFIED

Professional Certification: I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland.
License No: 19966 Expiration Date: 3/4/2019

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37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**PLUMBING RISER DIAGRAMS**

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: FDD | Checked by: JRV |
| NPS/MHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

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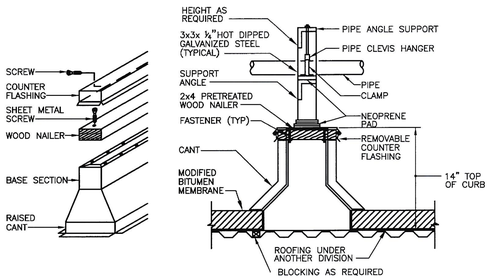
**75.02**

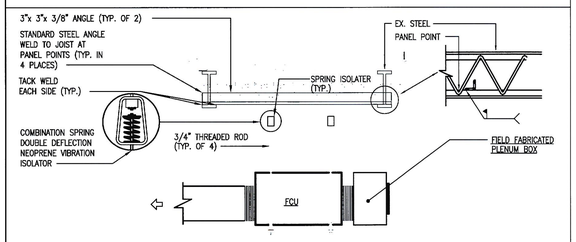
# MECHANICAL DETAILS




NOTES: 1. CURB SHALL BE PREFABRICATED. MANUFACTURER SHALL BE THE PATE COMPANY OR AS APPROVED EQUAL.
2. PROVIDE CROSS BRACING AND/OR INTERMEDIATE FRAMING MEMBERS AS REQUIRED.

## DETAIL - TYPICAL PIPE SUPPORT ON ROOF

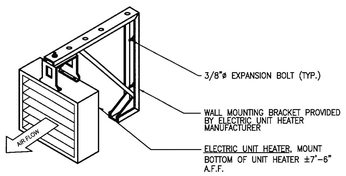
SCALE: NONE




## DETAIL - FCU UNIT SUPPORT & MOUNTING ABOVE CEILING

NOT TO SCALE

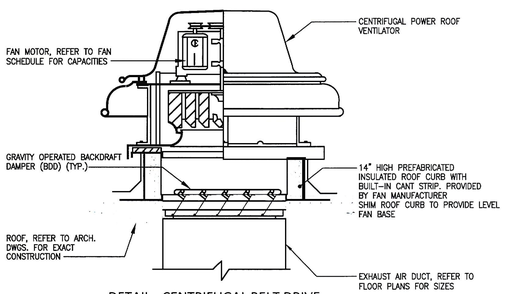
NOTES: 1. REFER TO ARCHITECTURAL & STRUCTURAL DWG.'s FOR EXACT FLOOR/CEILING & ROOF JOIST TYPES AND LOCATIONS.
2. HANGERS/SUPPORT RODS USED IN HANGING THE UNIT SHALL NOT INTERFERE WITH ACCESS TO FILTERS OR ANY OTHER ACCESS REQUIREMENTS TO THE UNIT.
3. REFER TO PLUMBING PLANS FOR CONDENSATE DISCHARGE.




## DETAIL - TYPICAL ELECTRIC UNIT HEATER

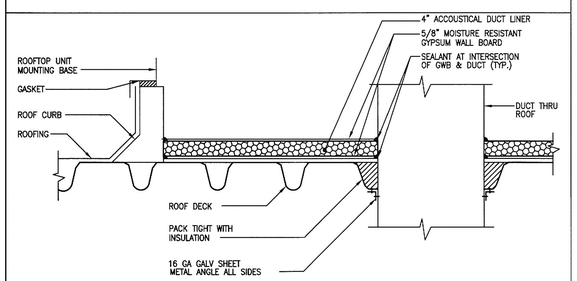
SCALE: NONE

NOTES: MOUNT UNIT HEATER TO BUILDING STRUCTURE AS APPROVED BY THE ARCHITECT.



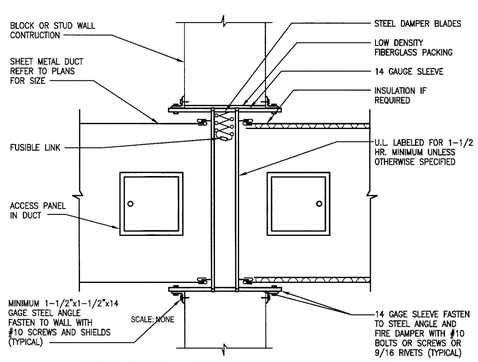

## DETAIL - CENTRIFUGAL BELT DRIVE POWER ROOF VENTILATOR FAN

SCALE: NONE




## DETAIL - ACCOUSTICAL TREATMENT BELOW ROOFTOP UNITS

SCALE: NONE




## DETAIL-TYPICAL HORIZONTAL FLOW FIRE DAMPER

SCALE: NONE

# MECHANICAL LEGEND

| SYMBOL | ABBREV | DESCRIPTION |
|---|---|---|
| | SA/OA | SUPPLY OR OUTDOOR AIR DUCT TURNED UP |
| | SA/OA | SUPPLY OR OUTDOOR AIR DUCT TURNED DOWN |
| | RA | RETURN AIR DUCT TURNED UP |
| | RA | RETURN AIR DUCT TURNED DOWN |
| | EA | EXHAUST AIR DUCT TURNED UP |
| | EA | EXHAUST AIR DUCT TURNED DOWN |
| T UNIT-# | | THERMOSTAT WITH UNIT DESIGNATION |
| | | FLEXIBLE DUCT CONNECTION |
| DD | DD | DUCT SMOKE DETECTOR |
| VD | VD | VOLUME DAMPER |
| SD | SD | SMOKE DAMPER |
| FD | FD | FIRE DAMPER |
| MOD | MOD | MOTOR OPERATED DAMPER |
| T | | DUCT MOUNTED THERMOSTAT |
| | | INCLINED DUCT RISE |
| | | INCLINED DUCT DOWN |
| | | TURNING VANES |
| — X — X — X — X — X — | | DEMOLITION |
| | | DEMOLITION TO THIS POINT |
| ∉ | CFM | CUBIC FEET PER MINUTE |
| (X) | | SPECIFIC DRAWING NOTE REFERENCE |
| ø | | DIAMETER |

## IAQ

1. AN INDOOR AIR QUALITY MANAGEMENT PLAN SHALL BE DEVELOPED. SUCH PLAN SHALL ADDRESS THE METHODS AND PROCEDURES TO BE USED DURING DESIGN AND CONSTRUCTION TO OBTAIN COMPLIANCE WITH THE FOLLOWING REGULATIONS.
2. PROVIDE INDOOR AIR QUALITY TESTING PER SECTION 804.2 OF 2012 IGCC.
   2.1. AFTER ALL INTERIOR FINISHES ARE INSTALLED, THE BUILDING SHALL BE TESTED FOR INDOOR AIR QUALITY AND THE TESTING RESULTS SHALL INDICATE THAT THE LEVEL OF VOCs MEET THE LEVELS DETAILED IN THE TABLE 804.2 USING TESTING PROTOCOLS IN ACCORDANCE WITH ASTM D 6196, ASTM D 5466, ASTM D 2054, ASTM D 6345, AND ISO 7708, TEST SAMPLES SHALL BE TAKEN IN NOT LESS THAN ONE LOCATION IN EACH 25,000 SQUARE FEET(1860 m²) OF FLOOR AREA OR IN EACH CONTIGUOUS FLOOR AREA.
3. PROTECT THE HVAC SYSTEM FROM CONTAMINATION AND PROTECT THE OCCUPANTS DURING CONSTRUCTION PER SECTIONS 803.1.1, 803.1.2, AND 803.1.3 OF THE 2012 IGCC.
   3.1. DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENTS OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR SHALL BE COVERED BY AN APPROVED METHOD TO REDUCE THE AMOUNT OF DUST AND DEBRIS THAT COLLECTS IN THEY SYSTEM FROM THE TIME OF ROUGH-IN INSTALLATION AND UNTIL THE STARTUP OF THE HEATING AND COOLING EQUIPMENT. DUST AND DEBRIS SHALL BE CLEANED FROM DUCT OPENINGS PRIOR TO THE SYSTEM FLUSH OUT AND BUILDING OCCUPANCY.
   3.2. VENTILATION DURING CONSTRUCTION SHALL BE ACHIEVED THROUGH OPENINGS IN THE BUILDING ENVELOPE USING ONE OF MORE OF THE FOLLOWING METHODS:
      3.2.1. NATURAL VENTILATION IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE OR THE INTERNATIONAL MECHANICAL CODE.
      3.2.2. FANS THAT PRODUCE A MINIMUM OF THREE AIR CHANGES PER HOUR.
      3.2.3. EXHAUST IN THE WORK ARE AT A RATE OF NOT LESS THAN 0.05 CFM/FT² (0.24K/S.In.²) AND NIT LESS THAN 10 PERCENT GREATER THAN THE SUPPLY AIR RATE SO AS TO MAINTAIN NEGATIVE PRESSURIZATION OF THE SPACE.
   3.3. HVAC SUPPLY AND RETURN DUCT AND EQUIPMENT OPENINGS SHALL BE PROTECTED DURING DUST-PRODUCTING OPERATIONS.
   3.4. WHEN A FORCED AIR HVAC SYSTEM IS USED DURING CONSTRUCTION, NEW RETURN AIR FILTERS SHALL BE INSTALLED PRIOR TO SYSTEM FLUSH OUT AND BUILDING OCCUPANCY.
   3.5. WHERE SPACES ARE CONDITIONED DURING THE CONSTRUCTION PHASE, SPACE CONDITIONING SYSTEMS SHALL BE OF THE DUCTLESS VARIETY, OR FILTERS FOR DUCTED SYSTEMS SHALL BE RATED AT MERV 8 OR HIGHER IN ACCORDANCE WITH ASHRAE 52.2, AND SYSTEM EQUIPMENT SHALL BE DESIGNED TO BE COMPATIBLE. DUCT SHALL ACCOUNT FOR PRESSURE DROP ACROSS THE FILTER.
   3.6. HVAC SEALANTS SHALL HAVE A VOC CONTENT LIMIT OF 420 AND HVAC SEALANT PRIMERS SHALL HAVE A VOC CONTENT LIMIT OF 750.

# NEW WORK GENERAL NOTES

1. UNLESS OTHERWISE INDICATED, WORK IS NEW WORK.
2. COORDINATE AND LOCATE STAGING/STORAGE AREA WHERE DIRECTED BY THE OWNER PRIOR TO BEGINNING CONSTRUCTION.
3. THE SPRINKLER SYSTEM SHALL BE DESIGNED & COORDINATED WITH NEW AND EXISTING DUCTWORK, PIPING, LIGHTING, EQUIPMENT AND ARCHITECTURAL REFLECTED CEILING PLANS. EXISTING SPRINKLER HEADS SHALL BE REMOVED AND REPLACED WITH RAPID RESPONSE RECESSED WHITE FINISH SPRINKLER HEADS.
4. THE EXISTING SPRINKLER (FIRE PROTECTION) SYSTEM CURRENTLY SERVING THE EXISTING AREAS SHALL BE REMOVED, MODIFIED, EXTENDED (INCLUDING SPRINKLER HEADS, BRANCH LINES, PIPE SUPPORTS, FIRE MAINS, VALVING, ETC...) TO ACCOMPLISH SPRINKLERING OF THE SCOPE OF WORK AREA. INCLUDE ALL SPRINKLER MODIFICATIONS TO THE EXISTING BUILDING TO ACCOMODATE NEW PARTITIONING, AIR DISTRIBUTION LAYOUT, LIGHTING LAYOUT, AREA HAZARD CLASSIFICATIONS, ETC...
5. CONTRACTOR SHALL CLEAN ALL EXISTING TO REMAIN DUCTWORK, DIFFUSERS, REGISTERS & GRILLES.
6. ALL SUPPLY, RETURN AND EXHAUST AIR DUCT OPENINGS NOT BEING REUSED SHALL BE PATCHED AND REPAIRED AIR TIGHT IN ACCORDANCE WITH SMACNA STANDARDS.
7. EXISTING PIPING, VALVING, DUCTWORK & ELECTRIC CONDUITS, ETC... DO EXIST WITHIN THE CEILING SPACE OTHER THAN THAT WHICH IS SHOWN ON THE CONTRACT DRAWINGS.
8. FIELD CHECK PREMISES PRIOR TO SUBMITTING BID TO BECOME ACQUAINTED WITH EXISTING CONDITIONS AND TO DETERMINE BEST MANNER FOR INSTALLATION. DETAILS OF PROPOSED DEPARTURES DUE TO ACTUAL FIELD CONDITIONS OR OTHER CAUSES SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO FINAL INSTALLATION. NO EXTRAS SHALL BE PAID IN INSTANCES WHERE DISCREPANCIES ARISE AND THE INSTALLER HAS FAILED TO VERIFY JOB SITE CONDITIONS.
9. THE OWNER HAS FIRST RIGHT OF REFUSAL TO EQUIPMENT, DIFFUSERS, GRILLES, ETC. BEING REMOVED AND NOT BEING RELOCATED.
10. PREPARE COORDINATION DRAWINGS FOR ALL INTERIOR BUILDING SYSTEMS. DRAWINGS SHALL BE 1/4"=1'-0" SCALE. SHOW THE RELATIONSHIP OF COMPONENTS SHOWN ON SEPARATE SHOP DRAWINGS. INDICATE REQUIRED INSTALLATION SEQUENCES.
11. CONDENSATE DRAIN PIPING SHALL RUN AT A 2% SLOPE MINIMUM UNLESS NOTED OTHERWISE.
12. COORDINATE MOTORS AND OTHER ELECTRICAL EQUIPMENT FURNISHED UNDER DIV. 15 WITH DIV. 16. PROVIDE EQUIPMENT COORDINATION TABLE AS A SHOP DRAWING FOR REVIEW. TABLE SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION:
    A) EQUIPMENT POWER REQUIREMENTS INCLUDING AMPS & VOLTAGES
    B) DISCONNECTING MEANS AND OVER CURRENT PROTECTION REQUIREMENTS.
    C) CONTROL REQUIREMENTS.
13. COORDINATE THE INSTALLATION OF LIGHTING FIXTURES WITH PIPING, DUCTWORK, AIR DEVICES, SPRINKLERS AND EQUIPMENT BEING INSTALLED IN THE FACILITY SUCH THAT PIPING, DUCTWORK, AIR DEVICES, AND EQUIPMENT DO NOT BLOCK OR IMPEDE LIGHTING.
14. COORDINATE THE INSTALLATION OF SUPPLY, RETURN AND EXHAUST AIR DEVICES, ETC... WITH DUCTWORK, DOMESTIC WATER, SANITARY, STORM WATER PIPING. IF THE INSTALLATION DEVIATES FROM THE CONTRACT DRAWINGS, SERVICEABILITY & MAINTENANCE MUST BE MAINTAINED TO VALVING, EQUIPMENT, ETC...
15. PROVIDE HANGERS, ANCHORS, ETC... ON PIPING PER SUPPORT MANUFACTURER'S RECOMMENDATIONS.
16. INSTALL PIPING SO THAT VALVING IS ACCESSIBLE. PROVIDE ACCESS PANELS PER SPECIFICATIONS.
17. ROUTE DOMESTIC WATER PIPING, SPRINKLER PIPING, HVAC PIPING, GAS PIPING, ETC... IN PIPE CHASES AND FURRED OUT WALLS AND ABOVE CEILINGS. NO PIPING SHALL BE EXPOSED UNLESS APPROVED BY THE ARCHITECT OR OWNER.
18. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF, WALL AND CEILING CONSTRUCTION TYPES AND DETAILS. REFER TO STRUCTURAL DRAWINGS FOR STEEL SIZES AND LOCATIONS.
19. INSTALL EQUIPMENT, IE: ROOFTOP UNITS, ETC... IN SUCH A MANNER AS TO PROVIDE ADEQUATE SPACE FOR MAINTENANCE AND SERVICE ACCESS.
20. PROVIDE PIPE SLEEVES AT ALL WALL, FLOOR AND ROOF PENETRATIONS, ALL EXTERIOR ROOF & WALL PIPING PENETRATIONS SHALL BE MADE WEATHER TIGHT, REFER TO DETAILS OF EXTERIOR & INTERIOR WALL PENETRATIONS FOR MORE INFORMATION.
21. FIRE STOP ALL PIPING AND DUCT PENETRATIONS THRU FIRE WALLS AND FLOORS, IN ADDITION PROVIDE FIRE DAMPERS WHERE REQUIRED BY CODE IN ALL DUCTS THAT PASS THROUGH FIRE WALLS-REFER TO ARCHITECTURAL DWG.'s FOR FIRE WALL LOCATIONS.
22. PROVIDE WEATHER TIGHT WALL & ROOF DUCT AND PIPING PENETRATIONS, ALL SEALING MATERIALS TO BE APPROVED BY THE ARCHITECT.
23. PROVIDE ACCESS DOORS IN DUCTWORK FOR EVERY FIRE DAMPER WHETHER SHOWN OR NOT.
24. INSTALL DUCTWORK SO THAT VOLUME DAMPERS, CONTROL PANELS, ETC... ARE ACCESSIBLE. PROVIDE ACCESS PANELS PER SPECIFICATIONS.
25. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF THERMOSTATS SERVING EQUIPMENT WITH THE OWNER AND/OR ARCHITECT.
26. REPLACE AIR FILTERS SERVING AIR HANDLING EQUIPMENT PRIOR TO FINAL BALANCING OF ALL AIR DISTRIBUTION SYSTEMS.
27. PROVIDE FLEXIBLE DUCT CONNECTION AT ALL DUCTED: RTU'S & EXHAUST FAN INLET & OUTLET CONNECTIONS.
28. COORDINATE ALL NEW & DEMOLITION WORK WITH EXISTING WORK TO REMAIN SO AS NOT TO DAMAGE EXISTING WORK. ANY DAMAGE TO EXISTING WORK TO REMAIN SHALL BE REPLACED/REPAIRED AT NO COST TO THE OWNER.
29. PIPING & DUCTWORK REMOVALS INDICATED ON DEMOLITION DRAWINGS SHALL BE INTERPRETED TO INCLUDE PIPE AND DUCT INSULATION, VALVING, PIPE & DUCT SUPPORTS AND ALL OTHER ASSOCIATED APPURTENANCES. PIPING SHALL BE CAPPED AT POINT OF REMOVAL.
30. PATCH EXISTING WALLS AND FLOORS TO MATCH EXISTING WHERE NEW MECHANICAL UTILITIES SUCH AS PLUMBING LINES, ATC WIRING AND TUBING, DUCTS, ETC. PENETRATES EXISTING WALLS AND FLOORS. CONTRACTOR SHALL ALSO PATCH WALLS AND FLOORS TO MATCH EXISTING WHERE EXISTING PIPING, WIRING, TUBING DUCTS, ETC. ARE BEING REMOVED AND PENETRATES EXISTING WALLS.

