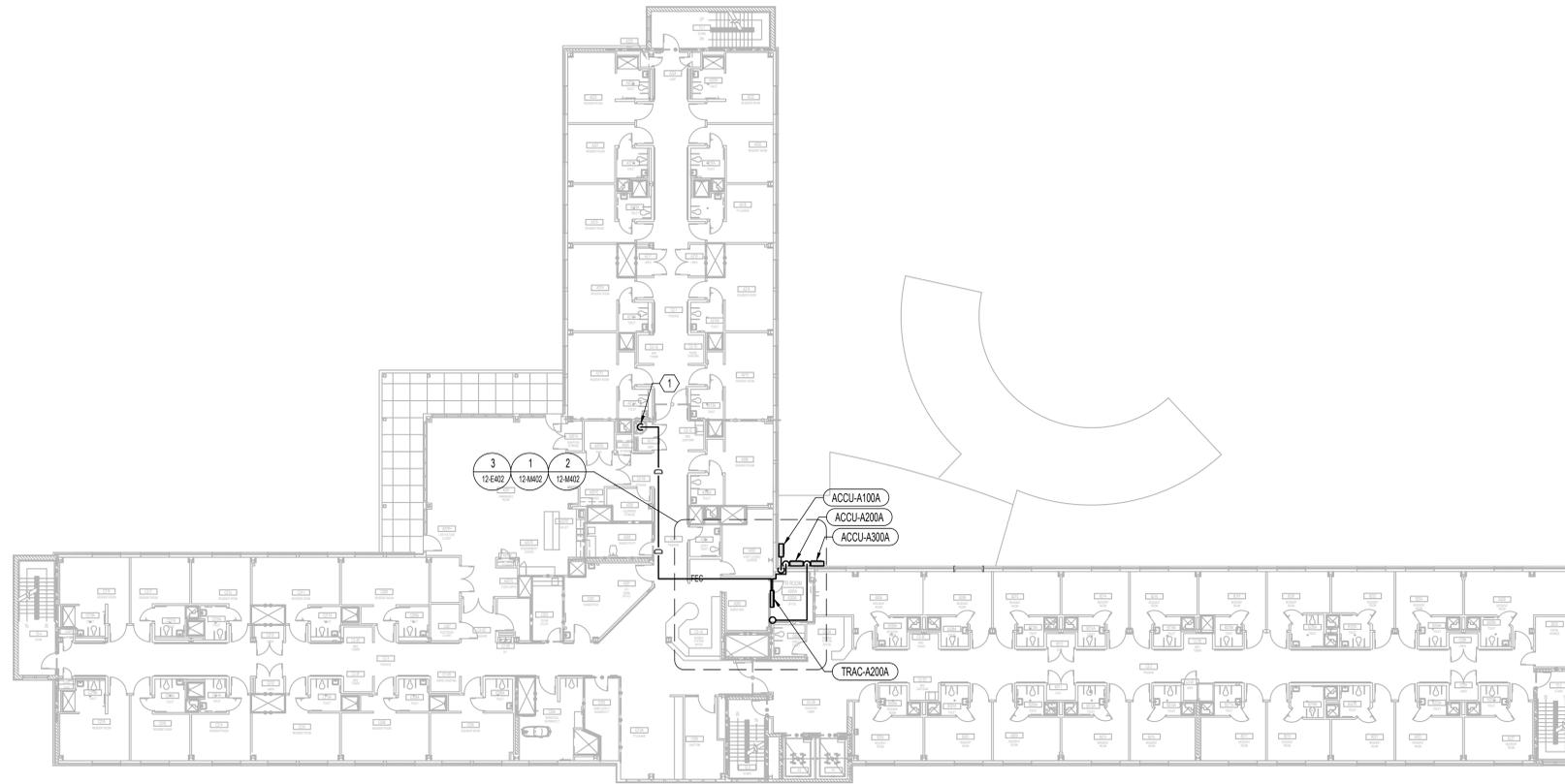


**MECHANICAL GENERAL NOTES**

- A. SEE ENLARGED TELECOMMUNICATION ROOM MECHANICAL PLANS PER CIRCLE TAG DESIGNATIONS.
- B. SEE COMBINED OVERALL FLOOR AND ROOF PLANS FOR SPLIT SYSTEM AIR COOLED CONDENSING UNIT (ACCU) LOCATIONS AND PIPING ROUTES.

**(X) MECHANICAL KEY NOTES**

- 1. NEW 3/4" CONDENSATE DRAIN PIPING DOWN. TERMINATE 6" ABOVE MOP SINK.



**1 MECHANICAL - BUILDING 12 - SECOND FLOOR - OVERALL**  
1/8"=1'-0"

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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
100% CONSTRUCTION DOCUMENTS SUBMISSION	03/14/2022
95% CONSTRUCTION DEVELOPMENT SUBMISSION	02/10/2022
65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

BANCROFT ARCHITECTS + ENGINEERS  
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BAE PROJECT NO. 18-121

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09/02/2022

**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

**Drawing Title**  
MECHANICAL - BUILDING 12 - SECOND FLOOR - OVERALL

Approved: Project Director

**Phase**  
CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

**Project Title**  
EHRM INFRASTRUCTURE UPGRADES

**Location**  
DES MOINES, IOWA

Issue Date: 09/02/2022  
Checked: DG  
Drawn: IL

**Project Number**  
636A6-21-101

**Building Number**  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

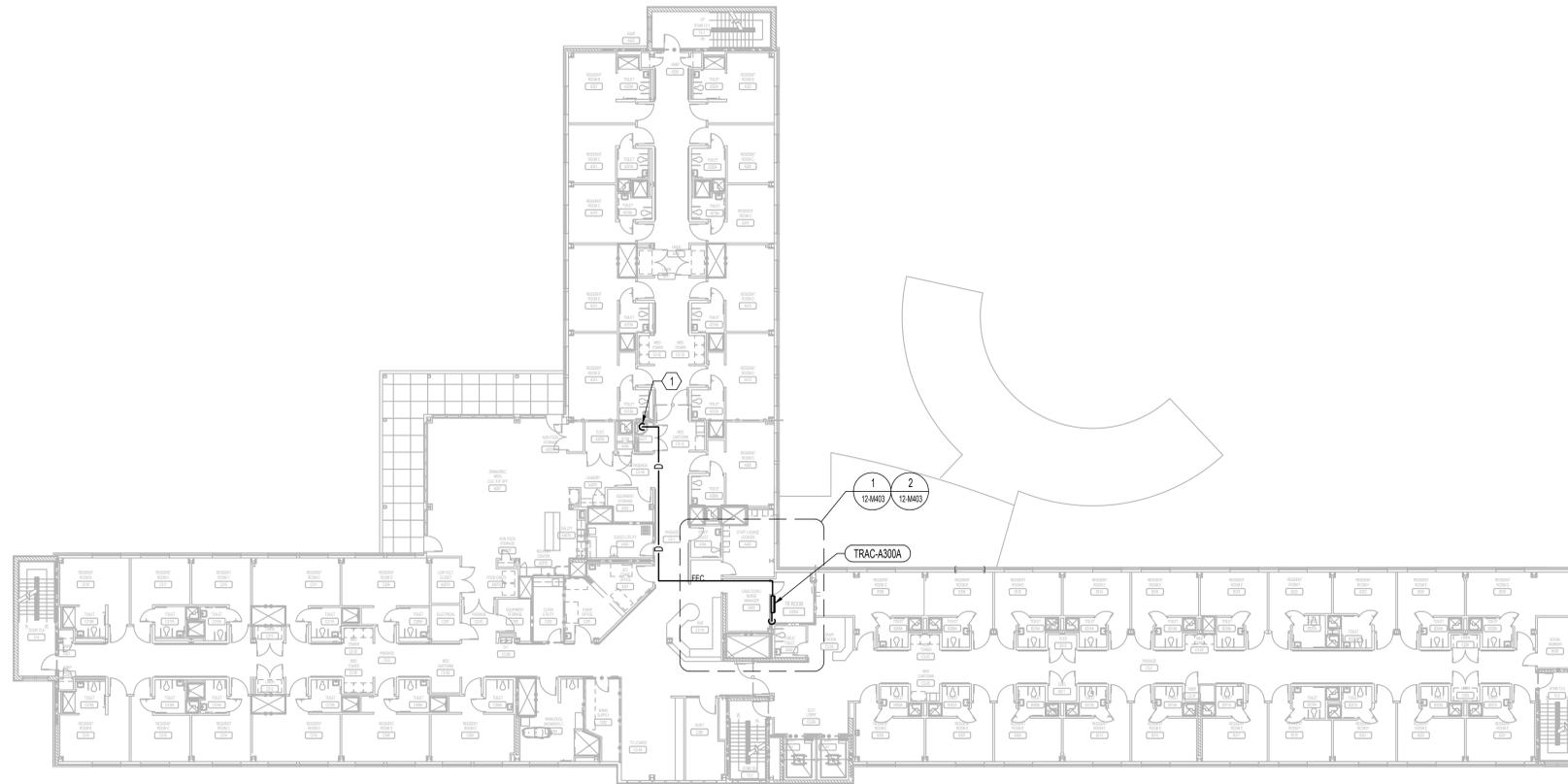
**Drawing Number**  
12-M102

**MECHANICAL GENERAL NOTES**

- A. SEE ENLARGED TELECOMMUNICATION ROOM MECHANICAL PLANS PER CIRCLE TAG DESIGNATIONS.
- B. SEE COMBINED OVERALL FLOOR AND ROOF PLANS FOR SPLIT SYSTEM AIR COOLED CONDENSING UNIT (ACCU) LOCATIONS AND PIPING ROUTES.

