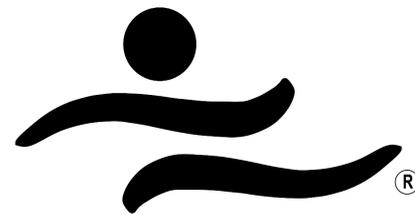


LAKE HAVASU CITY, ARIZONA

FA1030

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UTILITY CONTACTS

LAKE HAVASU CITY (WASTEWATER)	(928) 855-3999
LAKE HAVASU CITY (WATER)	(928) 855-2618
SUDDEN LINK	(928) 855-9855
FRONTIER COMMUNICATION	(928) 453-0541
UNISOURCE ENERGY SERVICES (GAS)	(928) 505-7025
UNISOURCE ENERGY SERVICES (ELECTRIC)	(928) 505-7031

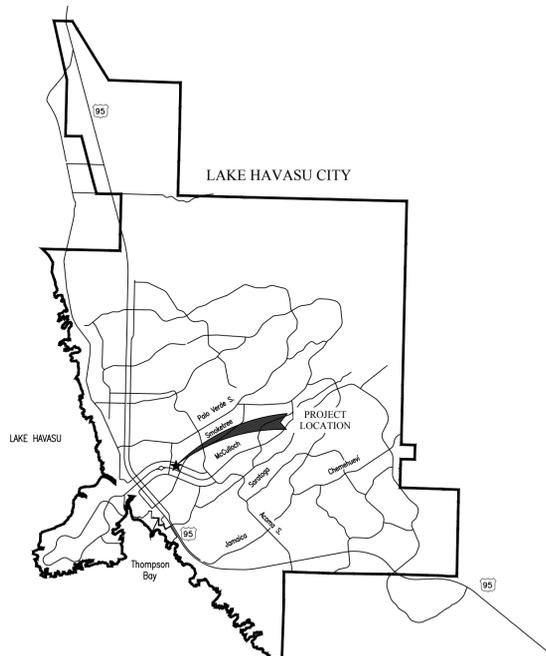
SHEET INDEX

- T1 COVER SHEET
- T2 ARCHITECTURAL DATA SHEET
- A1 DEMOLITION AND FLOOR PLAN
- A2 SECOND FLOOR AND ROOF PLAN
- A3 REFLECTED CEILING PLAN
- A4 WALL SECTIONS
- A5 INTERIOR ELEVATIONS
- A6 INTERIOR ELEVATIONS
- A7 DETAILS
- A8 DETAILS
- E-1 ELECTRICAL SYMBOLS LEGEND
- E-2 IT ROOM ELECTRICAL LIGHTING PLAN
- E-3 IT ROOM ELECTRICAL PLAN/SPECIFICATIONS
- E-4 IT ROOM ELECTRICAL ROOF PLAN
- E-5 IT ROOM POWER DISTRIBUTION PLAN
- E-6 EXISTING ELECTRICAL ROOM DEMOLITION/ LAYOUT
- E-7 ONE LINE DIAGRAM
- M-1 MECHANICAL SPECIFICATIONS AND SCHEDULES
- M-2 MECHANICAL FLOOR PLAN
- FP1 FIRE PROTECTION PLAN

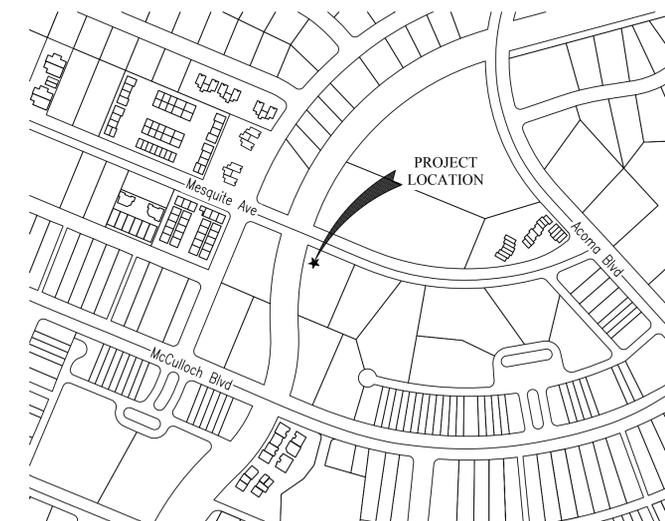


CITY COUNCIL

MARK S. NEXSEN	MAYOR
DON CALLAHAN	VICE MAYOR
DEAN BARLOW	COUNCIL MEMBER
DONNA BRISTER	COUNCIL MEMBER
MICHELE LIN	COUNCIL MEMBER
CAL SHEEHY	COUNCIL MEMBER
JENI COKE	COUNCIL MEMBER



VICINITY MAP



LOCATION MAP

Job No. FA1030

Drawn By PDH

Checked By PDH

Date 10-5-16

File Name

Revised

HAVASU CITY POLICE DEPARTMENT IT UPGRADES
2360 MCCOLLOCH N. BLVD N.
LAKE HAVASU CITY ARIZONA 86403
IT ROOM UPGRADES

Sheet Number

T1

GENERAL NOTES

1. General Notes apply to all drawings. In case of conflict between specifications, construction drawings, and Instruction for Bidders, the Instructions for bidder shall over rule. In the case of a conflict between the specification and construction drawings, the construction drawings overrule.
2. All dimensions are to face of masonry walls, or face of gypsum board at interior walls, unless noted otherwise.
3. The Contractor shall provide paid staff for fire watch when wet and dry fire suppression systems are inoperable. (Nights, weekends, holidays, weekdays, etc).
4. Ceiling heights noted on Reflected Ceiling Plan are listed from finish floor of individual rooms.
5. All floor and wall penetrations required for pipes, conduit, etc. shall be sealed to stop the passage of fire and / or smoke and maintain the integrity of the fire suppression system.
6. Scribe 5/8" gypsum board of walls and partitions to irregularities of structure. Seal tightly around any penetrations.
7. The Contractor shall visit the existing site and prior to bidding and shall verify all dimensions and conditions prior to beginning work. Should any condition arise where the intent of the drawings is in doubt or where there is a discrepancy between the drawings and field conditions, the Architect shall be notified immediately for clarification. The starting of any work, by any Contractor or Subcontractor shall be considered evidence that he has inspected and accepted all conditions involved in his work and finds them satisfactory.
8. All work, including materials and workmanship, shall conform to the requirements of local codes, laws, and ordinances, and the 2012 Edition-International Building Code. In the event of a conflict with code requirements and items called out on the plans, that code or call-out which establishes higher standard shall take precedence.
9. The Contractor shall be responsible for maintaining the integrity of fire-rated walls (i.e. no gaps, holes, voids, unsealed penetrations, etc. beyond that which code allows). Duct penetrations shall have fire dampers per IBC. All gaps between pipes, conduits, or ductwork shall be sealed using the Dow Corning Fire Stop System installed in accordance with I.C.B.O. Report Number 3817.
10. Fire extinguishers shall be 2A:10B:C rated. Travel distance to an extinguisher shall not exceed 75 feet. Fire Department and Architect to determine exact extinguisher locations. Extinguishers shall bear a service tag and shall be mounted so that the top of the extinguisher is no higher than four feet A.F.F.
11. The Contractor shall modify the existing fire sprinkler systems as required by Lake Havasu City.
12. The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all work will be good quality, free from faults and defects and in conformance with the construction documents. All work not so conforming to these standards may be considered defective. It is understood that no inferior or non-conforming work or materials will be accepted whether discovered at the time they are incorporated in the work or at any time before or after the final acceptance. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind of quality of materials and equipment.
13. All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the manufacturers' written specifications or instruction unless hereinafter specified to the contrary.
14. The Contractor shall supervise and direct the work using his best skill and attention. He shall be solely responsible for all construction and/or procedures and for coordinating all portions of the work under the Contract.
15. Dimensions take precedence over scale on construction documents.
16. All work shall be executed in a neat and working manner, acceptable to the Owner.
17. When work not specified is called out as required to complete the work, it shall be provided and be of the best materials and workmanship.
18. The existing server room shall remain in operation at all times during construction. Power shall be provided to all equipment. All precautions must be taken to prevent dust from damaging the computer equipment. A temperature of 70 degrees maximum must be maintained at all times.

BUILDING DATA

Applicable Codes

2012 International Building Code
 2012 International Mechanical Code
 2012 International Plumbing Code
 2012 International Fuel Gas Code
 2006 International Energy Conservation Code
 2012 International Fire Code
 2011 National Electrical Code
 2010 ADA

CONSTRUCTION TYPE: II-B
 SPRINKLERED: YES
 OCCUPANCY: MIXED USE B & I3

A 4 HOUR SEPARATION IS PROVIDED BETWEEN THE TWO OCCUPANCIES.

Police Operations: (Office and Support Functions)

OCCUPANCY: B

Allowable Square Footage: 23,000 SF
 Per IBC 506.2, an allowable Area Increase of 200% is allowed for a building with more than one level and sprinklered.

Total Existing Square Footage:
 First Floor 26,991 SF
 Second Floor 8,668 SF
 Covered Walkways 3,308 SF
 Open air Courtyard 2,400 SF

Total: 41,367 SF

Jail Operations:

OCCUPANCY: I 3
 CONSTRUCTION TYPE: II A

Allowable square footage: 15,000 SF
 Existing Square Footage 13,915 SF

Area to be remodeled: 432 Square feet.

An FM 200 Gas Fire Suppression system is to be installed in the New Data Room

PROJECT STATEMENT

The Information Technology Department is remodeling 432 square feet of space to accommodate a new server room. We will be removing the interior of an office and turning it into an entrance room. A raised floor will be installed in the server room to act as a supply air plenum and space for data cable. The raised floor will have server racks and air handlers installed atop the surface. A Gas fire suppression system will be installed for the server room. The scope of work includes Architectural, Structural, Mechanical, Electrical, and Fire Protection.

ROOM FINISH SCHEDULE

Finish Schedule

NO.	Room	Floor	Base	WALLS			CEILING		REMARKS	
				North	East	South	West	TYPE		HEIGHT
B126	Server Room	RFS	RB	PT GB	PT GB	PT GB	PT GB	PT GB	8'-0"	PAINT ALL WALLS
B117	Computer Entrance	VCT	RB	PT GB	PT GB	PT GB	PT GB	ACT	9'-6"	PAINT ALL WALLS

ROOM FINISH SCHEDULE LEGEND

FLOOR FINISHES
 RFS = RAISED FLOOR SYSTEM
 VCT = VINYL COMPOSITION TILE

WALL FINISHES
 PT GB = Gypsum wallboard painted

CEILING FINISHES
 PT GB = Gypsum wallboard painted
 ACT = Acoustical Ceiling Tile

ROOM FINISH SCHEDULE NOTES

1. Refer to all sheets for specific finishes related to details.
2. Continuous wall base with preformed pieces at outside corners.

PROJECT DIRECTORY

OWNER
 Lake Havasu City Police Department
 2360 Mccolloch N. Blvd N.
 Lake Havasu City, Arizona 86403

ELECTRICAL ENGINEER
 Sun Engineering LLC
 Tom Mott, PE
 2015 West Northern Suite 100
 Phoenix, Arizona 85021
 Tel: 623-329-2050
 Email: Tmott@sunengineering.us

ARCHITECT
 C&H Associates llc
 3507 N. Central Avenue Suite 407
 Phenix, Arizona 85012
 Tel: 602-348-5576
 Fax: 480-603-1165

MECHANICAL ENGINEER
 Sun Engineering
 John Hall, PE
 Project Manager, Frank Oquendo
 602-518-5346

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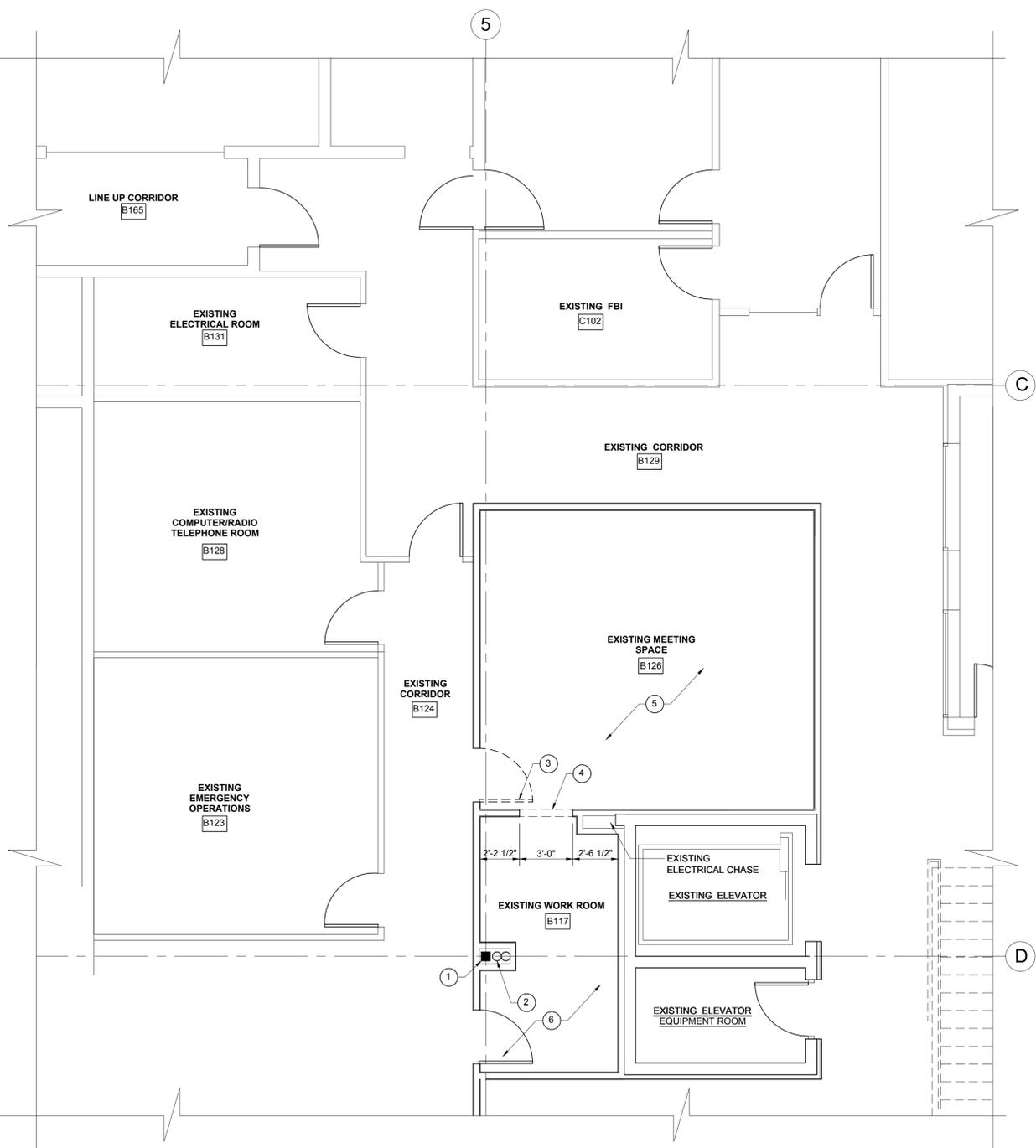


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HAVASU CITY POLICE DEPARTMENT IT UPGRADES
 2360 MCCOLLOCH N. BLVD N.
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IT ROOM IMPROVEMENTS

Sheet Number
T2



DEMOLITION PLAN - FIRST FLOOR

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

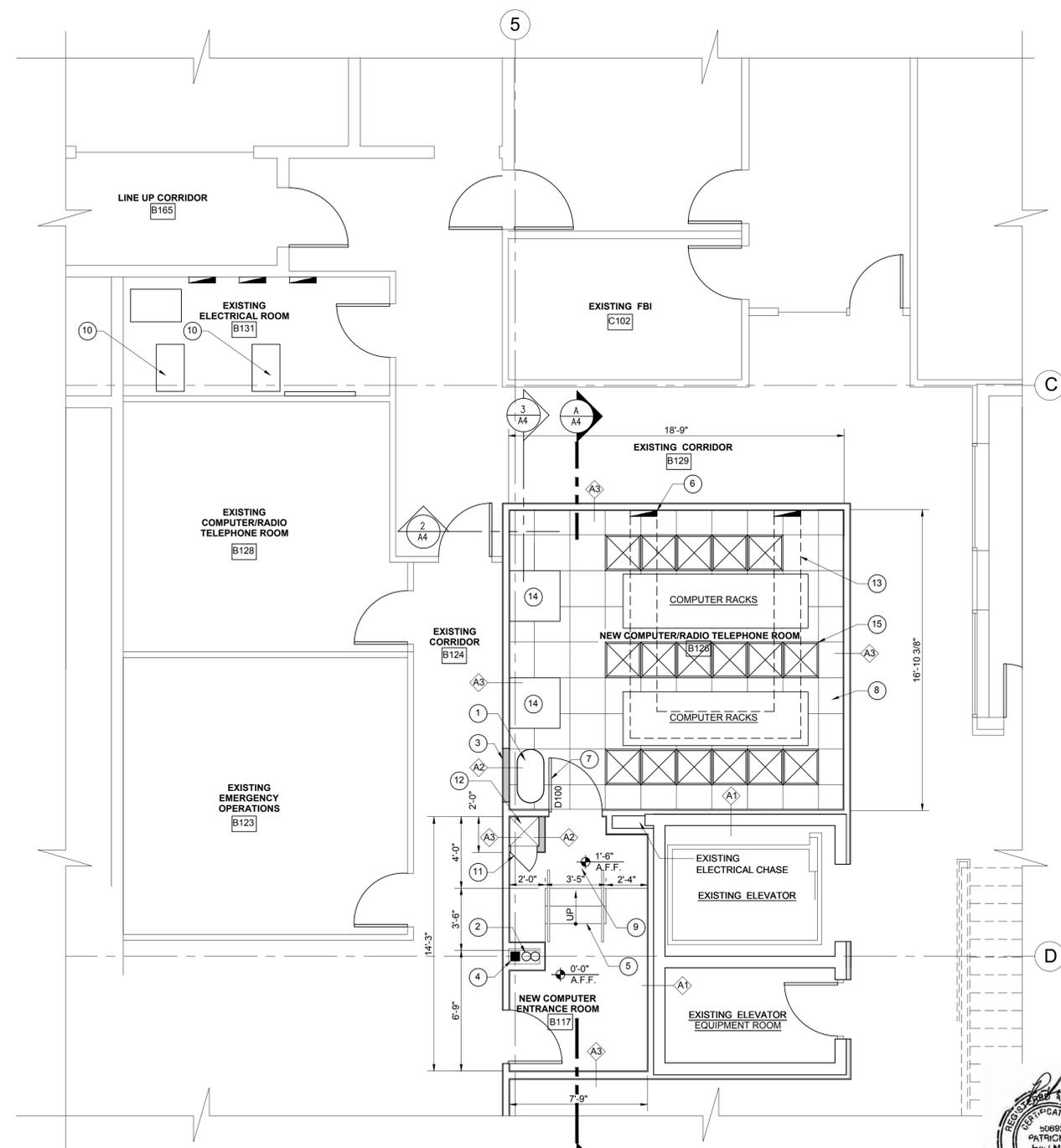


KEY NOTES- DEMOLITION PLAN

1. EXISTING COLUMN.
2. EXISTING ROOF DRAIN AND OVERFLOW.
3. REMOVE EXISTING DOOR.
4. REMOVE EXISTING WALL.
5. REMOVE CARPET AND BASEBOARD.
6. REMOVE CARPET.

GENERAL NOTES- DEMOLITION PLAN

1. REMOVE CARPET.
2. REMOVE EXISTING LIGHTING.
3. REMOVE EXISTING ELECTRICAL CONVENIENCE OUTLETS.
4. REMOVE EXISTING CEILING.
5. REMOVE EXISTING SPRINKLER SYSTEM.
6. REMOVE AND CAP EXISTING MECHANICAL DUCTS TO ROOM.
7. PROTECT EXISTING SPACE FROM ALL DUST AND DEBRIS. PROVIDE PLASTIC SHEET CURTAINS TO SEPARATE CONSTRUCTION AREA FROM WORKING AREAS OCCUPIED BY CLIENT.



FIRST FLOOR PLAN

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



KEY NOTES- FLOOR PLAN

1. NEW FM 200 GAS FIRE SUPPRESSION SYSTEM TANK.
2. EXISTING ROOF DRAIN AND OVERFLOW w/ EXISTING FURRED OUT JACKET.
3. FILL-IN EXISTING DOOR OPENING. TO MATCH EXISTING ADJACENT WALL CONSTRUCTION AND FINISH.
4. EXISTING COLUMN.
5. NEW STEEL STAIR WITH HANDRAILS.
6. NEW UPS PANEL.
7. NEW 3'-0" x 7'-0" HOLLOW METAL DOOR w/ CLOSER AND SMOKE GASKETS.
8. NEW 24"x24" ALL-STEEL 1500 SYSTEM WITH BOLTED STINGERS. STEEL METAL PANEL RAISED ACCESS FLOOR. TATE FLOORING.
9. NEW VCT FLOORING.
10. EXISTING UPS.
11. NEW 1'-6" x 1'-6" METAL ACCESS DOOR ACUDOR AS-9000 18 x 18 CLP. (GASKETED)
12. NEW DATA CHASE. SEAL ALL CABLE PENETRATIONS TO PREVENT THE PASSAGE OF GAS.
13. NEW UNDER FLOOR CABLE TRAY.
14. NEW AIR HANDLER.
15. NEW PERFORATED FLOOR PANEL. TATE FLOORING SYSTEM PERF 1250 PANELS.

SQUARE FOOTAGE

NEW COMPUTER ENTRANCE ROOM	114 S.F.
NEW COMPUTER/RADIO TELEPHONE ROOM	318 S.F.
TOTAL SQUARE FOOTAGE	432 S.F.