# MECHANICAL ABBREVIATIONS

| ABBREV. | DESCRIPTION | ABBREV. | DESCRIPTION |
|---|---|---|---|
| ABV. | ABOVE | KW | KILOWATTS |
| ACCU | AIR COOLED CONDENSING UNIT | LAT | LEAVING AIR TEMPERATURE |
| A.F.F. | ABOVE FINISHED FLOOR | LBS. | POUNDS |
| AMPS | AMPERES | LBS/HR | POUNDS PER HOUR |
| APD | AIR PRESSURE DROP | LS | LINEAR SLOT |
| ARCH. | ARCHITECTURAL | MAX. | MAXIMUM |
| ATC | AUTOMATIC TEMPERATURE CONTROLS | MBH | THOUSANDS OF BTUH'S/HOUR |
| BTUH | BRITHISH THERMAL UNITS PER HOUR | MCA | MINIMUM CIRCUIT AMPS |
| CAP. | CAPACITY | MECH. | MECHANICAL |
| CFM | CUBIC FEET PER MINUTE | MIN. | MINIMUM |
| CLG. | CEILING | MOCP | MAXIMUM OVERCURRENT PROTECTION |
| COMP. | COMPRESSOR | MTD. | MOUNTED |
| COND. | CONDENSER | OA | OUTDOOR AIR |
| CONT. | CONTINUED | OED | OPEN ENDED DUCT |
| CUH | CABINET UNIT HEATER | QTY. | QUANTITY |
| DB | DRY BULB | RAR | RETURN AIR GRILLE |
| DESIGN. | DESIGNATION | RHC | REHEAT COIL |
| DIV. | DIVISION | RLA | RUNNING LOAD AMPS |
| DN. | DOWN | RPM | REVOLUTIONS PER MINUTE |
| DWG. | DRAWINGS | RTU | ROOFTOP UNIT |
| EAG | EXHAUST AIR GRILLE | SAD | SUPPLY AIR DIFFUSER |
| EAT | ENTERING AIR TEMPERATURE | SAR | SUPPLY AIR REGISTER |
| EF | EXHAUST FAN | SEER | SEASIONAL ENERGY EFFICIENCY |
| EFF. | EFFICIENCY | SENS. | SENSIBLE |
| ELEC. | ELECTRICAL | SP | STATIC PRESSURE |
| EQPT. | EQUIPMENT | SQFT | SQUARE FEET |
| ESP | EXTERNAL STATIC PRESSURE | TAG | TRANSFER AIR GRILLE |
| EVAP. | EVAPERATOR | TEMP. | TEMPERATURE |
| EWH | ELECTRIC WALL HEATER | TYP. | TYPICAL |
| EX. | EXISTING | TYP.-# | TYPICAL OF "X" (NUMBER) |
| FD | FIRE DAMPER | V-PH | VOLTS-PHASE |
| FLA | FULL LOAD AMPS | VAV | VARIABLE AIR VOLUME |
| FPM | FEET PER MINUTE | VD | VOLUME DAMPER |
| GR | GRILLE | VFD | VARIABLE FREQUENCY DRIVE |
| HP | HORSEPOWER | W/ | WITH |
| IN. | INCHES | WB | WET BULB |
| IN.WC. | INCHES OF WATER COLUMN | WH | WATER HEATER |

# DEMOLITION NOTES

1. NOTIFY THE OWNER, IN WRITING, AT LEAST FOURTEEN (14) DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS OF WATER, SEWER, FIRE PROTECTION, GAS, ELECTRICAL SERVICE, OR OTHER UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM OWNER, SHUTDOWNS SHALL BE PERFORMED BETWEEN THE HOURS OF SIX (6) P.M. AND SIX (6) A.M. OR AS DIRECTED OTHERWISE BY THE OWNER AT NO ADDITIONAL CONTRACT COST. AT THE END OF EACH WORK DAY SHUT DOWN ALL SERVICES SHALL BE RESTORED SO THAT NORMAL USE OF UTILITIES CAN CONTINUE.
2. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF EXISTING STRUCTURE AND MECHANICAL AND ELECTRICAL SERVICES WHICH SHALL REMAIN.
3. REPAIR, REPLACE, OR RESTORE TO THE SATISFACTION OF THE ARCHITECT ALL EXISTING WORK DAMAGE IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK.
4. THE EXISTING CONDITIONS (DUCTWORK, PIPING, EQUIPMENT, AND MATERIALS) SHOWN ON THE CONTRACT DOCUMENTS ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND SHALL BE CONSIDERED DIAGRAMMATIC. THE CONTRACTOR SHALL FIELD VERIFY EXACT SIZES AND LOCATIONS OF ALL DUCTWORK, PIPING, EQUIPMENT, AND MATERIALS PRIOR TO COMMENCING WITH NEW AND DEMOLITION WORK.
5. EXISTING MECHANICAL AND ELECTRICAL WORK INDICATED TO BE REMOVED:(PIPES, VALVES, DUCTS, ETC.) SHALL BE REMOVED TO A POINT BELOW THE FINISHED FLOORS OR BEHIND FINISHED WALLS AND CAPPED. TERMINATION POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.
6. EXISTING DUCTWORK INDICATED TO BE DISCONNECTED AND REMOVED SHALL INCLUDE RELOCATED AIR DEVICES, HANGERS, SUPPORTS, ETC. DUCTWORK SHALL BE CAPPED WITH SIMILAR GAGE SHEET METAL. SECURE CAPS(S) WITH SHEET METAL SCREWS AND SEAL WITH DUCT SEALER, NO EXISTING DUCTWORK SHALL BE LEFT UNCAPPED.
7. PATCH TO MATCH EXISTING ALL NEW AND EXISTING OPENINGS IN WALLS, CEILINGS AND FLOOR SURFACES DAMAGED OR CREATED BY DEMOLITION WORK. PATCHING SHALL MATCH EXISTING ADJACENT SURFACES AS THICKNESS, TEXTURES, MATERIALS, AND COLOR ALL PATCHING SHALL BE PERFORMED TO THE SATISFACTION OF THE ARCHITECT AND AT NO ADDITIONAL CONTRACT COST.
8. ALL DEMOLISHED EQUIPMENT SHALL BE OFFERED TO THE OWNER PRIOR TO DISPOSAL. EQUIPMENT RETAINED BY THE OWNER SHALL BE STORED WHERE DIRECTED BY THE OWNER. ANY EQUIPMENT THE OWNER DOES NOT WISH TO RETAIN SHALL BE DISPOSED OF, OFF SITE, BY THE CONTRACTOR.

## MECHANICAL DRAWING LIST

| SHEET | TITLE |
|---|---|
| 80.00 | MECHANICAL LEGEND, NOTES, ABBREVIATIONS AND SCHEDULES |
| 80.01 | BASEMENT FLOOR PLAN MECHANICAL NEW WORK |
| 80.02 | FIRST FLOOR PLAN MECHANICAL NEW WORK |
| 80.03 | SECOND FLOOR PLAN MECHANICAL NEW WORK |
| 80.04 | THIRD FLOOR PLAN MECHANICAL NEW WORK |
| 80.05 | ROOF PLAN MECHANICAL NEW WORK |
| 86.01 | MECHANICAL SCHEDULES |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Professional Certification: I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland. License No: 19966 Expiration Date: 3/4/2019


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Union Brothers Furniture Company
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**MECHANICAL LEGEND, NOTES AND ABBREVIATION**

| Project Number | 16225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by | FDD | Checked by | JRV |
| NPS/MHT SUBMISSION | | | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

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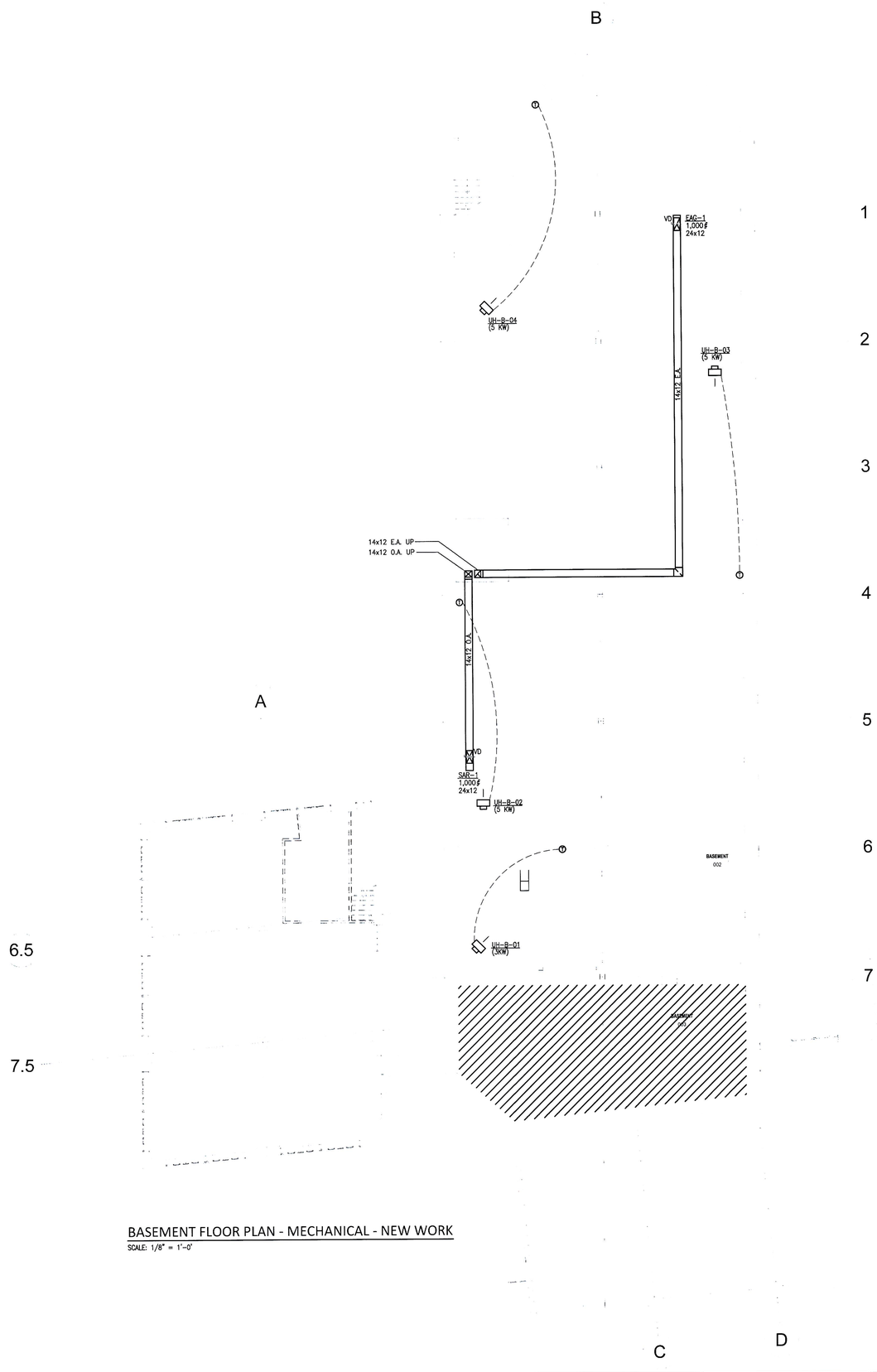
**80.00**




BASEMENT FLOOR PLAN - MECHANICAL - NEW WORK

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

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SHEET TITLE

**BASEMENT FLOOR PLAN MECHANICAL DEMOLITION**

| Project Number | 16225 | Date: | 10/05/17 |
|---|---|---|---|
| Drawn by | FDD | Checked by | JRV |
| INPS/MHT SUBMISSION | | | 09/30/16 |

| Num. | Description | Date |
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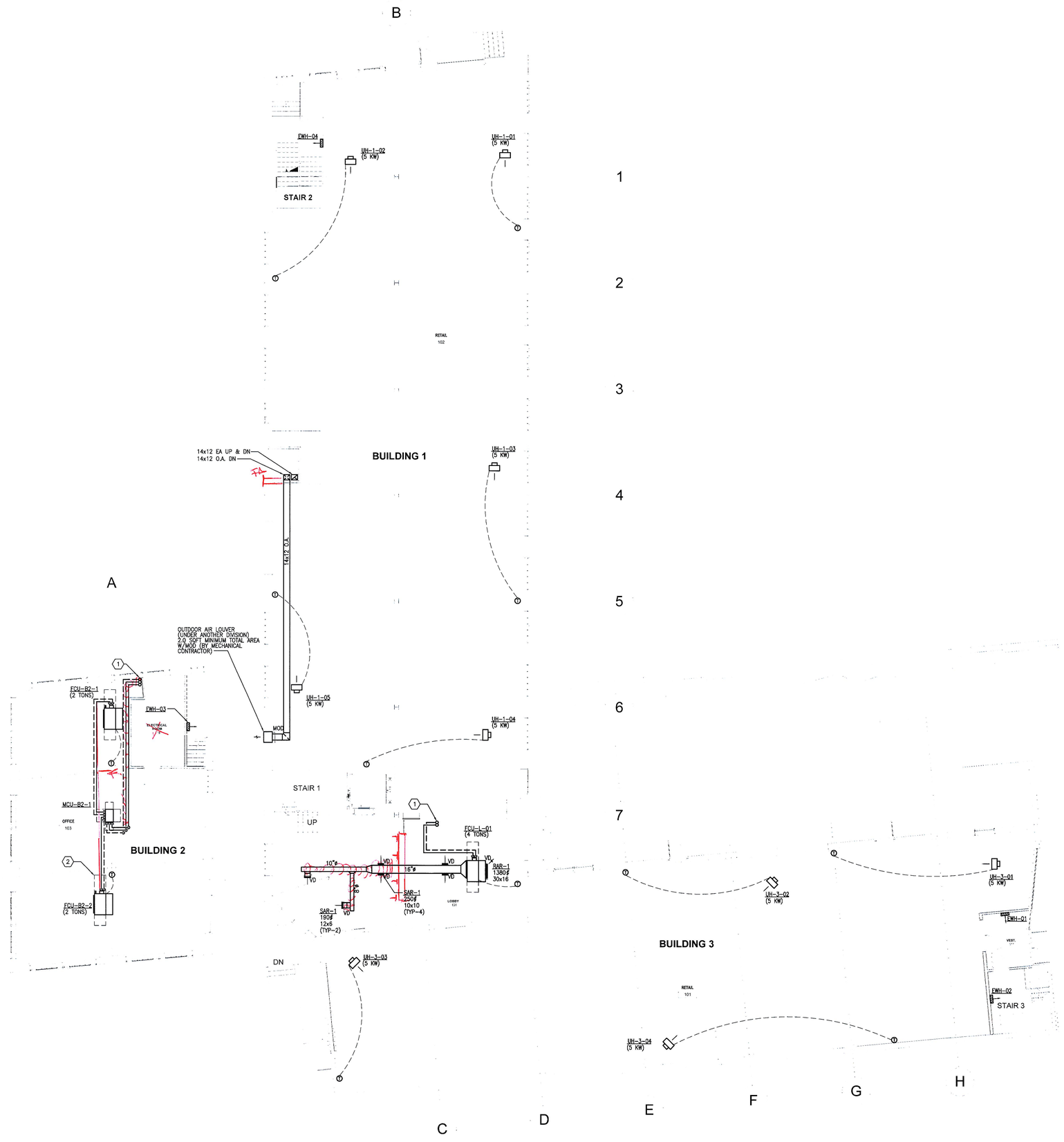
0 4' 8' 16'
SCALE: 1/8" = 1'-0"

**80.01**

SPECIFIC NOTES (REFER TO 80.02 WHERE INDICATED):

1. RS/RL PIPING UP. SIZE, ROUTE AND MOUNT PER MANUFACTURER'S RECOMMENDATIONS.
2. MAINTAIN THIS AREA CLEAR FOR SERVICE AND MAINTENANCE (TYP).




FIRST FLOOR PLAN - MECHANICAL - NEW WORK

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

0 4' 8' 16'

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

**FIRST FLOOR PLAN MECHANICAL NEW WORK**

| Project No./Index | 16225 | Date: | 10/05/17 |
|---|---|---|---|
| Drawn by: | FDD | Checked by: | JRV |
| MPS/PERMIT SUBMISSION | | | 09/30/16 |

| Num. | Description | Date |
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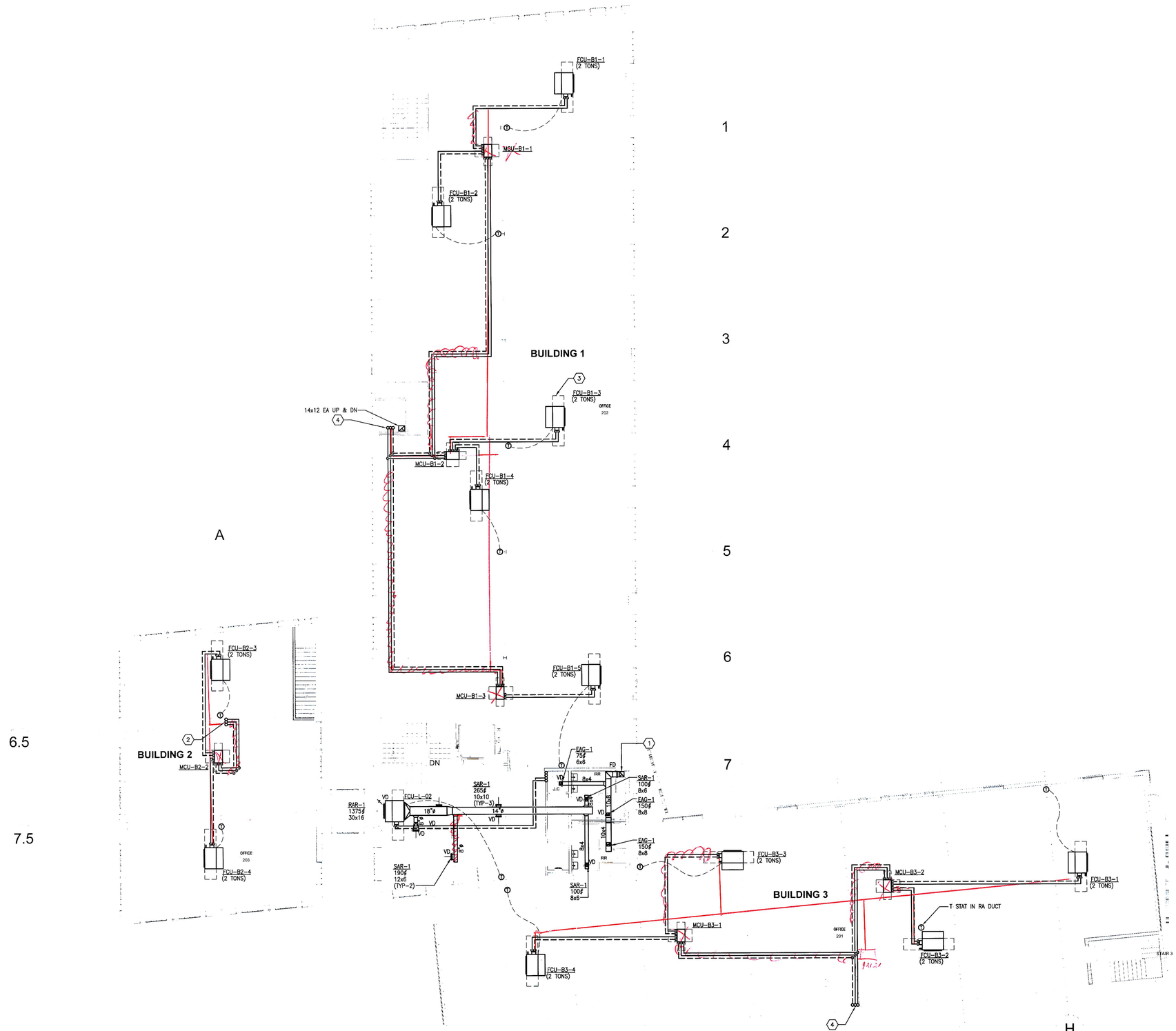
**80.02**




SECOND FLOOR PLAN - MECHANICAL - NEW WORK

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

SPECIFIC NOTES (REFER TO 80.03 WHERE INDICATED):

1. 10x8 EA UP.
2. RS/RL PIPING UP. SIZE, ROUTE AND MOUNT PER MANUFACTURER'S RECOMMENDATIONS.
3. MAINTAIN THIS AREA CLEAR FOR SERVICE AND MAINTENANCE (TYP).
4. RS/RL PIPING UP AND DOWN. SIZE, ROUTE AND MOUNT PER MANUFACTURER'S RECOMMENDATIONS.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SHEET TITLE

**SECOND FLOOR PLAN MECHANICAL NEW WORK**

| Project Number | 16225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by: | FDD | Checked by: | JRV |
| NPS/MHT SUBMISSION | | | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