**MECHANICAL KEY NOTES**

- 1. NEW 3/4" CONDENSATE DRAIN PIPING DOWN. TERMINATE 6" ABOVE MOP SINK.



**MECHANICAL - BUILDING 12 - THIRD FLOOR - OVERALL**  
1/16"=1'-0"

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ISSUE FOR BID	09/02/2022
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FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
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95% CONSTRUCTION DEVELOPMENT SUBMISSION	02/10/2022
65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

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12/09/2022  
Paul Hamid  
09/02/2022

Office of  
Construction  
and Facilities  
Management

**VA** U.S. Department  
of Veterans Affairs

Drawing Title  
**MECHANICAL - BUILDING 12 - THIRD  
FLOOR - OVERALL**

Approved: Project Director

Phase  
**CONSTRUCTION  
DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE  
UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
DG

Drawn  
IL

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10,  
11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**12-M103**

A

B

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**MECHANICAL DEMOLITION KEY NOTES**

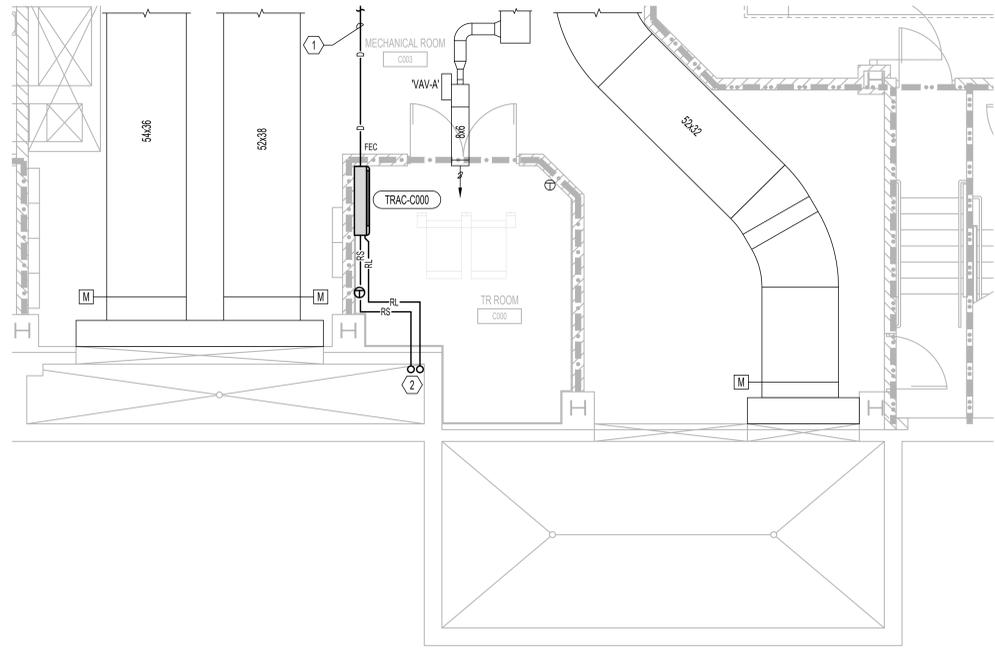
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**MECHANICAL GENERAL NOTES**

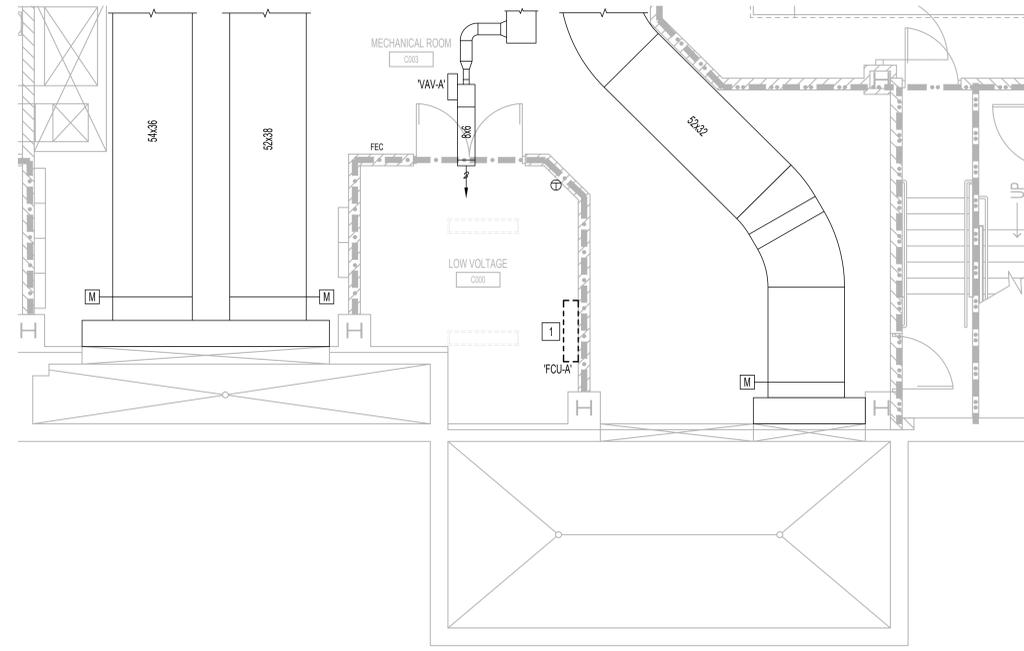
- A. CLEAN AND SEAL ALL EXISTING DUCTWORK THAT WILL BE REUSED.
- B. PROVIDE BALANCING DAMPER AT ALL SUPPLY DIFFUSER AND RETURN/EXHAUST GRILLES WHETHER OR NOT SHOWN ON DRAWINGS.
- C. COORDINATE CEILING MOUNTED GRILLES AND DIFFUSERS WITH SPRINKLER HEADS, LIGHTING FIXTURES AND ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL CEILING GRID DRAWINGS FOR LOCATIONS.
- D. CEILING ACCESS SHALL BE PROVIDED FOR ALL HVAC EQUIPMENT AND COMPONENTS LOCATED ABOVE THE CEILING THAT REQUIRE OPERATING, CLEANING, SERVICING, MAINTENANCE, AND CALIBRATION.
- E. DURING CONSTRUCTION, PROVIDE TEMPORARY CLOSURES ON ALL SUPPLY AND RETURN AIR DUCT OPENINGS BY SEALING WITH A DISPOSABLE POLYETHYLENE SHEETING TO PREVENT CONSTRUCTION DUST FROM ENTERING DUCTWORK SYSTEM OR AIR TERMINAL UNITS.
- F. CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL INSULATION AT EXISTING SHEET METAL DUCTWORK WHICH BECOMES DAMAGED DURING CONSTRUCTION ACTIVITIES AND SHALL REPAIR OR REPLACE ANY INSULATION AT NEW AND OLD DUCT CONNECTIONS AND ANY MISSING OR DAMAGED INSULATION ON REUSED OR EXISTING DUCTWORK.
- G. CONTRACTOR TO REWORK AND REROUTE EXISTING DUCTWORK AND PIPING TO ACCOMMODATE NEW CABLE TRAY. REFER ARCHITECTURAL DRAWINGS FOR EXACT ROUTING.

**MECHANICAL KEY NOTES**

- 1. NEW 3/4" CONDENSATE DRAIN PIPING TO NEAREST FLOOR DRAIN. REFER TO 12-M100 FOR EXACT LOCATION.
- 2. NEW REFRIGERANT LIQUID AND SUCTION PIPING UP TO 'ACCU-C000'. REFER TO 12-M101 FOR EXACT LOCATION.