WALL LEGEND

- EXISTING BLOCK WALL WITH GYPSUM BOARD ON FURRING CHANNELS
-
-



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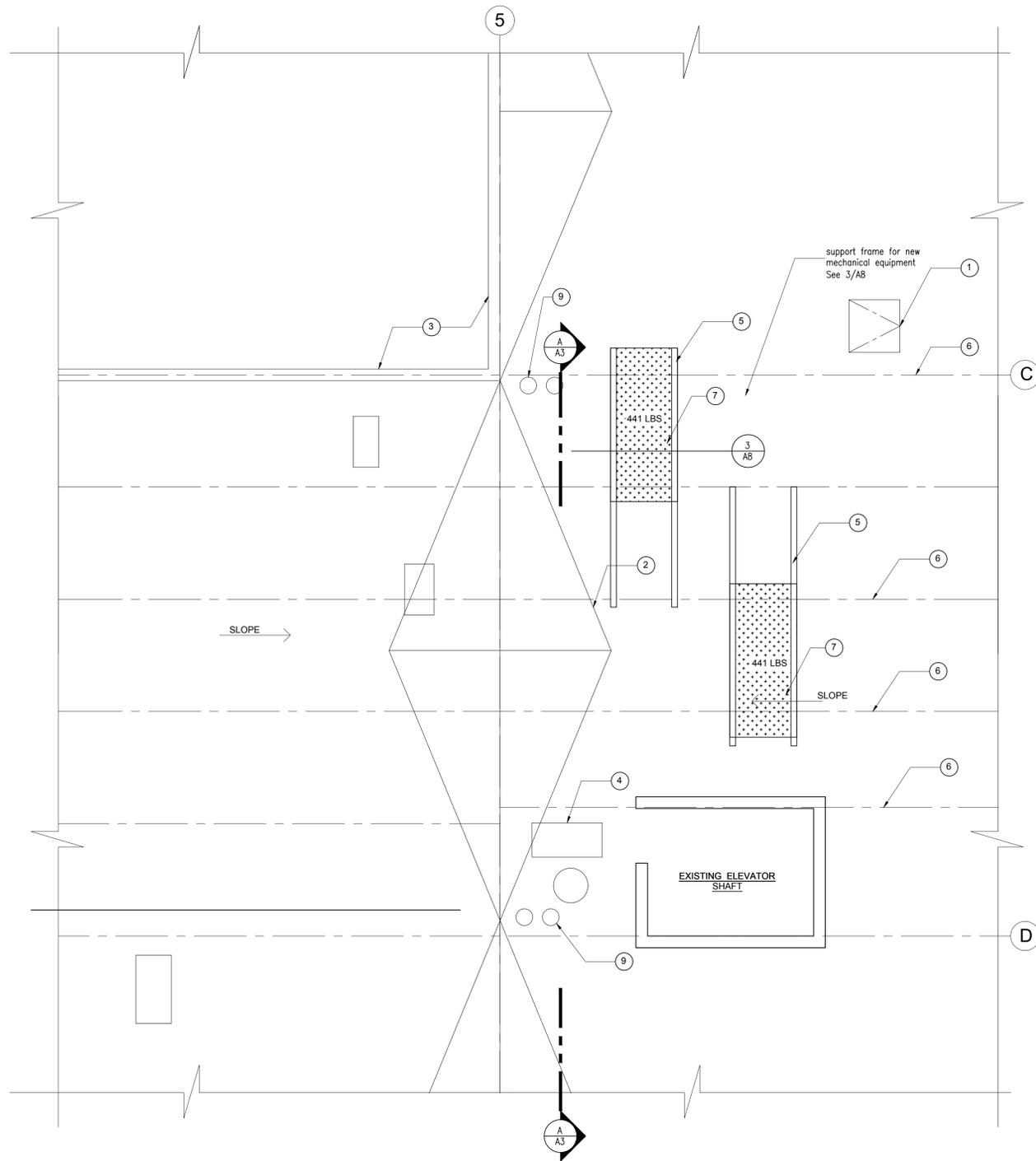
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 Checked By PDH
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HAVASU CITY POLICE DEPARTMENT IT UPGRADES
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IT ROOM UPGRADES

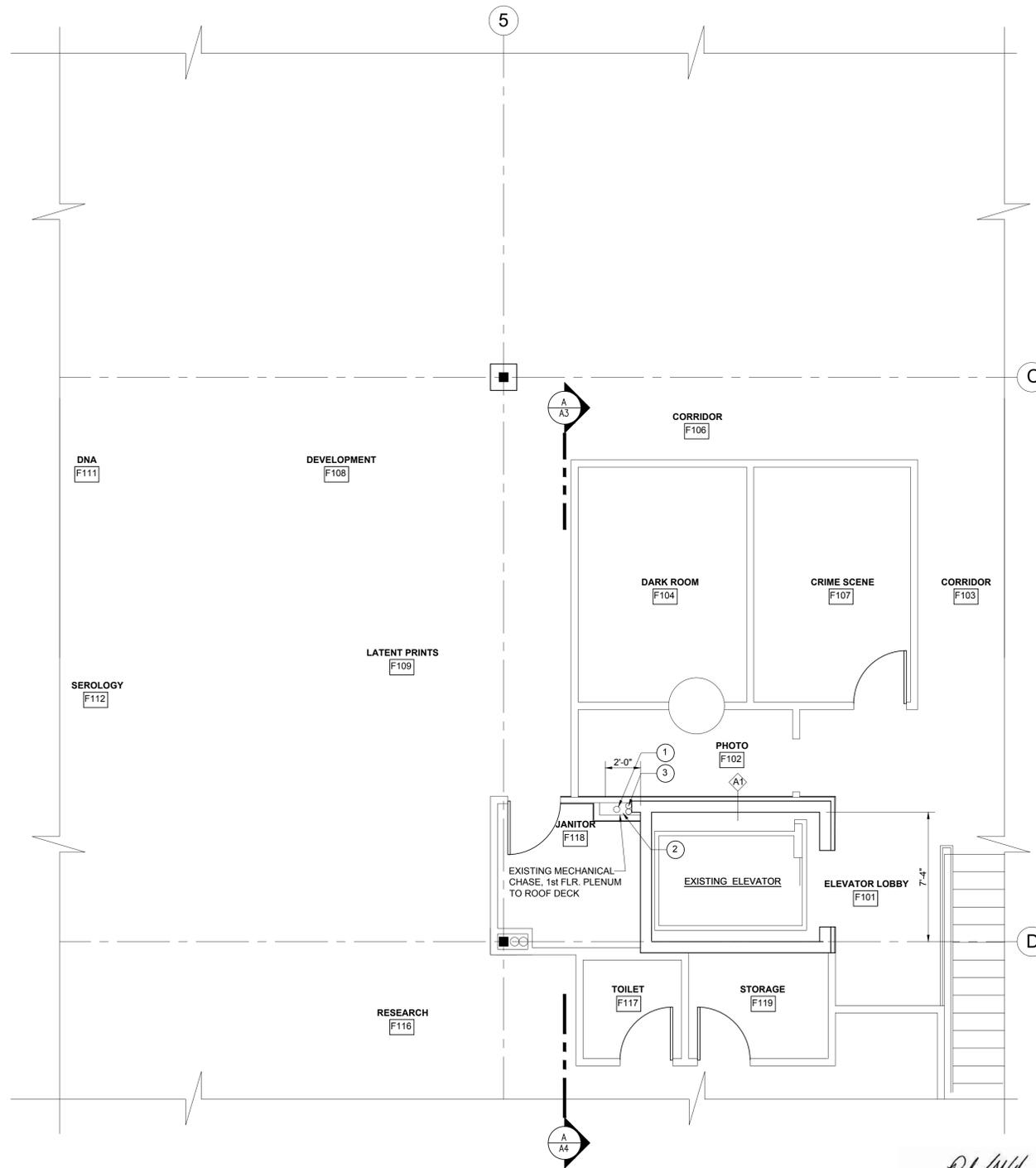
Sheet Number
A1



ROOF PLAN
 SCALE: 1/4" = 1'-0"
 0 1 2 4 8 16'

KEY NOTES- ROOF PLAN

1. EXISTING ROOF HATCH.
2. EXISTING CRICKET.
3. EXISTING PARAPET.
4. EXISTING WEATHER HEAD FOR RADIO/MICROWAVE CABLING.
5. 4x4 REDWOOD SLEEPER.
6. EXISTING STEEL ANGLE ROOF JOISTS.
7. NEW COMPRESSOR UNIT.
8. NOT USED.
9. EXISTING ROOF DRAIN AND OVER FLOW DRAIN.
10. NOT USED.



SECOND FLOOR PLAN
 SCALE: 1/4" = 1'-0"
 0 1 2 4 8 16'

KEY NOTES- SECOND FLOOR PLAN

1. EXISTING ELECTRICAL CONDUIT FROM 1ST FLOOR PLENUM.
2. REMOVE EXISTING GYPSUM BOARD TO PROVIDE PASSAGE OF MECHANICAL REFRIGERANT LINES INSIDE EXISTING CHASE.
3. EXISTING COMPUTER CABLE CONDUIT.
4. NOT USED.

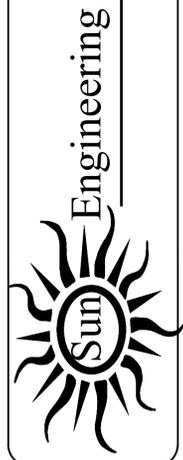
WALL LEGEND

- A1. EXISTING BLOCK WALL WITH GYPSUM BOARD ON FURRING CHANNELS
- A2. NEW INTERIOR PARTITION: ONE HOUR RATED SHAFT WALL. • 5/8" USG Sheetrock® Brand Firecode® X Panels, joints finished 2-1/2" USG C-H studs 25 gauge 24" o.c. 1" USG Sheetrock® Brand Gypsum Liner Panels UL ASSEMBLY 415



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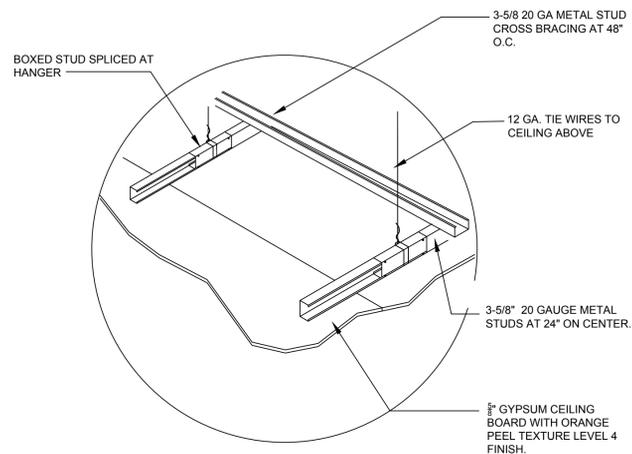


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 LAKE HAVASU CITY ARIZONA 86403

IT ROOM UPGRADES

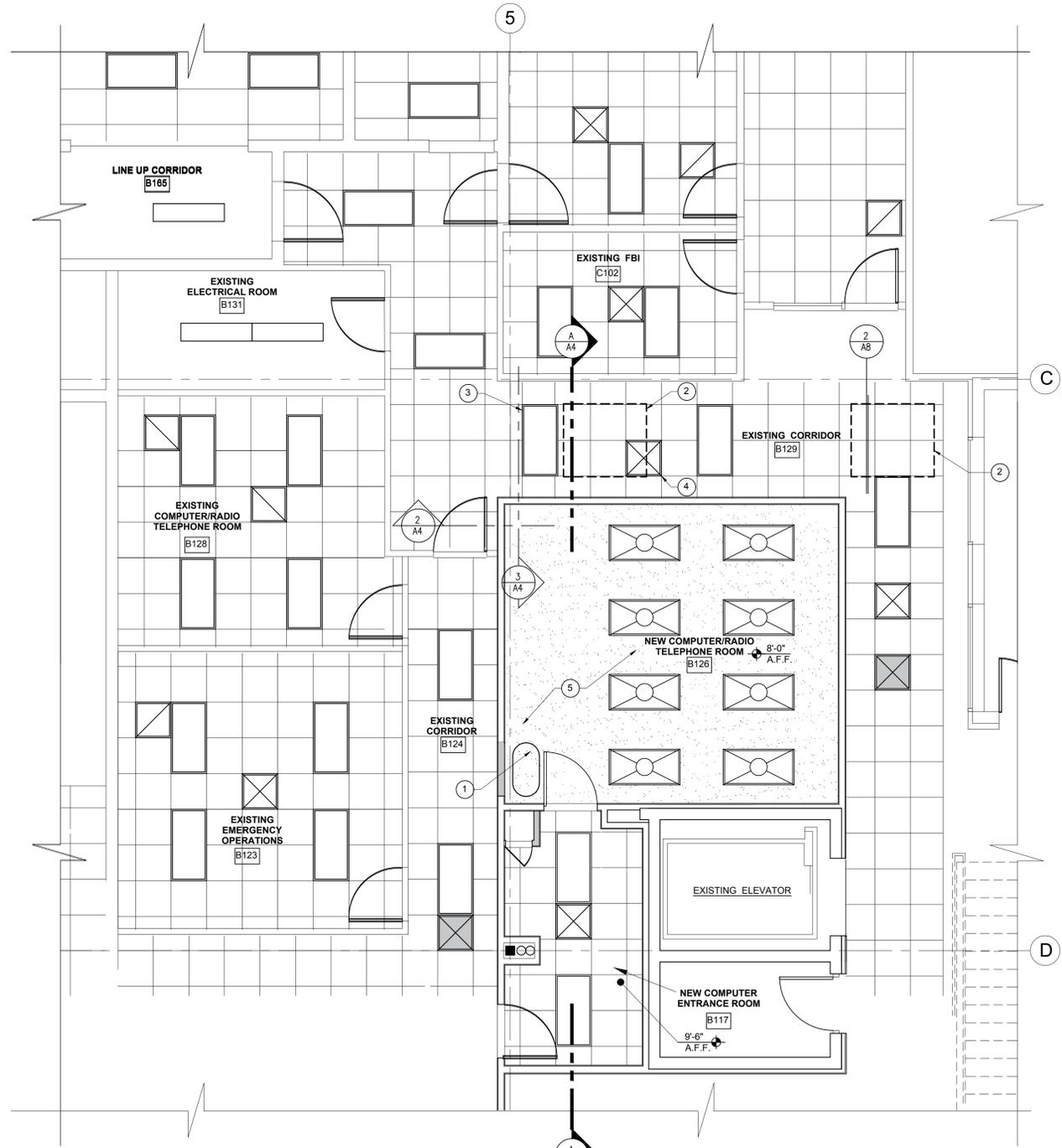
Sheet Number
A2



1 Ceiling Assembly Detail
SCALE: N.T.S.

CEILING LEGEND

	SMOKE DETECTOR
	EXISTING 2' x 4' FLUORESCENT LIGHT FIXTURE
	NEW 2' x 4' FLUORESCENT LIGHT FIXTURE
	EXISTING 1' x 4' RECESSED LIGHT FIXTURE
	EXISTING AIR SUPPLY DIFFUSER
	NEW TRANSFER AIR GRILLE
	NEW RETURN AIR GRILLE
	EXIST RETURN AIR GRILLE
	NEW EXHAUST DUCT
	PAINTED 5/8" GYPSUM BOARD W/ ORANGE PEEL LEVEL 4 FINISH.



REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"
0 1 2 4 8 16'

- KEY NOTES- REFLECTED CEILING PLAN**
- NEW FM 200 GAS FIRED SUPPRESSION SYSTEM TANK (AT FLOOR LEVEL).
 - NEW AIR HANDLER ABOVE EXISTING CEILING.
 - EXISTING ACOUSTICAL CEILING TILE TO REMAIN.
 - EXISTING AIR DIFFUSER.
 - SUSPENDED 5/8" GYPSUM CEILING BOARD ON 4" 20 GAUGE METAL STUDS @ 24" o.c. BRACE w/ 4" 20 GAUGE STUDS @ 48" o.c. SUSPEND w/ 12 GAUGE WIRE @ 48" o.c. TO STRUCTURE ABOVE.
 - EXISTING ACOUSTICAL CEILING TO REMAIN.



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IT ROOM UPGRADES

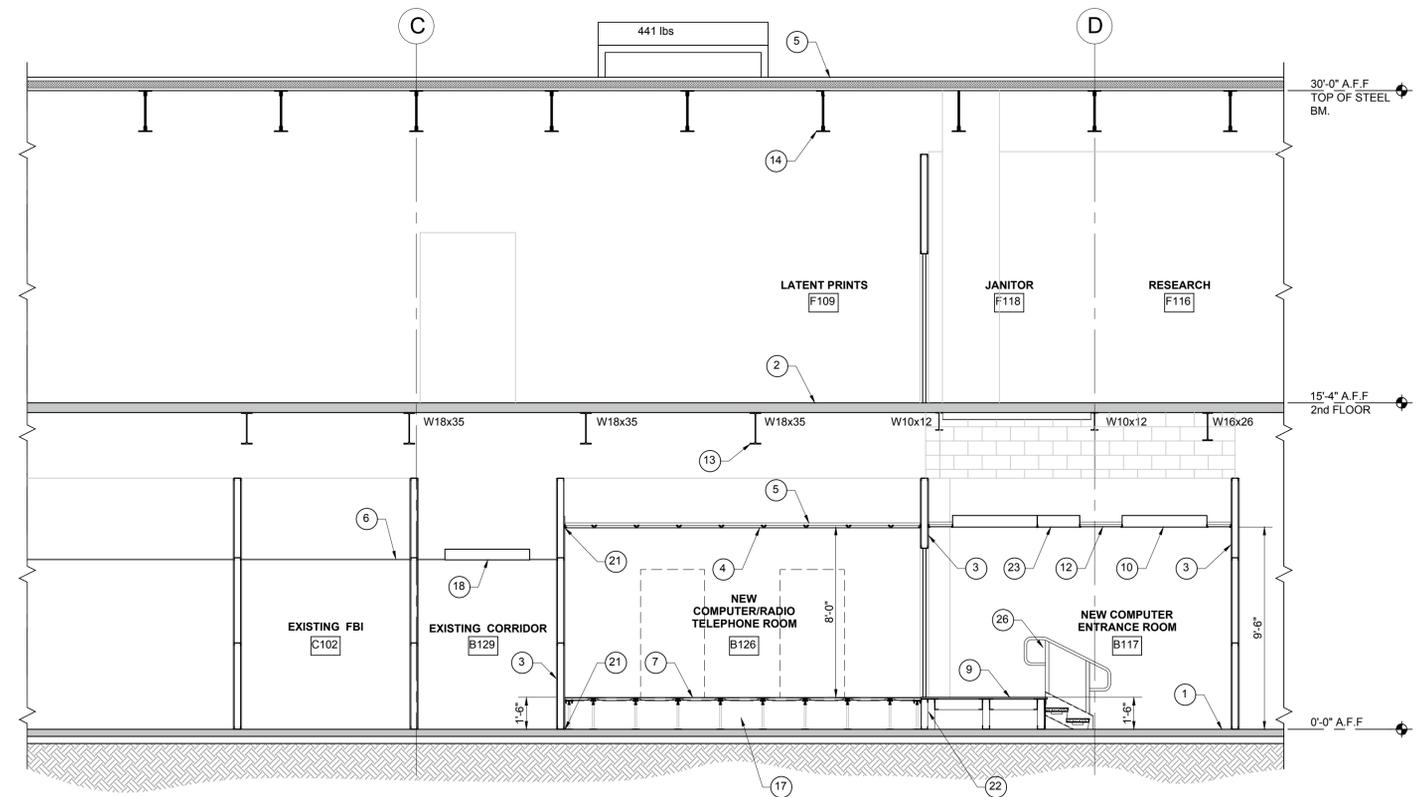
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A3

KEY NOTES- SECTION A-A

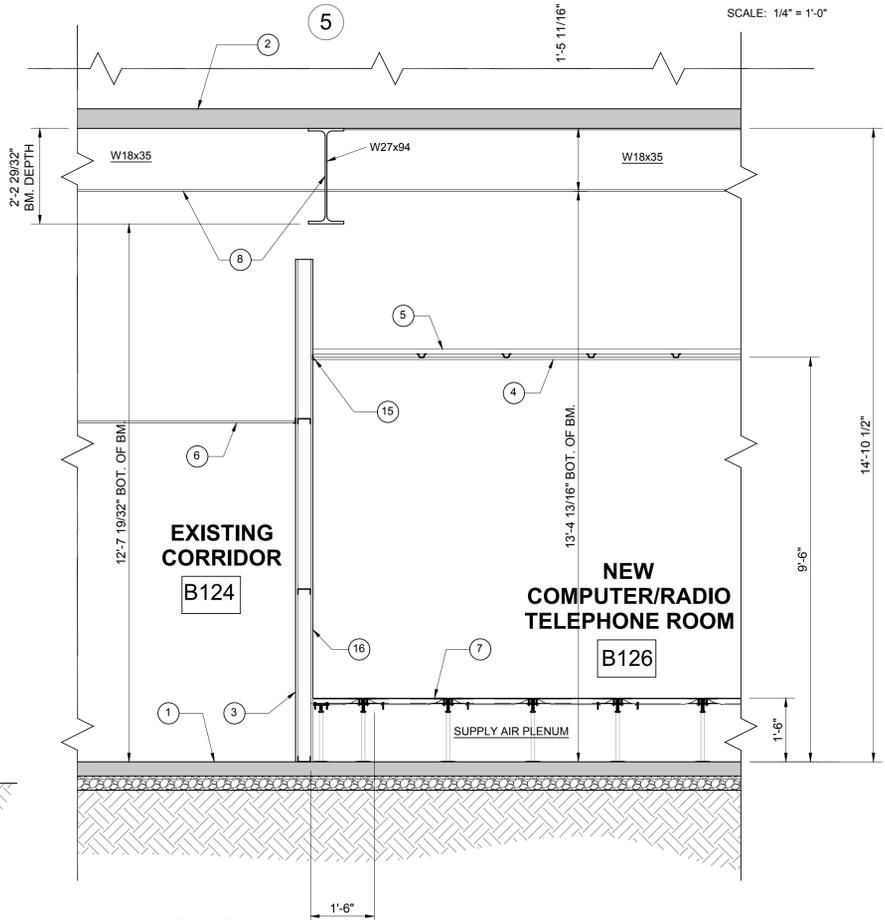
1. EXISTING CONCRETE SLAB.
2. EXISTING 2nd FLOOR FLOOR: 3 1/2" CONCRETE IN 2" METAL DECK.
3. EXISTING 3 1/2" METAL STUD WALL w/ GYPSUM BOARD, BOTH SIDES.
4. NEW 5/8" GYPSUM BOARD CEILING.
5. NEW SUSPENDED CEILING FURRING CHANNELS @ 24" o.c.
6. EXISTING SUSPENDED ACOUSTICAL CEILING.
7. NEW RAISED PANEL FLOOR SYSTEM. NOT USED.
8. NEW 3/4" T&G FIRE RETARDANT PLYWOOD DECK ON METAL FRAMING. NOT USED.
9. NEW 3/4" T&G FIRE RETARDANT PLYWOOD DECK ON METAL FRAMING. NOT USED.
10. NOT USED.
11. NOT USED.
12. NEW SUSPENDED ACOUSTICAL PANEL CEILING.
13. EXISTING STEEL BEAM.
14. EXISTING STEEL ROOF JOIST.
15. EXISTING FOAM ROOF ON RIGID INSULATION ON METAL DECK. NOT USED.
16. NEW SUPPLY PLENUM.
17. EXISTING LIGHT FIXTURE, IN FOREGROUND. NOT USED.
18. NOT USED.
19. NOT USED.
20. NOT USED.
21. APPLY 1/2" MINIMUM CONTINUOUS SILICONE SEALANT, AT PERIMETERS BOTTOM OF WALL AND CEILING-TYPICAL AT NEW COMPUTER/RADIO TELEPHONE ROOM B126.
22. SEAL OFF FLOOR PLENUM w/ 1/2" GYPSUM BOARD AND CONTINUOUS SILICONE SEALANT AT PERIMETER OF GYPSUM BOARD.
23. EXISTING CEILING DIFFUSER. NOT USED.
24. NOT USED.
25. NOT USED.
26. 34" STEEL HANDRAIL EACH SIDE OF STAIR.