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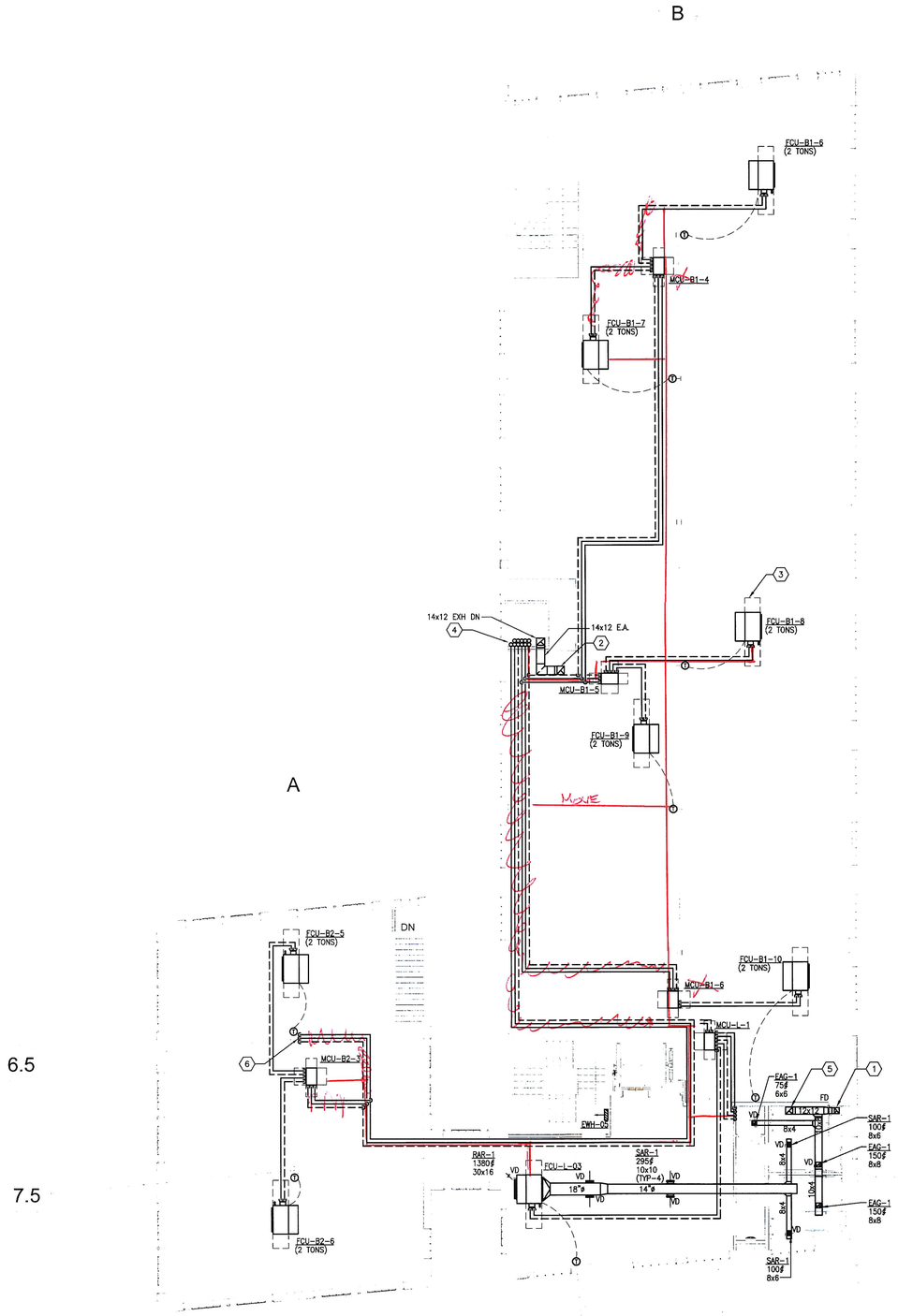
0 4' 8' 16'

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

**80.03**




SPECIFIC NOTES (REFER TO 80.04 WHERE INDICATED):

1. 10x8 EA DOWN.
2. 14x12 EXH UP TO EF-2.
3. MAINTAIN THIS AREA CLEAR FOR SERVICE AND MAINTENANCE (TYP).
4. RS/RL PIPING UP AND DOWN. SIZE, ROUTE AND MOUNT PER MANUFACTURER'S RECOMMENDATIONS.
5. 12x12 EA UP TO EF-1.
6. RS/RL PIPING DOWN. SIZE, ROUTE AND MOUNT PER MANUFACTURER'S RECOMMENDATIONS.

THIRD FLOOR PLAN - MECHANICAL - NEW WORK

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

0 4' 8' 16'

SCALE: 1/8" = 1'-0"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SHEET TITLE
THIRD FLOOR PLAN MECHANICAL NEW WORK

| | |
|---|---|
| Project Number | 18225 |
| Date | 10/05/17 |
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|---|---|---|

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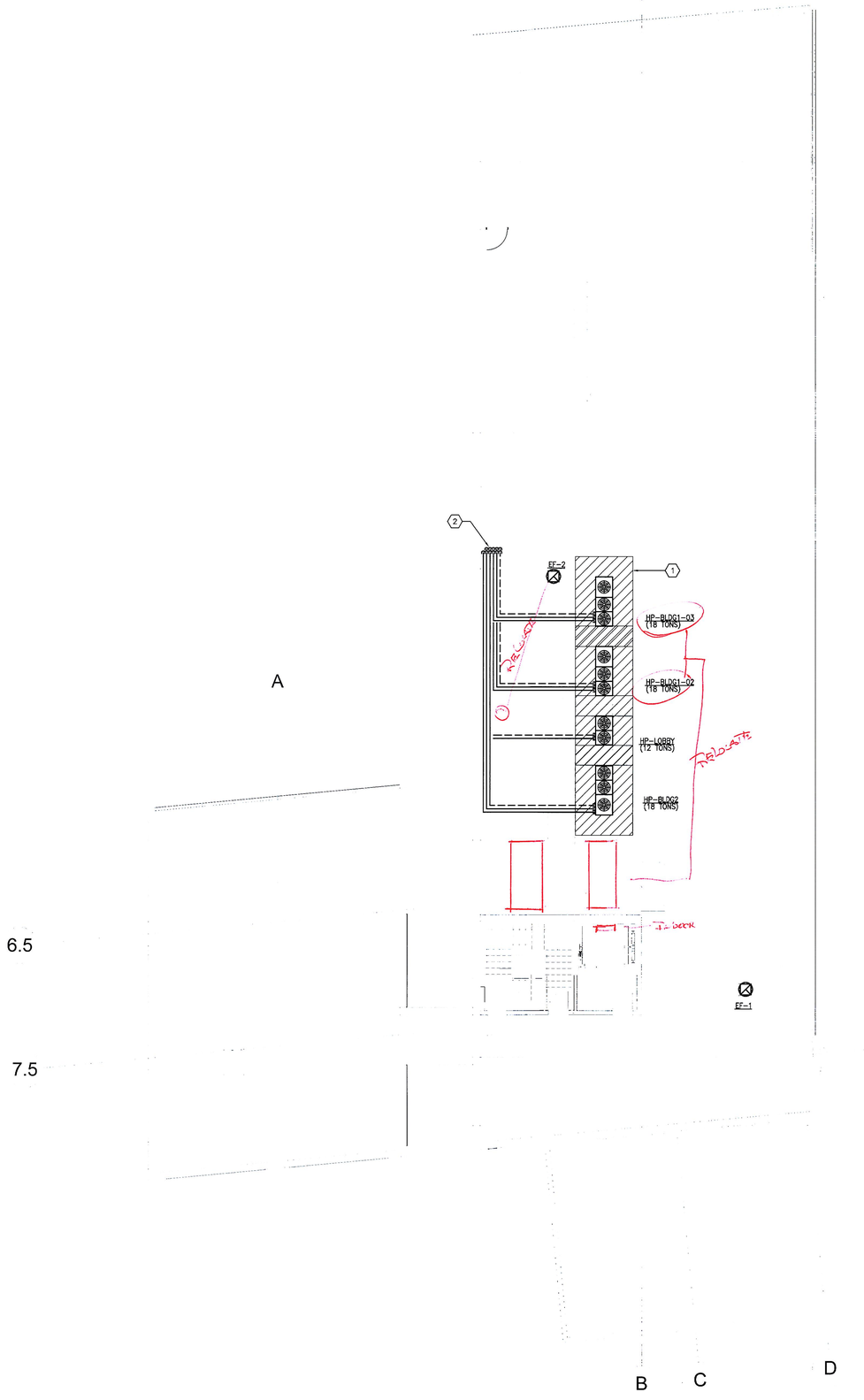
80.04

SPECIFIC NOTES (REFER TO 80.05 WHERE INDICATED):

(1) MAINTAIN THIS AREA CLEAR FOR SERVICE AND MAINTENANCE. (TYP.)

(2) RS/RL PIPING DOWN. SIZE, ROUTE AND MOUNT PER MANUFACTURER'S RECOMMENDATIONS.




ROOF PLAN - MECHANICAL - NEW WORK

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

0 4' 8' 16'

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

**ROOF PLAN MECHANICAL NEW WORK**

| Project Number | 16225 | Date | 10/05/17 |
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| MP/HMHT SUBMISSION | | | 08/30/18 |

| Num. | Description | Date |
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**80.05**

## HEAT PUMP SCHEDULE

| UNIT DESIGN. | SERVING | SYSTEM TYPE | COOLING AMB. TEMP. (F) | COOLING TOTAL NOMINAL TONS | HEATING TOTAL CAP. MBH | HEATING AMB. TEMP. (F) | HEATING TOTAL CAP. MBH | CONNECTION RATIO % | REFRIGERANT TYPE | ELECTRICAL RLA UNIT #1 | RLA UNIT #2 | RLA UNIT #3 | MCA UNIT #1 | MCA UNIT #2 | MCA UNIT #3 | MOCP UNIT #1 | MOCP UNIT #2 | MOCP UNIT #3 | V-PH | SYSTEM MANUFACTURER/ MODEL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HP-LOBBY | BUILDING 1&3 LOBBY AREAS | AIR COOLED HEAT PUMP | 95 | 12 | 138 | 10 | 154 | 100 | R-410A | | | | 52.6 | | | 70 | | | 208-3 | TRANE 4TVH0144B3 | 1,2,3,4,5,6,7 |
| HP-BLDG1-02 | BUILDING 1-SECOND FLOOR | AIR COOLED HEAT RECOVERY | 95 | 18 | 206 | 10 | 230 | 50 | R-410A | | | | 28.0 | 52.6 | | 35 | 70 | | 208-3 | TRANE 4TVR0216B3 | 1,2,3,4,5,6,8 |
| HP-BLDG1-03 | BUILDING 1-THIRD FLOOR | AIR COOLED HEAT RECOVERY | 95 | 18 | 206 | 10 | 230 | 50 | R-410A | | | | 28.0 | 52.6 | | 35 | 70 | | 208-3 | TRANE 4TVR0216B3 | 1,2,3,4,5,6,8 |
| HP-BLDG2 | BUILDING 2-ALL FLOORS | AIR COOLED HEAT RECOVERY | 95 | 18 | 206 | 10 | 230 | 50 | R-410A | | | | 28.0 | 52.6 | | 35 | 70 | | 208-3 | TRANE 4TVR0216B3 | 1,2,3,4,5,6,8 |
| HP-BLDG3-02 | BUILDING 3-SECOND FLOOR | AIR COOLED HEAT RECOVERY | 95 | 14 | 160 | 10 | 180 | 50 | R-410A | | | | 66.0 | | | 80 | | | 208-3 | TRANE 4TVR0168B3 | 1,2,3,4,5,6,9 |

NOTES

1. DISCONNECT SWITCH SHALL BE PROVIDED UNDER THE ELECTRICAL DIVISION.
2. ROUTE, MOUNT AND SIZE RS/RL PIPING PER MANUFACTURER'S RECOMMENDATIONS FOR A COMPLETE AND OPERABLE SYSTEM. "Y" BRANCHES TO BE SUPPLIED BY UNIT MANUFACTURER.
3. EACH HEAT PUMP MODULE REQUIRES AN INDIVIDUAL POWER CONNECTION.
4. UNITS TO INCLUDE MICROPROCESSOR CONTROLLER, ELECTRONIC EXPANSION VALVES, OUTDOOR TEMPERATURE SENSOR, DC SCROLL COMPRESSORS, CRANKCASE HEATER, ACCUMULATOR, OIL SEPARATOR, SUBCOOLER, HIGH AND LOW PRESSURE SENSORS, AND 4-WAY REVERSING VALVE.
5. PROVIDE AC SMART MONITORING SYSTEM.
6. PROVIDE (6) YEAR COMPRESSOR PARTS ONLY WARRANTY.
7. UNIT IS A SINGLE HEAT PUMP SECTION. CONNECTION TO MODE CONTROL UNITS VIA TWO PIPES.
8. UNIT IS TWO HEAT RECOVERY MODULES. CONNECTION TO MODE CONTROL UNITS VIA THREE PIPES.
9. UNIT IS A SINGLE HEAT RECOVERY MODULE. CONNECTION TO MODE CONTROL UNITS VIA THREE PIPES.

## FAN SCHEDULE

| DESIGN. | SERVING | DUTY | CFM | E.S.P. (IN.W.C.) | FAN RPM | SONES | TYPE | DRIVE | MOTOR | ELECTRICAL WATTS/HP | ELECTRICAL VOLTS-PH | MANUFACTURER /MODEL | ACCESSORIES | WEIGHT (LBS.) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-01 | TOILET ROOMS | EXHAUST | 750 | 0.5 | 1,300 | 6.5 | RMD | DD | ODP | 1/4 HP | 120-1 | GREENHECK G-103 VG 1/4 | VSC,TO,VIB | 54 | 1,2 |
| EF-02 | BASEMENT VENTILATION | EXHAUST | 1000 | 0.5 | 1,500 | 9.0 | RMD | DD | ODP | 1/4 HP | 120-1 | GREENHECK G-103 VG 1/4 | VSC,TO,VIB | 54 | 1,2 |

TYPE: RMD ROOF DOWNBLAST; CLG CEILING

DRIVE: DD DIRECT DRIVE

MOTOR: OPD OPEN DRIP PROOF

ACCESSORIES: BD INTEGRAL BACKDRAFT DAMPER; GR GRILLE; MD MOTION DETECTOR-WALL MOUNTED; PLG PLUG-IN TYPE DISCONNECT; TS WALL MOUNTED THERMOSTAT; SC SPEED CONTROLLER; TO THERMAL OVERLOAD PROTECTION; VIB VIBRATION ISOLATION KIT; VSC VARIABLE SPEED DIRECT DRIVE MOTOR

NOTES:

1. PROVIDE FAN WITH AN INTERNAL MOUNTED, SOLID STATE SPEED CONTROLLER, 5WSSC, 5 AMP, 120V-1PH.
2. FAN SHALL OPERATE VIA A TIMED WALL SWITCHED (UNDER MECHANICAL DIVISION).

## FAN COIL UNIT SCHEDULE

| INDOOR UNIT FCU- | OUTDOOR UNIT HP- | SERVING | SUPPLY AIR CFM | ESP | OUTDOOR AIR CFM | HEATING HEAT PUMP EAT (F) | HEATING HEAT PUMP TOTAL BTUH | HEATING HEAT PUMP LAT (F) | COOLING EAT DB (F) | COOLING EAT WB (F) | COOLING BTUH TOTAL (BTUH) | COOLING BTUH SENS (BTUH) | COOLING NOMINAL TONS | COOLING REFRIGERANT TYPE | AMBIENT TEMP (F) | INDOOR UNIT TRANE MODEL | INDOOR UNIT TYPE | ELECTRICAL MCA | ELECTRICAL MOCP | ELECTRICAL V-PH | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L-01 | LOBBY | LOBBY 131 | 1,380 | 0.5 | 0 | 68 | 54,000 | 105 | 76 | 64 | 48,000 | 36,000 | 4.0 | R-410A | 95.0 | 4TVD0048 | CEILING MOUNTED DUCTED (MED STATIC) | 2.5 | 15 | 208-1 | 1,2,3 |
| L-02 | LOBBY | LOBBY 206 | 1,380 | 0.5 | 0 | 68 | 54,000 | 105 | 76 | 64 | 48,000 | 36,000 | 4.0 | R-410A | 95.0 | 4TVD0048 | CEILING MOUNTED DUCTED (MED STATIC) | 2.5 | 15 | 208-1 | 1,2,3 |
| L-02 | LOBBY | LOBBY 306 | 1,380 | 0.5 | 0 | 68 | 54,000 | 105 | 76 | 64 | 48,000 | 36,000 | 4.0 | R-410A | 95.0 | 4TVD0048 | CEILING MOUNTED DUCTED (MED STATIC) | 2.5 | 15 | 208-1 | 1,2,3 |
| B1-1 | BLDG1-02 | OFFICE 202 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-2 | BLDG1-02 | OFFICE 202 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-3 | BLDG1-02 | OFFICE 202 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-4 | BLDG1-02 | OFFICE 202 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-5 | BLDG1-02 | OFFICE 202 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-6 | BLDG1-03 | OFFICE 302 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-7 | BLDG1-03 | OFFICE 302 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-8 | BLDG1-03 | OFFICE 302 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-9 | BLDG1-03 | OFFICE 302 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B1-10 | BLDG1-03 | OFFICE 302 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B2-1 | BLDG2 | OFFICE 103 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B2-2 | BLDG2 | OFFICE 103 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B2-3 | BLDG2 | OFFICE 203 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B2-4 | BLDG2 | OFFICE 203 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B2-5 | BLDG2 | OFFICE 303 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B2-6 | BLDG2 | OFFICE 303 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B3-1 | BLDG3 | OFFICE 201 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B3-2 | BLDG3 | OFFICE 201 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B3-3 | BLDG3 | OFFICE 201 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |
| B3-4 | BLDG3 | OFFICE 201 | 650 | 0.5 | 0 | 68 | 27,000 | 105 | 76 | 64 | 24,000 | 18,000 | 2.0 | R-410A | 95.0 | 4TVD0024 | CEILING MOUNTED DUCTED (MED STATIC) | 1.5 | 15 | 208-1 | 1,2,3 |

NOTES:

1. DISCONNECT SWITCH SHALL BE PROVIDED UNDER THE ELECTRICAL DIVISION.
2. PROVIDE UNIT WITH WALL MOUNTED THERMOSTAT AND BUILT-IN CONDENSATE PUMP.
3. PROVIDE FILTER BOX WITH MERV 11 MINIMUM FILTER

## NATURAL VENTILATION SCHEDULE

| ROOM NUMBER | ROOM DESCRIPTION | FLOOR AREA (SQFT) | 4% OF FLOOR AREA (SQFT) | TOTAL OPERABLE AREA (SQFT) | WINDOW AREA > 4% OF FLOOR AREA (Y/N) | OPERABLE AREA % OF FLOOR AREA |
|---|---|---|---|---|---|---|
| BUILDING 1 | | | | | | |
| 131 | LOBBY | 1299 | 52 | 119.7 | Y | 9.2% |
| 102 | OFFICE | 6109 | 244 | 242.4 | Y | 4.0% |
| 202 | OFFICE | 6145 | 246 | 292.5 | Y | 4.8% |
| 306 | LOBBY | 597 | 24 | 58.8 | Y | 9.8% |
| 302 | OFFICE | 6187 | 247 | 292.5 | Y | 4.7% |
| BUILDING 2 | | | | | | |
| 103 | OFFICE | 1857 | 74 | 225 | Y | 12.1% |
| 203 | OFFICE | 1809 | 72 | 201 | Y | 11.1% |
| 303 | OFFICE | 1814 | 73 | 226 | Y | 12.5% |
| BUILDING 3 | | | | | | |
| 101 | RETAIL | 4447 | 178 | 245 | Y | 5.5% |
| 201 | OFFICE | 4688 | 188 | 275 | Y | 5.9% |

## VRF ZONE HEAT RECOVERY DEVICE SCHEDULE

| MODE CONTROL DESIGN. | ASSOCIATED FCU | ASSOCIATED HP | AREA SERVED | NO. OF PORTS | MAX. CAP. (BTUH) PER PORT | MAX. CAP. (BTUH) FOR UNIT | ELECTRICAL MCA | ELECTRICAL MOCP | ELECTRICAL V-PH | TRANE MODEL |
|---|---|---|---|---|---|---|---|---|---|---|
| MCU L-1 | L-1, L-2, L-3 | LOBBY | LOBBY FLOORS 1 THROUGH 3 | 6 | 48,000 | 180,000 | 0.1 | 15 | 208-1 | 4MCUCUY6 |
| MCU B1-1 | B1-1, B1-2 | BLDG1-02 | BUILDING 1 - SECOND FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B1-2 | B1-3, B1-4 | BLDG1-02 | BUILDING 1 - SECOND FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B1-3 | B1-5 | BLDG1-02 | BUILDING 1 - SECOND FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B1-4 | B1-6, B1-7 | BLDG1-03 | BUILDING 1 - THIRD FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B1-5 | B1-8, B1-9 | BLDG1-03 | BUILDING 1 - THIRD FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B1-6 | B1-10 | BLDG1-03 | BUILDING 1 - THIRD FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B2-1 | B2-1, B2-2 | BLDG2 | BUILDING 2 - FIRST FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B2-2 | B2-3, B2-4 | BLDG2 | BUILDING 2 - SECOND FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B2-3 | B2-5, B2-6 | BLDG2 | BUILDING 2 - THIRD FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |
| MCU B3-1 | B3-3, B3-4 | BLDG3-02 | BUILDING 3 - SECOND FLOOR | 6 | 48,000 | 180,000 | 0.1 | 15 | 208-1 | 4MCUCUY6 |
| MCU B3-2 | B3-1, B3-2 | BLDG3-02 | BUILDING 3 - SECOND FLOOR | 4 | 48,000 | 120,000 | 0.1 | 15 | 208-1 | 4MCUCUY4 |

NOTES

1. PROVIDE BALL VALVES AND CAP ALL ADDITIONAL UNUSED RS/RL PORTS ON BOX FOR LATER USE.
2. MAINTAIN ACCESS TO BRANCH CONTROLLER BOX IN CEILING SPACE.