**2 MECHANICAL - BUILDING 12 - ROOM C000 - NEW WORK**  
1/4"=1'-0"



**1 MECHANICAL - BUILDING 12 - ROOM C000 - DEMOLITION**  
1/4"=1'-0"

K:\COC\_PROJECTS\101815-121\_36C26319D0044\_VSN.23\_IDIQ (North Dakota + Iowa)\636A6-21-101 - EHRM Infrastructure Upgrades - Des Moines, IA\ADD\_Design\0222\_Drawing\0222\AutoCAD\636A6-21-101\_12-M400.dwg  
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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
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65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

CONSULTANT
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**ARCHITECT/ENGINEER OF RECORD**

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BANCROFT ARCHITECTS + ENGINEERS  
VA CONTRACT NO. 36C26319D0044  
www.bancroft-ae.com  
BAE PROJECT NO. 18-121

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Paul Hamid  
09/02/2022

**Office of Construction and Facilities Management**

U.S. Department of Veterans Affairs

Drawing Title  
**MECHANICAL - ENLARGED PLAN - BASEMENT**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
09/02/2022

Checked  
DG

Drawn  
IL

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**12-M400**

**MECHANICAL DEMOLITION KEY NOTES**

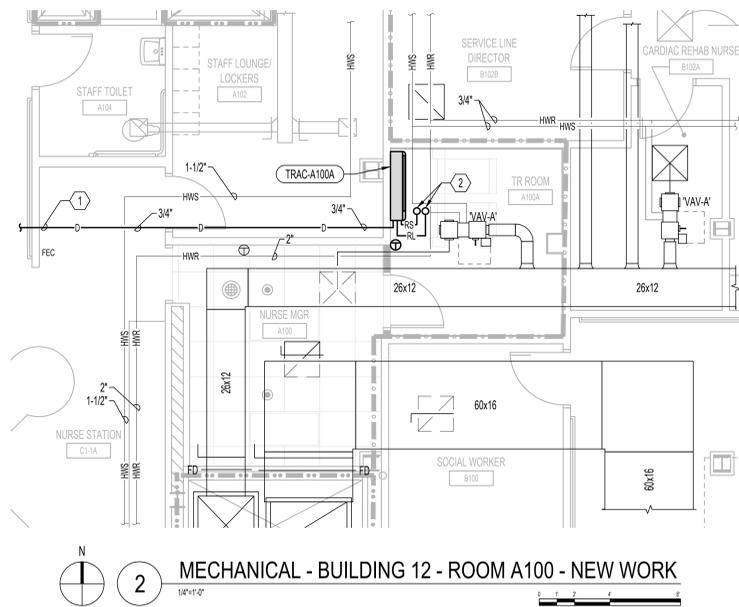
- 1. REMOVE DUCTWORK, INSULATION, DIFFUSERS, GRILLES, HANGERS, ETC. SHOWN DASHED AND CAP AT MAIN.

**MECHANICAL GENERAL NOTES**

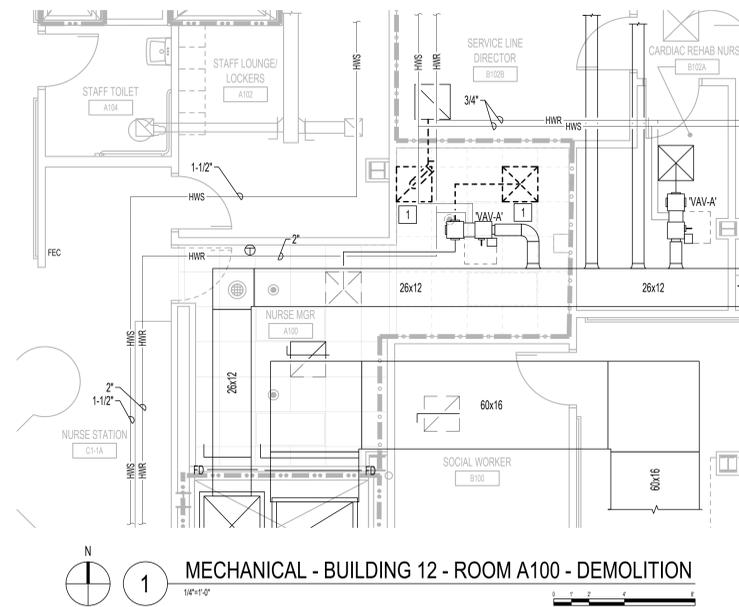
- A. CLEAN AND SEAL ALL EXISTING DUCTWORK THAT WILL BE REUSED.
- B. PROVIDE BALANCING DAMPER AT ALL SUPPLY DIFFUSER AND RETURN EXHAUST GRILLES WHETHER OR NOT SHOWN ON DRAWINGS.
- C. COORDINATE CEILING MOUNTED GRILLES AND DIFFUSERS WITH SPRINKLER HEADS, LIGHTING FIXTURES AND ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL CEILING GRID DRAWINGS FOR LOCATIONS.
- D. CEILING ACCESS SHALL BE PROVIDED FOR ALL HVAC EQUIPMENT AND COMPONENTS LOCATED ABOVE THE CEILING THAT REQUIRE OPERATING, CLEANING, SERVICING, MAINTENANCE, AND CALIBRATION.
- E. DURING CONSTRUCTION, PROVIDE TEMPORARY CLOSURES ON ALL SUPPLY AND RETURN AIR DUCT OPENINGS BY SEALING WITH A DISPOSABLE POLYETHYLENE SHEETING TO PREVENT CONSTRUCTION DUST FROM ENTERING DUCTWORK SYSTEM OR AIR TERMINAL UNITS.
- F. CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL INSULATION AT EXISTING SHEET METAL DUCTWORK WHICH BECOMES DAMAGED DURING CONSTRUCTION ACTIVITIES AND SHALL REPAIR OR REPLACE ANY INSULATION AT NEW AND OLD DUCT CONNECTIONS AND ANY MISSING OR DAMAGED INSULATION ON REUSED OR EXISTING DUCTWORK.
- G. CONTRACTOR TO REWORK AND ROUTE EXISTING DUCTWORK AND PIPING TO ACCOMMODATE NEW CABLE TRAY. REFER ARCHITECTURAL DRAWINGS FOR EXACT ROUTING.

**MECHANICAL KEY NOTES**

- 1. NEW 3/4" CONDENSATE DRAIN PIPING TO BE ROUTED TO MOP SINK IN ROOM A111. REFER TO 12-M401 FOR EXACT LOCATION AND ROUTING.
- 2. NEW REFRIGERANT PIPING UP TO 'ACCU-A100A' ON ROOF ABOVE.



**2 MECHANICAL - BUILDING 12 - ROOM A100 - NEW WORK**  
1/4" = 1'-0"



**1 MECHANICAL - BUILDING 12 - ROOM A100 - DEMOLITION**  
1/4" = 1'-0"

1 2 3 4 5 6 7 8 9 10

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ISSUE FOR BID	09/02/2022
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FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
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100% CONSTRUCTION DOCUMENTS SUBMISSION	03/14/2022
95% CONSTRUCTION DEVELOPMENT SUBMISSION	02/10/2022
65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

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BAE PROJECT NO. 18-121

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10/2/2022

*Paul Hamid*  
09/02/2022

Office of  
Construction  
and Facilities  
Management

VA U.S. Department  
of Veterans Affairs

Drawing Title  
**MECHANICAL - ENLARGED PLAN -  
FIRST FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION  
DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE  
UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
**DG**

Drawn  
**IL**

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10,  
11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**12-M401**



E. CONTRACTOR SHALL PERFORM AN AIRFLOW TEST ON ALL OUTLETS AND INLETS SERVING EXISTING TR SPACES FROM THE EXISTING AIR HANDLING UNITS AND REPORT TO ARCHITECT AND ENGINEER FOR REVIEW.

**MECHANICAL DEMOLITION KEY NOTES**

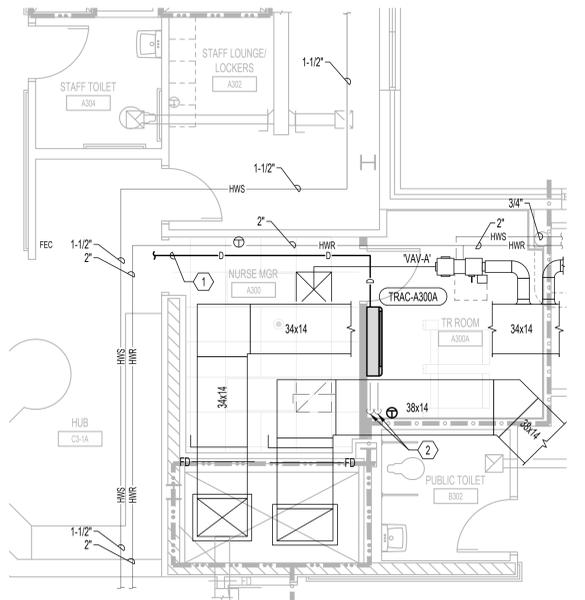
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**MECHANICAL GENERAL NOTES**

