



PROJECT NO. 1420.01  
 ISSUE FOR:  
 10 NOVEMBER 2017

CONSULTANTS

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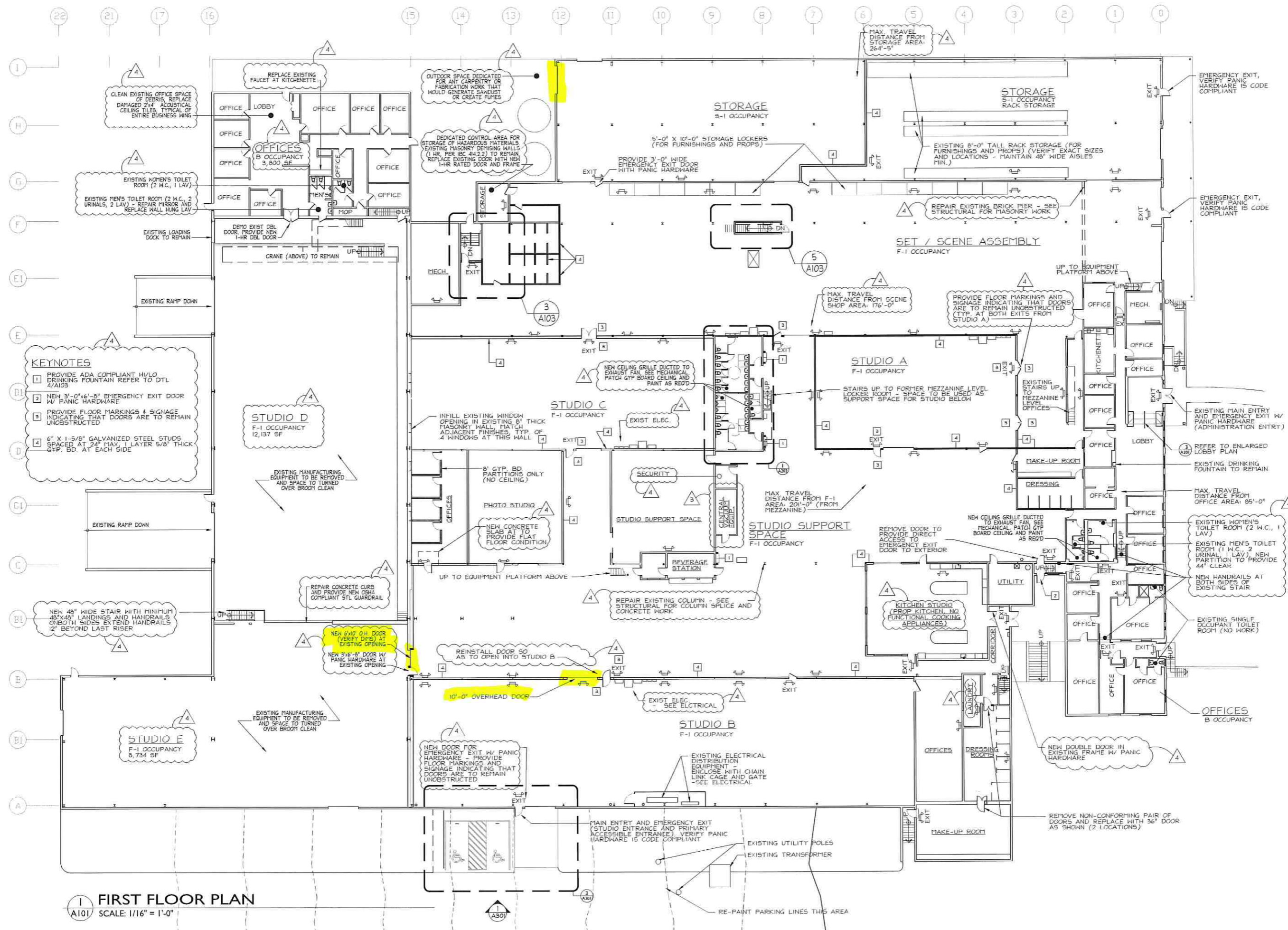
CONSTRUCTION DOCUMENTS  
**3 RIVERS STUDIOS**  
 4100 Steubenville Pike  
 Pittsburgh, PA 15205