## ELECTRIC HEATER SCHEDULE

| DESIG. | SERVING | CFM | CAP. (MBH) | TYPE | ELECTRIC KW | ELECTRIC AMPS | ELECTRIC VOLTS-PH | MANUFACTURER / MODEL | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| EWH-01 | MECHANICAL L08 | 100 | 10.2 | WALL HEATER | 3.0 | 14.4 | 208-1 | BERKO FRA4024F | 1,3 |
| EWH-02 | VESTIBULE 101 | 100 | 10.2 | WALL HEATER | 3.0 | 14.4 | 208-1 | BERKO FRA4024F | 1,3 |
| EWH-03 | SOUTH STAIR THIRD FLOOR | 100 | 10.2 | WALL HEATER | 3.0 | 14.4 | 208-1 | BERKO FRA4024F | 1,3 |
| EWH-04 | NORTH STAIR N-3RD | 100 | 10.2 | WALL HEATER | 3.0 | 14.4 | 208-1 | BERKO FRA4024F | 1,3 |
| EWH-05 | MENS L12 | 100 | 10.2 | WALL HEATER | 3.0 | 14.4 | 208-1 | BERKO FRA4024F | 1,3 |
| UH B-01 | BASEMENT BUILDING 1 | 350 | 10.2 | UNIT HEATER | 3.0 | 14.4 | 208-1 | Q-MARK HUHAA320 | 1 |
| UH B-02 | BASEMENT BUILDING 1 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH B-03 | BASEMENT BUILDING 1 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH B-04 | BASEMENT BUILDING 1 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 1-01 | FIRST FLOOR BUILDING 1 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 1-02 | FIRST FLOOR BUILDING 1 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 1-03 | FIRST FLOOR BUILDING 1 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 1-04 | FIRST FLOOR BUILDING 1 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 1-05 | FIRST FLOOR BUILDING 1 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 3-01 | FIRST FLOOR BUILDING 3 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 3-02 | FIRST FLOOR BUILDING 3 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 3-03 | FIRST FLOOR BUILDING 3 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |
| UH 3-04 | FIRST FLOOR BUILDING 3 | 350 | 17.3 | UNIT HEATER | 5.0 | 13.9 | 208-3 | Q-MARK HUHAA520 | 1 |

NOTES:

1. PROVIDE WALL HEATER WITH THERMAL OVERLOAD PROTECTION, DISCONNECT SWITCH AND INTEGRAL THERMOSTAT.
2. UNIT SHALL BE RECESS MOUNTED; PROVIDE TRIM KIT FOR RECESSED MOUNTING.
3. UNIT SHALL BE SURFACE MOUNTED; PROVIDE FRAME FOR SURFACE MOUNTING.


MARKS, THOMAS ARCHITECTS
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CERTIFIED


Professional Certification: I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland. License No: 19966 Expiration Date: 3/4/2019


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Union Brothers Furniture Company
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**MECHANICAL SCHEDULES**

Project Number: 16225 | Date: 10/05/17
Drawn by: FDD | Checked by: JRV

| Num. | Description | Date |
|---|---|---|
| | MEP/MHT SUBMISSION | 08/30/16 |

**PERMIT / CONSTRUCTION 10/05/17**


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**86.01**

# ELECTRICAL SYMBOLS LEGEND

| SYMBOL | DESCRIPTIONS | MH (UON) |
|---|---|---|
| | MULTI OUTLET ASSEMBLY WITH TYPES AND QUANTITIES OF OUTLETS AS SHOWN/NOTED. M.H. 42" A.F.F. OR 8" ABOVE COUNTER. | 48" TOD |
| | SIMPLEX RECEPTACLE, 5-20R CONFIGURATION | 18" CTR |
| | DUPLEX RECEPTACLE, 5-20R CONFIGURATION | 18" CTR |
| | DUPLEX RECEPTACLE, FLOOR MOUNTED, 5-20R CONFIGURATION | |
| | DUPLEX RECEPTACLE, CONTROLLED BY SWITCH, 5-20R CONFIGURATION | 18" CTR |
| WP | DUPLEX RECEPTACLE, SUBSCRIPT NOTES: C = FLUSH CEILING, WP = WEATHERPROOF | |
| A | SPECIAL RECEPTACLE: 20A, 2P, 3W, 208V NEMA 6-20R | 18" CTR |
| B | SPECIAL RECEPTACLE: 30A, 2P, 3W, 208V NEMA 6-30R | 18" CTR |
| C | SPECIAL RECEPTACLE: 20A, 3P, 4W, 208/120V NEMA 14-20 | 18" CTR |
| D | SPECIAL RECEPTACLE: 30A, 3P, 4W, 208V NEMA 15-30 | 18" CTR |
| | SPECIAL RECEPTACLE, FLOOR MOUNTED | |
| | DOUBLE DUPLEX RECEPTACLE | 18" CTR |
| | RECEPTACLE MOUNTED 6" ABOVE BACK SPLASH OR COUNTER | |
| | GROUND FAULT INTERRUPTER TYPE RECEPTACLE | 18" CTR |
| | ISOLATED GROUND RECEPTACLE | 18" CTR |
| | PROGRAM CLOCK OUTLET - SINGLE FACE, DOUBLE FACE | 84" CTR |
| EPO | EMERGENCY POWER OFF SWITCH | 48" TOD |
| J | JUNCTION BOX | |
| E | EQUIPMENT CONNECTION AS NOTED | |
| CB | ENCLOSED CIRCUIT BREAKER | |
| | NON-FUSED DISCONNECT SWITCH, 30A, 3P (UNLESS OTHERWISE NOTED) | |
| | FUSED DISCONNECT SWITCH - FUSE SIZE AS INDICATED | |
| MS | MAGNETIC MOTOR STARTER | |
| FVNR | COMBINATION MAGNETIC MOTOR STARTER. ABBREVIATION INDICATES TYPE: FVNR, FVR, RVAT, 2S1W, 2S2W, SST | |
| VFC | VARIABLE FREQUENCY CONTROLLER W/FUSED DISCONNECT SWITCH | |
| | MOTOR - NUMERALS (IF SHOWN) INDICATE HP | |
| | GENERATOR - NUMERALS (IF SHOWN) INDICATE KW | |
| CP | CONTROL PANEL - TYPE AS INDICATED | |
| PB | MOMENTARY CONTACT START-STOP PUSH BUTTON STATION | |
| PBM | MAINTAINED CONTACT START-STOP PUSHBUTTON STATION | |
| ES | MAINTAINED CONTACT EMERGENCY STOP PUSHBUTTON STATION | |
| | PANELBOARD | 78" TOD |
| T | TRANSFORMER | |
| | RACEWAY "UP" OR "TOWARDS" | |
| | RACEWAY "DOWN" OR "AWAY" | |
| | CIRCUIT CONCEALED IN WALLS OR CEILING SPACE. CONDUCTORS SHALL BE MINIMUM 2#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT, (UNLESS OTHERWISE NOTED) | |
| | BRANCH CIRCUIT HOMERUN TO PANELBOARD. QUANTITY OF CIRCUITS INDICATED BY ARROWS ( ). NUMBER OF CONDUCTORS SHALL BE MINIMUM 4#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT, (UNLESS OTHERWISE NOTED) | |
| | BUS DUCT OR CABLE TRAY UP OR TOWARDS | |
| | BUS DUCT OR CABLE TRAY DOWN OR AWAY | |
| | BUS DUCT, TYPE & SIZE AS INDICATED | |
| | TELEPHONE AND POWER POLE ASSEMBLY | |
| | CONCRETE ENCASED DUCTBANK BELOW GRADE | |
| | FLEXIBLE CONDUIT | |
| | CABLE TRAY | |
| | GROUND ROD | |
| | LIGHTNING PROTECTION AIR TERMINAL | |
| -G-G- | GROUND WIRE CONNECTION GROUND WIRE | |
| | LIGHTNING PROTECTION DOWN LEAD | |
| | UTILITY POLE | |
| N E L | AUTOMATIC TRANSFER DEVICE | |
| A | METERING DEVICES: A-AMMETER, V-VOLTMETER, PF-POWER FACTOR, HZ-FREQUENCY METER | |
| DMM | DIGITAL METER | |
| (50) | FUSE, FUSE SIZE AS INDICATED (50A) | |
| | GROUND CONNECTION | |
| | TRANSFORMER (DELTA - RESISTANCE GROUNDED WYE SHOWN) | |
| | CURRENT TRANSFORMER | |
| | POTENTIAL TRANSFORMER | |
| LA | LIGHTNING ARRESTOR | |
| | MOTOR STARTER CONTACTOR AND THERMAL OVERLOAD | |
| KI | KIRK KEY INTERLOCK SYSTEM | |
| FRAME TRIP | MOLDED CASE CIRCUIT BREAKER WITH RATINGS AS INDICATED | |
| | SWITCH | |
| | DRAW OUT DEVICE | |
| W | DRAW OUT POWER CIRCUIT BREAKER | |
| TTB | TEST TERMINAL BLOCK | |
| TB | WIRING TERMINAL BLOCK | |
| | INDICATOR OR PILOT LIGHT: R-RED, B-BLUE, W-WHITE, G-GREEN, A-AMBER | |
| VFC | VARIABLE FREQUENCY CONTROLLER | |
| 2S2W | MOTOR - SINGLE WINDING UNLESS NOTED OTHERWISE NOTED: 2S2W = 2 SPEED 2 WINDING 2S1W = 2 SPEED 1 WINDING NUMERALS (IF SHOWN) INDICATE HP | |
| | CONDUCTORS NOT CONNECTED | |
| | CONDUCTORS CONNECTED | |

| SYMBOL | DESCRIPTIONS | MH (UON) |
|---|---|---|
| START | NORMALLY OPEN MOMENTARY CONTACT PUSH BUTTON WITH NAMEPLATE AS INDICATED ON DIAGRAM | |
| STOP | NORMALLY CLOSED MOMENTARY CONTACT PUSH BUTTON WITH NAMEPLATE AS INDICATED ON DIAGRAM | |
| EMERG. STOP | NORMALLY CLOSED MAINTAINED CONTACT PUSH BUTTON WITH MUSHROOM BUTTON | |
| OFF ON | TWO POSITION MAINTAINED CONTACT SELECTOR SWITCH WITH NAMEPLATE AS INDICATED ON DIAGRAMS | |
| LOCAL OFF REMOTE XOO OOX | THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH WITH NAMEPLATE AS INDICATED ON THE CONTROL DIAGRAMS. X = CLOSED O = OPEN | |
| | NORMALLY CLOSED PRESSURE SWITCH - OPENS ON RISING PRESSURE | |
| | NORMALLY OPEN PRESSURE SWITCH - CLOSES ON RISING PRESSURE | |
| | NORMALLY CLOSED TEMPERATURE SWITCH - OPENS ON RISING TEMPERATURE | |
| | NORMALLY OPEN TEMPERATURE SWITCH - CLOSES ON RISING TEMPERATURE | |
| | NORMALLY CLOSED FLOW SWITCH - OPENS ON RISING FLOW | |
| | NORMALLY OPEN FLOW SWITCH - CLOSES ON RISING FLOW | |
| | NORMALLY CLOSED LEVEL SWITCH - OPENS ON RISING LEVEL | |
| | NORMALLY OPEN LEVEL SWITCH - CLOSES ON RISING LEVEL | |
| | NORMALLY CLOSED LIMIT SWITCH (HELD OPEN) | |
| | NORMALLY CLOSED LIMIT SWITCH | |
| | NORMALLY OPEN LIMIT SWITCH | |
| | NORMALLY OPEN LIMIT SWITCH (HELD CLOSED) | |
| R | RELAY OR CONTACTOR COIL WITH TAG NUMBER AS SHOWN | |
| | NORMALLY OPEN RELAY CONTACT | |
| | NORMALLY CLOSED RELAY CONTACT | |
| TD | ON-DELAY OR OFF-DELAY RELAY | |
| | ON-DELAY RELAY NORMALLY CLOSED TIMED OPENING CONTACT | |
| | ON-DELAY RELAY NORMALLY OPEN TIMED CLOSING CONTACT | |
| | OFF-DELAY NORMALLY CLOSED CONTACT (OPENS WHEN ENERGIZED), TIMED CLOSING AFTER DE-ENERGIZING) | |
| | OFF-DELAY NORMALLY OPEN CONTACT (OPENS WHEN ENERGIZED, TIMED OPENING AFTER DE-ENERGIZING) | |
| L U | LATCHING RELAY L = LATCH COIL U = UNLATCH COIL | |
| | FIELD WIRING TERMINAL | |
| | 4' LIGHTING FIXTURE - TYPE AS SPECIFIED | |
| | LIGHTING FIXTURE - WALL MOUNTED - TYPE AS SPECIFIED | |
| | LIGHTING FIXTURE - RECESSED OR SURFACE MOUNTED - TYPE AS SPECIFIED | |
| | STRIP LIGHTING FIXTURE - TYPE AS SPECIFIED | |
| | 2'X2' LIGHTING FIXTURE - TYPE AS SPECIFIED | |
| | 2'X4' LIGHTING FIXTURE - TYPE AS SPECIFIED | |
| | CEILING FAN - TYPE AS SPECIFIED | |
| | TRACK LIGHTING - TYPE AS SPECIFIED | |
| | LIGHTING FIXTURE - SPOT - TYPE AS SPECIFIED | |
| | LIGHTING FIXTURE - TYPE AS SPECIFIED - FILLED CIRCLE DENOTES ON EMERGENCY CIRCUIT,ON NIGHTLIGHT CIRCUIT OR WITH EMERGENCY BALLAST. | |
| | EXIT SIGN - UNIVERSAL MOUNTING. NUMBER OF SHADED AREAS INDICATE NUMBER OF FACES. ARROWS INDICATED DIRECTIONAL FACE. | |
| | EMERGENCY LIGHT - TYPE AS SPECIFIED | |
| | LIGHTING FIXTURE - WALL MOUNTED - TYPE AS SPECIFIED | |
| | POLE MOUNTED LIGHT FIXTURE - TYPE AS SPECIFIED | |
| S | SINGLE POLE TOGGLE SWITCH | 48" TOD |
| Sa | SWITCH - SUBLETTER INDICATES FIXTURES CONTROLLED | 48" TOD |
| S2 | DOUBLE POLE TOGGLE SWITCH | 48" TOD |
| S3 | THREE-WAY TOGGLE SWITCH (SPDT) | 48" TOD |
| S4 | FOUR-WAY TOGGLE SWITCH (DPDT) | 48" TOD |
| SK | KEY OPERATED SWITCH | 48" TOD |
| SW | MANUAL STARTER WITH OVERLOADS | 48" TOD |
| SP | SWITCH WITH PILOT LIGHT | 48" TOD |
| SD | DIMMER SWITCH | 48" TOD |
| SLV | LOW VOLTAGE CONTROL SWITCH | 48" TOD |
| ST | MANUAL TIME SWITCH | 48" TOD |
| SC | MOMENTARY CONTACT SWITCH | 48" TOD |
| TC | TIME CLOCK | |
| R | RELAY | |
| L | LIGHTING CONTACTOR | |
| P | PHOTOCELL OR PUSHPLATE SWITCH | |
| H | HORN TYPE SPEAKER | GENERAL NOTE 5 |
| 75 | FLASHING STROBE SUBSCRIPT DENOTES CANDELLA RATING | GENERAL NOTE 5 |
| F | FIRE ALARM HORN | GENERAL NOTE 5 |
| 75 F | COMBINATION FIRE ALARM HORN AND FLASHING STROBE LIGHT. SUBSCRIPT DENOTES CANDELLA RATING | GENERAL NOTE 5 |
| H | DOOR HOLD OPEN DEVICE | |