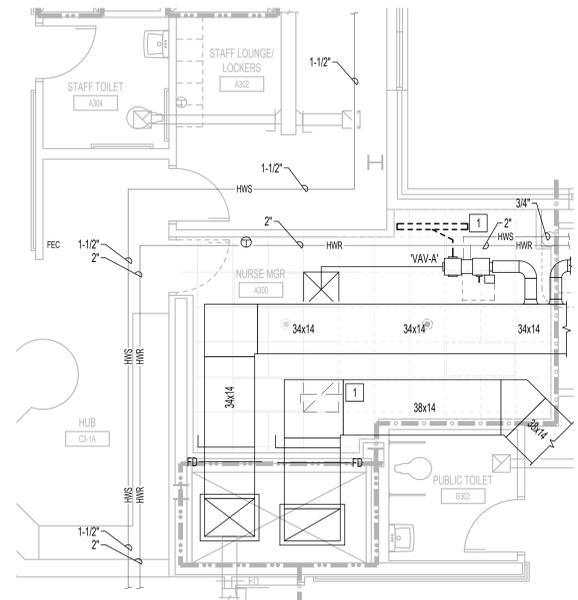
- A. CLEAN AND SEAL ALL EXISTING DUCTWORK THAT WILL BE REUSED.
- B. PROVIDE BALANCING DAMPER AT ALL SUPPLY DIFFUSER AND RETURN EXHAUST GRILLES WHETHER OR NOT SHOWN ON DRAWINGS.
- C. COORDINATE CEILING MOUNTED GRILLES AND DIFFUSERS WITH SPRINKLER HEADS, LIGHTING FIXTURES AND ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL CEILING GRID DRAWINGS FOR LOCATIONS.
- D. CEILING ACCESS SHALL BE PROVIDED FOR ALL HVAC EQUIPMENT AND COMPONENTS LOCATED ABOVE THE CEILING THAT REQUIRE OPERATING, CLEANING, SERVICING, MAINTENANCE, AND CALIBRATION.
- E. DURING CONSTRUCTION, PROVIDE TEMPORARY CLOSURES ON ALL SUPPLY AND RETURN AIR DUCT OPENINGS BY SEALING WITH A DISPOSABLE POLYETHYLENE SHEETING TO PREVENT CONSTRUCTION DUST FROM ENTERING DUCTWORK SYSTEM OR AIR TERMINAL UNITS.
- F. CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL INSULATION AT EXISTING SHEET METAL DUCTWORK WHICH BECOMES DAMAGED DURING CONSTRUCTION ACTIVITIES AND SHALL REPAIR OR REPLACE ANY INSULATION AT NEW AND OLD DUCT CONNECTIONS AND ANY MISSING OR DAMAGED INSULATION ON REUSED OR EXISTING DUCTWORK.
- G. CONTRACTOR TO REWORK AND REROUTE EXISTING DUCTWORK AND PIPING TO ACCOMMODATE NEW CABLE TRAY. REFER ARCHITECTURAL DRAWINGS FOR EXACT ROUTING.

**MECHANICAL KEY NOTES**

1. NEW 3/4" CONDENSATE DRAIN PIPING TO BE ROUTED TO MOP SINK IN ROOM A311. REFER TO SHEET 12-M103 FOR EXACT LOCATION.
2. NEW REFRIGERANT LIQUID AND SUCTION PIPING DOWN TO TR A200A.



**2 MECHANICAL - BUILDING 12 - ROOM A300 - NEW WORK**  
1/4"=1'-0"



**1 MECHANICAL - BUILDING 12 - ROOM A300 - DEMOLITION**  
1/4"=1'-0"

1 2 3 4 5 6 7 8 9 10

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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
100% CONSTRUCTION DOCUMENTS SUBMISSION	03/14/2022
95% CONSTRUCTION DEVELOPMENT SUBMISSION	02/10/2022
65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

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 BAE PROJECT NO. 18-121

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PAID 10/02/2022

PAID 09/02/2022

**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

Drawing Title  
**MECHANICAL - ENLARGED PLAN - THIRD FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
 DG

Drawn  
 IL

Project Number  
**636A6-21-101**

Building Number  
 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**12-M403**

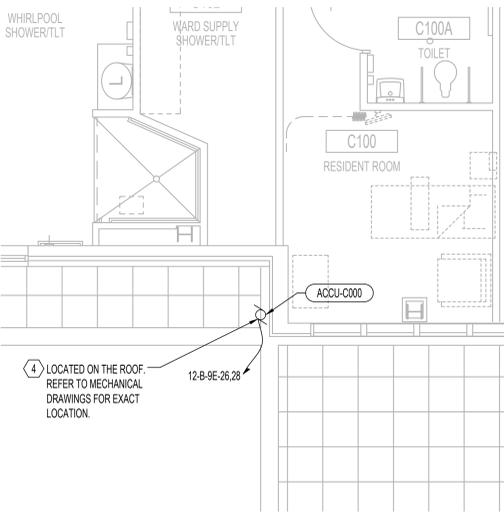
1 2 3 4 5 6 7 8 9 10

**(X) ELECTRICAL KEY NOTES**

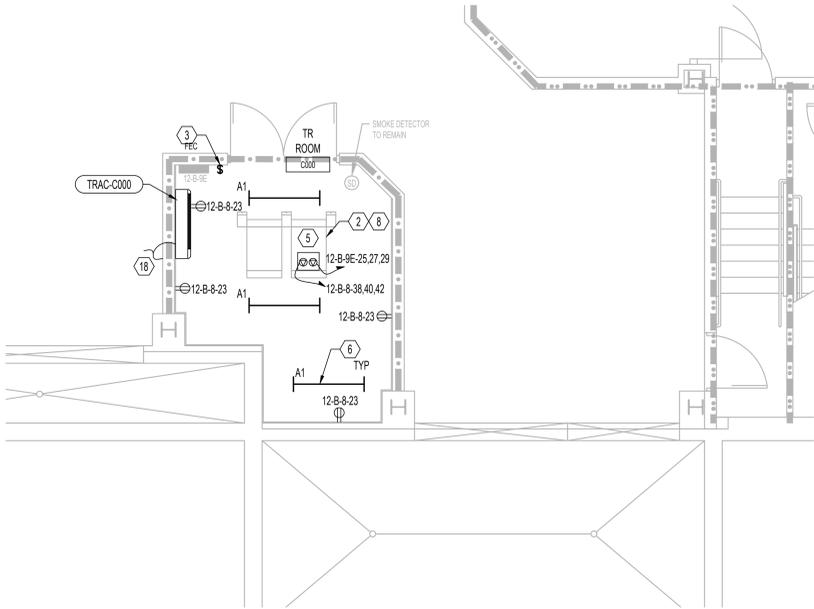
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
- ALL DATA RACK(S), LIGHTS AND RECEPTACLES SHALL REMAIN ACTIVE UNTIL NEW DATA RACKS ARE INSTALLED AND FUNCTIONING PROPERLY. ONCE NEW TR SPACE IS ACTIVE CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING EQUIPMENT WITH ALL ASSOCIATED CONDUIT AND WIRING BACK TO SOURCE. CONTRACTOR SHALL UTILIZE EXISTING CIRCUITS WHEREVER POSSIBLE.
  - CONTRACTOR SHALL PROVIDE OVERHEAD POWER DROP CORD WITH ONE (1) CRITICAL AND ONE (1) NORMAL TWIST LOCK RECEPTACLE:  
 1 RACK - (2) 208V/3P; L21-20R  
 2 RACKS - (2) 208V/3P; L21-30R  
 3 RACKS - (2) 208V/3P; 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD)  
 4 RACKS - (2) 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD) AND (2) 208V/3P; L21-20R.  
 RECEPTACLES SHALL BE 8.5 FEET AFF. COORDINATE EXACT LOCATION WITH IT DRAWINGS AND VA PRIOR TO ROUGH-IN AND INSTALLATION.
  - CONTRACTOR SHALL PROVIDE NEW LIGHT SWITCH.
  - RUN 2#10+12G IN 3/4" C TO ACCU WITH 20A/2P CIRCUIT BREAKER. DISCONNECT SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL DRAWINGS. PROVIDE WHILE IN USE WEATHER PROOF/OFCI RECEPTACLE WITHIN 25FT OF MECHANICAL UNIT. CONTRACTOR SHALL ACCOMMODATE FOR VOLTAGE DROP.
  - CONTRACTOR SHALL PROVIDE ONE (1) 5KVA UPS POWER SUPPLY PER RACK WITH NEMA 20A, L21-20P INPUT AND L21-20R OUTPUT.
  - CONTRACTOR SHALL EXTEND CRITICAL CIRCUIT TO LIGHT FIXTURE FROM DEMOLISHED TR SPACE. CONDUIT AND WIRING SHALL MATCH EXISTING.
  - IN TR SPACE WITH ONE (1) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 20A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#12+12G IN 3/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - IN TR SPACE WITH TWO (2) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 30A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#10+12G IN 3/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - IN TR SPACE WITH THREE (3) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 60A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#6+10G IN 1-1/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING TO PROVIDE NORMAL POWER TO TR RACK.
  - CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING TO PROVIDE CRITICAL POWER TO TR RACK.
  - CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL, AND DATA DEVICES. FIRE ALARM DEVICES SHALL REMAIN IN PLACE. CONTRACTOR SHALL PROPERLY COVER ANY DEVICES WHICH MAY ACTIVATE DURING CONSTRUCTION DUE TO DUST AND/OR CONTAMINANTS. ALL DEVICES ARE NOT SHOWN FOR CLARITY.
  - NEW LOCATION OF RELOCATED DEVICES. EXTEND CONDUIT AND WIRING. WIRING TYPE TO MATCH EXISTING. ALL DEVICES ARE NOT SHOWN FOR CLARITY.
  - CONTRACTOR SHALL CONNECT TO 120/208V NORMAL PANEL. PROVIDE OR UTILIZE EXISTING 20A, 1P BREAKER AND RUN 2#12+12G IN 3/4" CONDUIT AS REQUIRED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING.
  - CONTRACTOR SHALL CONNECT TO 120/208V CRITICAL PANEL. PROVIDE OR UTILIZE EXISTING 20A, 1P BREAKER AND RUN 2#12+12G IN 3/4" CONDUIT AS REQUIRED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING.
  - TELECOM ENCLOSURE: CONTRACTOR SHALL PROVIDE OVERHEAD (8.5 AFF) 120V; L5-30R POWER DROP CORD WITH (1) CRITICAL/EMERGENCY AND (1) NORMAL TWIST LOCK RECEPTACLE. IF THERE IS NO EMERGENCY POWER IN THE BUILDING, CONTRACTOR SHALL UTILIZE (2) NORMAL CIRCUITS. PROVIDE (2) 120V-30A/1P CIRCUIT BREAKER AND RUN 2#10+10G - 3/4" C TO PANELBOARD.
  - PROVIDE RACK MOUNT UPS L5-30 INPUT / L5-30 OUTPUT, 2880VA, 2RU (RACK UNIT), APC SMX3000RMLV2U OR APPROVED EQUAL.
  - INDOOR UNIT POWERED FROM ROOF MOUNTED OUTDOOR UNIT. PROVIDE POWER MANUFACTURER RECOMMENDED CONDUCTORS IN 3/4" C FOR CONNECTION TO OUTDOOR UNIT.