KEY NOTES- SECTIONS 2 & 3

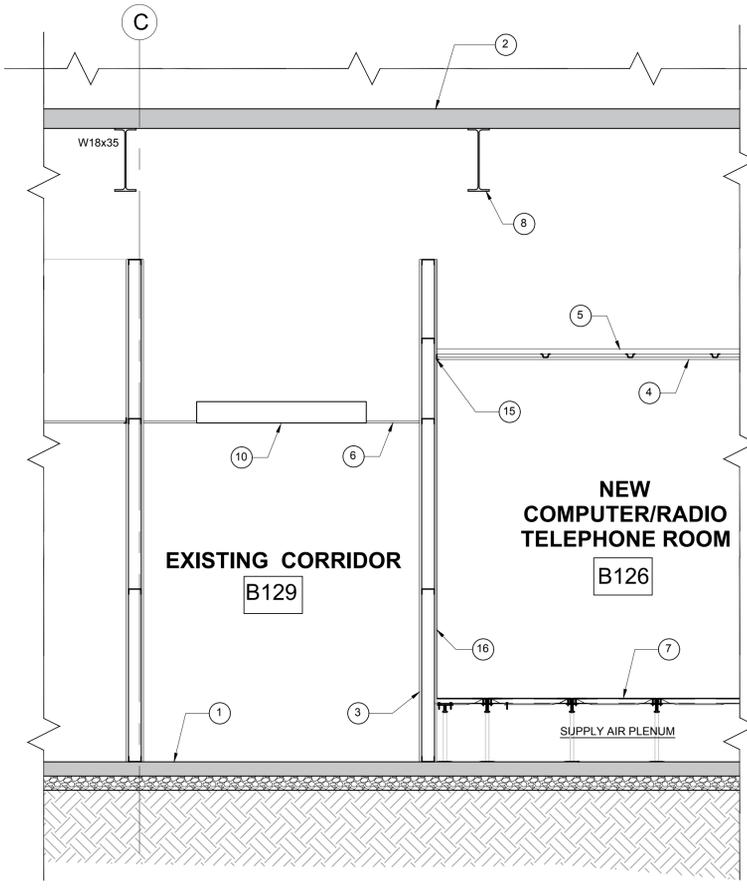
1. EXISTING CONCRETE SLAB.
2. EXISTING 2nd FLOOR FLOOR: 3 1/2" CONCRETE IN 2" METAL DECK.
3. EXISTING 3 1/2" METAL STUD WALL w/ GYPSUM BOARD, BOTH SIDES.
4. NEW 5/8" SUSPENDED GYPSUM BOARD CEILING.
5. NEW SUSPENDED CEILING FURRING CHANNELS @ 24" o.c.
6. EXISTING SUSPENDED ACOUSTICAL CEILING.
7. NEW PERFORATED RAISED FLOOR SYSTEM.
8. EXISTING STEEL BEAM.
9. NEW SUPPLY DUCT.
10. EXISTING LIGHT FIXTURE, IN FOREGROUND. NOT USED.
11. NOT USED.
12. NOT USED.
13. NEW 3 1/2" METAL STUD WALL w/ 1/2" GYPSUM BOARD.
14. NOT USED.
15. APPLY 1/2" MINIMUM CONTINUOUS SILICONE SEALANT, AT PERIMETERS BOTTOM OF WALL AND CEILING-TYPICAL AT NEW COMPUTER/RADIO TELEPHONE ROOM B126. BENEATH TAPE AND TEXTURE.
16. EXISTING GYPSUM BOARD FINISH.



SECTION A-A
SCALE: 1/4" = 1'-0"



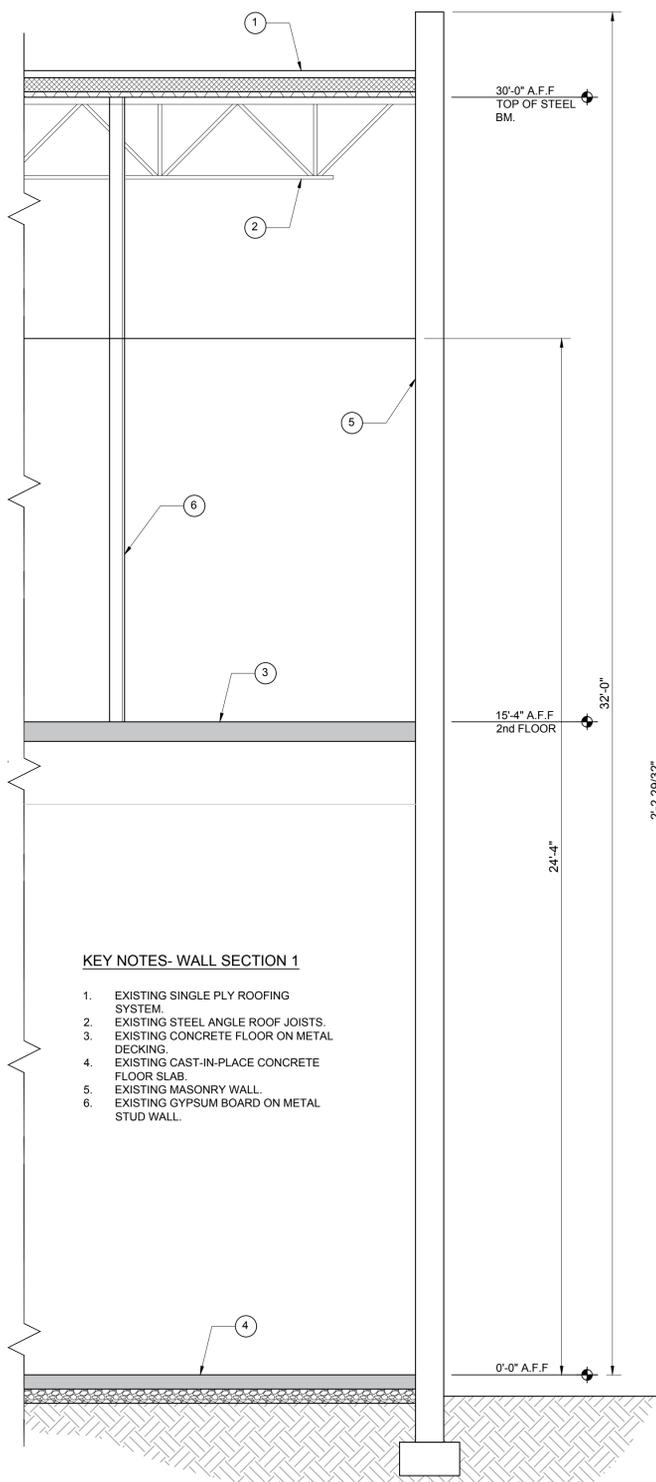
SECTION 2
SCALE: 1/2" = 1'-0"



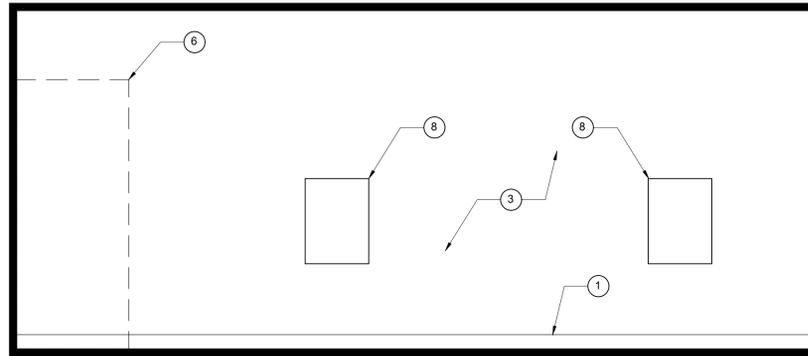
SECTION 3
SCALE: 1/2" = 1'-0"

KEY NOTES- WALL SECTION 1

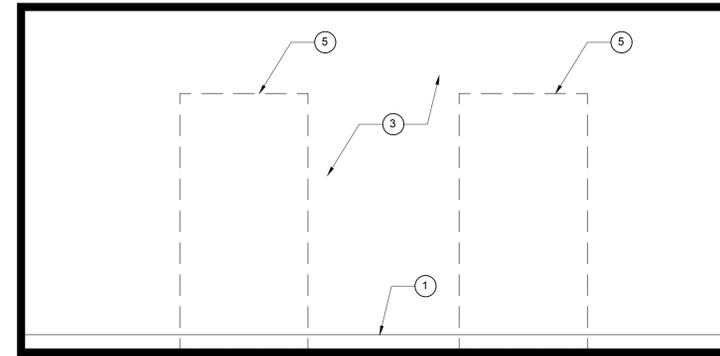
1. EXISTING SINGLE PLY ROOFING SYSTEM.
2. EXISTING STEEL ANGLE ROOF JOISTS.
3. EXISTING CONCRETE FLOOR ON METAL DECKING.
4. EXISTING CAST-IN-PLACE CONCRETE FLOOR SLAB.
5. EXISTING MASONRY WALL.
6. EXISTING GYPSUM BOARD ON METAL STUD WALL.



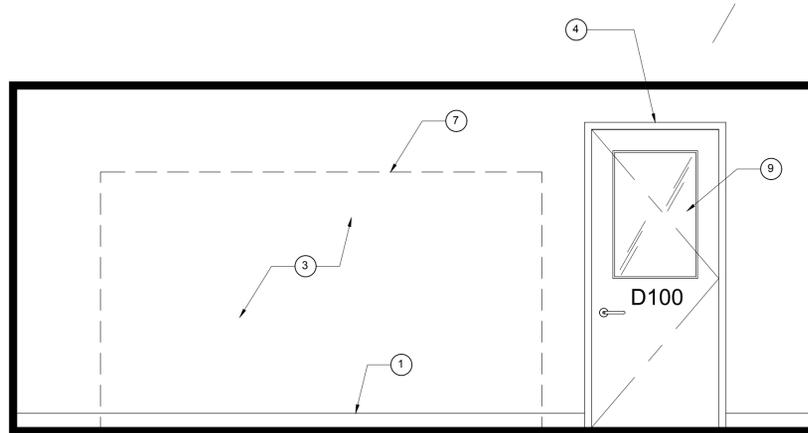
1 TYPICAL WALL SECTION
SCALE: 1/2" = 1'-0"
FOR REFERENCE PURPOSES ONLY



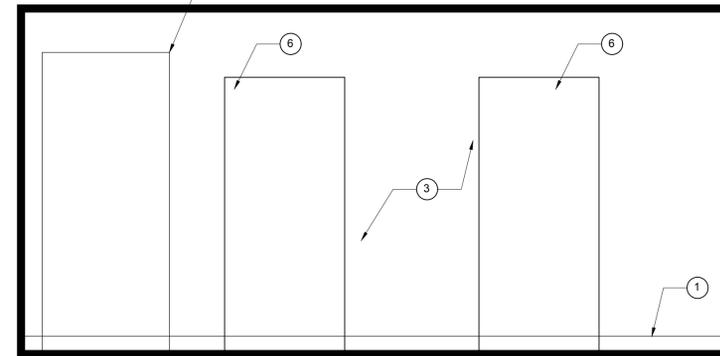
NORTH



EAST



SOUTH



WEST

NEW COMPUTER/RADIO TELEPHONE ROOM ELEVATION

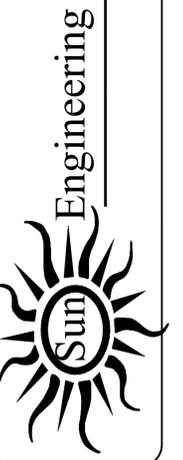
SCALE: 1/2" = 1'-0"

KEY NOTES

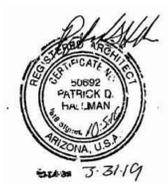
1. NEW 4" HIGH RUBBER BASE.
2. NEW 5/8" GYPSUM BOARD- ALIGN FINISH W/ EXISTING ADJACENT WALL AND.
3. EXISTING HOLLOW METAL DOOR.
4. NEW DOWNFLOW AC UNIT.
5. NEW DATA TRAY RACK.
6. NEW GYPSUM BOARD- FINISH TO MATCH ADJACENT EXISTING WALL.
7. NEW UPS PANEL.
8. TEMPERED 1/8" CLEAR GLAZING.

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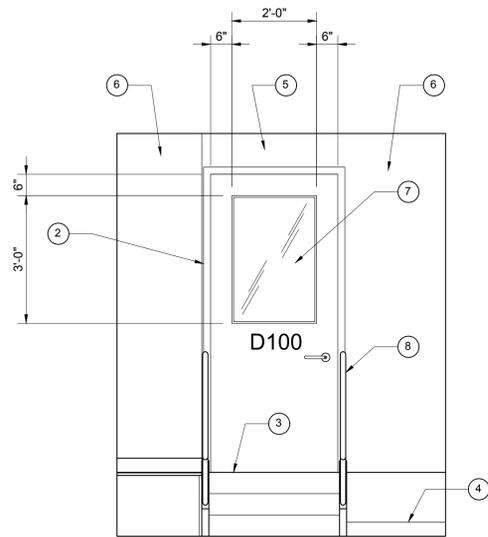
Job No.	FA1030
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Checked By	PDH
Date	7-12-16
File Name	
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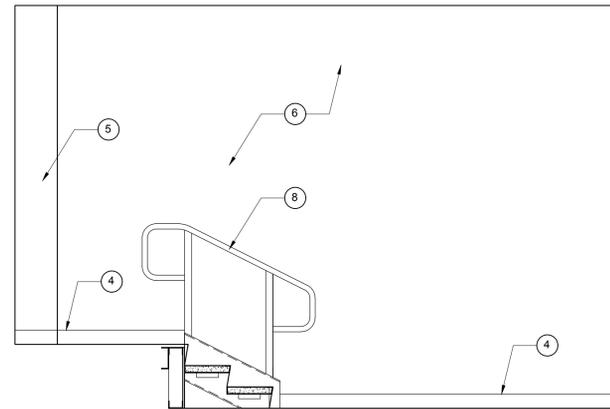
HAVASU CITY POLICE DEPARTMENT IT UPGRADES
2360 MCCOLLOCH N. BLVD N.
LAKE HAVASU CITY ARIZONA 86403

IT ROOM UPGRADES

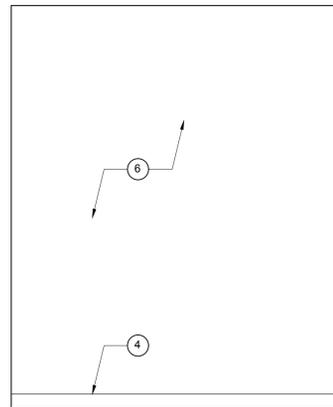
Sheet Number
A5



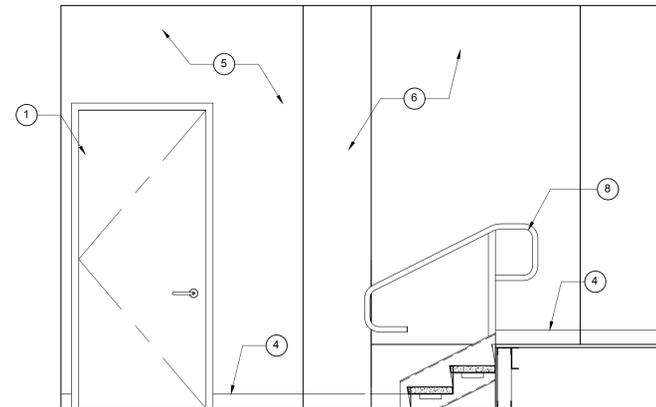
NORTH



EAST



SOUTH



WEST

NEW COMPUTER ENTRANCE ROOM ELEVATION

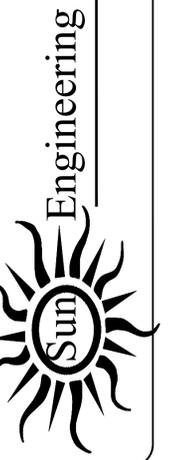
SCALE: 1/2" = 1'-0"

KEY NOTES

1. EXISTING DOOR.
2. NEW HOLLOW METAL DOOR.
3. NEW TOP LANDING
4. NEW 4" HIGH RUBBER BASE.
5. NEW 1/2" GYPSUM BOARD- ALIGN FINISH W/ EXISTING ADJACENT WALL, AND; PATCH TO MATCH ADJACENT WALL.
6. EXISTING GYPSUM BOARD WALL.
7. TEMPERED 3/8" CLEAR GLAZING.
8. 34" HIGH PAINTED 1 1/2" DIA STEEL HANDRAIL.

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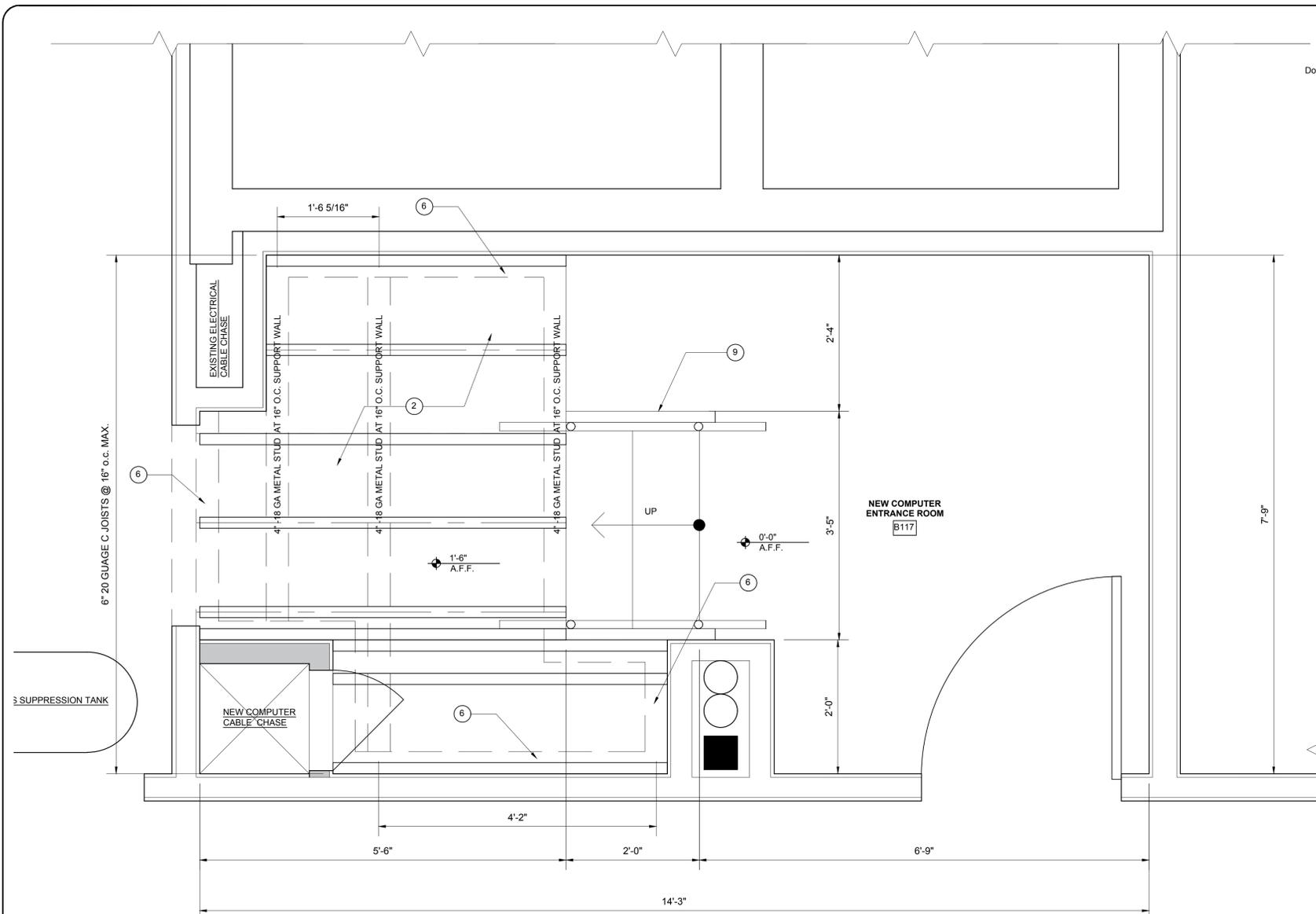
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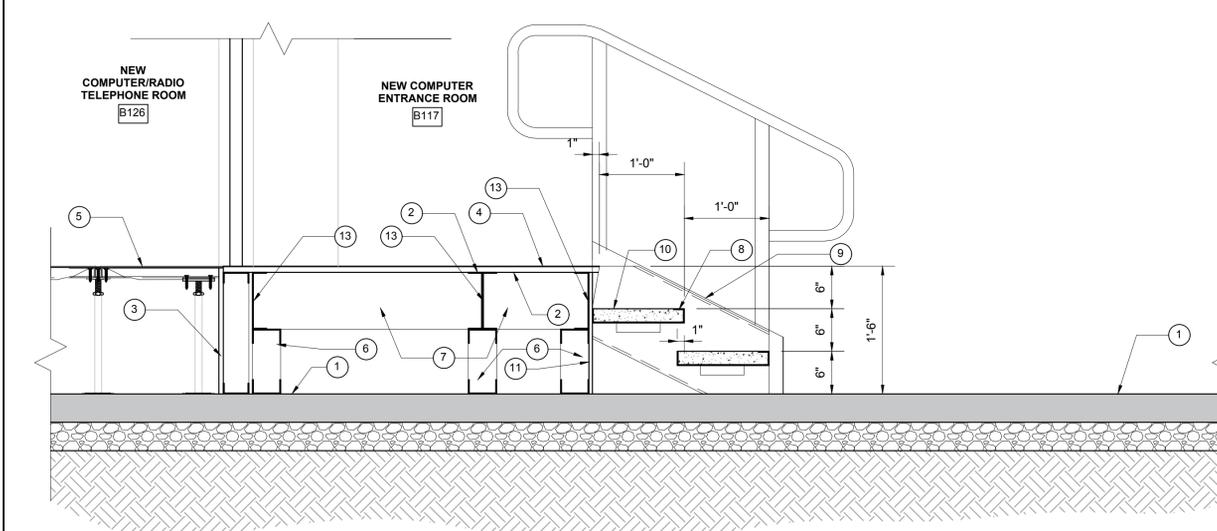
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Sheet Number
A6