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SHEET TITLE  
 FIRST FLOOR PLAN

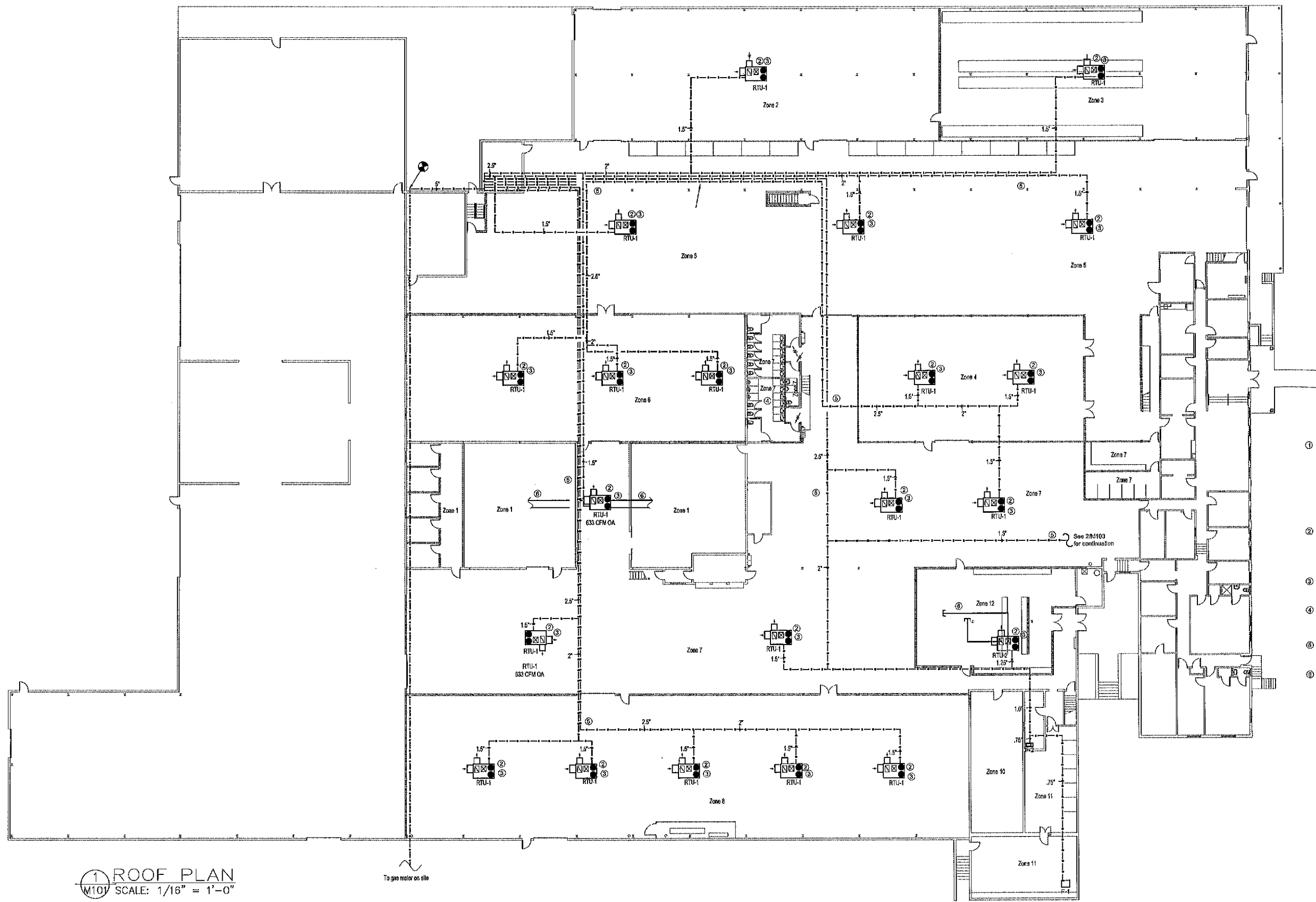
DRAWING NUMBER  
**A101**



**KEYNOTES**

- 1 PROVIDE ADA COMPLIANT H/L/O DRINKING FOUNTAIN REFER TO DTL 4/A103
- 2 NEW 3'-0" x 6'-8" EMERGENCY EXIT DOOR W/ PANIC HARDWARE
- 3 PROVIDE FLOOR MARKINGS & SIGNAGE INDICATING THAT DOORS ARE TO REMAIN UNOBSTRUCTED
- 4 6" x 1-5/8" GALVANIZED STEEL STUDS SPACED AT 24" MAX, 1 LAYER 5/8" THICK GYP. BD. AT EACH SIDE

**1 FIRST FLOOR PLAN**  
 A101 SCALE: 1/16" = 1'-0"



**General Notes**

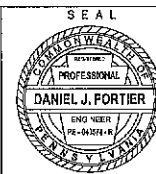
- ① Gas piping shall be ASTM A106 or ASTM A53, black steel pipe, schedule 40, ASME B16.1 malleable iron fittings, ASMEB1.20.1 threaded joints. Any concealed piping must be all welded construction. All piping shall be painted yellow and labeled as gas piping every 20 feet. Each gas fired item must have a sediment trap/fit, leg and shut-off valve (See Dirt Log Detail 4/M201). Piping shall be leak tested according to local gas utility requirements. Piping shall be supported according to the 2009 International Mechanical Code Requirements and the 2009 National Fuel Gas Code (NFPA 54).