**GENERAL NOTES**

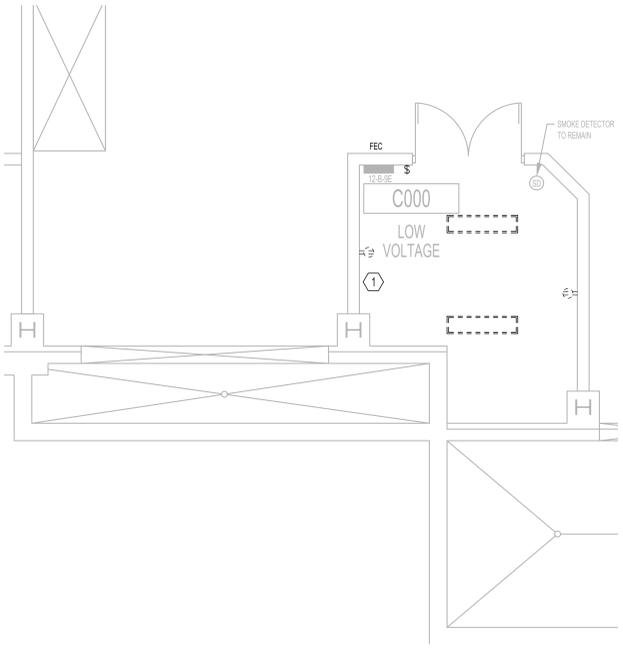
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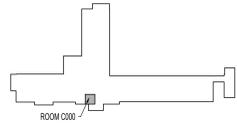
**3 ELECTRICAL - BUILDING 12 - ROOF**  
1/4"=1'-0"



**2 ELECTRICAL - BUILDING 12 - BASEMENT - PROPOSED**  
1/4"=1'-0"



**1 ELECTRICAL - BUILDING 12 - BASEMENT - DEMOLITION**  
1/4"=1'-0"



**KEY PLAN - BLDG 12 - BASEMENT**  
NTS

K:\COC\_PROJECTS\2018\18-121\_36C26319D0044\_VSN\_23\_IDIQ\_North Dakota + Iowa\3636A6-21-101 - EHRM Infrastructure Upgrades - Des Moines, IA\ADD\_Detailed\2022\_Drawing\09\09\2022\AutoCAD\3636A6-21-101\_12-E400.dwg 8/16/2022 1:40:57 PM

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
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Revisions:	Date:

**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

BANCROFT ARCHITECTS + ENGINEERS  
VA CONTRACT NO. 36C26319D0044

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Northbrook, IL 60062  
T: 847.952.9362  
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BAE PROJECT NO. 18-121

**STAMP**

CARLOS CIFUENTES  
No. 89367  
STATE OF IOWA  
PROFESSIONAL ENGINEER

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**ELECTRICAL - ENLARGED PLAN - BASEMENT**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
**CC**

Drawn  
**FK**

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**12-E400**

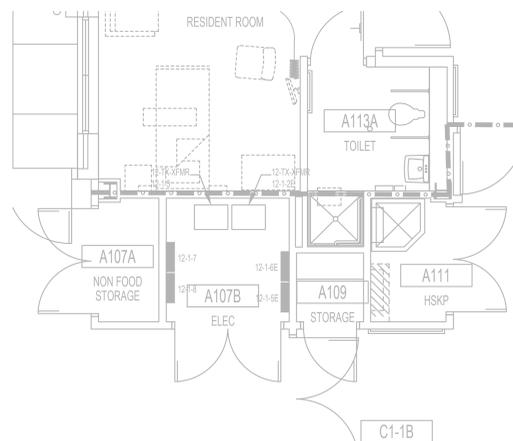
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**(X) ELECTRICAL KEY NOTES**

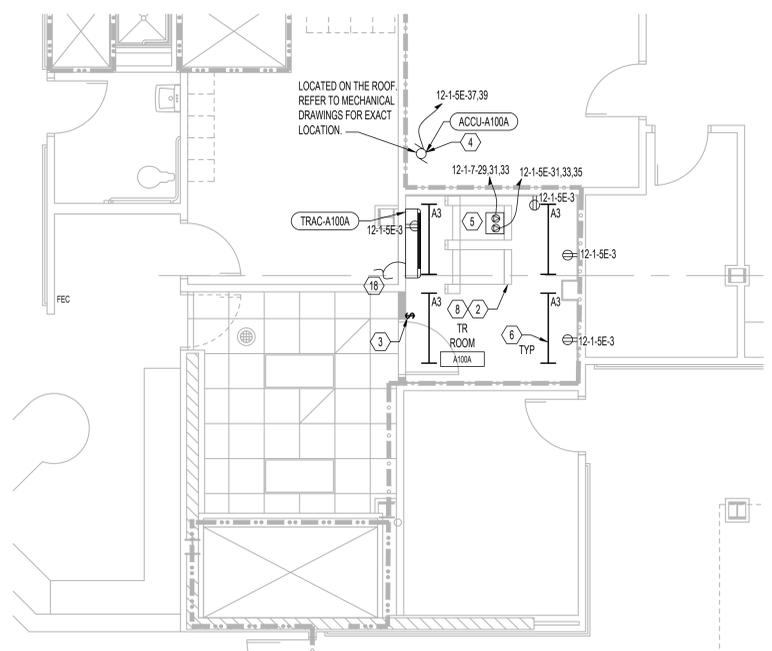
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    - 2 RACKS - (2) 208V/3P; L21-30R
    - 3 RACKS - (2) 208V/3P; 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD)
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**GENERAL NOTES**

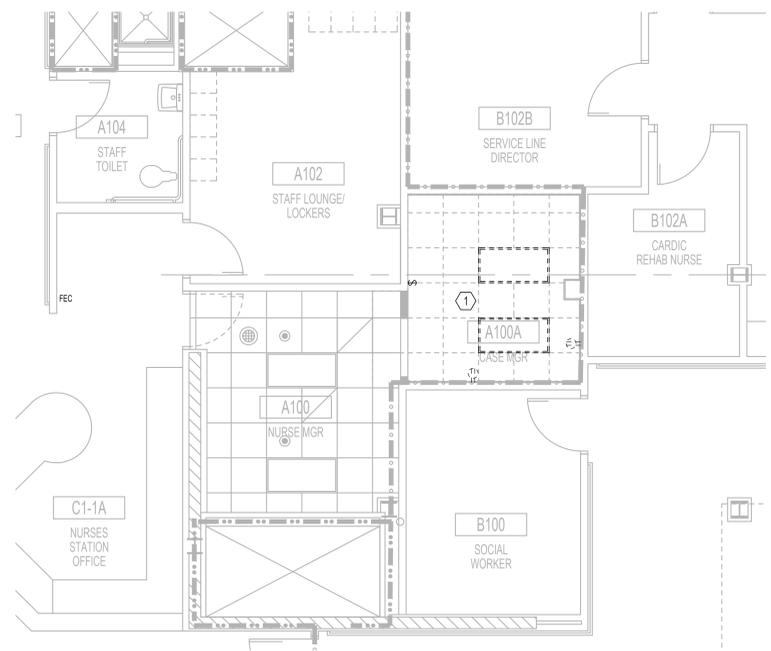
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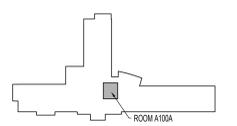
**3 ELECTRICAL - BUILDING 12 - FIRST FLOOR - ELEC RM A107B**



**2 ELECTRICAL - BUILDING 12 - FIRST FLOOR - PROPOSED**



**1 ELECTRICAL - BUILDING 12 - FIRST FLOOR - DEMOLITION**



**KEY PLAN - BLDG 12 - FIRST FLOOR**

K:\COC\_PROJECTS\2018\12-13626319D0044\15N\23 IDIQ North Dakota - Iowa\336A6-21-101 - EHRM Infrastructure Upgrades - Des Moines, IA\Mod\_Design\2022\_Drawing\09\02\2022\AutoCAD\336A6-21-101\_12-E001.dwg 8/16/2022 1:40:46 PM