PLAN

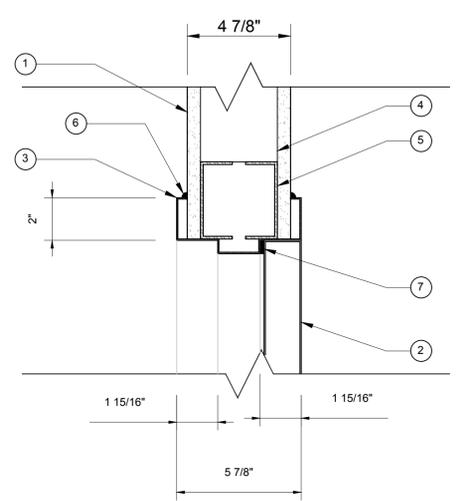


2 STAIR AND LANDING DETAIL
SCALE: 1" = 1'-0"

KEY NOTES- STAIR & LANDING

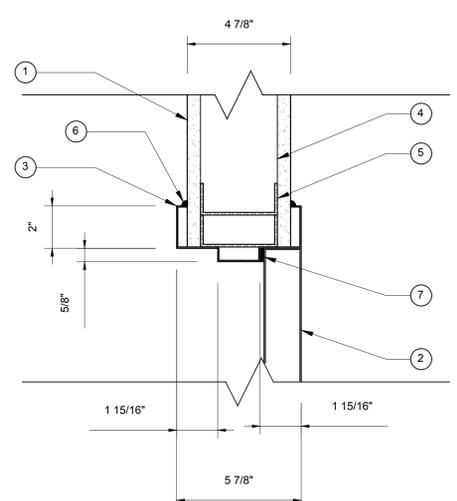
1. EXISTING CONCRETE SLAB.
2. 3/4" CLASS 'A' T&G FIRE RETARDANT PLYWOOD DECK. FASTEN TO JOISTS WITH #10 TEK SCREWS AT 8" O.C.
3. 3/8" 18 GA. METAL STUD CRIPPLE WALL w/ 5/8" GYPSUM BOARD. SEAL PERIMETER INTO UNDER FLOOR PLENUM AREA w/ SILICONE SEALANT AT TOP AND BOTTOM, AND TAPE JOINTS CONTINUOUSLY.
4. VINYL COMPOSITION TILE (VCT) FLOOR FINISH.
5. NEW STEEL PANEL RAISED FLOOR SYSTEM. TATE FLOORING ALLSTEEL 1500 24"x24" PANELS WITH BOLTED STRINGER SUPPORT PEDESTALS.
6. 4" 18 GAUGE STRUCTURAL STUDS @ 16" o.c. MAXIMUM.
7. 8" 20 GA. 800S162-33 METAL STUD JOISTS @ 16" o.c. MAXIMUM.
8. SAFETY NOSE EDGE.
9. STEEL CHANNEL STRINGER.
10. CONCRETE FILLED METAL PAN TREAD.
11. 5/8" GYPSUM BOARD.
12. 8" STUD TRACK. 8001584333
13. 8" 20 GA. RIM JOIST

- Doors: D100A**
- | | | | | |
|---|-------------------------|----------------------------|-----|----|
| 3 | Hinges | FBB191 4 1/2 X 4 1/2 NRP | 630 | ST |
| 1 | Entry Lock | 9K4AB14CS3 | 626 | BE |
| 1 | Door Closer - Cush Stop | QDC119 | 689 | SH |
| 1 | Kick Plate | KO050 10" x 2" LDW B4E CSK | 630 | TR |
| 1 | Gasketing | 107NA Head & Jamb | NA | NA |
| 1 | Door Bottom | 420AA | NA | NA |
| 1 | Threshold | DKBV | NA | NA |
- Manufacturer List**
- | | | |
|-----------|----|-----------------------------|
| Code Name | BE | Best Access Systems |
| Code Name | NA | National Guard |
| Code Name | SH | Stanley Commercial Hardware |
| Code Name | ST | Stanley |
| Code Name | TR | Trimco |
- Finish List**
- | | |
|------|---------------------------|
| Code | Description |
| 28 | Aluminum Anodized (Clear) |
| AL | Aluminum |
| 626 | Satin Chromium Plated |
| 630 | Satin Stainless Steel |
| 689 | Aluminum Painted |



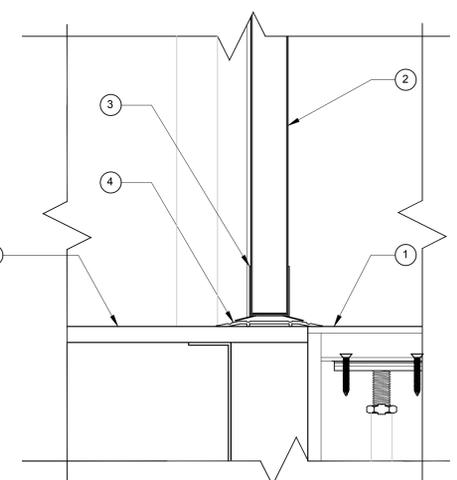
1 HEAD
Scale: 3" = 1'-0"

1. NEW 5/8" GYPSUM BOARD.
2. NEW 1 3/4" HOLLOW METAL DOOR.
3. NEW HOLLOW METAL DOOR FRAME.
4. 3/8" METAL STUD CRIPPLES.
5. 3/8" HEADERS.
6. CONTINUOUS SILICONE SEALANT EACH SIDE.
7. CONTINUOUS GASKET.



2 JAMB
Scale: 3" = 1'-0"

1. NEW 5/8" GYPSUM BOARD.
2. NEW 1 3/4" HOLLOW METAL DOOR.
3. NEW HOLLOW METAL DOOR FRAME.
4. 3/8" METAL STUD WALL.
5. KING & TRIMMER STUD.
6. CONTINUOUS SILICONE SEALANT EACH SIDE.
7. CONTINUOUS GASKET.

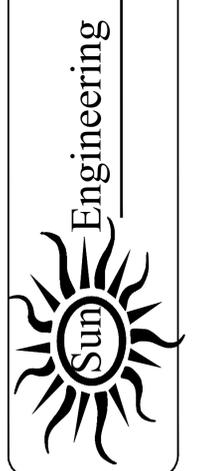


5 THRESHOLD
Scale: 3" = 1'-0"

1. NEW RAISED FLOOR PANEL.
2. NEW 1 3/4" HOLLOW METAL DOOR.
3. NEW DOOR SHOE WITH RUBBER SWEEPS EACH SIDE.
4. NEW THRESHOLD ON FULL BED CAULK.
5. NEW DECK SHEATHING.

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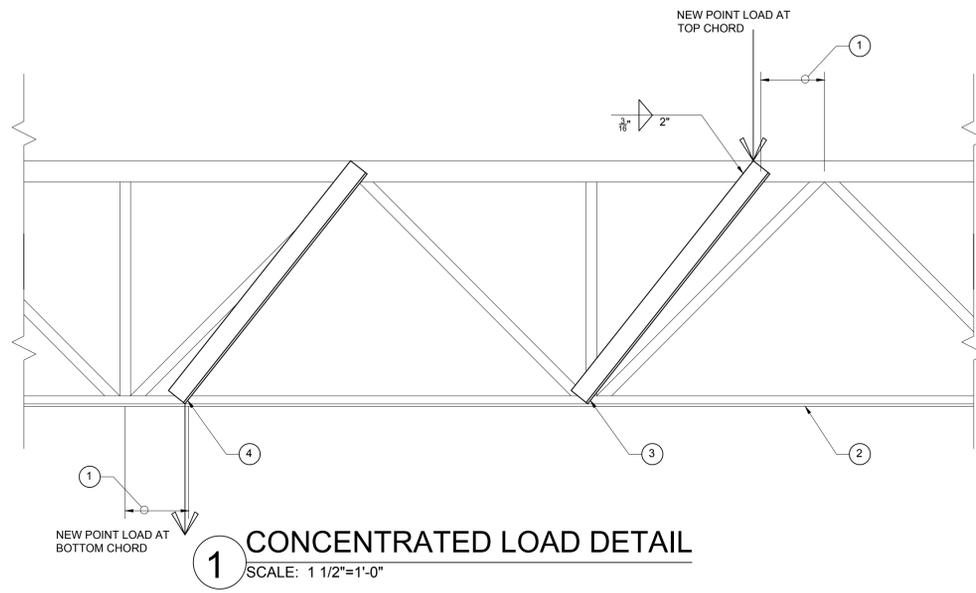
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IT ROOM UPGRADES

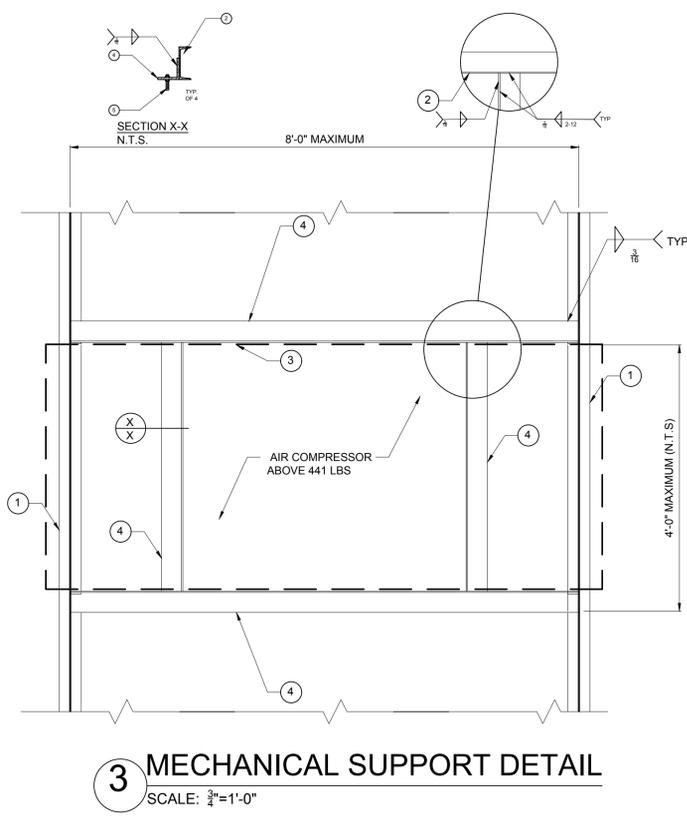
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A7

ALL DIMENSIONS UNLESS OTHERWISE NOTED TO BE IN FEET AND INCHES. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY. THIS DRAWING IS THE PROPERTY OF SUN ENGINEERING. THE USE OF THIS DRAWING IS LIMITED TO THE ORIGINAL SITE IT WAS DESIGNED FOR. ANY CHANGES TO THE ORIGINAL DRAWINGS ARE FORBIDDEN WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. PUBLICATIONS BY ANY METHOD IS NOT PERMITTED WITHOUT THE CONSENT OF SUN ENGINEERING.



1. ADDITIONAL MEMBER REQUIRED WHEN LOAD IS MORE THAN 6" FROM PANEL POINT.
2. EXISTING STEEL JOIST.
3. STEEL ANGLE 2" x 2" x 1/8" EACH SIDE FROM TOP CHORD TO NEAREST BOTTOM CHORD PANEL POINT.
4. STEEL ANGLE 2" x 2" x 1/8" EACH SIDE FROM BOTTOM CHORD PANEL POINT.
5. TYPICAL, EACH ANGLE, EACH END.

AS REQUIRED FOR TRUSSES SUPPORTING AIR HANDLER AT ROOF



1. STEEL JOIST.
2. 3/4" STEEL EDGE PLATE AROUND OPENING, TYPICAL.
3. C8 x 11.5 STEEL BEAM (UNI-STRUT SUPPORT).
4. STEEL ANGLE 4" x 4" x 0.4".
5. TREADED ROD 1/2" Ø w/ DOUBLE NUTS. (MINIMUM 4 RODS)



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IT ROOM UPGRADES

Sheet Number
A8

ABBREVIATIONS	
A	AMPERES
ACC	ABOVE ACCESSIBLE CEILING
AC	ALTERNATING CURRENT
ACCU	AIR COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
ADA	AMERICANS WITH DISABILITIES ACT.
AF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AC	AVAILABLE INTERRUPTING CAPACITY
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE.
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
AV	AUDIO VISUAL
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BKR	BREAKER
C	CONDUIT
CCTV	CLOSED CIRCUIT TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CSB	CENTRAL SWITCH BANK
DD	DUPLEX CONDUITANCE OUTLET
DPST	DOUBLE POLE SINGLE THROW
E/R	EXHAUST/RETURN FAN
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ELEC	ELECTRICAL
EM	EMERGENCY LIGHT
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
ES	ENERGY SAVING
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EK	EXISTING
F	FUSED
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FCU	FAN COIL UNIT
FFB	FROM FLOOR BELOW
FFH	FAN FORCED HEATER
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GF	GROUND FAULT PROTECTION
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HDA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HPU	HEAT PUMP UNIT
HVAC	HEAT VENTILATING AIR CONDITIONING
HZ	HERTZ
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
INC	INCANDESCENT
JBOX	JUNCTION BOX
K	KEYED
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KW	KILOWATT HOUR
LC	LIGHTING CONTACTOR
LTS	LIGHTING
LTS	LIGHTS
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MH	METAL HALIDE
MH-P	MANHOLE - POWER
MH-S	MANHOLE - SIGNAL
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MVA	MEGAVOLT AMPS
MTG	MOUNTING
MC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSN.
NIC	NOT IN CONTRACT
NM	NONMETALLIC
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OPA	OWNER FURNISHED, OWNER INSTALLED
PA	PUBLIC ADDRESS
PB	PULL BOX
PC	PHOTOCELL
PNL	PANEL
PP	POWER POLE
PRV	POWER ROOF VENTILATOR
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWR	POWER
QTY	QUANTITY
RCP	REFLECTED CEILING PLAN
REC	RECEPTACLE
RETR	REFRIGERATOR
REQD	REQUIRED
RF	RETURN FAN
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RP	RECIRCULATING PUMP
SOH	SCHEDULE
SES	SERVICE ENTRANCE SWITCHBOARD
SF	SUPPLY FAN
SJ	SOUND JUNCTION BOX
SN	SOLID NEUTRAL
SP	SUMP PUMP
SPST	SINGLE POLE SINGLE THROW
TC	TEMPERATURE CONTROL PANEL
TEL	TELEPHONE
TEMP	TEMPORARY
TF	TO FLOOR ABOVE
TP	TAMPER PROOF
TIB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UC	UNDERCOUNTER
UF	UNDERGROUND FEEDER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS, VOLTAGE
VP	VOLTS AMPERES
VFD	VARIABLE FREQUENCY DRIVE
VF	VERIFY IN FIELD
VL	VERIFY LOCATION
W	WATTS
WH	WATER HEATER
WHP	WEATHERPROOF
XFMR	TRANSFORMER

REFERENCE	
①	KEYED NOTE REFERENCE
①	CIRCUITING REFERENCE
①	KITCHEN EQUIPMENT
△	REVISION NOTE TAG
25	ENGINEERING CALCULATION REFERENCE NODE.
XXX 01	EQUIPMENT TAG
+48"	DENOTES MOUNTING HEIGHT ABOVE FINISHED FLOOR.

GENERAL DRAWING SYMBOLS	
A	SECTION LETTER OR DETAIL NUMBER
E4	DRAWING NUMBER WHERE DETAILED
B	SECTION NUMBER OR DETAIL LETTER
E3/E4	DRAWING NUMBER WHERE DETAILED
	DRAWING NUMBER WHERE TAKEN

DEMOLITION	
⊘	DASHED SYMBOL INDICATES EXISTING FIXTURE, OUTLET, DEVICE OR EQUIPMENT TO BE REMOVED.
⊘	SOLID SYMBOL WITH "EX" INDICATES EXISTING FIXTURE, OUTLET, DEVICE OR EQUIPMENT TO REMAIN.
EX	EXISTING CONDUIT TO BE REUSED.
R	EXISTING CONDUIT TO BE REMOVED IF IN AN ACCESSIBLE AREA OR TO BE CAPPED AND ABANDONED IF IN AN INACCESSIBLE AREA.

POWER DEVICES	
⊘	SINGLE RECEPTACLE, MOUNTED AT +18" PANEL AND CIRCUIT NO. AS SHOWN
⊘	WALL MOUNTED, 125 VOLT, 15 AMP DUPLEX RECEPTACLE MOUNT AT +18" A.F.F., UNLESS NOTED OTHERWISE
⊘	DOUBLE DUPLEX RECEPTACLE, MOUNTED AT +18"
⊘	GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE.
⊘	ISOLATED GROUND, DUPLEX RECEPTACLE.
⊘	WEATHERPROOF DUPLEX RECEPTACLE
⊘	SPLIT WIRED RECEPTACLE.
⊘	SPECIAL PURPOSE RECEPTACLE.
⊘	SURFACE MOUNTED RECEPTACLE.
⊘	FLOOR MOUNTED RECEPTACLE.
⊘	FULLY IN-FLOOR RECEPTACLES FOR POWER AND DATA () INDICATES NUMBER OF CABLES AND OUTLETS.
⊘	FULLY IN-FLOOR RECEPTACLES FOR POWER AND DATA () INDICATES NUMBER OF CABLES AND OUTLETS.
⊘	CODE SIZE JUNCTION BOX.
⊘	WALL MOUNTED CODE SIZE J-BOX
⊘	CODE SIZE PULLBOX.
⊘	ENCLOSED CIRCUIT BREAKER.
⊘	NON-FUSED DISCONNECT SWITCH.
⊘	FUSED DISCONNECT SWITCH.
⊘	MOTOR STARTER.
⊘	COMBINATION DISCONNECT SWITCH AND MOTOR STARTER.
⊘	MOTOR CONNECTION. LETTER "X" DENOTES HORSEPOWER.
S ₁	TOGGLE SWITCH, SMALL CASE LETTER DENOTES SWITCHING CONTROL. MOUNTED AT + 42" U.O.N.
S ₂	DOUBLE POLE TOGGLE SWITCH.
S ₃	THREE-WAY TOGGLE SWITCH.
S ₄	FOUR-WAY TOGGLE SWITCH.
S _p	TOGGLE SWITCH WITH INTEGRAL PILOT LIGHT.
S _m	MOMENTARY CONTACT SWITCH.
S _k	KEY OPERATED SWITCH.
S _u	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD PROTECTION.
S _w	WEATHERPROOF TOGGLE SWITCH.
S _o	DIMMER SWITCH. NUMBER "600" DENOTES WATTAGE.
⊘	THERMOSTAT.
⊘	LIGHTNING PROTECTION AIR TERMINAL.
⊘	GROUND BAR.
⊘	BACKBOARD.
⊘	PANELBOARD, SURFACE MOUNT, REFER TO PANEL SCHEDULE (EXISTING)
⊘	FLUSH MOUNT PANELBOARD. (EXISTING)
⊘	TRANSFORMER (XFMR)

TELEPHONE/DATA	
⊘	WALL MOUNTED TELEPHONE OUTLET JACK, MOUNT @ 18" A.F.F. U.N.O. PROVIDE SINGLE GANG 4" SQUARE BOX WITH QUAD MUD RING AND PLASTIC BUSHING. RUN 3/4" CONDUIT STUB TO ACCESSIBLE CEILING SPACE. () INDICATES NUMBER OF CABLES AND OUTLETS.
⊘	WALL MOUNTED TELEPHONE, MOUNTED AT +48" U.O.N.
⊘	FULLY-IN-FLOOR SINGLE TELEPHONE OUTLET. () INDICATES NUMBER OF CABLES AND OUTLETS.
⊘	WALL MOUNTED DATA OUTLET JACK, MOUNT @ 18" A.F.F. U.N.O. PROVIDE SINGLE GANG 4" SQUARE BOX WITH QUAD MUD RING AND PLASTIC BUSHING. RUN 3/4" CONDUIT STUB TO ACCESSIBLE CEILING SPACE. DO NOT COMBINE WITH TELEPHONE OUTLET. () INDICATES NUMBER OF CABLES AND OUTLETS.
⊘	FULLY-IN-FLOOR SINGLE DATA OUTLET. () INDICATES NUMBER OF CABLES AND OUTLETS.
⊘	WALL MOUNTED DATA/TELEPHONE OUTLET JACK, MOUNT @ 18" A.F.F. U.N.O. PROVIDE SINGLE GANG 4" SQUARE BOX WITH PLASTER RING, BOTH DATA AND PHONE CABLE PULLED TO SAME BOX. RUN 3/4" CONDUIT STUB TO ACCESSIBLE CEILING SPACE. () INDICATES NUMBER OF CABLES AND OUTLETS.
⊘	FULLY-IN-FLOOR DUPLEX TELEPHONE/DATA OUTLET. () INDICATES NUMBER OF CABLES AND OUTLETS.
⊘	TELEPHONE TERMINAL BOARD (TTB) FIREPROOF (PAINTED 3/4" P.W.)