| SYMBOL | DESCRIPTIONS | MH (UON) |
|---|---|---|
| FAAP | FIRE ALARM ANNUNCIATOR PANEL | |
| FACP | FIRE ALARM CONTROL PANEL | |
| RAM | RESCUE ASSISTANCE MASTER CONTROL | 48" TOD |
| TP | PANEL FIRE ALARM TRANSPONDER | |
| RAR | RESCUE ASSISTANCE REMOTE STATION | 48" TOD |
| DACT | DIGITAL ALARM COMMUNICATOR TRANSMITTER | |
| DS ES | DOOR SOLENOID, ELECTRIC STRIKE - LOCKING DEVICE CONNECTION POINT | |
| F | FIRE ALARM MANUAL PULL STATION | 48" TOD |
| HD | THERMAL HEAT DETECTOR | |
| SD | SMOKE DETECTOR (PHOTOELECTRIC), AB INDICATES AUDIBLE BASE, E INDICATES ELEVATOR CONTROLS | |
| I | SMOKE DETECTOR (IONIZATION) | |
| DD | DUCT SMOKE DETECTOR | |
| ARC | FIRE ALARM SYSTEM ADDRESSABLE RELAY - CONTROL | |
| ARM | FIRE ALARM SYSTEM ADDRESSABLE RELAY - MONITOR | |
| RAL | FIRE ALARM SYSTEM REMOTE ALARM LIGHT | |
| FS | FLOW SWITCH CONNECTION | |
| TS | TAMPER SWITCH CONNECTION | |
| LBT LBR | FIRE ALARM LINEAR BEAM SMOKE DETECTOR TRANSMITTER & RECEIVER | |
| | FIREMAN'S TELEPHONE JACK | 48" TOD |
| F/S | FIRE/SMOKE DAMPER | |
| | HVAC EMERGENCY SHUT DOWN PUSH BUTTON STATION WITH COVER | 48" TOD |
| M | MONITOR SYSTEM JUNCTION BOX | 36" CTR |
| F | CEILING SPEAKER, F = FIRE ALARM, S = AV SYSTEM | |
| A | AMPLIFIER | |
| K | KEYPAD | 48" TOD |
| CR | CARD READER | 48" TOD |
| DA | DOOR ALARM CONTACT | |
| | TELEPHONE OUTLET AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE | 18" CTR |
| W | TELEPHONE OUTLET, WALL MOUNTED AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE | 54" CTR |
| | TELEPHONE OUTLET, FLOOR MOUNTED | |
| | DATA/TELEPHONE OUTLET, UNSHADED AREA = DATA, SHADED AREA = VOICE, NUMERALS INDICATE QUANTITY OF WIRED JACKS AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE | 18" CTR |
| | DATA/TELEPHONE OUTLET, FLOOR MOUNTED, UNSHADED AREA = DATA, SHADED AREA = VOICE, NUMERALS INDICATE QUANTITY OF WIRED JACKS AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE | |
| | DATA OUTLET, WALL MOUNTED AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE | 18" CTR |
| | DATA OUTLET, FLOOR MOUNTED AND 3/4" CONDUIT UP TO NEARBY ACCESSIBLE CEILING SPACE | |
| E | TELEPHONE OUTLET - EMERGENCY DATA OUTLET | 54" TOD |
| TV | TELEVISION ANTENNA OUTLET | 18" CTR |
| 2W 4W | TELEVISION SYSTEM SPLITTER - 2 WAY, 4 WAY | |
| | DATA/TELEPHONE OUTLET, CEILING MOUNTED | |
| | ROUGH IN JUNCTION BOX FOR CCTV CAMERA | |
| | BULL HORN STYLE SPEAKER | |
| C | SYSTEM CALL-IN STATION | 54" TOD |
| V | VOLUME CONTROL SELECTOR SWITCH | 54" TOD |
| M | MICROPHONE JACK - MOUNTED FLUSH IN FLOOR | |
| D | DOORBELL CHIME | |
| DR | DOOR RELEASE PUSHBUTTON | |
| D | ELECTRIC DOOR STRIKE | |
| P | PROGRAM BELL | |
| M | MICROPHONE JACK - WALL MOUNTED AT | 18" CTR |
| B | DOORBELL BUZZER | |
| CS | P.A. SYSTEM CALL-IN STATION | 54" TOD |
| NC | NURSE CALL STATION - PATIENT & EMERGENCY | 60" CTR |
| NCA | NURSE CALL ANNUNCIATOR PANEL | 48" CTR |
| NM | NURSE CALL MASTER STATION | 60" CTR |
| S | NURSE CALL STAFF STATION | 60" CTR |
| D | NURSE CALL DUTY STATION | 60" CTR |
| B | NURSE CALL CODE BLUE STATION | 60" CTR |
| CB | CODE BLUE ANNUNCIATOR | 60" CTR |
| D | NURSE CALL DOME LIGHT - CEILING MOUNTED | |
| P | NURSE CALL DOME LIGHT - WALL MOUNTED | 90" CTR |
| N Z | NURSE CALL ZONE LIGHT - CEILING MOUNTED | |
| NCE | NURSE CALL EQUIPMENT CABINET | 78" TOD |
| I | INTERCOM STATION | 48" TOD |
| | EMERGENCY PULL CORD STATION | 48" TOD |
| | PUSH BUTTON STATION | 48" TOD |
| 1 | SPECIFIC NOTE - REFER TO SPECIFIC NOTES | |
| 2 | REVISION NUMBER 2 | |
| 1 | DRAWING NOTE NUMBER 2 | |
| 1 | EQUIPMENT TAG NUMBER - REFER TO EQUIPMENT | |
| X XX/XX | SCHEDULE SECTION/ELEVATION IDENTIFICATION | |
| X XX | PART PLAN AND DETAIL IDENTIFICATION | |
| | DEVICES AND CIRCUITRY SHOWN AS LIGHT LINEWEIGHT ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED. | |
| X | DEVICES AND CIRCUITRY SHOWN AS LIGHT LINEWEIGHT AND WITH "X" DESIGNATES EXISTING TO BE REMOVED UNLESS OTHERWISE NOTED. | |

# ELECTRICAL ABBREVIATIONS

| | | | |
|---|---|---|---|
| A, AMP | - AMPERE | KVAR | - KILOVOLT AMPERES REACTIVE |
| AC | - ALTERNATING CURRENT | KW | - KILOWATTS |
| A/C | - AIR CONDITIONING | KWH | - KILOWATT HOUR |
| AFF | - ABOVE FINISHED FLOOR | LA | - LIGHTNING ARRESTOR |
| AFG | - ABOVE FINAL GRADE | LC | - LIGHTING CONTACTOR |
| AHU | - AIR HANDLING UNIT | LTG | - LIGHTING |
| AIC | - AMPS INTERRUPTING CAPACITY | LTNG | - LIGHTNING |
| ALT | - ALTERNATE | LP | - LIGHTING PANEL |
| ANN | - ANNUNCIATOR | LRA | - LOCKED ROTOR AMPERES |
| APPROX | - APPROXIMATELY | MATV | - MASTER ANTENNA TELEVISION |
| ARCH | - ARCHITECT | MCB | - MAIN CIRCUIT BREAKER |
| ATC | - AUTOMATIC TEMPERATURE CONTROL | MCC | - MOTOR CONTROL CENTER |
| | | MEH | - METAL HALIDE |
| ATS | - AUTOMATIC TRANSFER SWITCH | MH | - MANHOLE, MOUNTING HEIGHT |
| AWG | - AMERICAN WIRE GAUGE | MLO | - MAIN LUGS ONLY |
| BAS | - BUILDING AUTOMATION SYSTEM | MSP | - MOTOR STARTER PANEL |
| BFC | - BELOW FINISHED CEILING | MTD | - MOUNTED |
| BFG | - BELOW FINISHED GRADE | MV | - MERCURY VAPOR |
| BLDG | - BUILDING | NC | - NORMALLY CLOSED |
| BOD | - BOTTOM OF DEVICE | NEC | - NATIONAL ELECTRICAL CODE |
| C, CND | - CONDUIT | NFSS | - NON-FUSED SAFETY SWITCH |
| CATV | - CABLE TELEVISION | NO | - NUMBER, NORMALLY OPEN |
| CB | - CIRCUIT BREAKER | OC | - ON CENTER |
| CCTV | - CLOSED CIRCUIT TELEVISION | OFCI | - OWNER FURNISHED CONTRACTOR INSTALLED |
| CKT | - CIRCUIT | | |
| CL | - CURRENT LIMITING | OFOI | - OWNER FURNISHED OWNER INSTALLED |
| CLG | - CEILING | | |
| CONN | - CONNECT | OH | - OVERHEAD |
| CPT | - CONTROL POWER TRANSFORMER | ø, PH | - PHASE |
| CT | - CURRENT TRANSFORMER | P | - POLE |
| CTR | - CENTER | PB | - PUSHBUTTON |
| CU,CO | - COPPER | PF | - POWER FACTOR |
| CX | - CONNECT TO EXISTING | PFCC | - POWER FACTOR CORRECTION CAPACITOR |
| DC | - DIRECT CURRENT | | |
| DISC | - DISCONNECT | PL | - PILOT LIGHT |
| DN | - DOWN | PLC | - PROGRAMMABLE LIGHTING CONTROL |
| DP | - DISTRIBUTION PANEL | PNL | - PANEL |
| DPST | - DOUBLE POLE SINGLE THROW | PP | - POWER PANEL |
| DPDT | - DOUBLE POLE DOUBLE THROW | PR | - PAIR |
| DT | - DOUBLE THROW | PT | - POTENTIAL TRANSFORMER |
| DWG | - DRAWING | PVC | - POLYVINYL CHLORIDE |
| E, EMERG | - EMERGENCY | Pp | - PUMP |
| EA | - EACH | QTY | - QUANTITY |
| EC | - EMPTY CONDUIT | RCS | - REMOTE CONTROL SWITCH |
| EF | - EXHAUST FAN | REC, RECPT | - RECEPTACLE |
| EH | - ELECTRIC HEATER | REQ'D | - REQUIRED |
| ELEC | - ELECTRIC | RFI | - RADIO FREQUENCY INTERFERENCE |
| ELEV | - ELEVATION | RGS | - RIGID GALVANIZED STEEL |
| ETR | - EXISTING TO REMAIN | RLA | - RUNNING LOAD AMPERES |
| EX | - EXISTING | RM | - ROOM |
| EXP | - EXPOSED | RVAT | - REDUCED VOLTAGE AUTO TRANSFORMER |
| EWC | - ELECTRIC WATER COOLER | RX | - REMOVE EXISTING |
| FR | - FRAME | SC | - SURGE CAPACITOR |
| FA | - FIRE ALARM | SEC | - SECONDARY |
| FAAP | - FIRE ALARM ANNUNCIATOR PANEL | SN, S/N | - SOLID NEUTRAL |
| FACP | - FIRE ALARM CONTROL PANEL | SP | - SURGE PROTECTION |
| FBO | - FURNISHED BY OTHERS | SPDT | - SINGLE POLE DOUBLE THROW |
| FC | - FAN COIL | SS | - SAFETY SWITCH |
| FDR | - FEEDER | SST | - SOLID STATE |
| FLA | - FULL LOAD AMPERES | ST | - SINGLE THROW |
| FLR | - FLOOR | SW | - SWITCH |
| FU | - FUSED AND FUSIBLE | SWBD | - SWITCHBOARD |
| FUSS | - FUSED SAFETY SWITCH | TBR | - TO BE REMOVED |
| FVR | - FULL VOLTAGE REVERSING | TC | - TIME CLOCK |
| FVNR | - FULL VOLTAGE NON-REVERSING | TEL, TELE | - TELEPHONE |
| GEN | - GENERATOR, GENERAL | TOD | - TOP OF DEVICE |
| GFI | - GROUND FAULT INTERRUPTER | TRANS/XFMR | - TRANSFORMER |
| GFR | - GROUND FAULT RELAY | TH | - TUNGSTEN HALOGEN |
| GRD | - GROUND | TTB | - TELEPHONE TERMINAL BOARD |
| GRS | - GALVANIZED RIGID STEEL | TW | - TWISTED |
| HID | - HIGH INTENSITY DISCHARGE | TYP | - TYPICAL |
| HOA | - HAND-OFF-AUTOMATIC | UG | - UNDERGROUND |
| HP | - HORSEPOWER | UH | - UNIT HEATER |
| HPS | - HIGH PRESSURE SODIUM | UON | - UNLESS OTHERWISE NOTED |
| HTR | - HEATER | V | - VOLTS |
| HV | - HIGH VOLTAGE | VFC | - VARIABLE FREQUENCY CONTROLLER |
| HZ | - HERTZ | W | - WATTS, WIRE |
| IG | - ISOLATED GROUND | W/ | - WITH |
| JB | - JUNCTION BOX | WP | - WEATHER-PROOF |
| KCMIL | - THOUSAND CIRCULAR MILS | XP | - EXPLOSION PROOF |
| KV | - KILOVOLTS | 2S1W | - 2 SPEED SINGLE WINDING |
| KVA | - KILOVOLT AMPERES | 2S2W | - 2 SPEED DOUBLE WINDING |

# GENERAL NOTES

1. THIS IS A STANDARD SYMBOL LIST, SOME SYMBOLS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.
2. REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS.
3. PLAN & SECTION SYMBOLS MAY ALSO BE USED ON RISER DIAGRAMS.
4. ON SINGLE LINE DIAGRAMS FOR 3 PHASE SYSTEMS,DEVICE QUANTITY = 3 UNLESS OTHERWISE NOTED.
5. DEVICE SHALL BE MOUNTED A MINIMUM OF 90" AFF TO BOTTOM OF DEVICE OR BELOW THE FINISHED CEILING OF NOT LESS THAN 6" TO TOP OF DEVICE.
6. UNLESS OTHERWISE NOTED ALL INTERIOR CONDUITS AND BOXES SHALL BE CONCEALED.

# CIRCUIT DESIGNATIONS

**LIGHTING**

FIXTURE TYPE — A
*CIRCUIT DESIGNATION — #
SWITCH DESIGNATION — a

**POWER**

*CIRCUIT DESIGNATION — #

* SEE NOTES FOR PANEL DESIGNATIONS FOR EACH AREA.


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SHEET TITLE

**ELECTRICAL LEGEND ABBREVIATIONS AND NOTES**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: MBH | Checked by: MBH |
| MP5/MHT SUBMISSION | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

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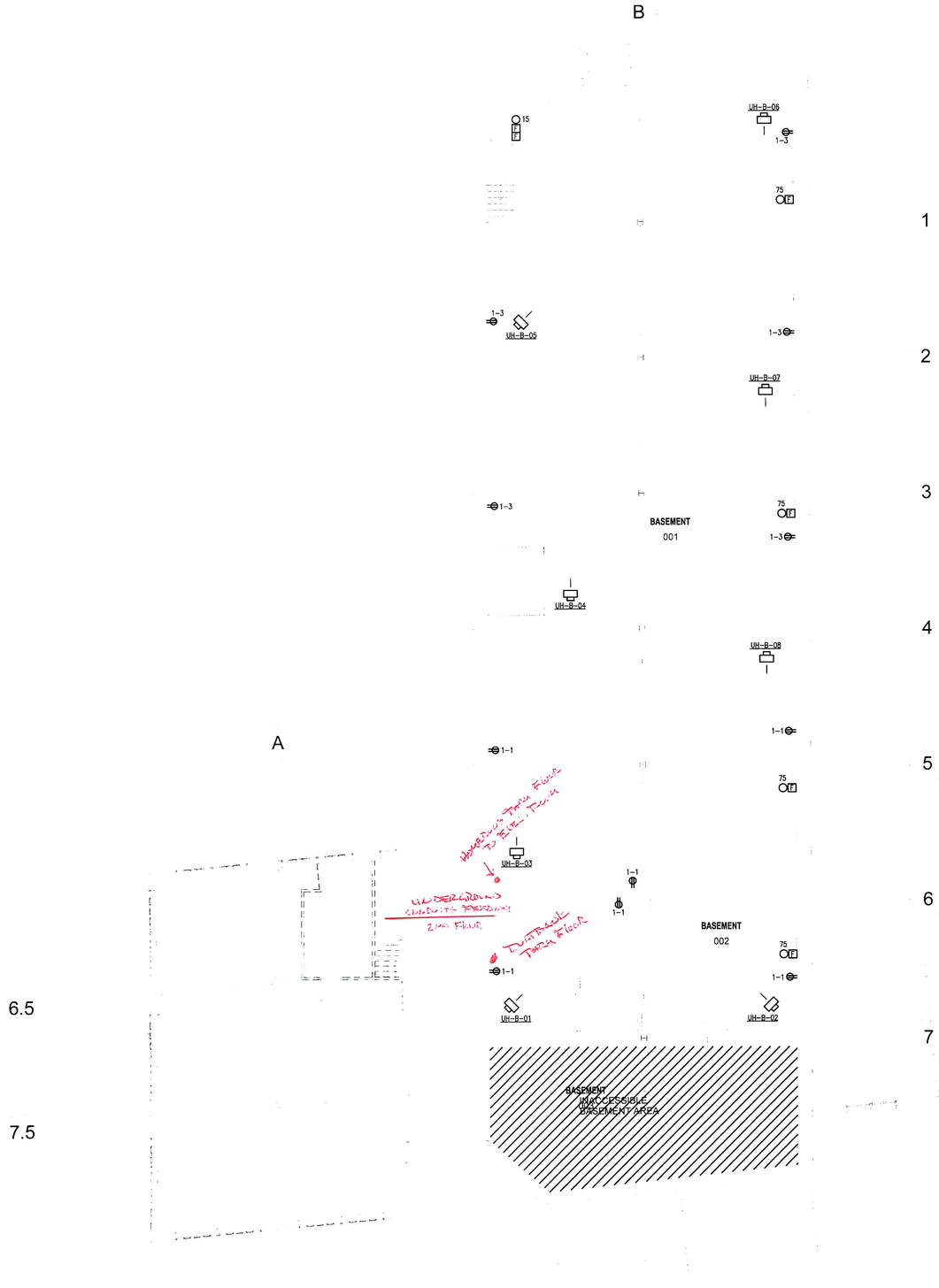
**90.01**




BASEMENT FLOOR PLAN - POWER AND FIRE ALARM - NEW WORK

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

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

**BASEMENT FLOOR PLAN POWER&F.A. NEW WORK**

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: MBH | Checked by: MBH |
| NPS/MHT SUBMISSION | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

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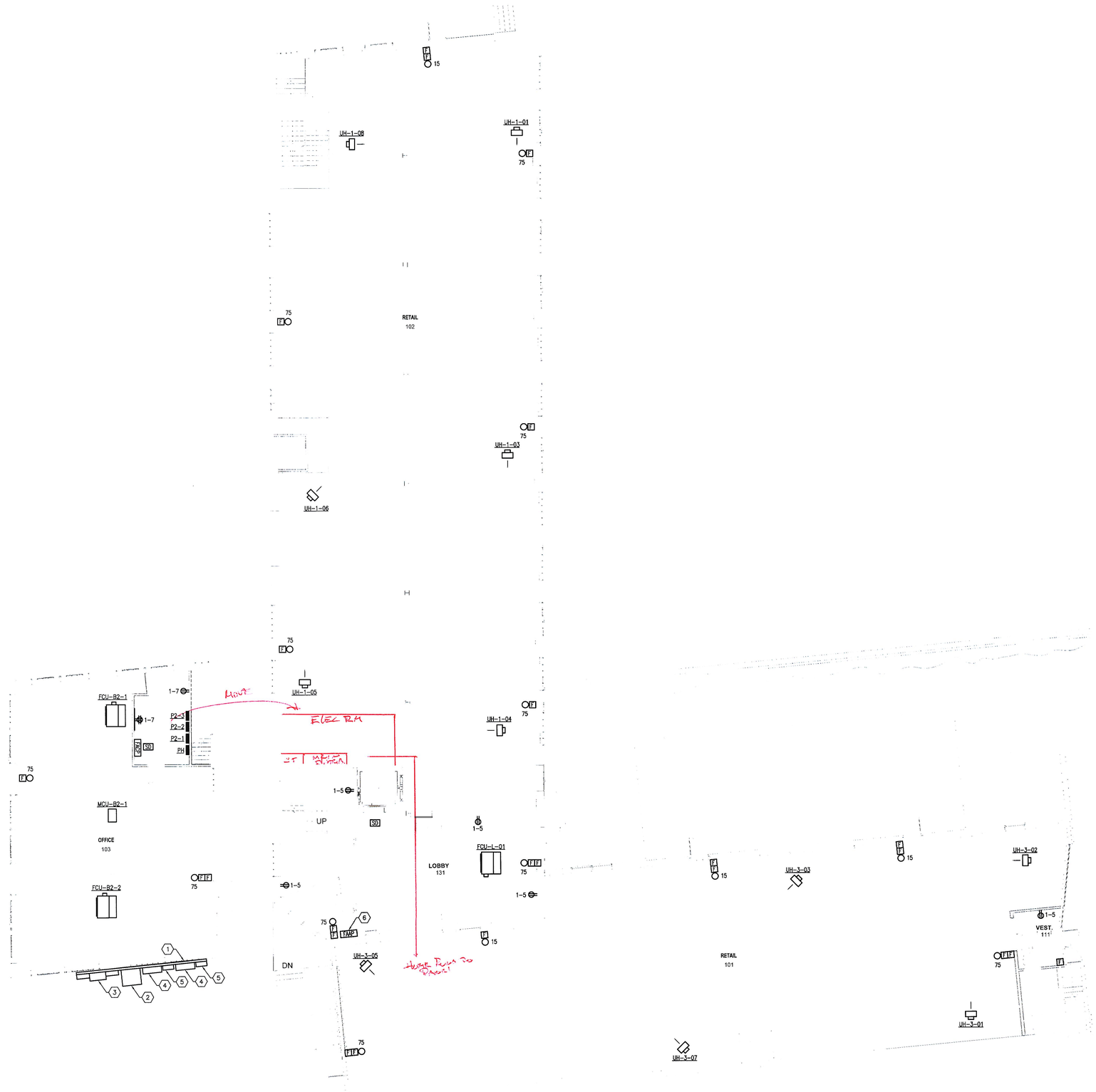
91.01

SPECIFIC NOTES (REFER TO 91.02 WHERE INDICATED):

1. PROVIDE FREESTANDING STAINLESS STEEL RACKING SYSTEM WITH PEDASTAL SUPPORTS.
2. BGE TERMINATION CABINET.
3. METER STACK MAIN AND BRANCH METERS FOR TENANT AND HOUSE POWER.
4. CT CABINET AND METER.
5. SERVICE DISCONNECT SWITCH.
6. COORDINATE LOCATION OF FAAP WITH FIRE MARSHALL.