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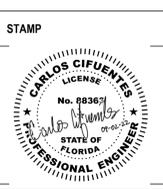
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BAE PROJECT NO. 18-121



**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

Drawing Title  
**ELECTRICAL - ENLARGED PLAN - FIRST FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title <b>EHRM INFRASTRUCTURE UPGRADES</b>	Project Number <b>636A6-21-101</b>
Location <b>DES MOINES, IOWA</b>	Building Number 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28
Issue Date <b>09/02/2022</b>	Checked <b>cc</b>
Drawn <b>FK</b>	Drawing Number <b>12-E401</b>

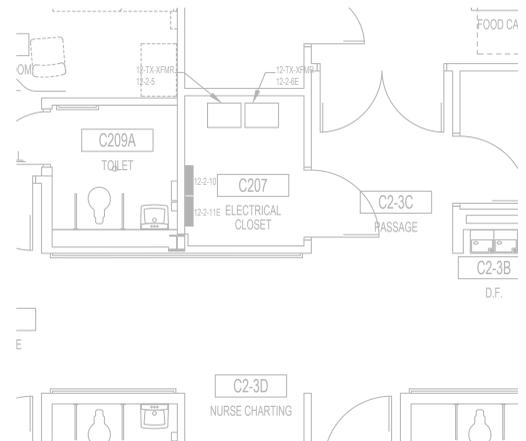
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**(X) ELECTRICAL KEY NOTES**

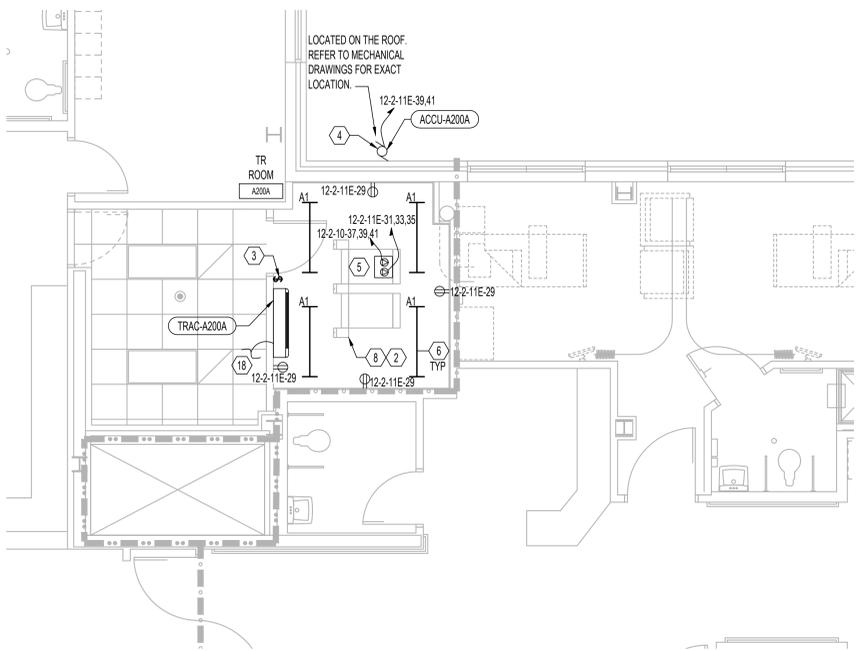
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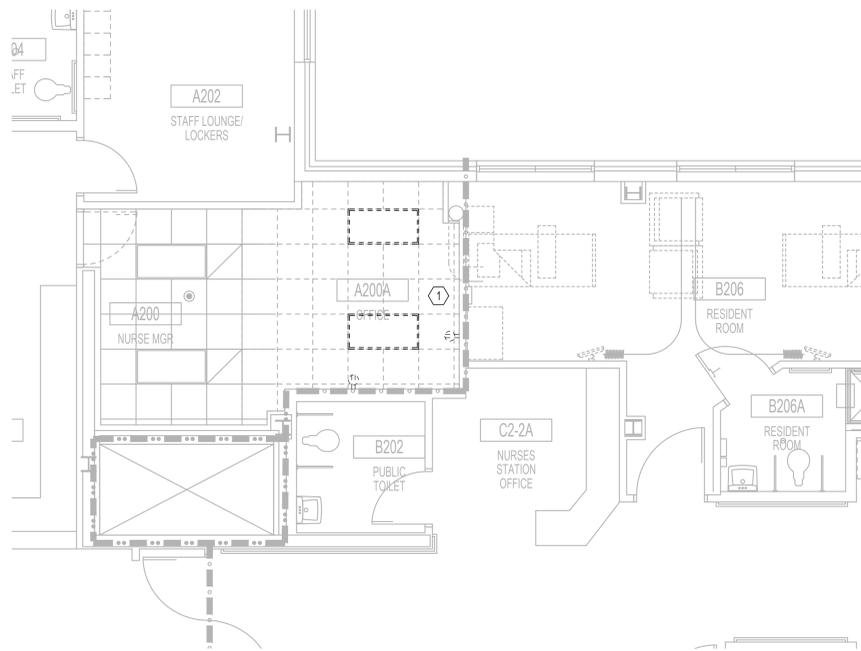
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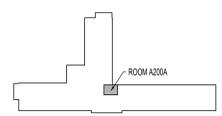
**3 ELECTRICAL - BUILDING 12 - SECOND FLOOR - ELEC RM C207**  
1/4"=1'-0"



**2 ELECTRICAL - BUILDING 12 - SECOND FLOOR - PROPOSED**  
1/4"=1'-0"



**1 ELECTRICAL - BUILDING 12 - SECOND FLOOR - DEMOLITION**  
1/4"=1'-0"



**KEY PLAN - BLDG 12 - SECOND FLOOR**  
NTS

K:\COC\_PROJECTS\2018\18-121\_36C26319D0044\_VSN\_23\_IDIQ (North Dakota) - Iowa\3636A6-21-101 - EHRM Infrastructure Upgrades - Des Moines, IA\Mod\_Design\2022\Drawings\CONSTRUCTION\AutoCAD\3636A6-21-101\_12-E402.dwg  
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CONSULTANT
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BAE PROJECT NO. 18-121

**STAMP**

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STATE OF IOWA  
PROFESSIONAL ENGINEER

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**ELECTRICAL - ENLARGED PLAN - SECOND FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

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Issue Date <b>09/02/2022</b>	Checked <b>CC</b>
Drawn <b>FK</b>	Drawing Number <b>12-E402</b>

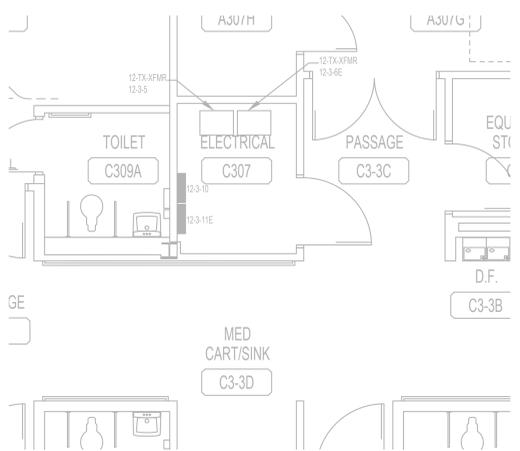
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**(X) ELECTRICAL KEY NOTES**