LIGHTING	
⊘	EXIT LIGHT - WALL MOUNT, ARROWS SHOW DIRECTION, FILL DENOTES FACE.
⊘	CEILING MOUNT
⊘	EMERGENCY BATTERY PACK LIGHT FIXTURE
⊘	INCANDESCENT OR FLUORESCENT RECESSED CAN TYPE LIGHT FIXTURE
⊘	INCANDESCENT OR FLUORESCENT STEP LIGHT FIXTURE
⊘	INCANDESCENT OR FLUORESCENT CEILING MOUNT LIGHT FIXTURE
⊘	INCANDESCENT OR FLUORESCENT WALL MOUNT LIGHT FIXTURE
⊘	HIGH BAY/LOW BAY INCANDESCENT
⊘	TRACK LIGHTING - LENGTH AS NOTED
⊘	2X4 FLUORESCENT LIGHT FIXTURE, F DENOTES TYPE, a/b DENOTES SWITCHING
⊘	EM - EMERGENCY 2X4 FLUORESCENT LIGHT FIXTURE, F DENOTES TYPE. PROVIDE BOBINE B-50R BATTERY PACK OR APPROVED EQUAL.
⊘	2X2 FLUORESCENT LIGHT FIXTURE, F DENOTES TYPE, a/b DENOTES SWITCHING
⊘	EM - EMERGENCY 2X2 FLUORESCENT LIGHT FIXTURE, F DENOTES TYPE. PROVIDE BOBINE B-50R BATTERY PACK OR APPROVED EQUAL.
⊘	SURFACE MOUNT 4' LONG FLUORESCENT FIXTURE, F DENOTES TYPE, a/b DENOTES SWITCHING.
⊘	EM DENOTES BOBINE B-50R BATTERY PACK OR APPROVED EQUAL.
⊘	PENDANT MOUNT 4' LONG FLUORESCENT LIGHT FIXTURE, F DENOTES TYPE, a/b DENOTES SWITCHING.
⊘	EM DENOTES BOBINE B-50R BATTERY PACK OR APPROVED EQUAL.
⊘	1X4 FLUORESCENT STRIP LIGHT FIXTURE, F DENOTES TYPE, a/b DENOTES SWITCHING.
⊘	EM DENOTES BOBINE B-50R BATTERY PACK OR APPROVED EQUAL.
⊘	SURFACE MOUNT 8' LONG FLUORESCENT FIXTURE, F DENOTES TYPE, a/b DENOTES SWITCHING.
⊘	EM DENOTES BOBINE B-50R BATTERY PACK OR APPROVED EQUAL.
⊘	PENDANT MOUNT 8' LONG FLUORESCENT LIGHT FIXTURE, F DENOTES TYPE, a/b DENOTES SWITCHING.
⊘	EM DENOTES BOBINE B-50R BATTERY PACK OR APPROVED EQUAL.
⊘	1X8 FLUORESCENT STRIP LIGHT FIXTURE, F DENOTES TYPE, a/b DENOTES SWITCHING.
⊘	EM DENOTES BOBINE B-50R BATTERY PACK OR APPROVED EQUAL.
⊘	SURFACE MOUNTED UNDERCOUNTER LIGHT FIXTURE, F DENOTES TYPE
⊘	HID SITE LIGHT FIXTURES, K DENOTES TYPE
⊘	INCANDESCENT OR FLUORESCENT BOLLARD TYPE LIGHT FIXTURE
S	SINGLE POLE SWITCH - 120/277 VOLT, 20 AMP RATED MOUNT +42" A.F.F. TO BOTTOM OF BOX, UNLESS NOTED OTHERWISE.
S ₃	THREE-WAY SWITCH.
S _T	SWITCH WITH DIGITAL TIMER. WATT STOPPER TS-100 OR APPROVED EQUAL.
S _o	DIMMER SWITCH
⊘	PHOTO CELL
⊘	CEILING FAN

SPECIAL SYSTEMS	
⊘	SPEAKER, CEILING MOUNTED.
⊘	SPEAKER, WALL MOUNTED AT +84" U.O.N.
⊘	MICROPHONE.
⊘	CARD READER.
⊘	DOOR CONTACT. PROVIDE 3/4"C. STUB FROM DOOR HEADER TO ACCESSIBLE CEILING. COORDINATE LOCATIONS WITH DOOR MFG. PRIOR TO ROUGH-IN.
⊘	DATA GATHERING PANEL.
⊘	CAMERA
⊘	T.V. BACKBOX/OUTLET. PROVIDE 3/4" C. TO ABOVE ACCESSIBLE CEILING. +84"U.O.N. VERIFY LOCATION W/ OWNER PRIOR TO ROUGH-IN.
⊘	BELL
⊘	INTERCOM
⊘	CEILING MOUNTED MOTION DETECTOR. PROVIDE BACK BOX, MUD RING, PLASTIC BUSHING AND 3/4"C. TO ACCESSIBLE CEILING SPACE
⊘	(ARROWS INDICATE DETECTION ZONES)
⊘	PUSHBUTTON CONTROL.
⊘	CLOCK OUTLET
⊘	TIMECLOCK

ELECTRICAL SYMBOL LEGEND	
CONDUIT & CONDUCTORS	
⊘	HOMERUN TO INDICATED PANELBOARD "A". HASH MARKS INDICATE NUMBER OF #12 WIRES. ANY CIRCUIT WITHOUT HASH MARKS INDICATES TWO-WIRE CIRCUIT. NUMBERS "1,3" INDICATE BRANCH CIRCUIT NUMBERS. ALL RUNS TO INCLUDE GROUND WIRE.
⊘	CONDUIT ROUTED CONCEALED.
⊘	CONDUIT ROUTED EXPOSED.
⊘	CONDUIT ROUTED UNDERGROUND.
⊘	FLEXIBLE CONDUIT.
⊘	CONDUIT TURNED DOWN.
⊘	CONDUIT TURNED UP.
⊘	CONDUIT CAPPED.
B	BUSSEWAY
G	GROUNDING CONDUCTOR.
T	CABLE TRAY
T	TELEPHONE CONDUIT.
D	DATA CONDUIT.
FA	FIRE ALARM CONDUIT
OH	OVERHEAD ELECTRICAL.
EQUIPMENT	
⊘	SWITCHBOARD.
⊘	MOTOR CONTROL CENTER
MH	MANHOLE.
MH	HANDHOLE.
G	GENERATOR.
VFD	VARIABLE FREQUENCY DRIVE
UPS	UNINTERRUPTIBLE POWER SUPPLY
HOSPITAL	
C	CODE BLUE STATION.
NG	NURSE CALL STATION.
S	STAFF EMERGENCY STATION.
△	DOME LIGHT.
MNC	MASTER NURSE CALL STATION.
H	NURSE CALL BED/PILLOW STATION.
H	NURSE CALL STATION WITH PATIENT PULLCORD.
MGAP	MEDICAL GAS ALARM PANEL.
CB	CRITICAL BRANCH CONDUIT.
LB	LIFE SAFETY BRANCH CONDUIT.
EB	EQUIPMENT BRANCH CONDUIT.
NP	NORMAL POWER BRANCH CONDUIT.

FIRE ALARM	
FACP	FIRE ALARM CONTROL PANEL.
FAAP	FIRE ALARM ANNUNCIATOR PANEL
F	FIRE ALARM PULL STATION. MOUNT +48" A.F.F.
⊘	AUDIO/VISUAL SIGNAL. MOUNT +80"-96" A.F.F. COMPLY WITH LOCATION REQUIREMENTS OF NFPA 72 6-4.4 AND TABLE 6-4.4.1.(c)
⊘	VISUAL FIRE ALARM SIGNAL. MOUNT +80" A.F.F. COMPLY WITH LOCATION REQUIREMENTS OF NFPA 72 6-4.4 AND TABLE 6-4.4.1.(c)
B	BELL
DH	DOOR HOLDER.
SD	SMOKE DAMPER CONNECTION. PROVIDE 120V POWER AND TIE INTO FIRE ALARM SYSTEM. DEVICE PROVIDED BY MECHANICAL.
⊘	DUCT SMOKE DETECTOR PROVIDED BY MECHANICAL. PROVIDE 120V POWER AND ASSOCIATED CONDUIT. SEE MECHANICAL PLANS FOR EXACT LOCATIONS. REFER TO SPECIFICATIONS FOR SERVICE, MANUFACTURER, AND MODEL.
⊘	PHOTOELECTRIC SMOKE DETECTOR.
⊘	IONIZATION SMOKE DETECTOR.
⊘	THERMAL HEAT DETECTOR.
⊘	DUCT MOUNTED SMOKE DETECTOR.
⊘	UNDER FLOOR SMOKE DETECTOR
PS	PRESSURE SWITCH.
TS	TAMPER SWITCH PROVIDED BY MECHANICAL. PROVIDE 120V POWER AND ASSOC. CONDUIT. SEE MECHANICAL PLANS FOR EXACT LOCATIONS.
FS	FLOW SWITCH PROVIDED BY MECHANICAL. PROVIDE 120V POWER AND ASSOC. CONDUIT. SEE MECHANICAL PLANS FOR EXACT LOCATIONS.
FP	FIREMAN'S TELEPHONE OUTLET.
PIV	POST INDICATOR VALVE.
EO	END OF LINE DEVICE.
⊘	REMOTE ALARM INDICATING LIGHT.
K	WALL MOUNT KEYPAD, MOUNT AT +50" A.F.F. PROVIDE BACK BOX, MUD RING, PLASTIC BUSHING AND 3/4"C. TO ACCESSIBLE CEILING SPACE

DISTRIBUTION	
⊘	MANUAL DISCONNECT SWITCH. AMP RATING, NO. OF POLES
⊘	FUSED DISCONNECT SWITCH. FUSE AND SWITCH RATINGS AS INDICATED
⊘	MOLDED CASE CIRCUIT BREAKER. THERMAL MAGNETIC TYPE. FRAME SIZE & TRIP RATING AS INDICATED.
⊘	TRANSFER SWITCH, MANUAL OR AUTO, AS SPECIFIED. RATING AS INDICATED.
⊘	FUSE, RATING AS INDICATED
K	KEY INTERLOCK
⊘	GROUND SYMBOL
⊘	FUSE SYMBOL
⊘	LIGHTNING ARRESTOR
⊘	SURGE ARRESTOR.
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR.
12470	POWER OR DIST. TRANSFORMER - SIZE VOLTS, IMPEDANCES, PRIMARY & SECONDARY CONNECTIONS & GROUNDING AS INDICATED ON DRAWING.
480	
K13	SHIELDED TRANSFORMER. "K13" DENOTES K-RATING
△	DELTA CONNECTED
Y	WYE CONNECTED
⊘	CURRENT TRANSFORMER, RATIO & NUMBER OF CT'S AS INDICATED
⊘	POTENTIAL TRANSFORMER, RATIO & NUMBER OF PT'S AS INDICATED
⊘	THERMAL OVERLOAD
⊘	INDUCTION MOTOR - H.P. AS INDICATED
V	LETTER IN SYMBOL INDICATES: V = VOLTMETER A = AMPMETER IT = WATT TRANSDUCER PF = POWER FACTOR R = RECORDER W = WATTMETER IT = CURRENT TRANSDUCER
AS	AMMETER SWITCH
VS	VOLTMETER SWITCH
⊘	PILOT LIGHT OR INDICATING LIGHT R - INDICATES RED Y - INDICATES YELLOW G - INDICATES GREEN B - INDICATES BLUE A - INDICATES AMBER W - INDICATES WHITE
⊘	NORMALLY OPEN PUSHBUTTON
⊘	NORMALLY CLOSED PUSHBUTTON
⊘	RELAY, CONTROL, "CR1" IS NUMBER OF RELAY
⊘	RELAY, TIME DELAY, "DT1" IS NUMBER OF TIMER
⊘	MASTER RELAY
⊘	COIL, CONTACTOR
⊘	TRANSFORMER, SIZE AND VOLTAGES AS INDICATED (FOR WIRING DIAGRAMS)

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Sun Engineering

Job No. 12006
 Drawn By PDH
 Checked By PDH
 Date 7-2-12
 File Name
 Revised xxx

NE "T" ROOM LAYOUT
 POLICE HEADQUARTERS
 LAKE HAVASU CITY, ARIZONA
 "I" CALL CENTER PROJECT

Sheet Number
 E1



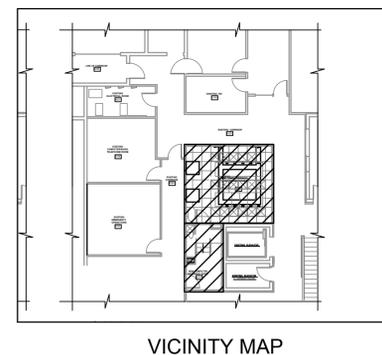
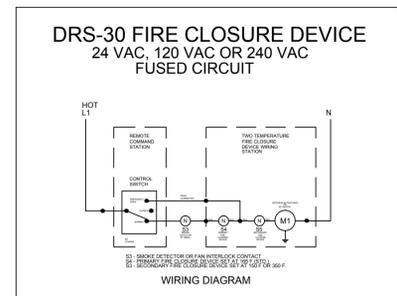
NEW "IT" ROOM LIGHTING PLAN

GENERAL NOTES:

- A. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH LATEST ADOPTED EDITION OF THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL CODES, ORDINANCES AND MAG AMENDMENTS.
- B. ALL DEMOLITION WORK TO ALSO CONFORM TO THE LATEST EDITION OF THE NFPA 70E STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- C. ALL DEMO'D EQUIPMENT BELONGS TO THE CITY OF LAKE HAVASU. ELECTRICAL EQUIPMENT TO BE RELOCATED AND REUSED. RELOCATION PER LAKE HAVASU CITY PROJECT MANAGER.
- D. ALL CONDUCTORS TO BE COPPER, MINIMUM SIZE #14 AWG. UNLESS OTHERWISE NOTED. INSULATION SHALL BE TYPE 90 DEGREES, XHHW-2 OR THHN/THWN.
- E. CONTRACTOR TO SUPPLY ALL NECESSARY EQUIPMENT TO COMPLETE PROJECT.

KEY NOTES

- ① INSTALL NEW SURFACE MOUNTED LIGHT FIXTURES. REPLACE EXISTING LIGHT SWITCH WITH NEW MOTION SENSOR SWITCH TYPE WATT STOPPER, PW-100, DUAL TECHNOLOGY OR EQUAL.
- ② RE-USE EXISTING LIGHTING CIRCUIT IN ROOM B126 & B117.



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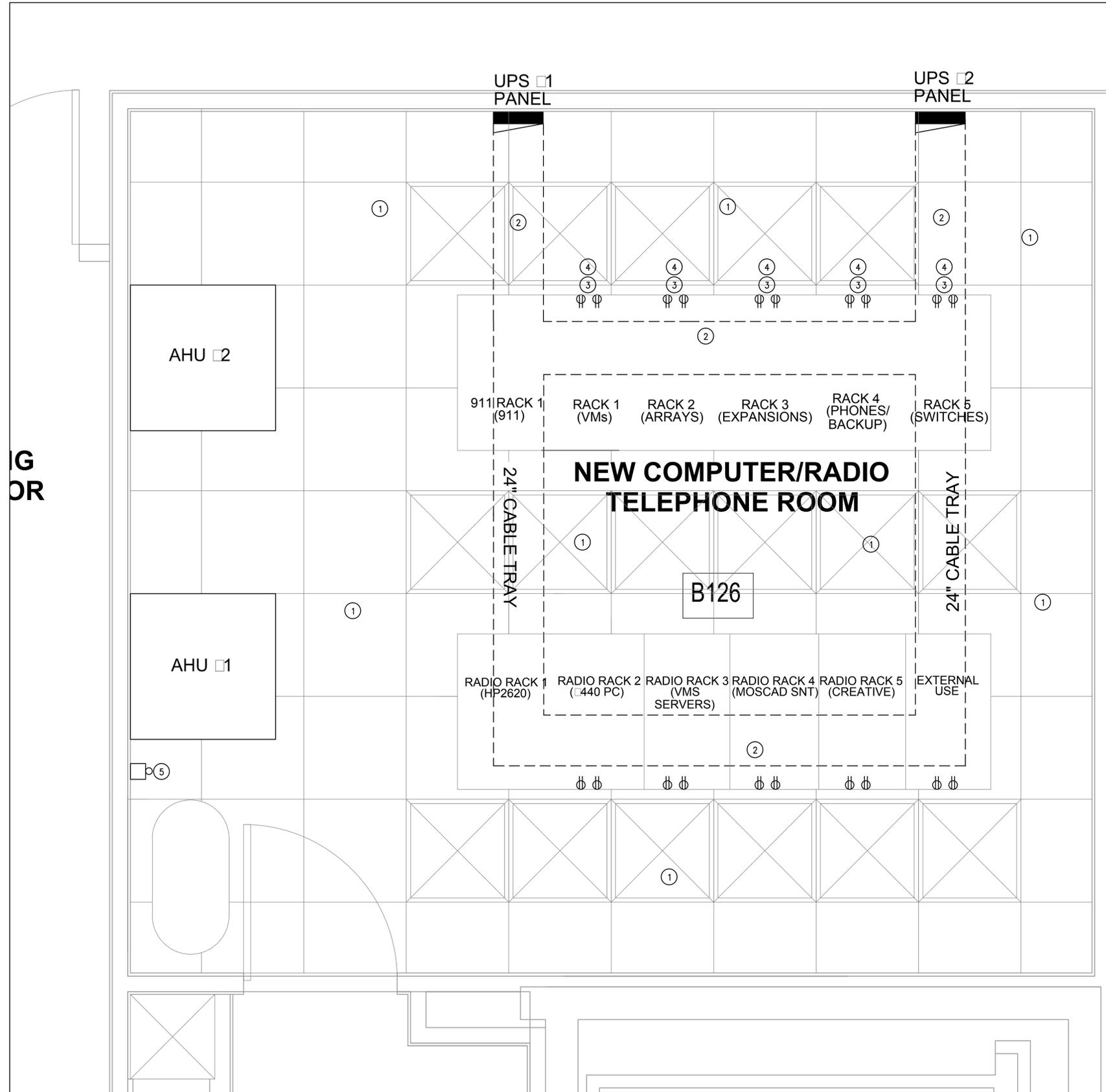


Job No.	16014
Drawn By	KP
Checked By	TM
Date	8/1/2016
File Name	
Revised	xxx

NE "IT" ROOM LAYOUT
POLICE HEADQUARTERS
LAKE HAVASU CITY, ARIZONA

1 CALL CENTER PROJECT

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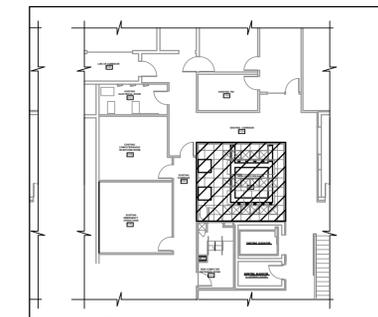


GENERAL NOTES:

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- E. CONTRACTOR TO SUPPLY ALL NECESSARY EQUIPMENT TO COMPLETE PROJECT.

KEY NOTES

- ① NEW "IT" ROOM, REMOVE EXISTING LAY-IN CEILING. REMOVE EXISTING FIXTURE HANGARS, LIGHT FIXTURES, CONDUIT AND WIRE. SAVE THE EXISTING FIXTURES FOR REUSE BY LAKE HAVASU CITY. DO NOT DAMAGE EXISTING WALLS AS THEY WILL BE REUSED. LEAVE CIRCUIT TO LIGHTS AND WALL SWITCH FOR FUTURE USE.
- ② INSTALL NEW CABLE TRAY AS SHOWN ON DRAWING. MOUNT CABLE TRAY 2" AFF.
- ③ RECEPTACLE WIRING TO BE TYPE "SJOOW" CORD WITH 4 #10 AWG, OR APPROVED EQUAL. MATCH 30 AMP RECEPTACLE WITH RACK POWER PLUG.
- ④ RACK POWER CIRCUITING
 - RACK #1 UPS #1 CKTS 1,3
UPS #2 CKTS 1,3
 - RACK #2 UPS #1 CKTS 2,4
UPS #2 CKTS 2,4
 - RACK #3 UPS #1 CKTS 5,7,9,11
UPS #2 CKTS 5,7,9,11
 - RACK #4 UPS #1 CKTS 6,8,10,12,14,16
UPS #2 CKTS 6,8,10,12,14,16
 - RACK #5 UPS #1 CKTS 13,15
UPS #2 CKTS 13,15
- ⑤ EMERGENCY POWER SHUTOFF (EPO) PUSH BUTTON TO BE EATON CAT. # 1020T3519 OR EQUAL. LABEL "EPO - OFF".



VICINITY MAP

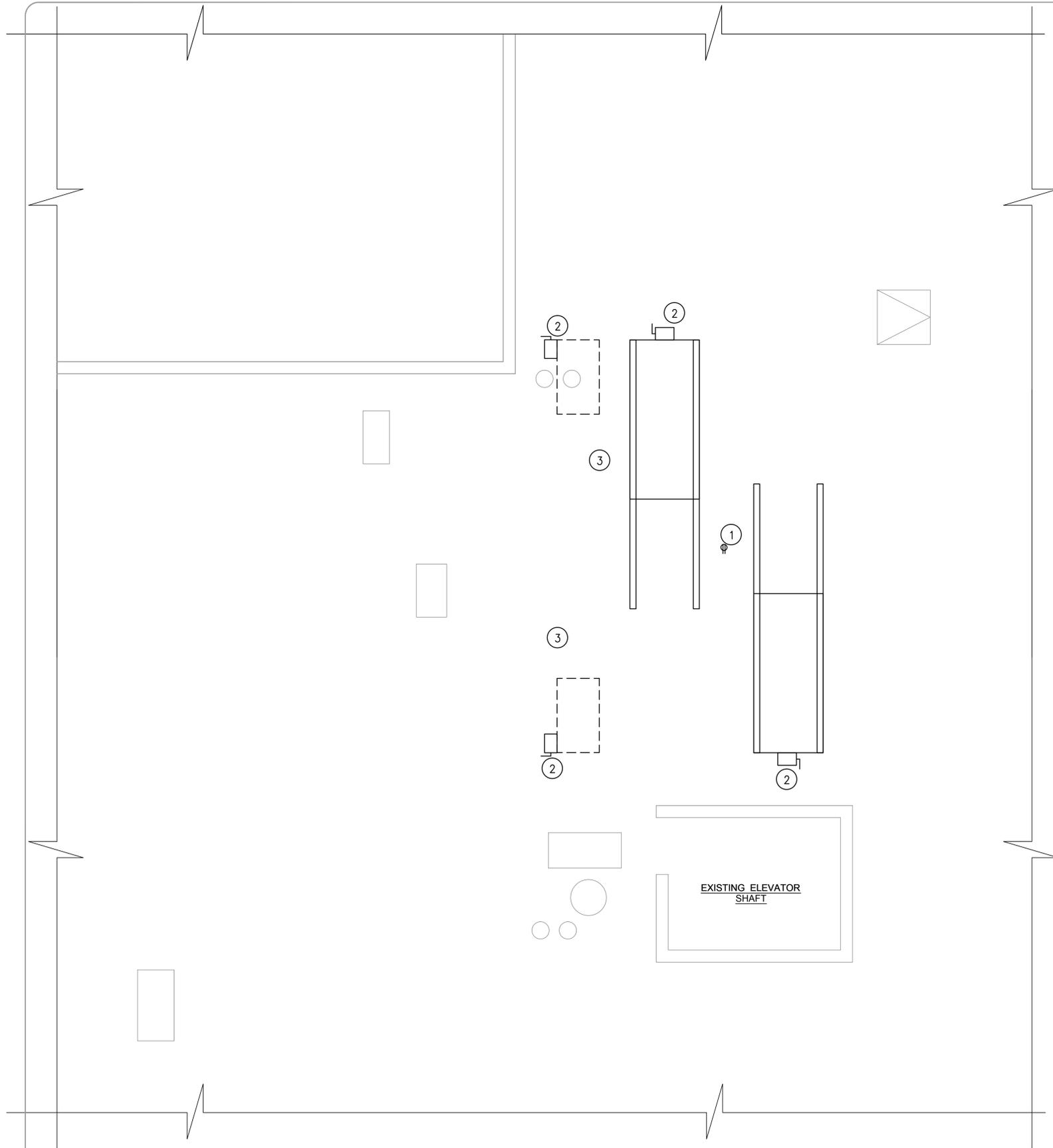
NEW "IT" ROOM POWER PLAN

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Job No.	16014
Drawn By	KP
Checked By	TM
Date	8/1/2016
File Name	
Revised	xxx

NEW "IT" ROOM LAYOUT
 POLICE HEADQUARTERS
 LAKE HAVASU CITY, ARIZONA
 #1 CALL CENTER PROJECT



ELECTRICAL ROOF PLAN

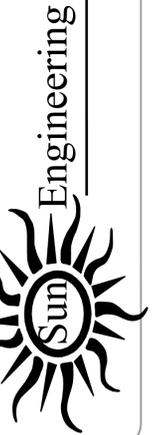
GENERAL NOTES:

- A. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH LATEST ADOPTED EDITION OF THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL CODES, ORDINANCES AND MAG AMENDMENTS.
- B. ALL DEMOLITION WORK TO ALSO CONFORM TO THE LATEST EDITION OF THE NFPA 70E STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- C. ALL DEMO'D EQUIPMENT BELONGS TO THE CITY OF LAKE HAVASU. ELECTRICAL EQUIPMENT TO BE RELOCATED AND REUSED. RELOCATION PER LAKE HAVASU CITY PROJECT MANAGER.
- D. ALL CONDUCTORS TO BE COPPER, MINIMUM SIZE #12 AWG. UNLESS OTHERWISE NOTED. INSULATION SHALL BE TYPE 90 DEGREES, XHHW-2 OR THHN/THWN.
- E. CONTRACTOR TO SUPPLY ALL NECESSARY EQUIPMENT TO COMPLETE PROJECT.