FIRST FLOOR PLAN - POWER AND FIRE ALARM - NEW WORK

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

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

**FIRST FLOOR PLAN POWER&F.A. NEW WORK**

| Project Number | 15225 | Date | 10/05/17 |
|---|---|---|---|
| Drawn by | MBH | Checked by | MBH |
| NPS/MHT SUBMISSION | | | 08/30/16 |

| Num. | Description | Date |
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**91.02**

SECOND FLOOR PLAN - POWER AND FIRE ALARM - NEW WORK

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

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


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SHEET TITLE

# SECOND FLOOR PLAN POWER&F.A. NEW WORK

| | |
|---|---|
| Project Number: 16225 | Date: 10/05/17 |
| Drawn by: MBH | Checked by: MBH |
| MEP/MHT SUBMISSION | 09/20/16 |

| Num. | Description | Date |
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91.03

THIRD FLOOR PLAN - POWER AND FIRE ALARM - NEW WORK

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

0 4' 8' 16'

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

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# THIRD FLOOR PLAN POWER&F.A. NEW WORK

| | |
|---|---|
| Project Number: 16225 | Date: 10/05/17 |
| Drawn by: MBH | Checked by: MBH |
| NPS/MHT SUBMISSION | 08/30/18 |

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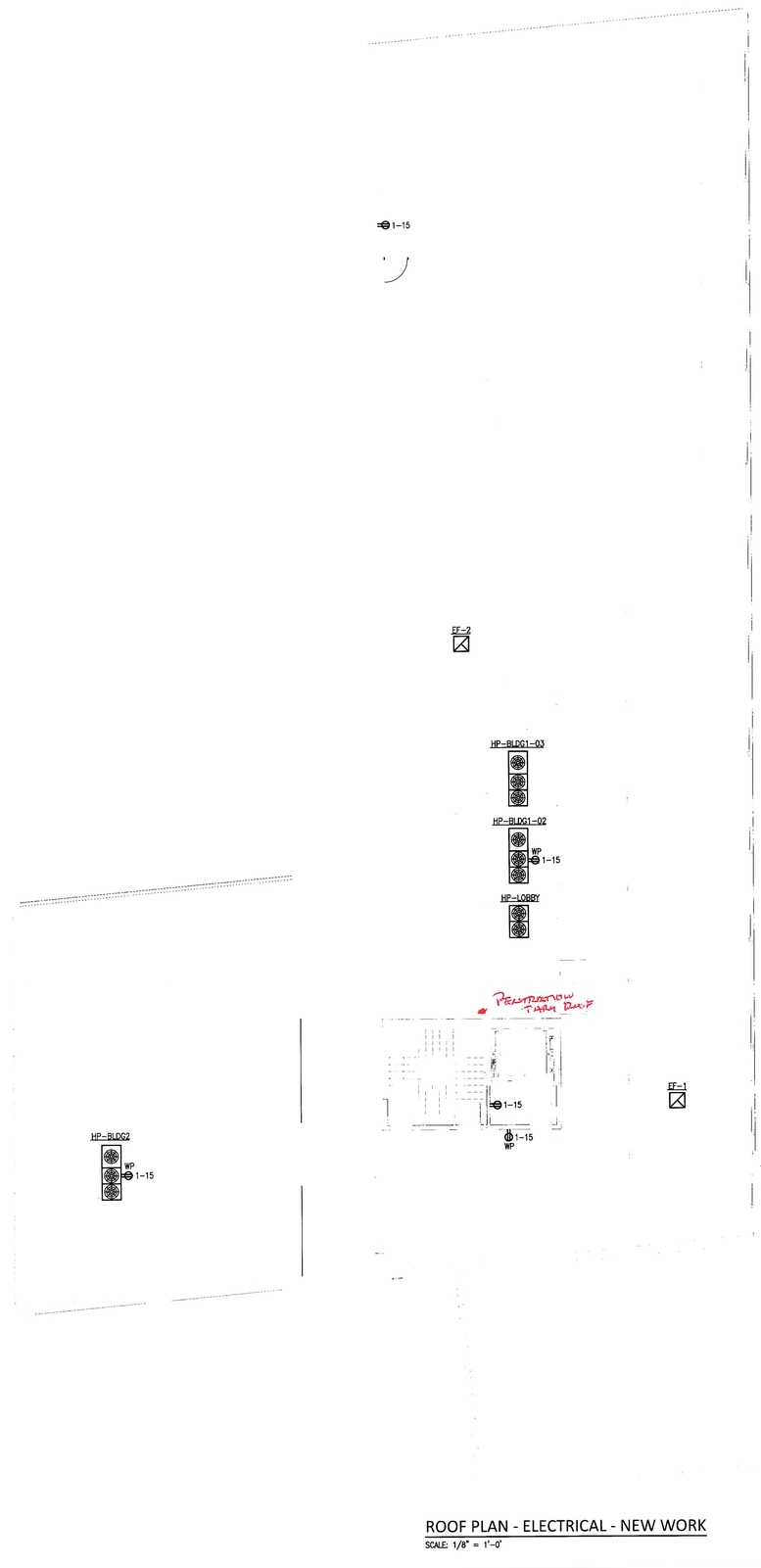
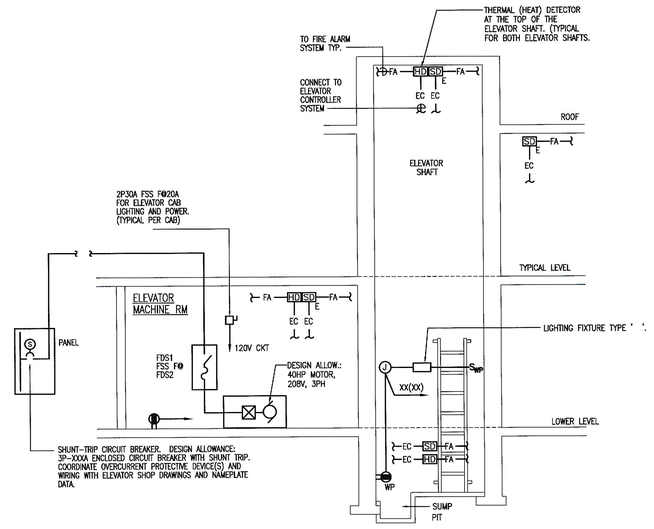
91.04




ROOF PLAN - ELECTRICAL - NEW WORK

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




## GENERAL ELEVATOR NOTES:

1. PROVIDE SHUNT-TRIP TYPE ENCLOSED CIRCUIT BREAKER(S) FOR ELEVATOR FEEDER(S). REFER TO PANEL SCHEDULES AND POWER RISER DIAGRAM FOR FEEDER CIRCUIT BREAKER AND CONFIGURATION ALLOWANCES. COORDINATE OVERCURRENT PROTECTION DEVICES & WIRING W/ ELEVATOR MOTOR/EQUIP. NAMEPLATE DATA. TYPICAL FOR EACH ELEVATOR. FIELD LOCATE EQUIPMENT AS NECESSARY FOR A COMPLETE AND SATISFACTORY SYSTEM, MEETING THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ELEVATOR INSTALLER.
2. PROVIDE A HEAT DETECTOR WITHIN 2' OF EACH SPRINKLER HEAD LOCATED IN THE ELEVATOR PIT, MACHINE ROOM OR SHAFT.
3. CONNECT HEAT DETECTORS IN ELEVATOR PIT(S), MACHINE ROOM(S) AND SHAFT(S) TO SHUNT-TRIP DEVICE SO THAT UPON ACTIVATION THE SHUNT-TRIP BREAKER SHUT DOWNS POWER TO THE ELEVATOR(S) PER ASME-17.1, 102.2c.
4. CONNECT SMOKE DETECTORS TO THE MAIN FIRE ALARM PANEL AND THE REMOTE ANNUNCIATOR PANEL. PANELS SHALL SUPERVISE ONLY; INDICATE "TROUBLE" WHEN DEVICE(S) ARE ACTIVATED.
5. FOR EACH ELEVATOR CONTROLLER, PROVIDE 2 PAIR OF CAT 3 CABLE TO MAIN TELEPHONE BACKBOARD. TERMINATE AT BACKBOARD ON 110 BLOCK.
6. REFER TO DIVISION 23 FOR FLOW AND TAMPER SWITCH REQUIREMENTS RELATED TO ELEVATOR(S).
7. EQUIPMENT SHOWN IN THE ELEVATOR MACHINE ROOM SHALL BE COORDINATED W/ THE ELEVATOR MANUFACTURER'S SHOP DRAWINGS AND THE ELEVATOR INSTALLER. FIELD-LOCATE EQUIPMENT SHOWN/REQUIRED AS NECESSARY FOR A COMPLETE AND SATISFACTORY SYSTEM.

DETAIL - ELEVATOR SHAFT AND ELEVATOR MACHINE ROOM

SCALE: NOT TO SCALE

0 4' 8' 16'

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

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SHEET TITLE

# ROOF PLAN ELECTRICAL NEW WORK

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: MBH | Checked by: MBH |
| NPS/MHT SUBMISSION | 09/09/16 |

| Num. | Description | Date |
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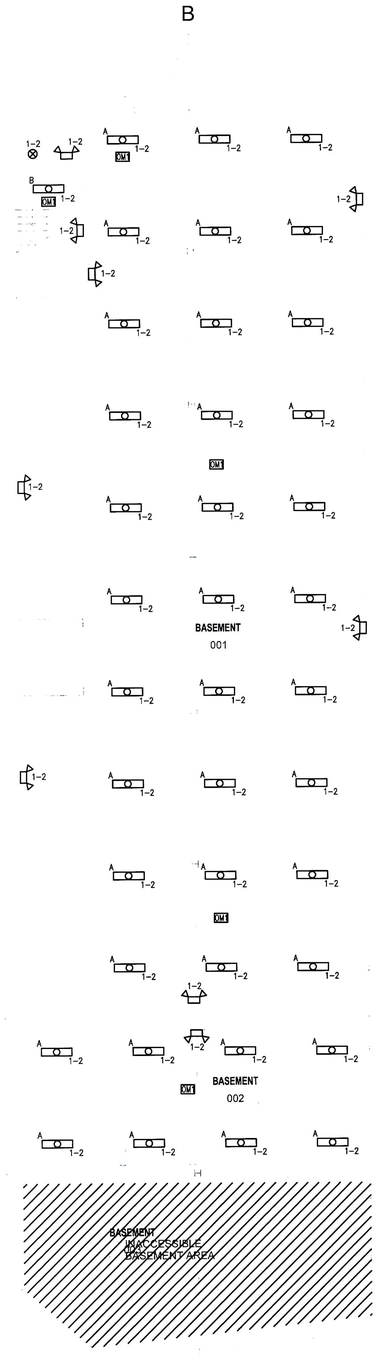
91.05

SPECIFIC NOTES (REFER TO 92.01 WHERE INDICATED):

(1) CONNECT ALL EXIT SIGNS AND EMERGENCY BATTERY PACKS AHEAD OF LOCAL SWITCHING.




BASEMENT FLOOR PLAN - LIGHTING - NEW WORK (1)

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

**BASEMENT FLOOR PLAN LIGHTING NEW WORK**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Date's by: MBH | Checked by: MBH |
| NPS/MHT SUBMISSION | 09/20/16 |

| Num. | Description | Date |
|---|---|---|

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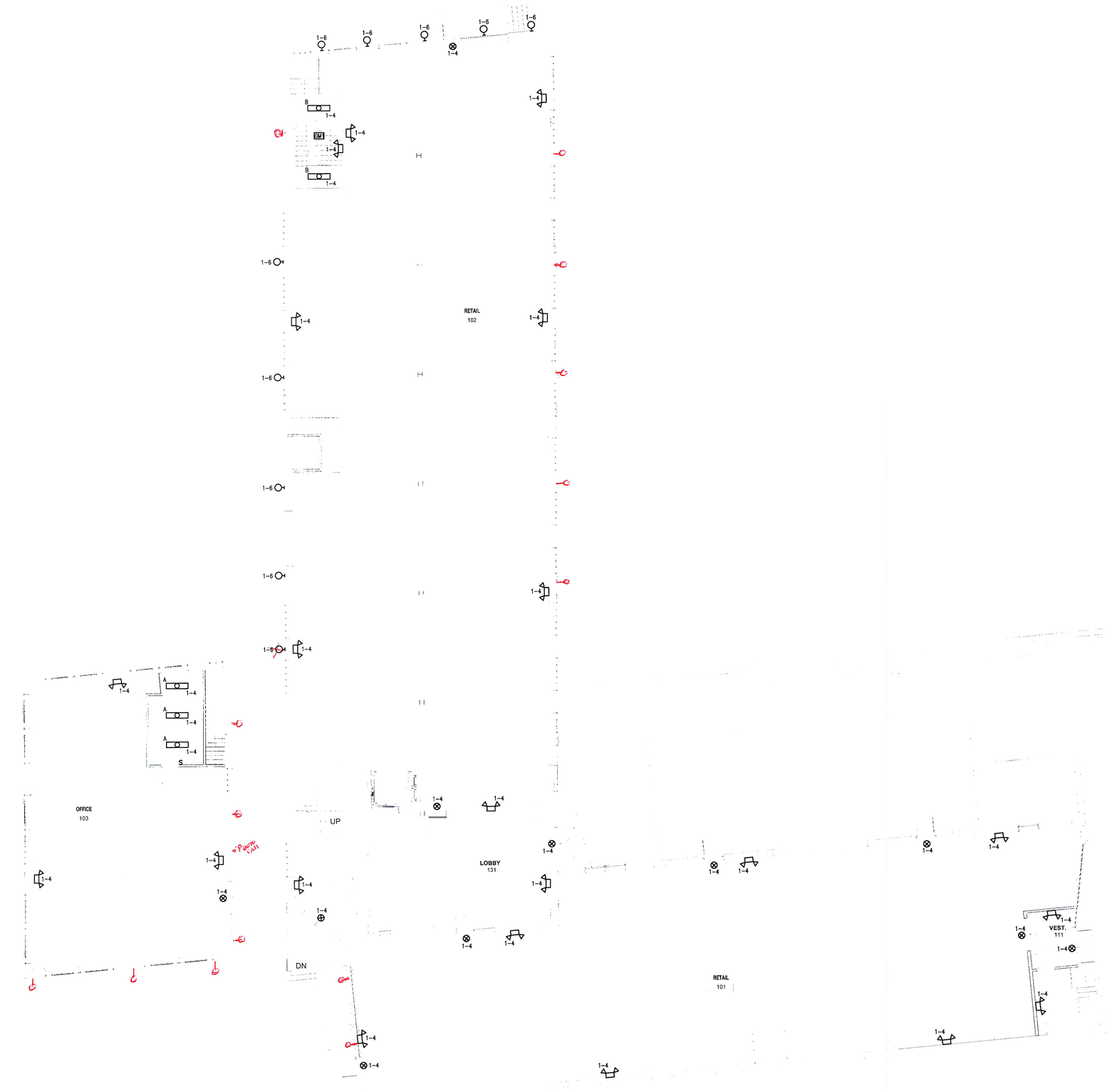
0 4' 8' 16'

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

**92.01**

SPECIFIC NOTES (REFER TO 92.02 WHERE INDICATED):

(1) CONNECT ALL EXIT SIGNS AND EMERGENCY BATTERY PACKS AHEAD OF LOCAL SWITCHING.




FIRST FLOOR PLAN - LIGHTING - NEW WORK (1)

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

0 4' 8' 16'

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

FIRST FLOOR PLAN LIGHTING NEW WORK

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: MBH | Checked by: MBH |
| NYS/MHT SUBMISSION | 06/30/16 |

| Num. | Description | Date |
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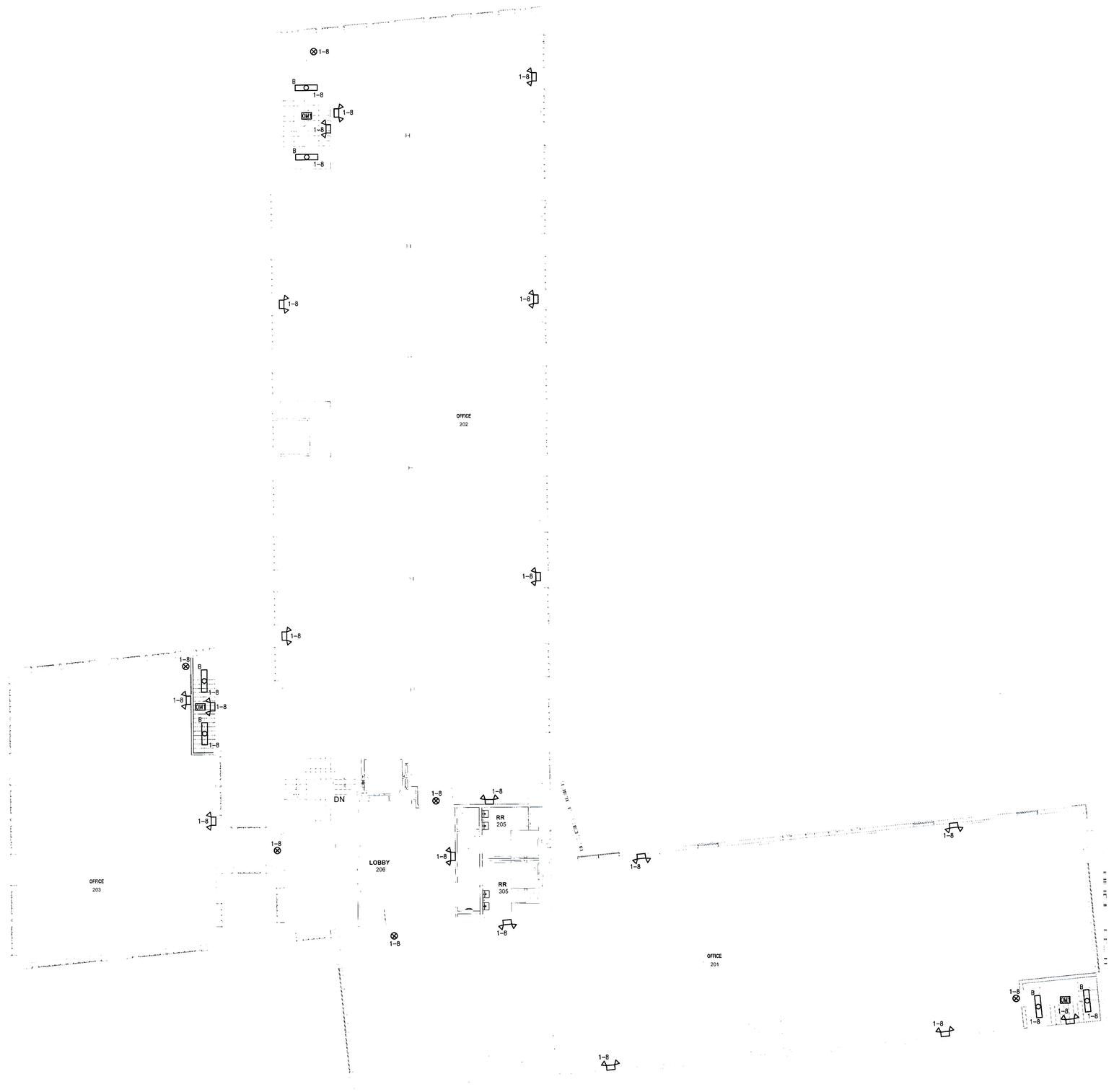
92.02

SPECIFIC NOTES (REFER TO 92.03 WHERE INDICATED):

(1) CONNECT ALL EXIT SIGNS AND EMERGENCY BATTERY PACKS AHEAD OF LOCAL SWITCHING.