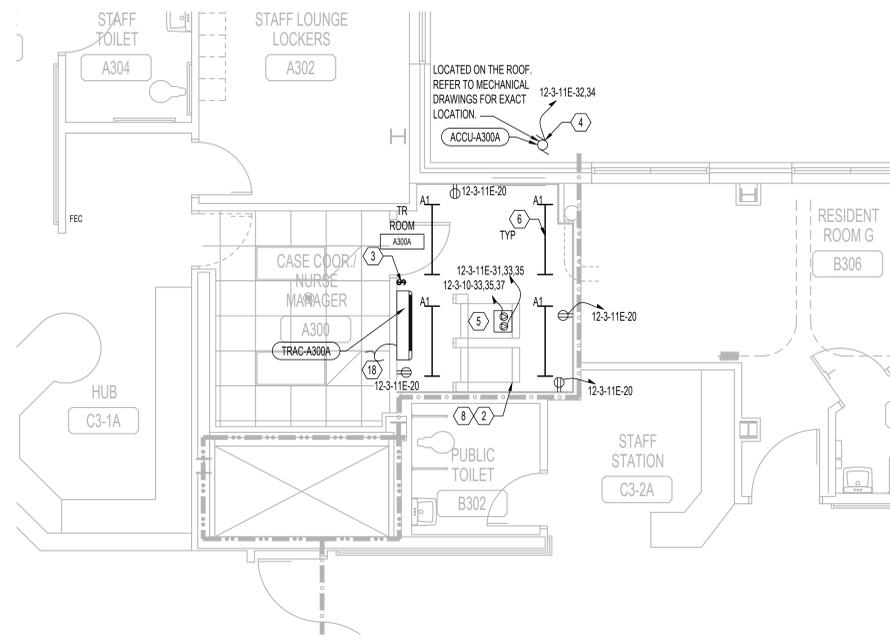
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
- ALL DATA RACK(S), LIGHTS AND RECEPTACLES SHALL REMAIN ACTIVE UNTIL NEW DATA RACKS ARE INSTALLED AND FUNCTIONING PROPERLY. ONCE NEW TR SPACE IS ACTIVE CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING EQUIPMENT WITH ALL ASSOCIATED CONDUIT AND WIRING BACK TO SOURCE. CONTRACTOR SHALL UTILIZE EXISTING CIRCUITS WHEREVER POSSIBLE.
  - CONTRACTOR SHALL PROVIDE OVERHEAD POWER DROP CORD WITH ONE (1) CRITICAL AND ONE (1) NORMAL TWIST LOCK RECEPTACLE:  
 1 RACK - (2) 208V/3P; L21-20R  
 2 RACKS - (2) 208V/3P; L21-30R  
 3 RACKS - (2) 208V/3P; 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD)  
 4 RACKS - (2) 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD) AND (2) 208V/3P; L21-20R.  
 RECEPTACLES SHALL BE 8.5 FEET AFF. COORDINATE EXACT LOCATION WITH IT DRAWINGS AND VA PRIOR TO ROUGH-IN AND INSTALLATION.
  - CONTRACTOR SHALL PROVIDE NEW LIGHT SWITCH.
  - RUN 2#10+12G IN 3/4" C TO ACCU WITH 20A/2P CIRCUIT BREAKER. DISCONNECT SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL DRAWINGS. PROVIDE WHILE IN USE WEATHER PROOF/OFCI RECEPTACLE WITHIN 25FT OF MECHANICAL UNIT. CONTRACTOR SHALL ACCOMMODATE FOR VOLTAGE DROP.
  - CONTRACTOR SHALL PROVIDE ONE (1) 5KVA UPS POWER SUPPLY PER RACK WITH NEMA 20A, L21-20P INPUT AND L21-20R OUTPUT.
  - CONTRACTOR SHALL EXTEND CRITICAL CIRCUIT TO LIGHT FIXTURE FROM DEMOLISHED TR SPACE. CONDUIT AND WIRING SHALL MATCH EXISTING.
  - IN TR SPACE WITH ONE (1) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 20A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#12+12G IN 3/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - IN TR SPACE WITH TWO (2) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 30A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#10+12G IN 3/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - IN TR SPACE WITH THREE (3) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 60A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#6+10G IN 1-1/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING TO PROVIDE NORMAL POWER TO TR RACK.
  - CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING TO PROVIDE CRITICAL POWER TO TR RACK.
  - CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL, AND DATA DEVICES. FIRE ALARM DEVICES SHALL REMAIN IN PLACE. CONTRACTOR SHALL PROPERLY COVER ANY DEVICES WHICH MAY ACTIVATE DURING CONSTRUCTION DUE TO DUST AND/OR CONTAMINANTS. ALL DEVICES ARE NOT SHOWN FOR CLARITY.
  - NEW LOCATION OF RELOCATED DEVICES. EXTEND CONDUIT AND WIRING. WIRING TYPE TO MATCH EXISTING. ALL DEVICES ARE NOT SHOWN FOR CLARITY.
  - CONTRACTOR SHALL CONNECT TO 120/208V NORMAL PANEL. PROVIDE OR UTILIZE EXISTING 20A, 1P BREAKER AND RUN 2#12+12G IN 3/4" CONDUIT AS REQUIRED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING.
  - CONTRACTOR SHALL CONNECT TO 120/208V CRITICAL PANEL. PROVIDE OR UTILIZE EXISTING 20A, 1P BREAKER AND RUN 2#12+12G IN 3/4" CONDUIT AS REQUIRED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING.
  - TELECOM ENCLOSURE: CONTRACTOR SHALL PROVIDE OVERHEAD (8.5 AFF) 120V; L5-30R POWER DROP CORD WITH (1) CRITICAL/EMERGENCY AND (1) NORMAL TWIST LOCK RECEPTACLE. IF THERE IS NO EMERGENCY POWER IN THE BUILDING, CONTRACTOR SHALL UTILIZE (2) NORMAL CIRCUITS. PROVIDE (2) 120V-30A/1P CIRCUIT BREAKER AND RUN 2#10+10G - 3/4" C TO PANELBOARD.
  - PROVIDE RACK MOUNT UPS L5-30 INPUT / L5-30 OUTPUT, 2880VA, 2RU (RACK UNIT), APC SMX3000RMLV2U OR APPROVED EQUAL.
  - INDOOR UNIT POWERED FROM ROOF MOUNTED OUTDOOR UNIT. PROVIDE POWER MANUFACTURER RECOMMENDED CONDUCTORS IN 3/4" C FOR CONNECTION TO OUTDOOR UNIT.

**GENERAL NOTES**

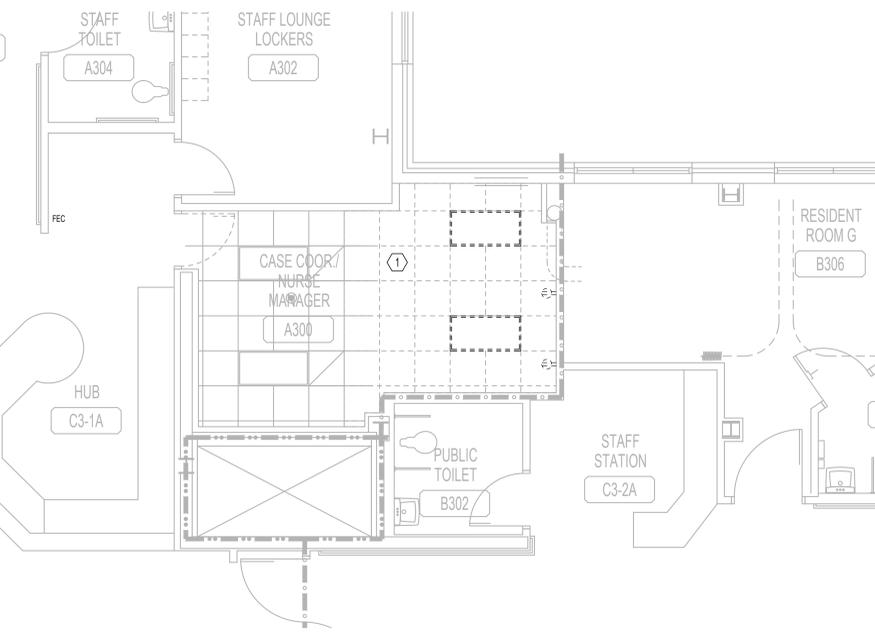
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
- REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR PLANS. REFER TO TECHNOLOGY, MECHANICAL, AND FIRE PROTECTION DRAWINGS FOR EXACT LOCATION OF EQUIPMENT.
  - REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
  - REFER TO ONE-LINE FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
  - ALL SERVICE INTERRUPTIONS TO THE EXISTING FACILITY MUST BE SCHEDULED AT LEAST TWO WEEKS IN ADVANCE AND BE KEPT TO A MINIMUM. COORDINATE ALL POTENTIAL DISTRIBUTIONS AND OUTAGE REQUIREMENTS WITH THE VA. ALL DISTRIBUTIONS MUST BE COORDINATED AND APPROVED BY THE COR.
  - ALL DEVICES BEING DEMOLISHED WITH ASSOCIATED CONDUIT AND WIRING SHALL BE REMOVED BACK TO SOURCE. PROVIDE NEW PANEL SCHEDULE DIRECTORY AND LABEL ALL DEMOLISHED CIRCUIT BREAKERS AS "SPARE" AND TURN OFF.
  - PATCH AND PAINT WALL AS REQUIRED WHERE DEVICES, BOXES, ETC ARE REMOVED OR REWORKED.
  - CONTRACTOR SHALL EXTEND CONDUIT AND WIRING TO NEW LOCATION OF TR SPACE. WIRING AND CONDUIT SIZE TO MATCH EXISTING.
  - COORDINATE EXACT LOCATION OF DEVICES WITH IT CONTRACTOR PRIOR TO INSTALLATION.
  - CONTRACTOR SHALL CREATE OPENING TO PROPERLY INSTALL DUPLEX RECEPTACLE(S). PROVIDE FIRESTOP SUCH AS EZ-PATH OR APPROVED EQUAL FOR ANY OPENINGS.
  - ALL DUPLEX AND LIGHTING CIRCUITS SHALL BE 2#12+12EG - 3/4" C, UON.
  - ALL LIGHT FIXTURES IN TR SPACES SHALL BE SUSPENDED 11'-0" AFF. CONTRACTOR SHALL FIELD COORDINATE LIGHT FIXTURES IF NECESSARY.
  - ALL LIGHT FIXTURES IN DATA CENTER SHALL BE SUSPENDED 7'-0" AFF. CONTRACTOR SHALL FIELD COORDINATE LIGHT FIXTURES IF NECESSARY.
  - EXISTING SMOKE DETECTORS SHALL BE UTILIZED AND RELOCATED IN EXISTING SPACE. NO NEW SMOKE DETECTORS SHALL BE INSTALLED.