KEY NOTES

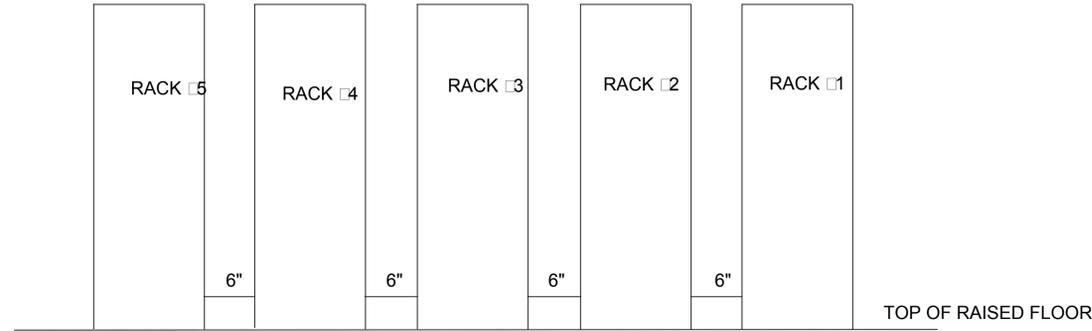
- ① NEW GENERAL USE GFCI RECEPTACLES IN WEATHER-PROOF CASE.
- ② 30 AMP DISCONNECT WITH 20 AMP FUSE.
- ③ DUCT SMOKE DETECTOR PROVIDED BY MECHANICAL ENGINEER. PROVIDE 120V POWER AND ASSOCIATED CONDUIT.

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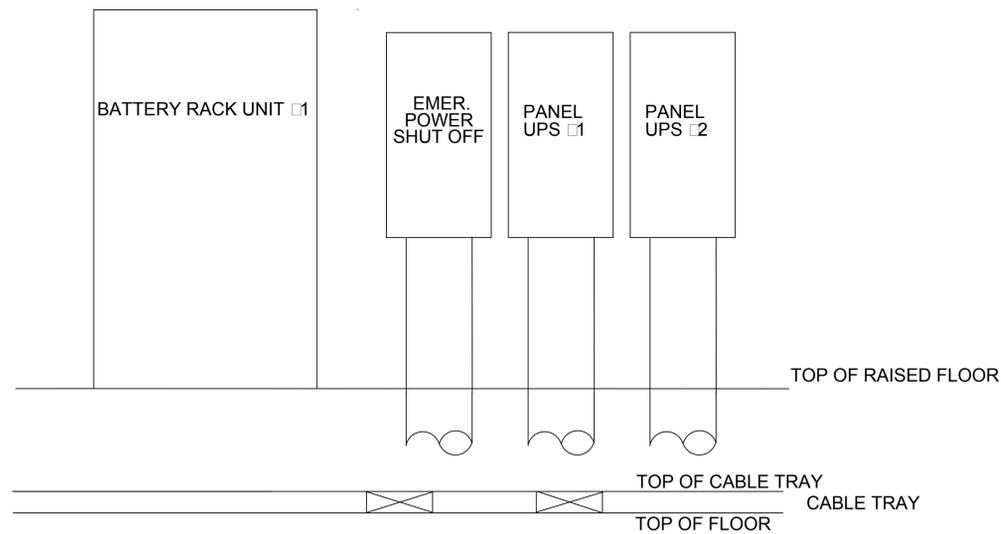
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NE "IT" ROOM LAYOUT
 POLICE HEADQUARTERS
 LAKE HAVASU CITY, ARIZONA
 □ 1 CALL CENTER PROJECT



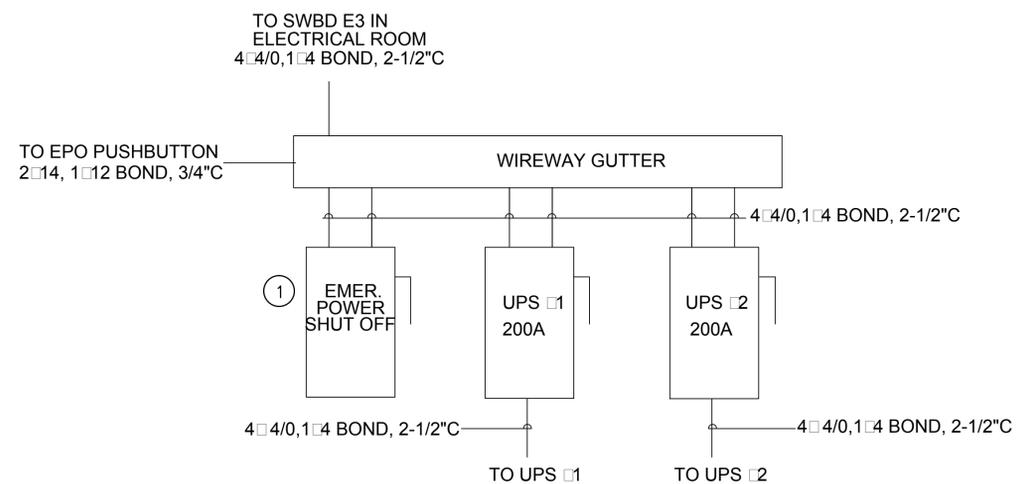
EQUIPMENT RACK ARRANGEMENT

NTS.



EQUIPMENT RACK ARRANGEMENT

NTS.



GENERAL NOTES:

- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH LATEST ADOPTED EDITION OF THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL CODES, ORDINANCES AND MAG AMENDMENTS.
- ALL DEMOLITION WORK TO ALSO CONFORM TO THE LATEST EDITION OF THE NFPA 70E STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
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- CONTRACTOR TO SUPPLY ALL NECESSARY EQUIPMENT TO COMPLETE PROJECT.

KEY NOTES

- EMERGENCY POWER SHUT-OFF (EPO) TO BE 400 AMP SHUNT TRIP BREAKER IN NEMA 1 ENCLOSURE.

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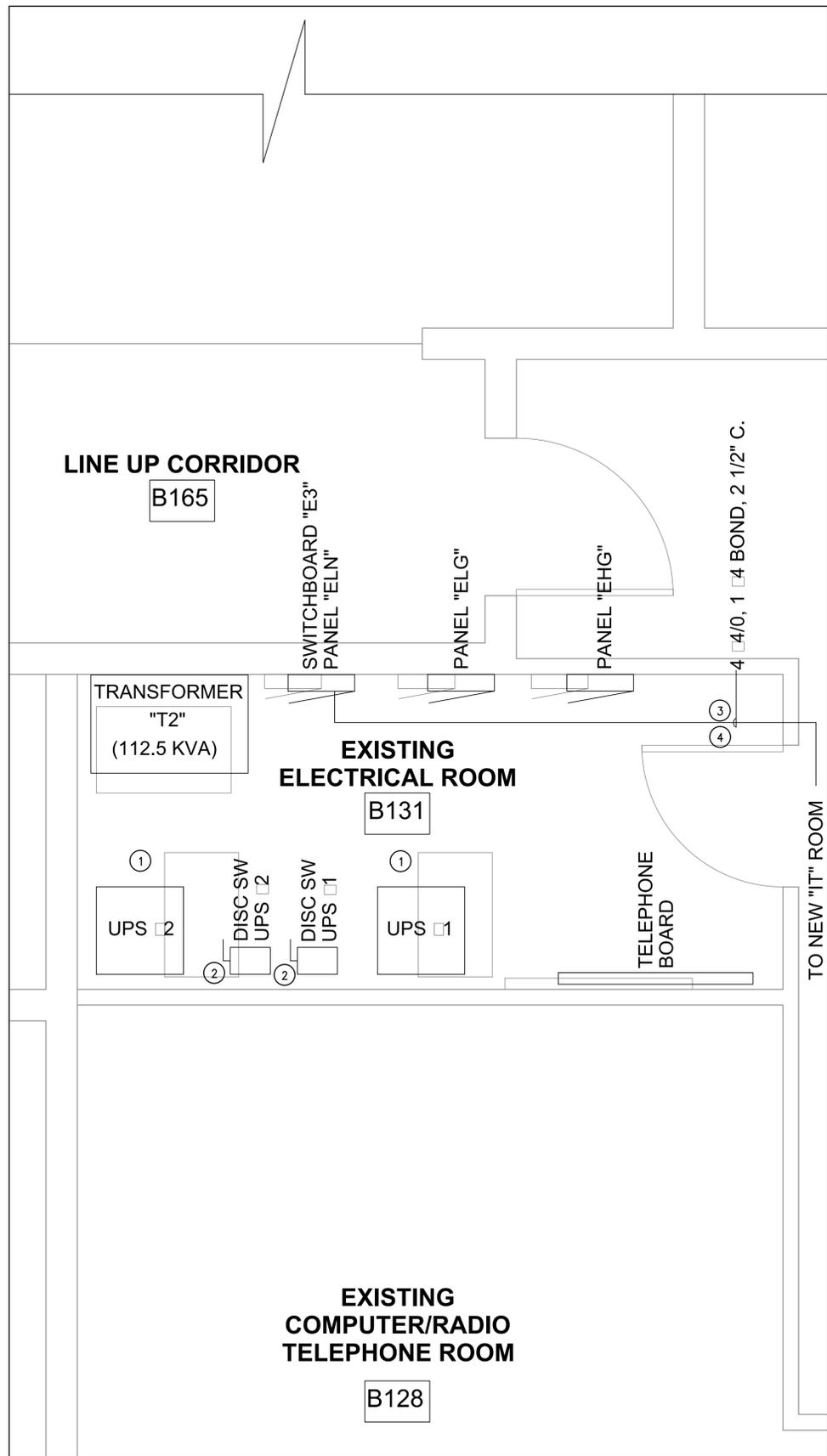
Job No.	16014
Drawn By	KP
Checked By	TM
Date	8/1/2016
File Name	
Revised	xxx

NE "IT" ROOM LAYOUT
POLICE HEADQUARTERS
LAKE HAVASU CITY, ARIZONA
01 CALL CENTER PROJECT

Sheet Number

E 0

NEW "IT" ROOM POWER DISTRIBUTION PLAN



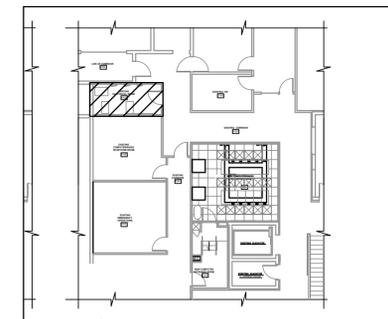
ELECTRICAL ROOM NEW LAYOUT

GENERAL NOTES:

- A. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH LATEST ADOPTED EDITION OF THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL CODES, ORDINANCES AND MAG AMENDMENTS.
- B. ALL DEMOLITION WORK TO ALSO CONFORM TO THE LATEST EDITION OF THE NFPA 70E STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- C. ALL DEMO'D EQUIPMENT BELONGS TO THE CITY OF LAKE HAVASU. ELECTRICAL EQUIPMENT TO BE RELOCATED AND REUSED. RELOCATION PER LAKE HAVASU CITY PROJECT MANAGER.
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- E. CONTRACTOR TO SUPPLY ALL NECESSARY EQUIPMENT TO COMPLETE PROJECT.

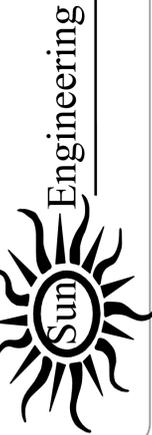
KEY NOTES

- ① REMOVE BOTH EXISTING UPS UNITS ALONG WITH ASSOCIATED CONDUIT AND WIRING BACK TO PANEL BOARD "E3" FEEDER BREAKER "ELN".
- ② REMOVE BOTH DISCONNECT SWITCHES ALONG WITH ASSOCIATED CONDUIT AND WIRING BACK TO PANEL BOARD "E3" FEEDER BREAKER "ELN".
- ③ INSTALL NEW CONDUIT RUN OF 3 #4/0, 1 #4 BOND, 2 1/2" CONDUIT FROM SWITCHBOARD "E3" FEEDER BREAKER "ELN" TO NEW UPS UNITS IN NEW "IT" ROOM.
- ④ NEW FEEDER CONDUIT TO NEW "IT" ROOM TO BE SEPARATED FROM NORMAL POWER CONDUIT RUNS IN THIS AREA.



VICINITY MAP

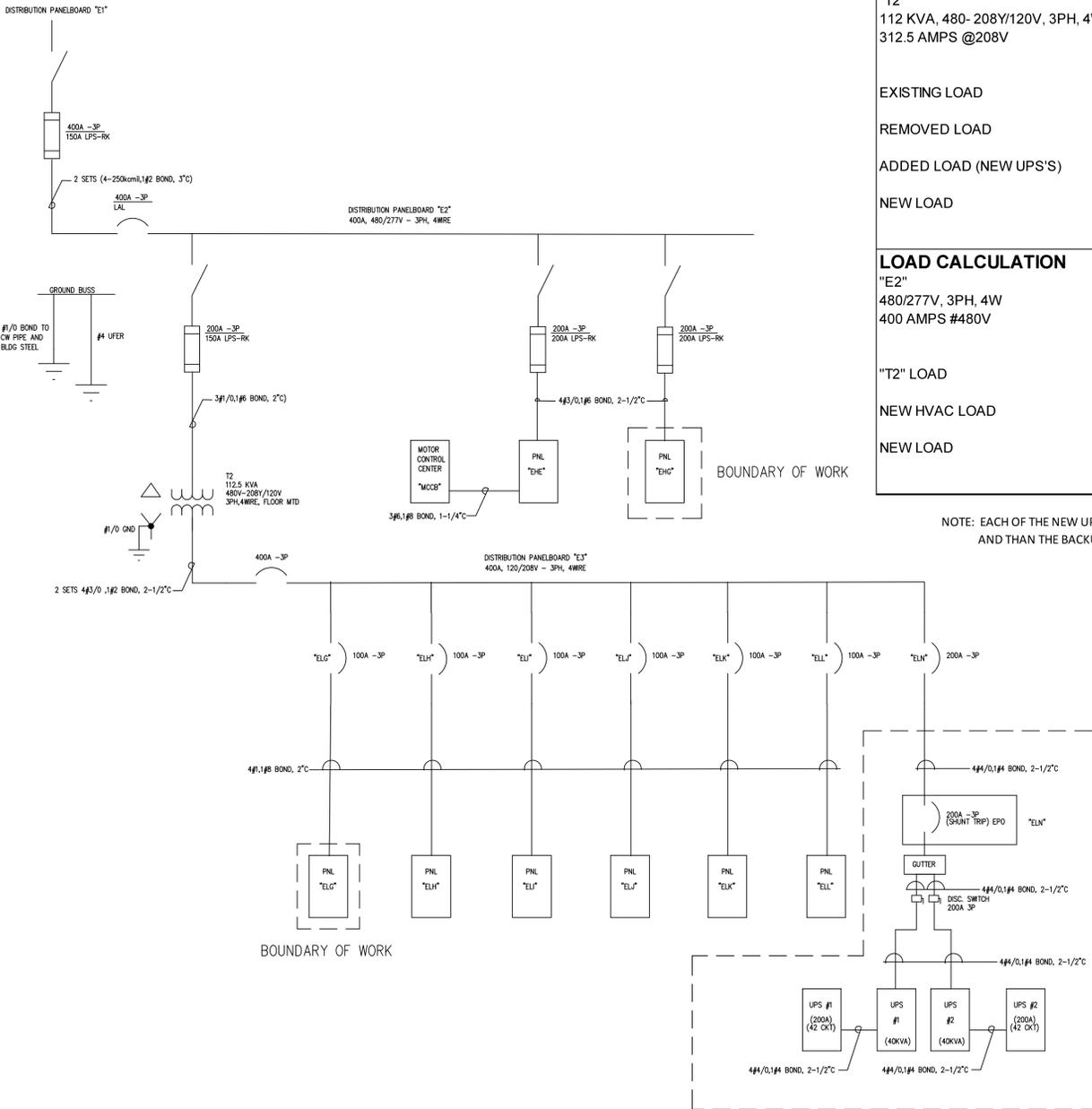
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Job No.	16014
Drawn By	KP
Checked By	TM
Date	8/1/2016
File Name	
Revised	xxx

NE "IT" ROOM LAYOUT
 POLICE HEADQUARTERS
 LAKE HAVASU CITY, ARIZONA
 I CALL CENTER PROJECT

Sheet Number



PARTIAL ONE-LINE DIAGRAM

LOAD CALCULATION
"T2"
112 KVA, 480-208Y/120V, 3PH, 4W
312.5 AMPS @208V

	ØA	ØB	ØC	SUBTOTALS
EXISTING LOAD	7320 VA	7320 VA	8520 VA	23160 VA
REMOVED LOAD	-6000 VA	-6000 VA	-6000 VA	-18000 VA
ADDED LOAD (NEW UPS'S)	13333 VA	13333 VA	13333 VA	39999 VA
NEW LOAD	14653 VA	14653 VA	15853 VA	45159 VA
TOTAL				45159 VA

LOAD CALCULATION
"E2"
480/277V, 3PH, 4W
400 AMPS #480V

	ØA	ØB	ØC	SUBTOTALS
"T2" LOAD	18973 VA	20413 VA	18733 VA	58119 VA
NEW HVAC LOAD	29968 VA	29968 VA	29968 VA	89904 VA
NEW LOAD	48941 VA	50381 VA	48701 VA	148023 VA
TOTAL				148023 VA

NOTE: EACH OF THE NEW UPS'S RUNS AT HALF CAPACITY UNTIL A FAULT OCCURS. AND THEN THE BACKUP UPS GOES TO FULL CAPACITY

GENERAL NOTES:

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH LATEST ADOPTED EDITION OF THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL CODES, ORDINANCES AND MAG AMENDMENTS.
2. ALL DEMOLITION WORK TO ALSO CONFORM TO THE LATEST EDITION OF THE NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE". CONTRACTOR EMPLOYEES TO BE EQUIPPED WITH HARD HATS, GLOVES, STEEL TOED SHOES, SAFETY GLASSES AND ANY OTHER PERSONNEL PROTECTIVE EQUIPMENT (PPE) DEEMED NECESSARY FOR PERSONNEL SAFETY.
3. ALL CONDUIT TO BE RIGID GALVANIZED STEEL (RGS) MINIMUM SIZE 3/4" UNLESS NOTED OTHERWISE.
4. ALL CONDUCTORS TO BE COPPER, MINIMUM SIZE #12 AWG. WIRE TYPE - 90 DEGREES XHHW-2 UNLESS NOTED OTHERWISE.

KEY NOTES

1. CONTRACTOR TO INSTALL NEW FEEDER FROM SWITCHBOARD BUCKET "ELN" IN SWITCHBOARD "E3" TO NEW UPS UNITS.
2. CONTRACTOR TO INSTALL BOTH NEW 40KVA UPS UNITS IN NEW "IT" ROOM ALONG WITH NEW GUTTER, DISCONNECT SWITCHES AND PANELBOARDS. MINIMIZE DAMAGE TO WALLS DURING INSTALLATION OF UPS UNITS AND ASSOCIATED EQUIPMENT.
3. CONTRACTOR TO SUPPLY ALL NECESSARY EQUIPMENT TO COMPLETE PROJECT, SUCH AS PORTABLE LIGHTS, LADDERS, TOOLS, ETC.
4. PANELS UPS #1 AND UPS#2 ARE 240V, 200 AMP, 3PH, 4W PANELS. CIRCUIT BREAKERS TO BE 2-POLE, 30 AMP, RATED 10KAIC. PANELS TO BE NEMA 1, 30 CIRCUIT. PROVIDE EACH PANEL WITH EIGHT (8) 30 AMP 2-POLE, 10 KAIC CIRCUIT BREAKERS.