- ② Duct smoke detector by E.C., see electrical drawings and 3/M201. Installation and testing per manufacturer's instructions and as recommended in NFPA 72. The pressure differential between the inlet and outlet sides shall be within the range specified by the manufacturer. Duct detector to be wired to shut down unit upon detection. See 3/M210.
- ③ RTU to be located on roof and supported structurally according to structural determination by structural Engineer and Architect.
- ④ See "Outdoor Air Requirements" schedule on M201. Exhaust system is existing, make-up air for exhaust rest room is provided by studio support space 2 RTUs through door louvers.
- ⑤ Gas piping sized per NFPA 54-2009 "longest branch method," table 6.2 (b), less than 2 psf and 0.5 in pressure drop.
- ⑥ Galvanized spiral duct, gauge per SMACNA 2" pressure class, sized for 0.1" pressure drop per 100 ft.

① ROOF PLAN  
M101 SCALE: 1/16" = 1'-0"

To gas meter on site

CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT BUILDING AND REPORT ANY DISCREPANCY TO CLIENT.

DATE	APPROVED
_____	APPROVED _____ 20____
_____	DIRECTOR OF FACILITIES DIVISION
_____	APPROVED _____ 20____



HVAC DESIGN

3 RIVERS STUDIOS  
4100 STEUBENVILLE PIKE  
PITTSBURGH, PENNSYLVANIA 15205

OWNER M101, M102, M103, M201, M301, M302	PROJ. NO. 1420.00
STANDARD DRAWINGS	SHEET NO. <b>M101</b>
DATE: November 8, 2017	DRAWN BY: GA



WIRING DESIGNATIONS FOR CONDUCTORS @ 75°C:

COPPER CONDUCTORS

ALUMINUM CONDUCTORS

- (225-4) 4 #4/0 + 1 #4 GRD. - 2-1/2" C.
- (250-3) 3-250 KCML + 1 #4 GRD. - 3" C.
- (250-4) 4-250 KCML + 1 #4 GRD. - 3" C.
- (300-3) 3-350 KCML + 1 #4 GRD. - 3" C.
- (300-4) 4-350 KCML + 1 #4 GRD. - 3" C.
- (400-3) 3-500 KCML + 1 #3 GRD. - 3-1/2" C.
- (400-4) 4-500 KCML + 1 #3 GRD. - 3-1/2" C.
- (500-3) 2 RUNS OF 3-250 KCML + 1 #2 GRD. - 3" C.
- (500-4) 2 RUNS OF 4-250 KCML + 1 #2 GRD. - 3" C.
- (600-3) 2 RUNS OF 3-350 KCML + 1 #1 GRD. - 3" C.
- (600-4) 2 RUNS OF 4-350 KCML + 1 #1 GRD. - 3" C.
- (800-3) 2 RUNS OF 3-500 KCML + 1 #1/0 GRD. - 3-1/2" C.
- (800-4) 2 RUNS OF 4-500 KCML + 1 #1/0 GRD. - 3-1/2" C.
- (1000-3) 3 RUNS OF 3-500 KCML + 1 #2/0 GRD. - 3-1/2" C.
- (1000-4) 3 RUNS OF 4-500 KCML + 1 #2/0 GRD. - 3-1/2" C.
- (1200-3) 4 RUNS OF 3-350 KCML + 1 #3/0 GRD. - 3" C.
- (1200-4) 4 RUNS OF 4-350 KCML + 1 #3/0 GRD. - 3" C.

NUMBERED NOTES:

- ◇ USE BUSSMANN #LPS-RK-400SP OR EQUAL DUAL-ELEMENT, TIME-DELAY FUSES.
- ◇ CONDUCTORS TO RTU'S OVERSIZED FOR VOLTAGE DROP.
- ◇ REPLACE 30A THREE-POLE DISCONNECT SWITCH WITH 30A, 3-POLE FUSED DISCONNECT SWITCH. INSERT FUSE SIZE INDICATED.
- ◇ FIVE SERIES 16 400A CAM-TYPE RECEPTACLES. SEE DETAIL BELOW.
- ◇ RELOCATE AND RECONNECT. SEE DWG. NO. E-2.

GENERAL NOTES:

1. SOME INFORMATION DEPICTED ON THIS DRAWING HAS BEEN FURNISHED BY OTHERS. GOOD-FAITH EFFORTS HAVE BEEN MADE TO CONFIRM ITS VALIDITY.