SECOND FLOOR PLAN - LIGHTING - NEW WORK (1)

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

0 4' 8' 16'

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


MARKS, THOMAS ARCHITECTS

1414 Key Highway, 2nd Floor, Baltimore, MD 21230 Phone: 410.539.4300 Fax: 410.539.0660


CERTIFIED

Professional Certification: I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland.
License No: 12955, Expiration Date: 3/4/2019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email: info@jennerikinc.com


**Union Brothers Furniture Company**

37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**SECOND FLOOR PLAN LIGHTING NEW WORK**

| Project No/Code: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: MBH | Checked by: MBH |
| NPS/MH I SUBMISSION | 08/30/15 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**


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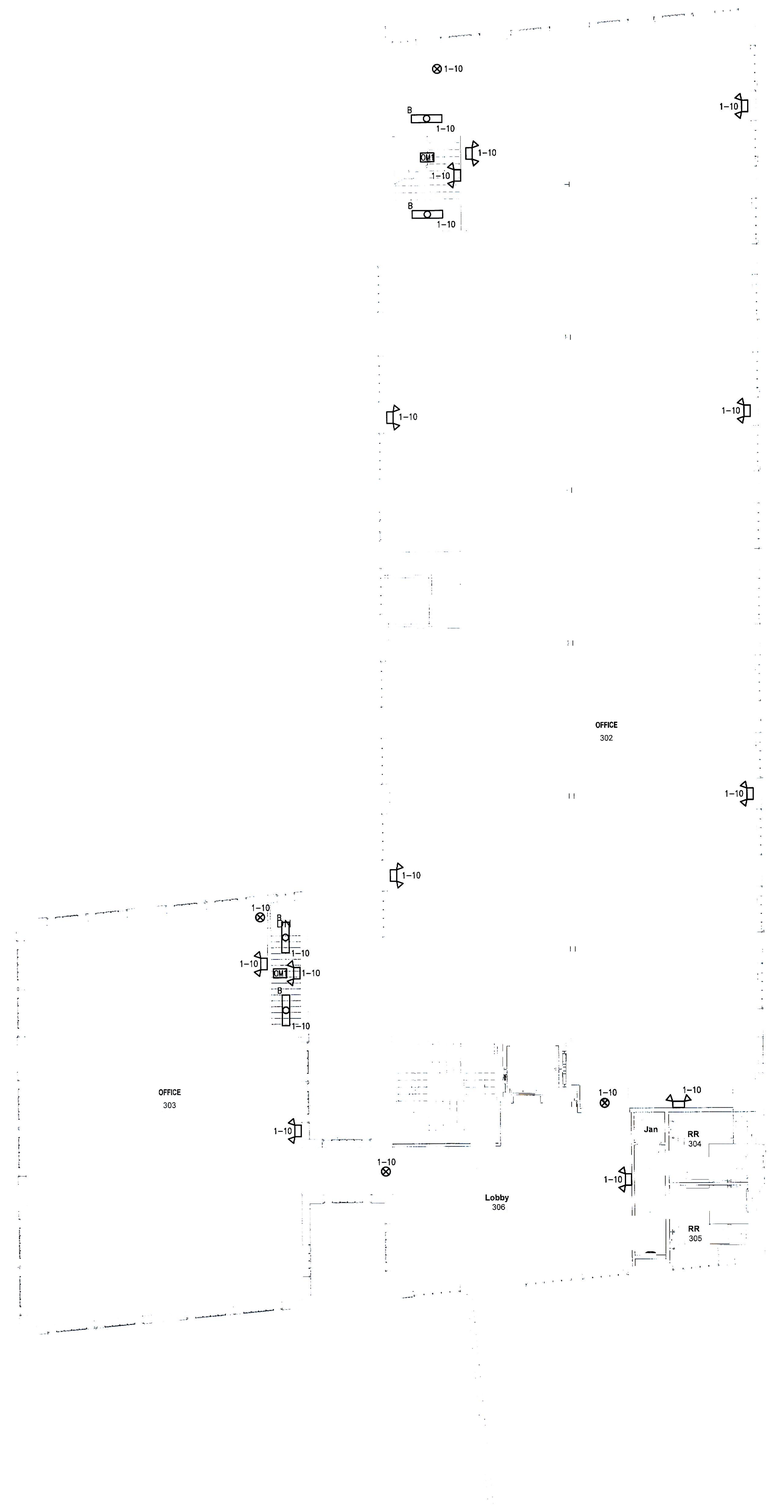
**92.03**

SPECIFIC NOTES (REFER TO 92.04 WHERE INDICATED):

(1) CONNECT ALL EXIT SIGNS AND EMERGENCY BATTERY PACKS AHEAD OF LOCAL SWITCHING.




THIRD FLOOR PLAN - LIGHTING - NEW WORK (1)

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

0 4' 8' 16'

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


MARKS, THOMAS ARCHITECTS
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Professional Certification: I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland.
License No. 19866 Expiration Date: 3/4/2019


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1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

# THIRD FLOOR PLAN LIGHTING NEW WORK

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: MBH | Checked by: MBH |
| NPS/MHT SUBMISSION | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

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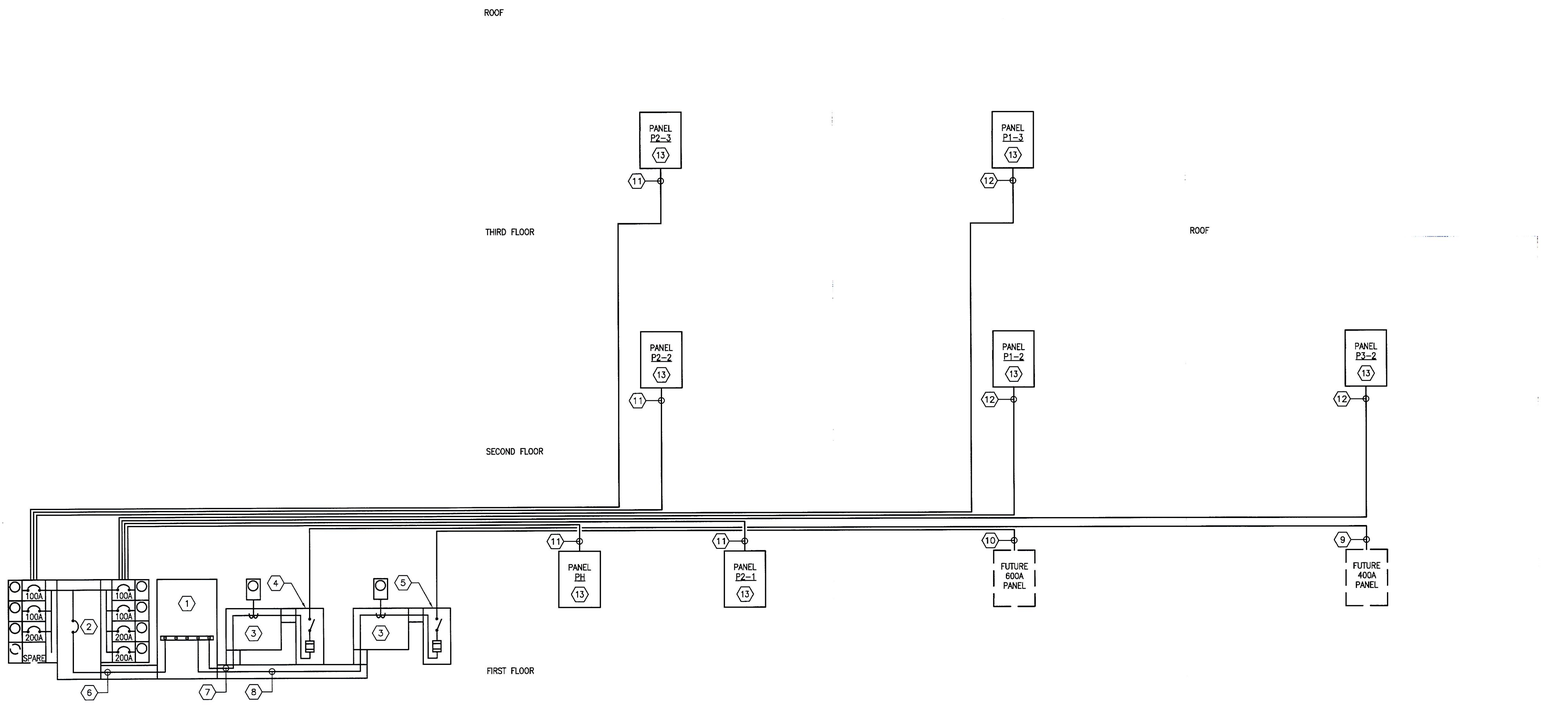
92.04

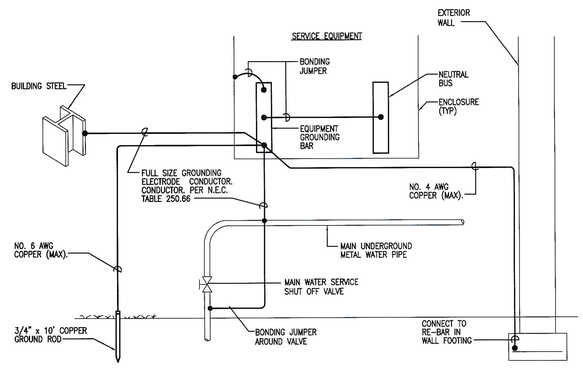
## SPECIFIC NOTES (REFER TO 95.01 WHERE INDICATED):

1. BGE TERMINATION CABINET RATED 2000A, 208Y/120V, NEMA 3R ENCLOSURE.
2. 1200A METER STACK WITH 1200A MAIN CIRCUIT BREAKER, 208Y/120V. DISTRIBUTION METER SIZES AS INDICATED. NEMA 3R ENCLOSURE.
3. CT CABINET AND BGE UTILITY METER, 208Y/120V, NEMA 3R ENCLOSURE.
4. SERVICE RATED 3P–400A FUSED SAFETY SWITCH FUSED AT 400A, NEMA 3R ENCLOSURE.
5. SERVICE RATED 3P–600A FUSED SAFETY SWITCH FUSED AT 600A, NEMA 3R ENCLOSURE.
6. PROVIDE 3 SETS 4#600KCMIL, 1#3/0 GROUND IN 14"X14" WIRETROUGH.
7. PROVIDE 4#600KCMIL, 1#3 GROUND IN 14"X14" WIRETROUGH.
8. PROVIDE 2 SETS 4#350KCMIL, 1#1 GROUND IN 14"X14" WIRETROUGH.
9. PROVIDE 4#600KCMIL, 1#3 GROUND IN 3–1/2" CONDUIT.
10. PROVIDE 2 SETS 4#350KCMIL, 1#1 GROUND IN 3" CONDUIT.
11. PROVIDE 4#3, 1#8 GROUND IN 1–1/4" CONDUIT.
12. PROVIDE 4#3/0, 1#6 GROUND IN 2–1/2" CONDUIT.
13. PROVIDE SOURCE LABEL OF FEEDER FOR PANELBOARD PER NEC,



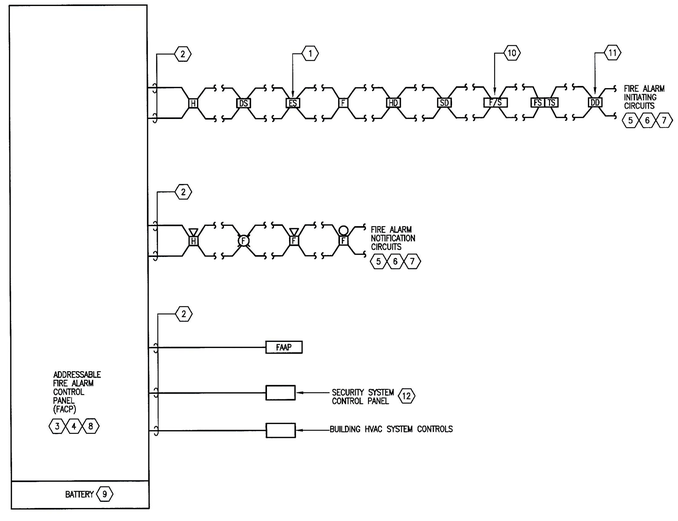

## ELECTRICAL RISER DIAGRAM

SCALE: NO SCALE




## DETAIL - GROUNDING ELECTRODE SYSTEM

SCALE: NOT TO SCALE




## FIRE ALARM SYSTEM WIRING DIAGRAM

SCALE: NOT TO SCALE

## GENERAL FIRE ALARM NOTES

1. FIRE SYSTEM IS CLASS B, ADDRESSABLE AND SUPERVISED. PROVIDE FIRE ALARM DEVICES WHICH ARE COMPATIBLE WITH FIRE ALARM SYSTEM.
2. ALL FIRE ALARM CIRCUIT WIRING SHALL BE RUN IN EMT.
3. PROVIDE CLEAR LABEL TO ALL DEVICES DISPLAYING ADDRESS ON DEVICE.
4. WALL MOUNTED STROBES/SPEAKERS SHALL BE INSTALLED NOT LESS THAN 6'–6" AND NOT MORE THAN 8'–0" FROM THE BOTTOM OF THE UNIT TO THE FINISHED FLOOR.
5. ALL STROBE CIRCUITS SHALL BE WIRED TO FLASH IN SYNCHRONIZATION; PROVIDE SYNCHRONIZATION MODULE FOR EACH STROBE CIRCUIT.
6. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS:
   1) NFPA 70, THE NATIONAL ELECTRICAL CODE.
   2) NFPA 72, THE NATIONAL FIRE ALARM CODE,
   3) NFPA 101, THE LIFE SAFETY CODE.
7. ALL FIRE–RATED ASSEMBLIES PENETRATED SHALL BE SEALED WITH AN APPROPRIATE UL LISTED FIRE–RESISTIVE THROUGH PENETRATION SYSTEM.
8. THE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS.
9. INSTALLATION AND TERMINATION OF ALL WIRES SHALL CONFORM TO MANUFACTURERS SPECIFICATIONS.
10. SYSTEM ACCEPTANCE TESTING SHALL BE WITNESSED BY THE PROJECT MANAGER, FIRE PROTECTION SERVICE AND FIRE PROTECTION COMPLIANCE SUPPORT. ALL SUPERVISORY AND TROUBLE ALERTS SHALL BE CLEARED BEFORE SYSTEM IS ACCEPTED.
11. T–TAPPING OF NAC CIRCUITS IS NOT PERMITTED.
12. SINGLE DEVICE ELECTRICAL BOXES TO BE RECESSED WITHIN WALL.
13. ALL SURFACE MOUNTED PULL STATIONS, STROBES, SHALL BE MOUNTED IN THE MANUFACTURER'S BACK BOXES FOR THESE DEVICES.
14. ALL FIRE ALARM STROBES IN THE CORRIDOR SHALL HAVE 75 CD MINIMUM RATING EXCEPT STROBES LOCATED NOT MORE THAN 15' FROM THE END OF CORRIDOR WHICH SHALL HAVE 15 CD MINIMUM RATING.
15. ALL STROBES WITH EXCEPTION TO CORRIDOR SHALL HAVE 110 CD MINIMUM RATING.
16. COORDINATE AND PROVIDE FIRE ALARM CONNECTONS TO, EPO CONTROL PANELS, UPS BATTERY DISCONNECT, PRE–ACTION SYSTEM CONTOL PANEL, FIRE/SMOKE DAMPERS, COMPUTER ROOM AC UNITS(CRUS) AND ALL LOCAL GRAPHICAL PANELS. SEE PLANS FOR LOCATIONS.
17. REFER TO FIRE ALARM SYSTEM SEQUENCE OF OPERATION MATRIX AND NOTES. PROVIDE PROGRAMMING BASED ON SEQUENCE OF OPERATION MATRIX AND SPECIFICATION.
18. CONTRACTOR SHALL PROVIDE SERVICES FOR TESTING OF COMPLETE FIRE ALARM SYSTEM ACCORDING TO CLIENT'S FIRE ALARM TESTING PROCEDURE.
19. FOR AREAS WITH COMPUTER RACKS, ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS:
    1) NFPA 70, THE NATIONAL ELECTRICAL CODE
    2) NFPA 72, THE NATIONAL FIRE ALARM CODE
    3) NFPA 101, THE LIFE SAFETY CODE

## SPECIFIC NOTES FIRE ALARM SYSTEM NOTES:

1. TYPICAL DEVICES ARE SHOWN. ACTUAL NUMBER OF DEVICES SHALL BE DETERMINED FROM PLANS.
2. ALL WIRING SHALL BE RUN IN CONDUIT. WIRING IS SHOWN FOR BIDDING PURPOSES ONLY. ACTUAL WIRING SHALL BE AS RECOMMENDED BY FIRE ALARM SYSTEM MANUFACTURER.
3. PROVIDE SHOP DRAWING OF THE FIRE ALARM SYSTEM USING MANUFACTURER SERVICES WHICH INCLUDES FIRE ALARM DEVICES WITH CONNECTIONS TO FIRE ALARM SYSTEM. PROVIDE NECESSARY WIRING DIAGRAMS, PLANS, AND RISER DIAGRAMS.
4. PROVIDE WIRING DIAGRAMS FOR CONNECTIONS TO HVAC SYSTEM, EPO SWITCHES, LOCAL FIRE ALARM ANNUNCIATOR PANELS, AND SECURITY SYSTEM RELAY WHERE APPLICABLE.
5. NUMBER OF CIRCUITS AS REQUIRED.
6. WIRING AS RECOMMENDED BY MANUFACTURER.
7. EACH INITIATING AND SUPERVISORY DEVICE SHALL BE INDIVIDUALLY ADDRESSABLE AND IDENTIFIABLE FROM MAIN CONTROL PANEL ALPHANUMERIC DISPLAY.
8. FIRE ALARM SHOP DRAWING SHALL BE SUBMITTED TO AHJ FOR APPROVAL.
9. PROVIDE BATTERIES AND BATTERY DRYER FOR BACKUP POWER OF FA SYSTEM.
10. CONNECT FIRE/SMOKE DAMPERS SUCH THAT IN THE EVENT OF FIRE DAMPER SHALL BE CLOSED AND FIRE ALARM CONTROL PANEL SHALL HAVE SUPERVISORY ALARM.
11. ACTIVATION OF DUCT SMOKE DETECTOR SHALL SHUTDOWN ASSOCIATED AHU AND CLOSE CORRESPONDING DAMPERS. PROVIDE AUXILARY RELAYS AND WIRING REQUIRED TO MAKE FINAL CONNECTIONS.
12. PROVIDE RELAY WITH DRY CONTACTS FOR SECURITY SYSTEM TO CONNECT FIRE ALARM SYSTEM TO SECURITY SYSTEM SUCH THAT IN CASE OF FIRE, SECURITY SYSTEM SHALL BE DE–ACTIVATED. PROVIDE WIRING AND NUMBER OF DRY CONTACTS AS REQUIRED (MINIMUM 4 CONTACTS).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**Union Brothers Furniture Company**
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE

**ELECTRICAL DIAGRAMS**

| | |
|---|---|
| Project Number: 16225 | Date: 10/05/17 |
| Drawn by: MBH | Checked by: MBH |
| NYS/AHT SUBMISSION | 09/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**