PANELBOARD		EHG		SCHEDULE	
VOLTAGE	277/480V 3PH, 4W	LOAD - VA	LOCATION	ELECTRICAL ROOM	ENCLOSURE
DESIGN LOAD	29968	29968	29968	29968	29968
LINE AMPS	108.1	108.1	108.1	108.1	108.1
DESIGN LOAD KVA	89.90				

PANELBOARD		ELG		SCHEDULE	
VOLTAGE	120/208V 3PH, 4W	LOAD - VA	LOCATION	ELECTRICAL ROOM	ENCLOSURE
DESIGN LOAD	4320	4320	4320	4320	4320
LINE AMPS	36.0	48.0	24.0	24.0	24.0
DESIGN LOAD KVA	12.96				

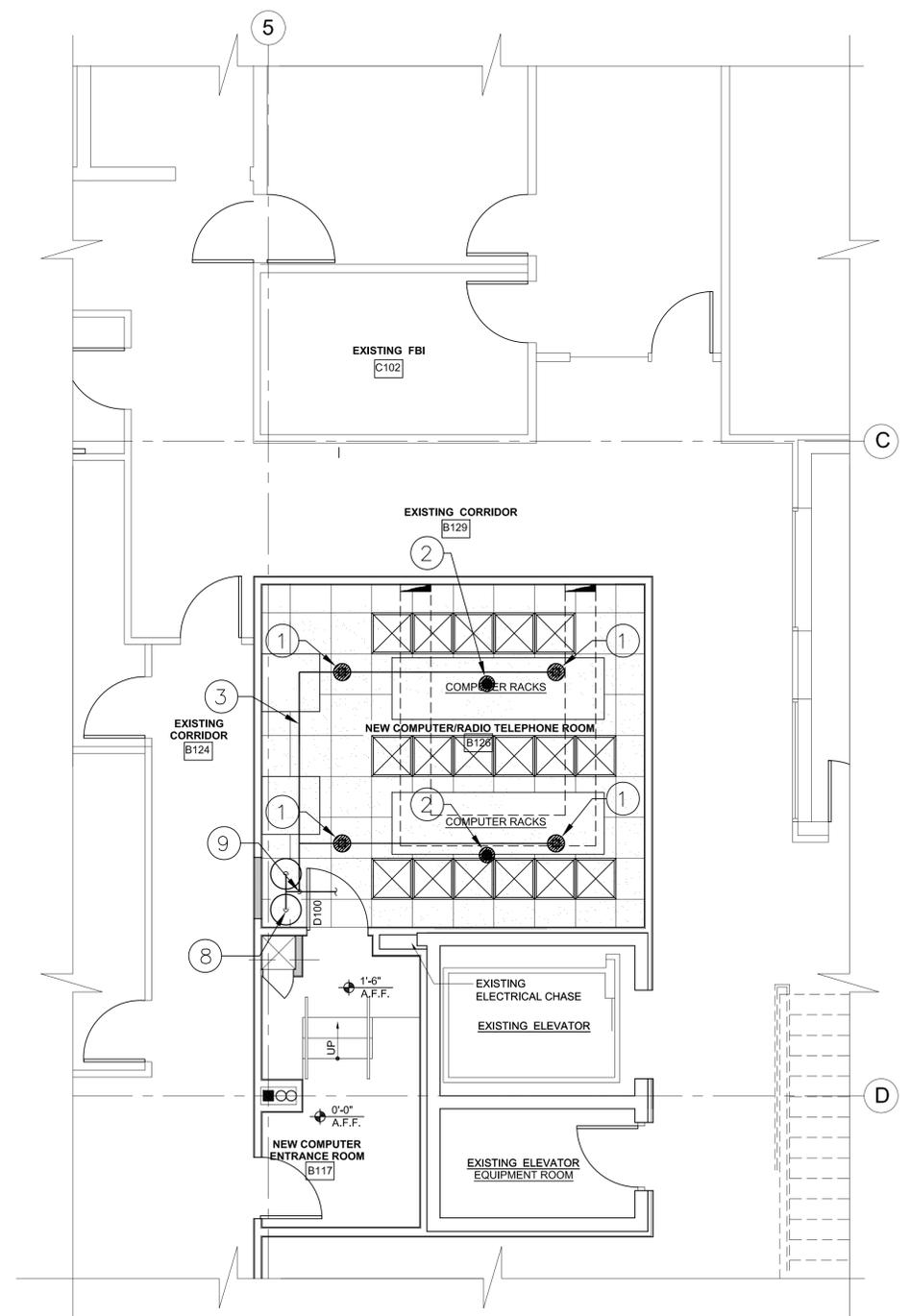
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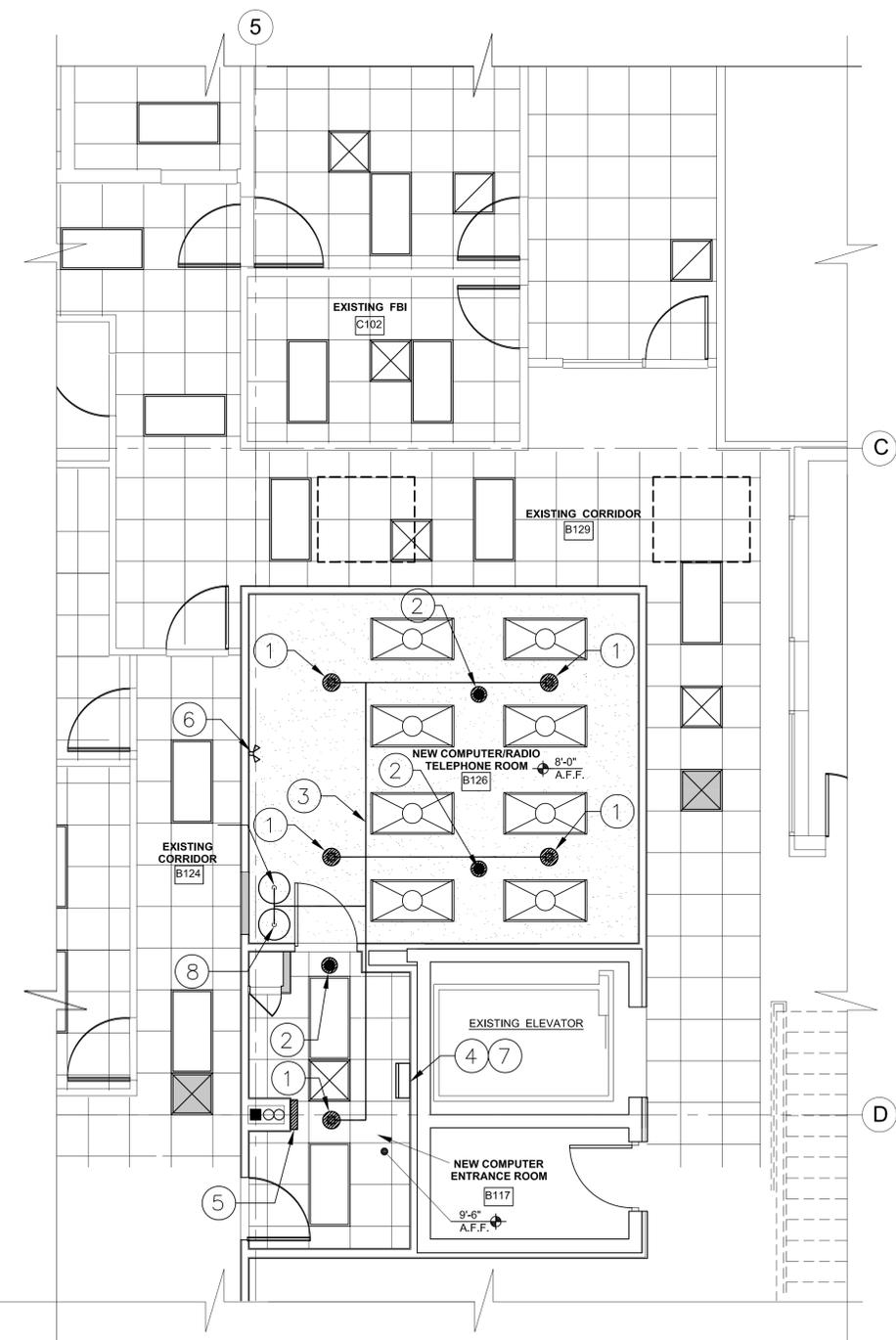
Job No. 16014
Drawn By KP
Checked By TM
Date 8/1/2016
File Name
Revised xxx

IT ROOM LAYOUT
POLICE HEADQUARTERS
LAKE HAVASU CITY, ARIZONA
CALL CENTER PROJECT

Sheet Number E



RAISED FIRST FLOOR PLAN



REFLECTED CEILING PLAN

GENERAL NOTES:

1. FIRE PROTECTION CONTRACTOR SHALL ADHERE TO STANDARD POLICY FOR SAFETY AND CLEANUP AND FACILITIES STANDARDS.
2. FIRE PROTECTION CONTRACTOR TO IDENTIFY AND VERIFY ROUTES, FIELD CONNECTIONS AND DIMENSIONS FOR ORDERING FITTINGS, PIPE MATERIAL SHALL MATCH FITTINGS.
3. FIRE PROTECTION CONTRACTOR SHALL COORDINATE WITH OWNER REGARDING ANY NECESSARY SCHEDULING OF ALL SERVICES OR FACILITIES SHUT-DOWNS.
4. FIRE PROTECTION CONTRACTOR SHALL FIELD VERIFY EXISTING PROJECT CONDITIONS BEFORE START OF WORK.
5. CLEAN AGENT FIRE EXTINGUISHING SYSTEM SHALL COMPLY WITH THE 2012 EDITION OF NFPA CODE 2001.
6. INSTALL PIPING, DETECTORS, PIPING, AND EQUIPMENT AT LOCATIONS SHOWN. COORDINATE ALL EQUIPMENT LOCATIONS WITH ARCHITECT.

KEY NOTES:

1. INSTALL CLEAN-AGENT EXTINGUISHING SYSTEM DISCHARGE NOZZLES SIZED FOR THE CORRECT FLOW OF AGENT FOR THE HAZARD IN THE PROTECTED AREA.
2. INSTALL DETECTOR SENSORS FOR AN AUTOMATIC ELECTRONIC DETECTION SYSTEM TO ACTIVATE THE CLEAN AGENT EXTINGUISHING SYSTEM. THE DETECTION SYSTEM SHALL ACTIVATE A SINGLE, FIXED, FIRE SUPPRESSION AND/OR ALARM SYSTEM BASED ON INPUTS RECEIVED FROM THE FIRE DETECTION DEVICES. THE DETECTION SYSTEM SHALL BE TESTED TO THE APPLICABLE FCC RULES AND REGULATIONS FOR CLASS A COMPUTING DEVICES.
3. DISTRIBUTION PIPING NETWORK PIPE SIZES SHALL BE BASED ON TWO-PHASE FLOW OF THE CLEAN AGENT AND NITROGEN THROUGH THE PIPING NETWORK. ALL REQUIRED PIPE SIZES, NOZZLE DRILL SIZES, AVERAGE NOZZLE PRESSURES, AND DISCHARGE TIME SHALL BE BASED ON FLOW CALCULATIONS AS SPECIFIED IN FIRE PROTECTION SPECIFICATION SECTION 212200 "CLEAN-AGENT FIRE-EXTINGUISHING SYSTEM."
4. INSTALL WALL MOUNTED FIRE DETECTION CONTROL PANEL IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
5. INSTALL AUDIBLE HORN IN NEW COMPUTER ENTRANCE ROOM IN ACCORDANCE WITH NFPA 2001, SECTION "DETECTION, ACTUATION, AND CONTROL SYSTEMS."
6. INSTALL STROBE LIGHT IN NEW COMPUTER/RADIO/TELEPHONE ROOM IN ACCORDANCE WITH NFPA 2001, SECTION "DETECTION, ACTUATION, AND CONTROL SYSTEMS."
7. CONNECT ALL ELECTRICAL DEVICES TO THE FIRE DETECTION CONTROL PANEL AND TO THE BUILDING'S FIRE-ALARM SYSTEM CONTROL PANEL.
8. INSTALL CLEAN AGENT STORAGE TANKS WITH FACTORY FABRICATED RESTRAINING BRACKETS ATTACHED TO THE WALL.
9. INSTALL CLEAN AGENT DISTRIBUTION PIPING UNDER RAISED COMPUTER ROOM FLOORING.

FIRE PROTECTION SYMBOLS

SYMBOLS	DESCRIPTION
	CLEAN AGENT PIPE LINE (CA)
	GATE VALVE
	BALL VALVE
	STROBE
	DETECTOR SENSOR
	NOZZLE
	AUDIBLE HORN

LAKE HAVASU CITY BUILDING CODES

2012 EDITION OF THE INTERNATIONAL MECHANICAL CODE
2012 EDITION OF THE NATIONAL ELECTRICAL CODE

LIST OF DRAWINGS

FP-1 FIRE PROTECTION FLOOR PLAN - COMPUTER/RADIO/TELEPHONE ROOM



**FIRE PROTECTION PLAN
COMPUTER/RADIO/TELEPHONE ROOM
CLEAN AGENT EXTINGUISHING SYSTEM**

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



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Job No. 2016-SE-01
 Drawn By TAF
 Checked By TAF
 Date 10-12-16
 File Name FP-1
 Revised 10-18-16

HAVASU CITY POLICE DEPARTMENT IT UPGRADES
 2360 MCCOLLOCH N. BLVD N.
 LAKE HAVASU CITY ARIZONA 86403
IT ROOM IMPROVEMENTS

Sheet Number
FP1

SPECIFICATIONS

GENERAL

- THE CONTRACTOR SHALL PROVIDE THE WORK SHOWN ON THE DRAWINGS AND SPECIFIED FOR THEIR INDIVIDUAL SECTIONS OF WORK. THE WORD "WORK" SHALL MEAN ALL LABOR, TRANSPORTATION, MATERIAL, EQUIPMENT, TOOLS, INSTALLATION, SUPERVISION, AND ANY OTHER INCIDENTAL ITEMS OR SERVICES OBVIOUSLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE COMPLETE SYSTEMS, WHICH SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY MENTIONED OR SHOWN.
- ALL GENERAL CONDITIONS, SPECIAL REQUIREMENTS OR GENERAL REQUIREMENTS OF THE GENERAL CONSTRUCTION SPECIFICATION ARE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF PRINTED HERE IN FULL.
- THE WORD "PROVIDE" SHALL MEAN FURNISH AND INSTALL, MAKE ALL FINAL CONNECTIONS, AND LEAVE IN AN APPROVED OPERATING CONDITION.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE APPLICABLE BUILDING, MECHANICAL, PLUMBING, AND ELECTRICAL CODES, AND FEDERAL, STATE, AND LOCAL REGULATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING: WORKMEN'S IDENTIFICATION AND SAFETY, FIRE PROTECTION, CONTRACTOR'S LIABILITY INSURANCE, SAFETY BARRICADES, WARNING SIGNS, AND TRASH REMOVAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL FEES AND OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL DRAWINGS FOR THE BUILDING, AND FOR OTHER TRADES, AND SHALL COORDINATE THE WORK WITH ALL OTHER TRADES, INCLUDING, BUT NOT LIMITED TO, THE CONSTRUCTION DOCUMENTS, SHOP DRAWINGS, ETC. FOR ALL GENERAL CONSTRUCTION, STRUCTURAL, MECHANICAL, AND ELECTRICAL AND SPECIALTY CONTRACTOR WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIAL INTO THE BUILDING AS PLANNED, WITHOUT INTERFERENCE WITH OTHER WORK, AND SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH OTHER TRADES, TO PROVIDE ACCESS AND FOR THE PROPER EXECUTION OF THE WORK.
- DRAWINGS ARE DIAGRAMMATIC, SMALL SCALE, AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. CERTAIN COMPONENTS, APPURTENANCES, AND RELATED SPECIALTIES ARE NOT SHOWN, AND SHALL BE PROVIDED. IT IS THE INTENT OF THE DRAWING AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. DO NOT SCALE DRAWINGS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF PIPES AND DUCTWORK, ETC. INDICATED ON DRAWINGS MAY REQUIRE MODIFICATION DUE TO UNFORSEEN CONDITIONS AND REQUIRED ON SITE REVISIONS DURING CONSTRUCTION. (SEE ALSO "BIDDING")
- ALL WORK REQUIRED FOR IDENTICAL ITEMS SHOWN ON THE DRAWINGS SHALL BE PROVIDED ALTHOUGH EACH SPECIFIC IDENTICAL ITEM MAY NOT BE SHOWN IN DETAIL- OR CALLED OUT.
- THE CONTRACTOR SHALL PROVIDE (5) COPIES OF SUBMITTALS AT ONE TIME, BOUND IN A NEAT & ORDERLY MANNER. PARTIAL OR UNMARKED SUBMITTALS WILL NOT BE ACCEPTED. SUBMITTALS SHALL INCLUDE ALL EQUIPMENT, MATERIALS, AND DEVICES FOR REVIEW BY THE ENGINEER. WORK SHALL NOT START UNTIL ALL REVIEWS HAVE BEEN COMPLETED AND THE ITEMS TO BE PROVIDED ARE ACCEPTABLE. ALL MATERIALS AND EQUIPMENT SHALL BE COMMONLY USED ACCEPTABLE GRADES IN THE CONSTRUCTION INDUSTRY AND SHALL BEAR THE "U.L.", ASME, AMCA, OR OTHER LABEL WHEN APPLICABLE.
- UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUPPLY THE ARCHITECT WITH COMPLETE SETS OF AS-BUILT DOCUMENTS ACCURATELY SHOWING THE MATERIALS AND EQUIPMENT AS INSTALLED.
- ALL MATERIALS AND WORKMANSHIP TO BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER. REFRIGERATION COMPRESSORS SHALL BE GUARANTEED FOR A MINIMUM OF FIVE YEARS FROM DATE OF OWNER'S ACCEPTANCE. IN ADDITION, THE CONTRACTOR SHALL GUARANTEE THAT THE INSTALLATION, WHEN OPERATED IN ACCORDANCE WITH THE CONTRACTOR'S INSTRUCTIONS, WILL DEVELOP CAPACITY AND CHARACTERISTICS INDICATED OR SPECIFIED AND WILL FULFILL EACH AND EVERY REQUIREMENT OF THE DRAWINGS AND SPECIFICATIONS, AND SHOULD THE INSTALLATION IN ANY WAY FAIL TO DO SO, THE CONTRACTOR WILL, WITHOUT DELAY AND WITHOUT COST TO THE OWNER, PROVIDE WHATEVER ADDITIONAL EQUIPMENT, MATERIAL, AND LABOR IS NECESSARY TO CORRECT THE FAULT AND COMPLY WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
- CONTRACTOR SHALL CHECK AND VERIFY ALL SIZES, DIMENSIONS, AND CONDITIONS BEFORE STARTING ANY WORK. ANY DEVIATIONS OR PROBLEMS SHALL BE TRANSMITTED TO THE ENGINEER FOR REVIEW.

- PROVIDE BASE AND COUNTER FLASHING FOR ITEMS PENETRATING THE ROOF- COORDINATE WITH ARCHITECTURAL REQUIREMENTS.
- CONTRACTOR TO FURNISH AND INSTALL ALL STARTERS, WIRING, CONTROLS, DEVICES AND ALL CONDUIT, FOR A COMPLETE AND OPERABLE SYSTEM.
- ALL WORK SHOWN IS NEW, UNLESS NOTED AS EXISTING.

- MAINTAIN OCCUPANCY AND FIREWALL SEPARATION INTEGRITY AS REQUIRED. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF ALL OCCUPANCY/FIREWALL SEPARATIONS AND SPECIFIC DETAILS FOR CONSTRUCTION. PROVIDE ALL NECESSARY FIRE DAMPERS, ACCESS DOORS, AND CAULKING, ETC. FOR APPROVED INSTALLATION.

BIDDING

- SUBMISSION OF A BID PROPOSAL, DIRECTLY OR INDIRECTLY BY THE CONTRACTOR FOR THIS WORK, SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE AND UNDERSTANDS THE CONDITIONS THAT MAY AFFECT THE PERFORMANCE OF THE WORK. CONTRACTOR IS EXPECTED TO CONTACT ARCHITECT FOR ANY PARTICULAR PROBLEMS AND CLEAR UP ANY POSSIBLE MISUNDERSTANDING BEFORE BID IS SUBMITTED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE CONTRACT DOCUMENTS AND THE WORK TO BE ACCOMPLISHED.

- BASE PROPOSAL ON MANUFACTURERS NAMED, UNLESS "OR EQUAL" IS INDICATED.

EXECUTION

- THE CONTRACTOR SHALL PROVIDE ALL SLEEVES, OPENINGS, CUTTING, AND PATCHING NECESSARY FOR THE INSTALLATION OF THE WORK. CUTTING AND PATCHING SHALL BE DONE BY WORKMEN SKILLED IN THE TRADES REQUIRED AND PAID BY THE CONTRACTOR REQUIRING THE WORK COMPLETE.
- THE CONTRACTOR SHALL PROVIDE ALL RIGGING, HANDLING OF MATERIALS AND EQUIPMENT, AND THE NECESSARY PROTECTION FOR MATERIALS AND EQUIPMENT.
- TOOLS AND EQUIPMENT WILL BE STORED IN OWNER DESIGNATED AREAS ONLY.
- THE CONTRACTOR WILL PROTECT THE WORK AND MATERIAL AGAINST DIRT, THEFT, INJURY, OR DAMAGE UNTIL ACCEPTED BY OWNER. ALL WORK SHALL BE TURNED OVER TO OWNER CLEAN AND IN PERFECT CONDITION, READY FOR SATISFACTORY SERVICE.
- PIPES AND/OR CONDUITS PASSING THROUGH WALL, FLOORS, AND PARTITIONS SHALL BE PROVIDED WITH SLEEVES, EXCEPT AS PROHIBITED BY U.L. LISTING. SLEEVES PASSING THROUGH WATER PROOFING OR DAMP PROOFING SHALL BE WATER TIGHT. PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE PROOFED WITH MATERIAL APPROVED AND AS DEFINED FOR THE RATING OF THE STRUCTURE AND U.L. LISTED.
- EACH CONTRACTOR SHALL PROVIDE ALL FOUNDATIONS, HANGERS, AND SUPPORTS FOR ALL EQUIPMENT SUPPLIED AND/OR INSTALLED UNDER THEIR WORK. ANY EQUIPMENT WITH MOVING PARTS SHALL BE PROVIDED WITH VIBRATION ISOLATION.
- ALL EQUIPMENT SHALL BE PROVIDED WITH FACTORY FINISH. ALL REQUIRED PAINTING WILL BE PERFORMED UNDER THE GENERAL CONSTRUCTION SECTION OF THE SPECIFICATIONS
- WHERE PIPES OR CONDUITS PASS THROUGH WALLS, FLOORS, OR CEILINGS IN FINISHED AREAS, THEY SHALL BE FURNISHED WITH CHROME PLATED ESCUTCHEON PLATES.
- AT THE CONCLUSION OF THE JOB, EACH PIECE OF EQUIPMENT, VALVE, SWITCH, STARTER, PANEL, PIPE LINE, CONDUIT, ETC., SHALL BE CLEARLY IDENTIFIED WHETHER EXPOSED OR CONCEALED, COVERED OR UNCOVERED, IN ACCORDANCE WITH OSHA AND ANSI REGULATIONS. IDENTIFY PIPES NEAR EACH VALVE WITH "BRANDY-PERMA CODE PIPE TAPE" OR T. & B. WESTLINE "TEL-A-PIPE" INDICATING DIRECTION OF FLOW, SERVICE ZONE, AND SIZE. TAPE SHALL BE APPLIED TO PIPE, CONDUIT, OR COVERING. VALVES, CONTROLS, AND DAMPERS SHALL BE IDENTIFIED BY 2-INCH LAQUERED BRASS TAGS WITH STAMPED LETTERS FASTENED WITH "S" HOOKS OR CHAINS. EQUIPMENT IS TO BE IDENTIFIED AS TO FUNCTION AND PURPOSE BY MEANS OF PERMANENTLY ATTACHED LAMINATED PHENOLIC NAMEPLATES WITH BEVELED EDGES AND WHITE LETTERS ON BLACK BACKGROUND.
- AT THE CONCLUSION OF THE WORK, ALL EQUIPMENT AND SYSTEMS SHALL BE CAREFULLY BALANCED, ADJUSTED, AND TESTED TO PROVIDE BALANCED, QUIET-OPERATING, STABLE AND SAFE SYSTEMS. DEMONSTRATE OPERATION OF ALL SYSTEMS TO THE OWNER'S DESIGNATED REPRESENTATIVE.