POWER SYMBOLS

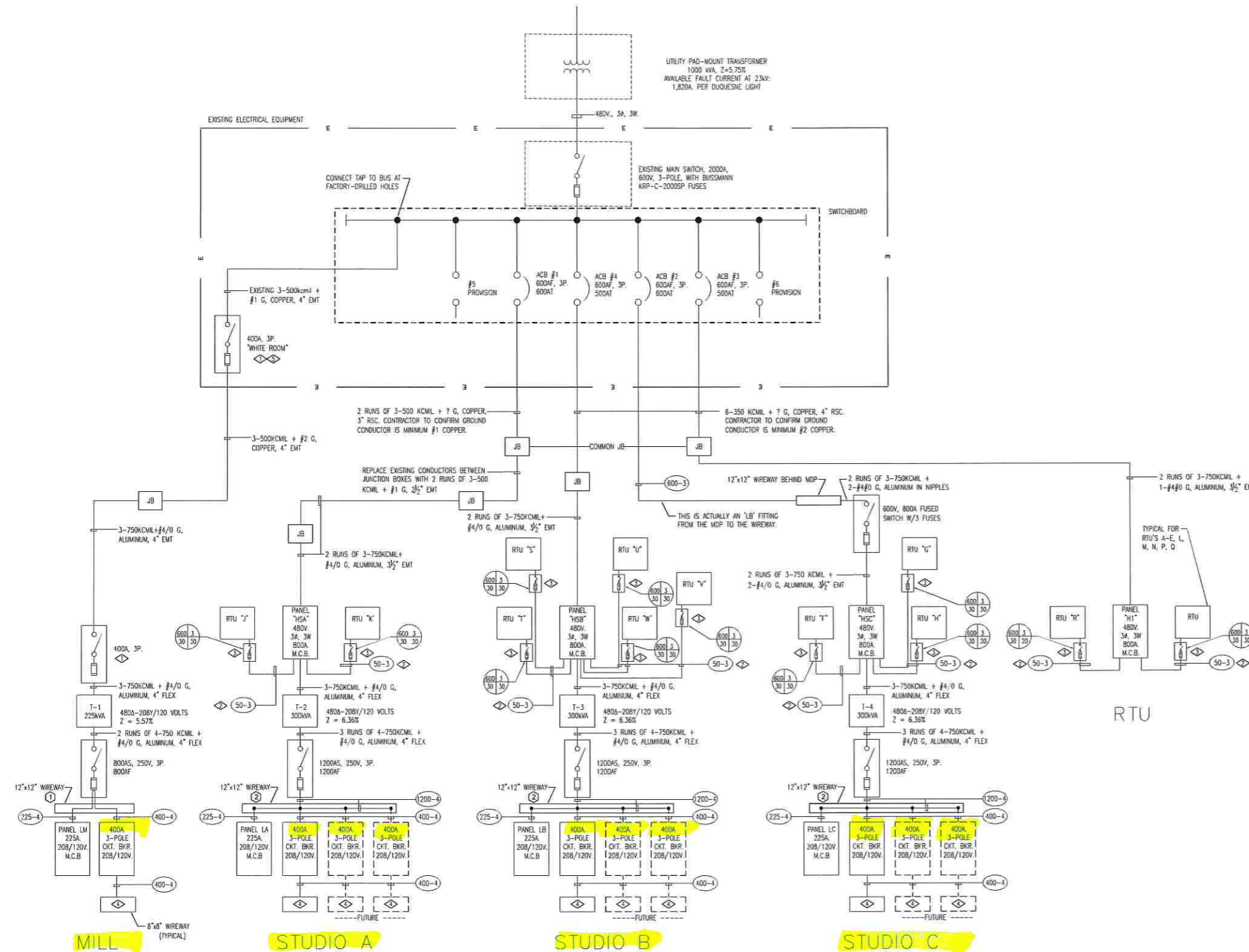


ELECTRICAL REQUIREMENTS KEY FOR SEPARATELY-MOUNTED DISCONNECT SWITCHES.

- A - AC VOLTAGE RATING OF DEVICE
- B - POLES (3 - W/O NEUTRAL, 3W - W/SOLID NEUTRAL)
- C - AMPERE RATING OF DEVICE
- D - OVERCURRENT FUSE AMPERES, N-DENOTES NON-FUSIBLE

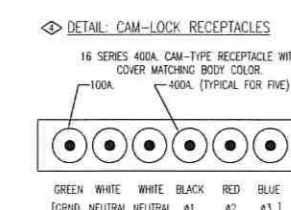
ROOF TOP UNITS (RTU'S)					
MARK	LOCATION	SERVICE	MFR/ MODEL	NAME- PLATE MCA*	NAME- PLATE MOCP#
RTU-1	ROOF	ALL HI-BAY SPACES	LUXAIRE ZS-10N24NAAA5	24.7	30
RTU-2	ROOF	CATERING KITCHEN	LUXAIRE ZS-07N18NAAA5	19.7	20

\* MINIMUM CIRCUIT AMPS PER RTU MANUFACTURER (DETERMINES CONDUCTOR SIZE)  
# MAXIMUM OVERCURRENT PROTECTION PER RTU MANUFACTURER



**ELECTRICAL RISER DIAGRAM**  
E-3 N.T.S.

WIREWAY CALCULATIONS:  
 ① AREA OF TWELVE 500 kcmil THHN CONDUCTORS: 5.7 SQUARE INCHES. REQUIRED MINIMUM AREA OF WIREWAY: 5.7 / 0.2 = 28.3 SQUARE INCHES.  
 ② AREA OF SIXTEEN 500 kcmil THHN CONDUCTORS: 11.4 SQUARE INCHES. REQUIRED MINIMUM AREA OF WIREWAY: 11.4 / 0.2 = 57 SQUARE INCHES.



### 480-VOLT RISER DIAGRAM

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CONSULTING ELECTRICAL ENGINEERS

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### 3 RIVERS STUDIOS

4100 Steubenville Pike  
Pittsburgh, PA 15205

JOB NO.  
**70-14**

DRAWING NO.  
**E-3**

OF 7

DRAWN BY RWP

DATE NOVEMBER 2, 2017

SCALE NTS