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**95.01**

## PANEL PH (1-CIRCUIT NUMBER)

Volts: **208/120** Bus: **100A** Poles: **42** Remarks:
Phase: **3** Main: **100A** Mtg: **SURFACE**
Wire: **4** AIC: **24,000**

| CKT | FOR | CIRCUITING SETS | NO | SIZE | C. | BREAKER POLE | AMP | LOAD KVA | Phase | KVA | BREAKER AMP | POLE | CIRCUITING C. | SIZE | NO | SETS | FOR | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | REC: BASEMENT | 1 | 2/1 | 12/12 | 3/4" | 1 | 20A | 1.20 | a | 1.00 | 20A | 1 | 3/4" | 12/12 | 2/1 | 1 | LTG: BASEMENT | 2 |
| 3 | REC: BASEMENT | 1 | 2/1 | 12/12 | 3/4" | 1 | 20A | 1.00 | b | 1.00 | 20A | 1 | 3/4" | 12/12 | 2/1 | 1 | LTG: FIRST FLOOR | 4 |
| 5 | REC: 1ST FLOOR | 1 | 2/1 | 12/12 | 3/4" | 1 | 20A | 1.00 | c | 1.00 | 20A | 1 | 3/4" | 12/12 | 2/1 | 1 | LTG: EXTERIOR | 6 |
| 7 | REC: DATA/TELECOM | 1 | 2/1 | 12/12 | 3/4" | 1 | 20A | 1.00 | a | 1.00 | 20A | 1 | 3/4" | 12/12 | 2/1 | 1 | LTG: 2ND FLOOR | 8 |
| 9 | FACP | 1 | 2/1 | 12/12 | 3/4" | 1 | 20A | 1.00 | b | 1.00 | 20A | 1 | 3/4" | 12/12 | 2/1 | 1 | LTG: 3RD FLOOR | 10 |
| 11 | REC: 2ND FLOOR | 1 | 2/1 | 12/12 | 3/4" | 1 | 20A | 0.80 | c | | - | - | - | - | - | - | | 12 |
| 13 | REC: 3RD FLOOR | 1 | 2/1 | 12/12 | 3/4" | 1 | 20A | 0.80 | a | | - | - | - | - | - | - | | 14 |
| 15 | REC: ROOF | 1 | 2/1 | 12/12 | 3/4" | 1 | 20A | 1.20 | b | | - | - | - | - | - | - | | 16 |
| 17 | HP-LOBBY | 1 | 3/1 | 4/8 | 1-1/4" | 3 | 70A | 6.32 | c | | - | - | - | - | - | - | | 18 |
| 19 | - | - | - | - | - | - | - | 6.32 | a | | - | - | - | - | - | - | | 20 |
| 21 | - | - | - | - | - | - | - | 6.32 | b | | - | - | - | - | - | - | | 22 |
| 23 | FCU-L | 1 | 2/1 | 12/12 | 3/4" | 2 | 15A | 0.78 | c | | - | - | - | - | - | - | | 24 |
| 25 | - | - | - | - | - | - | - | 0.78 | a | | - | - | - | - | - | - | | 26 |
| 27 | MCU-L | 1 | 2/1 | 12/12 | 3/4" | 2 | 15A | 0.01 | b | | - | - | - | - | - | - | | 28 |
| 29 | - | - | - | - | - | - | - | 0.01 | c | | - | - | - | - | - | - | | 30 |
| 31 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 32 |
| 33 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 34 |
| 35 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 36 |
| 37 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 38 |
| 39 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 40 |
| 41 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 42 |

NOTES:

**Total** 12.10 Connected kVa
11.53 Connected kVa
9.91 Connected kVa
**33.53 Connected kVa**
**34.78 Demanded Kva**

Phase A Amps: 101.00
Phase B Amps: 96.00
Phase C Amps: 83.00
**Average Connected Amps:** 93.14
**Average Demand Amps:** 96.61

## PANEL P2-1

Volts: **208/120** Bus: **100A** Poles: **42** Remarks:
Phase: **3** Main: **100A** Mtg: **SURFACE**
Wire: **4** AIC: **24,000**

| CKT | FOR | CIRCUITING SETS | NO | SIZE | C. | BREAKER POLE | AMP | LOAD KVA | Phase | KVA | BREAKER AMP | POLE | CIRCUITING C. | SIZE | NO | SETS | FOR | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 2 |
| 3 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 4 |
| 5 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 6 |
| 7 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 8 |
| 9 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 10 |
| 11 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 12 |
| 13 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 14 |
| 15 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 16 |
| 17 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 18 |
| 19 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 20 |
| 21 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 22 |
| 23 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 24 |
| 25 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 26 |
| 27 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 28 |
| 29 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 30 |
| 31 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 32 |
| 33 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 34 |
| 35 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 36 |
| 37 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 38 |
| 39 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 40 |
| 41 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 42 |

NOTES:

**Total** 0.00 Connected kVa
0.00 Connected kVa
0.00 Connected kVa
**0.00 Connected kVa**
**0.00 Demanded Kva**

Phase A Amps: 0.00
Phase B Amps: 0.00
Phase C Amps: 0.00
**Average Connected Amps:** 0.00
**Average Demand Amps:** 0.00

## PANEL P3-2

Volts: **208/120** Bus: **225A** Poles: **42** Remarks:
Phase: **3** Main: **200A** Mtg: **SURFACE**
Wire: **4** AIC: **24,000**

| CKT | FOR | CIRCUITING SETS | NO | SIZE | C. | BREAKER POLE | AMP | LOAD KVA | Phase | KVA | BREAKER AMP | POLE | CIRCUITING C. | SIZE | NO | SETS | FOR | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-BLDG3-02 | 1 | 3/1 | 4/8 | 1-1/4" | 3 | 80A | 7.93 | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-3-01 | 2 |
| 3 | - | - | - | - | - | - | - | 7.93 | b | 1.67 | - | - | - | - | - | - | - | 4 |
| 5 | - | - | - | - | - | - | - | 7.93 | c | 1.67 | - | - | - | - | - | - | - | 6 |
| 7 | FCU-B3 | 1 | 2/1 | 12/12 | 3/4" | 2 | 15A | 0.62 | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-3-02 | 8 |
| 9 | - | - | - | - | - | - | - | 0.62 | b | 1.67 | - | - | - | - | - | - | - | 10 |
| 11 | MCU-B3 | 1 | 2/1 | 12/12 | 3/4" | 2 | 15A | 0.01 | c | 1.67 | - | - | - | - | - | - | - | 12 |
| 13 | - | - | - | - | - | - | - | 0.01 | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-3-03 | 14 |
| 15 | | - | - | - | - | - | - | | b | 1.67 | - | - | - | - | - | - | - | 16 |
| 17 | | - | - | - | - | - | - | | c | 1.67 | - | - | - | - | - | - | - | 18 |
| 19 | | - | - | - | - | - | - | | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-3-04 | 20 |
| 21 | | - | - | - | - | - | - | | b | 1.67 | - | - | - | - | - | - | - | 22 |
| 23 | | - | - | - | - | - | - | | c | 1.67 | - | - | - | - | - | - | - | 24 |
| 25 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 26 |
| 27 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 28 |
| 29 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 30 |
| 31 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 32 |
| 33 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 34 |
| 35 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 36 |
| 37 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 38 |
| 39 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 40 |
| 41 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 42 |

NOTES:

**Total** 15.24 Connected kVa
15.23 Connected kVa
14.62 Connected kVa
**45.08 Connected kVa**
**45.08 Demanded Kva**

Phase A Amps: 127.00
Phase B Amps: 127.00
Phase C Amps: 122.00
**Average Connected Amps:** 125.22
**Average Demand Amps:** 125.23

## PANEL P1-2

Volts: **208/120** Bus: **225A** Poles: **42** Remarks:
Phase: **3** Main: **200A** Mtg: **SURFACE**
Wire: **4** AIC: **24,000**

| CKT | FOR | CIRCUITING SETS | NO | SIZE | C. | BREAKER POLE | AMP | LOAD KVA | Phase | KVA | BREAKER AMP | POLE | CIRCUITING C. | SIZE | NO | SETS | FOR | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-BLDG1-02 | 1 | 3/1 | 8/10 | 1" | 3 | 35A | 3.36 | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-1-01 | 2 |
| 3 | - | - | - | - | - | - | - | 3.36 | b | 1.67 | - | - | - | - | - | - | - | 4 |
| 5 | - | - | - | - | - | - | - | 3.36 | c | 1.67 | - | - | - | - | - | - | - | 6 |
| 7 | HP-BLDG1-02 | 1 | 3/1 | 4/8 | 1-1/4" | 3 | 70A | 6.32 | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-1-02 | 8 |
| 9 | - | - | - | - | - | - | - | 6.32 | b | 1.67 | - | - | - | - | - | - | - | 10 |
| 11 | - | - | - | - | - | - | - | 6.32 | c | 1.67 | - | - | - | - | - | - | - | 12 |
| 13 | FCU-B1 | 1 | 2/1 | 12/12 | 3/4" | 2 | 15A | 0.16 | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-1-03 | 14 |
| 15 | - | - | - | - | - | - | - | 0.16 | b | 1.67 | - | - | - | - | - | - | - | 16 |
| 17 | FCU-B1 | 1 | 2/1 | 12/12 | 3/4" | 2 | 15A | 0.16 | c | 1.67 | - | - | - | - | - | - | - | 18 |
| 19 | - | - | - | - | - | - | - | 0.16 | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-1-04 | 20 |
| 21 | MCU-B1 | 1 | 2/1 | 12/12 | 3/4" | 2 | 15A | 0.06 | b | 1.67 | - | - | - | - | - | - | - | 22 |
| 23 | - | - | - | - | - | - | - | 0.06 | c | 1.67 | - | - | - | - | - | - | - | 24 |
| 25 | | - | - | - | - | - | - | | a | 1.67 | 20A | 3 | 3/4" | 12/12 | 3/1 | 1 | UH-1-05 | 26 |
| 27 | | - | - | - | - | - | - | | b | 1.67 | - | - | - | - | - | - | - | 28 |
| 29 | | - | - | - | - | - | - | | c | 1.67 | - | - | - | - | - | - | - | 30 |
| 31 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 32 |
| 33 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 34 |
| 35 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 36 |
| 37 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 38 |
| 39 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 40 |
| 41 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 42 |

NOTES:

**Total** 18.34 Connected kVa
18.25 Connected kVa
18.25 Connected kVa
**54.83 Connected kVa**
**54.83 Demanded Kva**

Phase A Amps: 153.00
Phase B Amps: 152.00
Phase C Amps: 152.00
**Average Connected Amps:** 152.31
**Average Demand Amps:** 152.31

## PANEL P2-2

Volts: **208/120** Bus: **100A** Poles: **42** Remarks:
Phase: **3** Main: **100A** Mtg: **SURFACE**
Wire: **4** AIC: **24,000**

| CKT | FOR | CIRCUITING SETS | NO | SIZE | C. | BREAKER POLE | AMP | LOAD KVA | Phase | KVA | BREAKER AMP | POLE | CIRCUITING C. | SIZE | NO | SETS | FOR | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 2 |
| 3 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 4 |
| 5 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 6 |
| 7 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 8 |
| 9 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 10 |
| 11 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 12 |
| 13 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 14 |
| 15 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 16 |
| 17 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 18 |
| 19 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 20 |
| 21 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 22 |
| 23 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 24 |
| 25 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 26 |
| 27 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 28 |
| 29 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 30 |
| 31 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 32 |
| 33 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 34 |
| 35 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 36 |
| 37 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 38 |
| 39 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 40 |
| 41 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 42 |

NOTES:

**Total** 0.00 Connected kVa
0.00 Connected kVa
0.00 Connected kVa
**0.00 Connected kVa**
**0.00 Demanded Kva**

Phase A Amps: 0.00
Phase B Amps: 0.00
Phase C Amps: 0.00
**Average Connected Amps:** 0.00
**Average Demand Amps:** 0.00

## PANEL P1-3

Volts: **208/120** Bus: **225A** Poles: **42** Remarks:
Phase: **3** Main: **200A** Mtg: **SURFACE**
Wire: **4** AIC: **24,000**

| CKT | FOR | CIRCUITING SETS | NO | SIZE | C. | BREAKER POLE | AMP | LOAD KVA | Phase | KVA | BREAKER AMP | POLE | CIRCUITING C. | SIZE | NO | SETS | FOR | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 2 |
| 3 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 4 |
| 5 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 6 |
| 7 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 8 |
| 9 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 10 |
| 11 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 12 |
| 13 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 14 |
| 15 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 16 |
| 17 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 18 |
| 19 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 20 |
| 21 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 22 |
| 23 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 24 |
| 25 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 26 |
| 27 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 28 |
| 29 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 30 |
| 31 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 32 |
| 33 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 34 |
| 35 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 36 |
| 37 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 38 |
| 39 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 40 |
| 41 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 42 |

NOTES:

**Total** 0.00 Connected kVa
0.00 Connected kVa
0.00 Connected kVa
**0.00 Connected kVa**
**0.00 Demanded Kva**

Phase A Amps: 0.00
Phase B Amps: 0.00
Phase C Amps: 0.00
**Average Connected Amps:** 0.00
**Average Demand Amps:** 0.00

## PANEL P2-3

Volts: **208/120** Bus: **100A** Poles: **42** Remarks:
Phase: **3** Main: **100A** Mtg: **SURFACE**
Wire: **4** AIC: **24,000**

| CKT | FOR | CIRCUITING SETS | NO | SIZE | C. | BREAKER POLE | AMP | LOAD KVA | Phase | KVA | BREAKER AMP | POLE | CIRCUITING C. | SIZE | NO | SETS | FOR | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 2 |
| 3 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 4 |
| 5 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 6 |
| 7 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 8 |
| 9 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 10 |
| 11 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 12 |
| 13 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 14 |
| 15 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 16 |
| 17 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 18 |
| 19 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 20 |
| 21 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 22 |
| 23 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 24 |
| 25 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 26 |
| 27 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 28 |
| 29 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 30 |
| 31 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 32 |
| 33 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 34 |
| 35 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 36 |
| 37 | | - | - | - | - | - | - | | a | | - | - | - | - | - | - | | 38 |
| 39 | | - | - | - | - | - | - | | b | | - | - | - | - | - | - | | 40 |
| 41 | | - | - | - | - | - | - | | c | | - | - | - | - | - | - | | 42 |

NOTES:

**Total** 0.00 Connected kVa
0.00 Connected kVa
0.00 Connected kVa
**0.00 Connected kVa**
**0.00 Demanded Kva**

Phase A Amps: 0.00
Phase B Amps: 0.00
Phase C Amps: 0.00
**Average Connected Amps:** 0.00
**Average Demand Amps:** 0.00


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Union Brothers Furniture Company
37 WEST CROSS STREET, LLC
1120 SOUTH HANOVER STREET
BALTIMORE, MD 21230

SHEET TITLE
**ELECTRICAL SCHEDULES**

| Project Number: 16225 | Date: 10/05/17 |
|---|---|
| Drawn by: MBH | Checked by: MBH |
| NPS/MHT SUBMISSION | 08/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**


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**96.01**

## EQUIPMENT CONNECTION SCHEDULE

| DESIGNATION | LOAD | UNIT | VOLTS | PHASE | FSS @ UNIT POLE | FRAME | FUSE | STARTER | ENCLOSURE | CIRCUIT |
|---|---|---|---|---|---|---|---|---|---|---|
| HP-LOBBY | 52.6 | MCA | 208 | 3 | 3 | 100A | 70A | - | NEMA 3R | PH-17,19,21 |
| HP-BLDG1-02 | 28.0 | MCA | 208 | 3 | 3 | 60A | 35A | - | NEMA 3R | P1-2-1,3,5 |
| HP-BLDG1-02 | 52.6 | MCA | 208 | 3 | 3 | 100A | 70A | - | NEMA 3R | P1-2-7,9,11 |
| HP-BLDG1-03 | 28.0 | MCA | 208 | 3 | 3 | 60A | 35A | - | NEMA 3R | |
| HP-BLDG1-03 | 52.6 | MCA | 208 | 3 | 3 | 100A | 70A | - | NEMA 3R | |
| HP-BLDG2 | 28.0 | MCA | 208 | 3 | 3 | 60A | 35A | - | NEMA 3R | |
| HP-BLDG2 | 52.6 | MCA | 208 | 3 | 3 | 100A | 70A | - | NEMA 3R | |
| HP-BLDG3-02 | 66.0 | MCA | 208 | 3 | 3 | 100A | 80A | - | NEMA 3R | P3-2-1,3,5 |
| | | | | | | | | | | |
| FCU-L-01 | 2.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | PH-23,25 |
| FCU-L-02 | 2.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | PH-23,25 |
| FCU-L-03 | 2.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | PH-23,25 |
| FCU-B1-1 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-13,15 |
| FCU-B1-2 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-13,15 |
| FCU-B1-3 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-13,15 |
| FCU-B1-4 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-13,15 |
| FCU-B1-5 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-13,15 |
| FCU-B1-6 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-17,19 |
| FCU-B1-7 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-17,19 |
| FCU-B1-8 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-17,19 |
| FCU-B1-9 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-17,19 |
| FCU-B1-10 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-17,19 |
| FCU-B2-1 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| FCU-B2-2 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| FCU-B2-3 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| FCU-B2-4 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| FCU-B2-5 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| FCU-B2-6 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| FCU-B3-1 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P3-2-7,9 |
| FCU-B3-2 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P3-2-7,9 |
| FCU-B3-3 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P3-2-7,9 |
| FCU-B3-4 | 1.5 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P3-2-7,9 |
| | | | | | | | | | | |
| MCU-L-1 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | PH-27,29 |
| MCU-B1-1 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-21,23 |
| MCU-B1-2 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-21,23 |
| MCU-B1-3 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-21,23 |
| MCU-B1-4 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-21,23 |
| MCU-B1-5 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-21,23 |
| MCU-B1-6 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P1-2-21,23 |
| MCU-B2-1 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| MCU-B2-2 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| MCU-B2-3 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| MCU-B3-1 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P3-2-11,13 |
| MCU-B3-2 | 0.1 | MCA | 208 | 1 | 2 | 30A | 15A | - | NEMA 1 | P3-2-11,13 |
| | | | | | | | | | | |
| EF-01 | 1/4 | HP | 120 | 1 | 2 | 30A | 15A | - | NEMA 3R | |
| EF-02 | 1/4 | HP | 120 | 1 | 2 | 30A | 15A | - | NEMA 1 | |
| | | | | | | | | | | |
| EWH-01 | 3.0 | KW | 208 | 1 | - | - | - | - | - | |
| EWH-02 | 3.0 | KW | 208 | 1 | - | - | - | - | - | |
| EWH-03 | 3.0 | KW | 208 | 1 | - | - | - | - | - | |
| EWH-04 | 3.0 | KW | 208 | 1 | - | - | - | - | - | |
| EWH-05 | 3.0 | KW | 208 | 1 | - | - | - | - | - | |
| | | | | | | | | | | |
| UH-B-01 | 3.0 | KW | 208 | 1 | - | - | - | - | - | |
| UH-B-02 | 5.0 | KW | 208 | 3 | - | - | - | - | - | |
| UH-B-03 | 5.0 | KW | 208 | 3 | - | - | - | - | - | |
| UH-B-04 | 5.0 | KW | 208 | 3 | - | - | - | - | - | |
| | | | | | | | | | | |
| UH-1-01 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P1-2-2,4,6 |
| UH-1-02 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P1-2-8,10,12 |
| UH-1-03 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P1-2-14,16,18 |
| UH-1-04 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P1-2-20,22,24 |
| UH-1-05 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P1-2-26,28,30 |
| | | | | | | | | | | |
| UH-3-01 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P3-2-2,4,6 |
| UH-3-02 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P3-2-8,10,12 |
| UH-3-03 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P3-2-14,16,18 |
| UH-3-04 | 5.0 | KW | 208 | 3 | - | - | - | - | - | P3-2-20,22,24 |
| | | | | | | | | | | |
| WH-1 | | | | | | | | | | |
| WH-2 | | | | | | | | | | |
| | | | | | | | | | | |


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BALTIMORE, MD 21230

SHEET TITLE
**ELECTRICAL SCHEDULES**

| Project Number | Date |
|---|---|
| 16225 | 10/05/17 |
| Drawn by: MBH | Checked by: MBH |
| NPS/MHT SUBMISSION | 06/30/16 |

| Num. | Description | Date |
|---|---|---|

**PERMIT / CONSTRUCTION 10/05/17**


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**96.02**