HVAC

PRODUCTS

- PIPE INSULATION:** PIPES AND CHILLED WATER SHALL BE INSULATED WITH ALL REFRIGERANT AND CHILLED WATER SHALL BE INSULATED WITH 1-1/2" (2" ON EXTERIOR USE), THICK PREFORMED FIBERGLASS INSULATION. PROVIDE ALL SERVICE JACKET. PROVIDE METAL JACKET IN EXPOSED AREAS, I.E.: EXTERIOR.
- ALL DUCTWORK TO BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE SMACNA MANUAL ENTITLED "HVAC DUCT CONSTRUCTION STANDARDS- METAL AND FLEXIBLE". SUPPLY AND RETURN AIR DUCTWORK SHALL BE GALVANIZED METAL EXCEPT WHERE OTHERWISE INDICATED. ALL ELBOWS SHALL BE FULL INSIDE RADIUS THROAT. WHERE SQUARE ELBOWS ARE REQUIRED DUE TO CONSTRUCTION LIMITS, ELBOWS SHALL BE FITTED WITH DOUBLE-FACED TURNING VANES. KITCHEN HOOD EXHAUST DUCTWORK SHALL BE WITHOUT TURNING VANES AND CONSTRUCTED PER NFPA 96 (INCLUDING ENCLOSURE).
- PROVIDE OPPOSED BLADE BALANCING DAMPERS AT EACH SUPPLY AIR CONNECTING TO MAIN DUCTS AND WHEREVER NECESSARY TO FACILITATE AIR BALANCING OF THE DUCT SYSTEM.
- SEAL ALL DUCT PENETRATIONS THROUGH WALLS, FLOOR, AND ROOF. SEAL ALL TRANSVERSE DUCT SEAMS WITH APPROVED MASTIC. DUCT TAPES SHALL NOT BE ALLOWED FOR RIGID DUCTWORK.
- ALL DUCTWORK SIZES SHOWN ARE FREE AREA INSIDE DIMENSIONS. ALL ROUND SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED WITH FOIL FACED, LOW DENSITY DUCT WRAP. WRAP SHALL BE 2" THICK WITH A REINFORCED FOIL KRAFT VAPOR BARRIER FACING. A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES. A MINIMUM R-8 INSULATION WHEN LOCATED OUTSIDE OF BUILDING. INSTALL PER MANUFACTURER'S INSTRUCTIONS. EXHAUST DUCTWORK SHALL BE UNINSULATED. DUCTWORK INTERIOR BEHIND DEVICES SHALL BE PAINTED FLAT BLACK.
- LINE ALL RECTANGULAR DUCTWORK WITH 1" THICK, 1 1/2 LB DENSITY DUCT LINER. LINING SHALL BE APPLIED TO DUCTWORK WITH FIRE RESISTIVE ADHESIVES, FOSTER 85-10 OR EQUAL, AND COPPER OR CADMIUM PLATED MECHANICAL FASTENERS, GRAHAM, OMARK, OR EQUAL.
- FLEXIBLE DUCTWORK, WHERE INDICATED ON THE DRAWINGS, SHALL BE INSULATED WITH PLASTIC VAPOR BARRIER AT INTERIOR AND EXTERIOR, STEEL WIRE COIL REINFORCED. JOINTS SHALL BE BAND-CLAMPED AND TAPE SEALED TO MAINTAIN INTEGRITY OF VAPOR BARRIER. FLEXIBLE DUCT RUNS SHALL BE LIMITED TO 6' OF FLEX DUCT EACH RUNOUT. INSTALLATION SHALL BE SUPPORTED TO ELIMINATE SAGS. TURNS IN FLEXIBLE DUCT SHALL NOT EXCEED ONE EQUIVALENT FULL- RADIUS ELBOW PER 6' RUNOUT.
- BALANCE ALL EQUIPMENT, DIFFUSERS, AND GRILLES TO OBTAIN THE AIR QUANTITIES AS SHOWN ON PLANS. CONTRACTOR SHALL PROVIDE (5) FIVE BOUND COPIES OF A CERTIFIED TEST AND BALANCE REPORT WITH FORMS CONTAINING INFORMATION INDICATED IN SCHEDULES. SUBMIT REPORT TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PROJECT CLOSEOUT.
- PROVIDE FLEXIBLE DUCT CONNECTORS ON INLET AND OUTLET OF ALL AIR MOVING EQUIPMENT, INCLUDING EXHAUST FANS AND FAN COIL UNITS.
- REFER TO DRAWING SCHEDULE(S) FOR EQUIPMENT REQUIREMENTS.

HVAC LEGEND - DRY

ABBR.	SYMBOL	DESCRIPTION
SA		SUPPLY AIR (CEILING)
SA		SUPPLY AIR (SIDE WALL)
RA, EA		RETURN AIR, EXHAUST AIR
OA		OUTSIDE AIR
		DUCT SECTION POSITIVE PRESSURE - FIRST SIZE IS TOP
		DUCT SECTION NEGATIVE PRESSURE - FIRST SIZE IS TOP
		ROOF INTAKE VENTILATOR
		ROOF EXHAUST FAN
		CEILING EXHAUST FAN
		RIGID DUCT
FLEX		FLEXIBLE DUCT
		ROUND DUCT - DOWN
		ROUND DUCT - UP
		TERMINAL UNIT
		UNIT HEATER
RS		REFRIGERANT SUCTION PIPING
RL		REFRIGERANT LIQUID PIPING
VD		MANUAL VOLUME DAMPER
AVD		AUTOMATIC VOLUME DAMPER
CFM		CUBIC FEET PER MINUTE
FD		FIRE DAMPER
SD		FIRE AND SMOKE DAMPER
T-STAT		THERMOSTAT
DMSD		SMOKE DETECTOR (DUCT MOUNTED)
OAD		OUTSIDE AIR DAMPER (OPPOSED BLADE)
RAD		RETURN AIR DAMPER (OPPOSED BLADE)
EAD		EXHAUST AIR DAMPER (OPPOSED BLADE)
BDD		BACKDRAFT DAMPER
CD		CEILING DIFFUSER WITHOUT OBD
G		GRILLE
SD		SIDEWALL
LD		LINEAR DIFFUSER
R		REGISTER WITH OBD
TG		TRANSFER GRILLE
DG		DOOR GRILLE
UC		UNDERCUT
EATLAT		ENTERING, LEAVING AIR TEMPERATURE
WBDB		WET, DRY BULB TEMPERATURE
FFM		FEET PER MINUTE
RFM		REVOLUTIONS PER MINUTE
W		INCHES OF WATER COLUMN
TSP		TOTAL STATIC PRESSURE
ΔP		PRESSURE DROP, PRESSURE DIFFERENCE

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Job No.	16014
Drawn By	
Checked By	
Date	8/11/2016
File Name	
Revised	

911 CALL CENTER PROJECT
 POLICE HEADQUARTERS
 LAKE HAVASU CITY, ARIZONA
 NEW "IT" ROOM LAYOUT

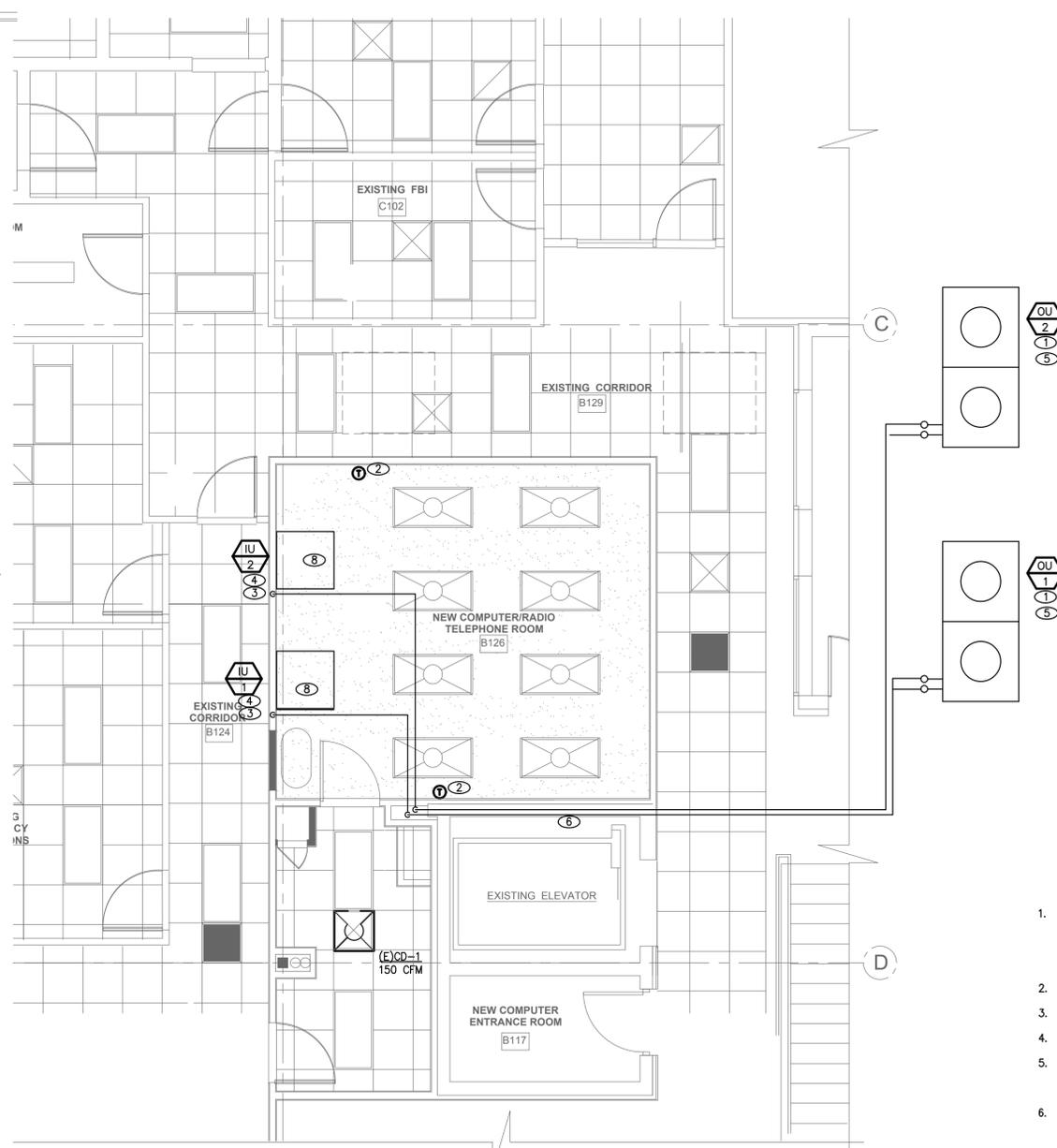
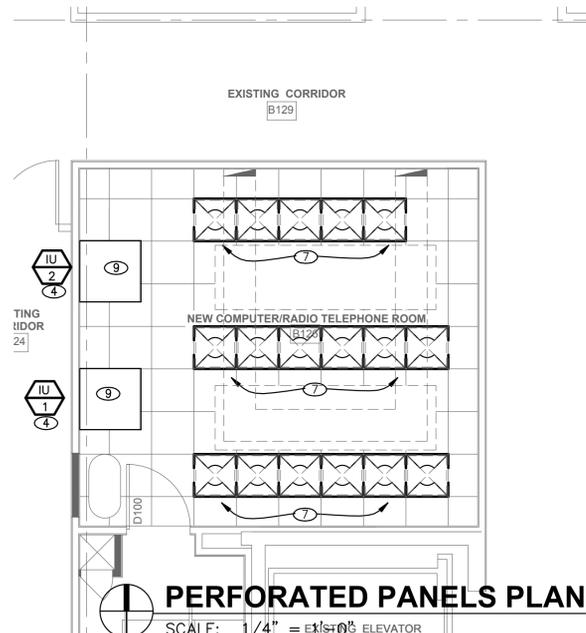
Sheet Number
M1

SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE

INDOOR UNIT													OUTDOOR UNIT													
IU #	MANUFACTURER AND MODEL NO.	AREA SERVED	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	RETURN AIRFLOW (CFM)	S.P. (IN WC)	ELECTRICAL FLA (A)	MOTOR HP	MCA	V-φ-Hz	OPERATIONAL WEIGHT (LBS)	INDOOR UNIT REMARKS	OU #	MANUFACTURER AND MODEL NO.	INDOOR UNIT SERVED	TOTAL COOLING (MBH)	SEN COOLING (MBH)	TOTAL HEATING (MBH)	AMB AIR/DB-WB (°F)	ELECTRICAL FLA (A)	MCA	COMP (KW)	V-φ-Hz	SEER	OPERATIONAL WEIGHT (LBS)	OUTDOOR UNIT REMARKS
1	LIEBERT PDX PX029DA1CBA	COMPUTER/RADIO TELEPHONE ROOM	4300	-	-	0.2	35.6	4.15	50	480-3-60	700	DOWN FLOW	1	LIEBERT PDX MCM080E1YDA	IU-1	88.9	84.4	51.6	120-67	2.8	-	-	460-3-60	-	450	-
2	LIEBERT PDX PX029DA1CBA	COMPUTER/RADIO TELEPHONE ROOM	4300	-	-	0.2	35.6	4.15	50	480-3-60	700	DOWN FLOW	2	LIEBERT PDX MCM080E1YDA	IU-2	88.9	84.4	51.6	120-67	2.8	-	-	460-3-60	-	450	-

- UNITS SHALL BE AS MANUFACTURED BY: TRANE, CARRIER, RUUD.
- UNITS ARE SIZED FOR 120°F SUMMER AMBIENT TEMPERATURE, 32°F WINTER TEMPERATURE.
- COOLING CAPACITY, MINIMUM HEAT CAPACITY AND CFM ARE MINIMUM OUTPUT REQUIRED. ALL UNITS SHALL HAVE NO LESS THEN 98% OF THESE CAPACITIES. COOLING CAPACITY IS GROSS COIL CAPACITY REQUIRED (FAN HEAT NOT DEDUCTED).
- PROVIDE FAN COIL UNIT WITH FILTER AND FILTER RACK SIZED AT 500 FPM VELOCITY.
- PROVIDE WITH PROGRAMMABLE THERMOSTAT.
- PROVIDE WITH LOW AMBIENT OPERATION TO: 32°F.
- ALL DX SPLIT SYSTEM FAN COIL WITH REMOTE CONDENSING UNIT WITH REFRIGERATOR LINES EXTENDING OVER "50" FT. IN LENGTH TO HAVE HARD START KIT, CRANK CASE HEATER, TIME GUARD, AND LIQUID SOLENOID VALVE AT CONDENSER. INSTALL AND ADJUST REFRIG. AND OIL CHARGE PER MFR'S RECOMMENDATIONS.
- INTERLOCK WITH FM-200 FIRE SYSTEM, WHEN FIRE SUPPRESSION SYSTEM IS ACTIVATED FAN SHOULD TURN OFF.

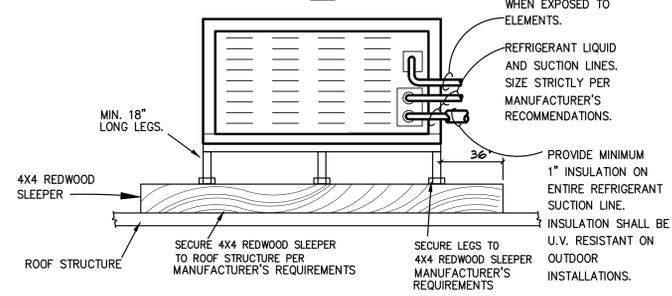
LOAD SUMMARY		
ITEM	A/C BTU/HR	BTU/HR
SEVER EQUIPMENT		130,341
LIGHTS		2,730
TOTAL		133,071
SPECIFIED	168.8	0.000



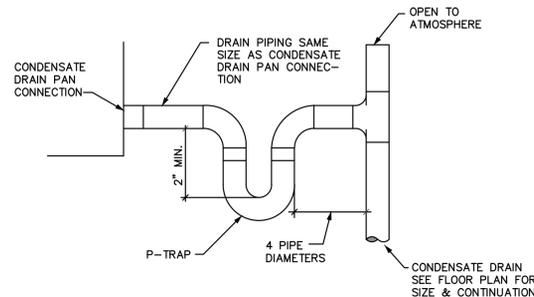
KEY NOTES

- MECHANICAL CONTRACTOR SHALL ROUTE REFRIGERANT LINES DOWN THRU ROOF OVER TO WALL DOWN TO CEILING SPACE AND OVER TO UNIT. INSTALL AND SIZE THE REFRIGERANT LINE PER THE MANUFACTURERS PUBLISHED INSTRUCTIONS. INSULATE VAPOR LINE WITH 3/4" WALL PRE FORMED INSULATION EQUAL TO ARMAFLEX. COVER ALL INSULATION EXPOSED TO THE WEATHER WITH AN ALUMINUM WEATHER JACKET
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT-MOUNT WITHIN 48"-54" A.F.F.
- CONTRACTOR SHALL FIELD ROUTE 3/4" "M" DRAIN LINE TO RESTROOM ROOM B118. SLOPE 1/8" PER FOOT. ROUTE 3/4" DRAIN LINE IN CEILING AND DOWN IN WALL TO LAV TAILPIECE. PROVIDE CODE APPROVED AIR GAP FITTING.
- MECH. CONTRACTOR SHALL MOUNT IN DOOR UNITS IN ROOM SPACE AS REQUIRED BY CODE AND MANUFACTURER'S.
- CONTRACTOR SHALL MOUNT OUT DOOR UNIT ON ROOF COORDINATE WITH BUILDING MANGER AND ARCHITECT.
- ROUTE REFRIGERANT LINES AS REQUIRED IN CEILING SPACE AND IN COLUMN.
- TATE PERFORATED PANELS
- UNIT IS TOP RETURN.
- UNIT IS DOWNFLOW, SUPPLY COOL AIR BELOW RAISED PLATFORM.

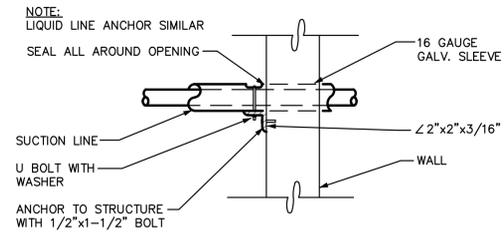
INSTALL CONDENSING UNIT IN ACCORDANCE WITH MANUFACTURER'S MINIMUM CLEARANCE REQUIREMENTS.



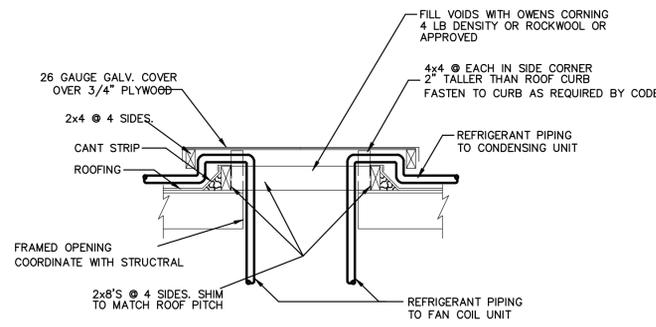
CONDENSING UNIT DETAIL
NOT TO SCALE



COND. PIPING AT UNIT DETAIL
NOT TO SCALE



REFRIGERANT PIPE SLEEVE ANCHOR THRU WALL DETAIL
NOT TO SCALE



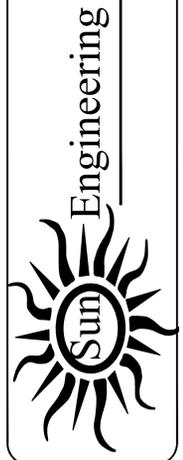
REFRIGERANT PIPING UP THRU ROOF DETAIL
NOT TO SCALE

GENERAL NOTES

- PRIOR TO ANY TENANT OR BUILDING CONSTRUCTION, THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE TO IDENTIFY ANY CONFLICTS WITH THE EXISTING CONDITIONS OR NEW DESIGN WORK SHOWN ON THESE DRAWINGS, AND ANY DIFFICULTIES WITH EXISTING CONDITIONS NOTED AND INCLUDED IN THIS BID.
- COORDINATE ALL SYSTEMS WITH OTHER TRADES TO MINIMIZE INTERFERENCES.
- PATCH ALL SURFACES DAMAGED BY THIS REMODEL TO MATCH REMODELED.
- THERMOSTAT/TEMPERATURE SENSOR MOUNTING HEIGHT TO BE 48" AFF.
- ALL NEW INSULATION AND INSULATION ADHESIVE SHALL COMPLY WITH NFPA-90A REQUIREMENTS FOR 25 OR LESS FLAME SPREAD RATING AND 50 OR LESS SMOKE SPREAD.
- THE DRAWINGS ARE GENERALLY DIAGRAMMATIC, AND ARE INTENDED TO CONVEY SCOPE OF WORK AND TO INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, DUCTS AND PIPING. THE DRAWINGS ARE NOT INTENDED TO SHOW EVERY OFFSET OR FITTINGS OR STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED DURING INSTALLATION OF WORK. DO NOT SCALE DRAWINGS. THE LOCATION OF ALL DUCTWORK, PIPING, EQUIPMENT AND RELATED ITEMS SHALL BE VERIFIED IN THE FIELD PRIOR TO FABRICATION.
- ALL MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THEN 25 AND A SMOKE-DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH THE TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS, (MCC 602.2.1.1).

THIS DRAWING IS THE PROPERTY OF SUN ENGINEERING. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUCH USE. ANY CHANGES TO THE ORIGINAL DRAWINGS ARE TO BE MADE BY THE ENGINEER OF RECORD. REPRODUCTION OR PUBLICATIONS BY ANY METHOD IS NOT PERMITTED WITHOUT THE CONSENT OF SUN ENGINEERING.

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Job No.	16014
Drawn By	
Checked By	
Date	8/11/2016
File Name	
Revised	

911 CALL CENTER PROJECT
POLICE HEADQUARTERS
LAKE HAVASU CITY, ARIZONA
NEW "IT" ROOM LAYOUT

Sheet Number
M2