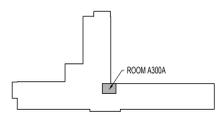
**3 ELECTRICAL - BUILDING 12 - THIRD FLOOR - ELEC RM C307**



**2 ELECTRICAL - BUILDING 12 - THIRD FLOOR - PROPOSED**



**1 ELECTRICAL - BUILDING 12 - THIRD FLOOR - DEMOLITION**



**KEY PLAN - BLDG 12 - THIRD FLOOR**

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
100% CONSTRUCTION DOCUMENTS SUBMISSION	03/14/2022
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65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

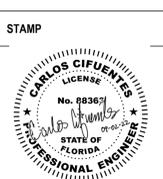
**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

BANCROFT ARCHITECTS + ENGINEERS  
 VA CONTRACT NO. 36C26319D0044

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 BAE PROJECT NO. 18-121



**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

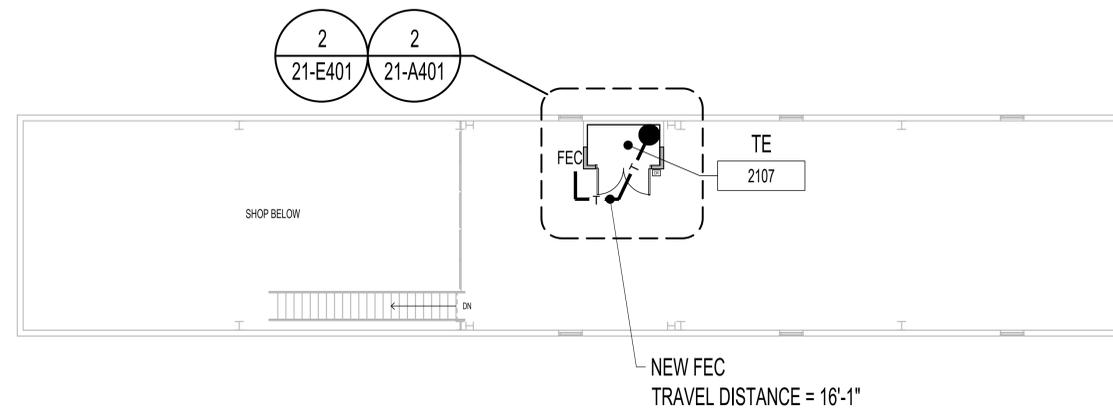
Drawing Title  
**ELECTRICAL - ENLARGED PLAN - THIRD FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title EHRM INFRASTRUCTURE UPGRADES	Project Number 636A6-21-101
Location DES MOINES, IOWA	Building Number 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28
Issue Date 09/02/2022	Checked cc
Drawn FK	Drawing Number 12-E403



1 ARCHITECTURAL - BUILDING 21 - SECOND FLOOR OVERALL  
1/8"=1'-0"

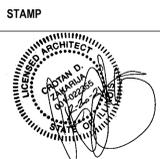
NOTE: NEW FIRE EXTINGUISHERS TO SERVICE NEW TR ROOM TO BE ABC CLEAN AGENT FIRE EXTINGUISHER WITH SEMI-RECESSED CABINET.

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
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Revisions:	Date:

CONSULTANT

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BAE PROJECT NO. 18-121



Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

Drawing Title  
ARCHITECTURAL - FLOOR PLAN - SECOND FLOOR - OVERALL

Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title  
EHRM INFRASTRUCTURE UPGRADES

Location  
DES MOINES, IOWA

Issue Date  
09/02/2022

Checked  
YH/MG

Drawn  
MG/YH

Project Number  
636A6-21-101  
Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28  
Drawing Number  
21-A002

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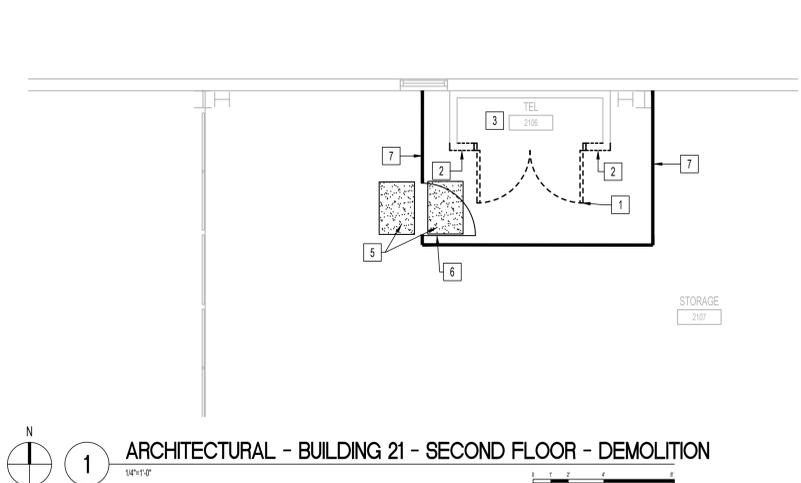
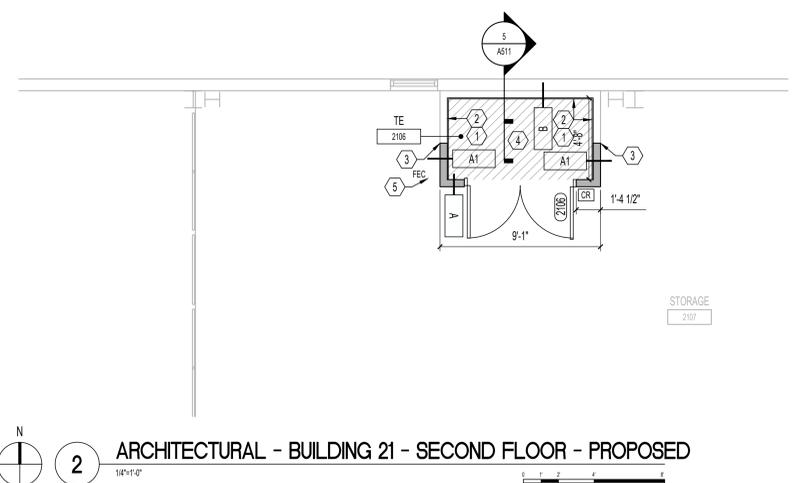
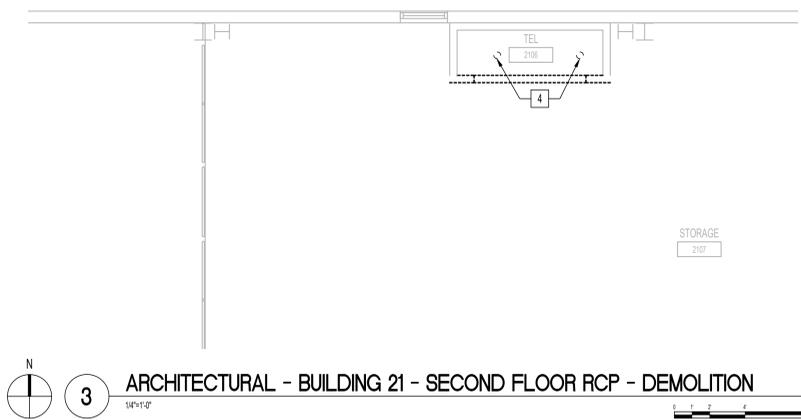
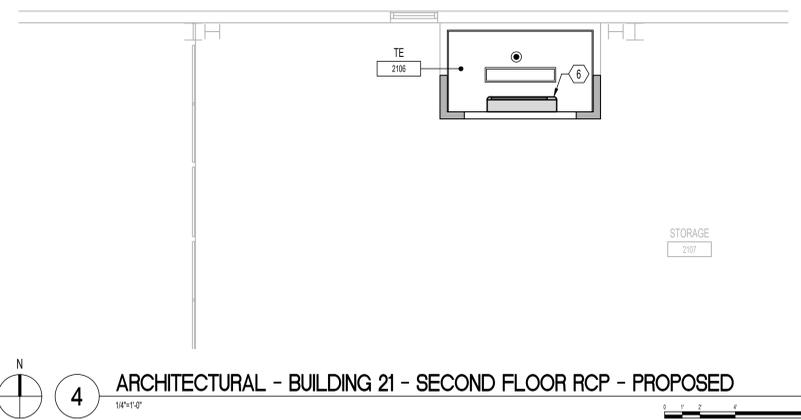
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FLOOR/RCP PLAN LEGEND		DEMOLITION PLAN LEGEND	
	EXISTING CONSTRUCTION		EXISTING CONSTRUCTION TO REMAIN
	DENOTES NEW PARTITION		DENOTES BUILDING COMPONENTS TO BE DEMOLISHED (UNO)
	DENOTES NEW CMU PARTITION		DENOTES DOOR TO BE DEMOLISHED
	DENOTES NEW DOOR AND FRAME		DENOTES FLOOR FINISH TO BE DEMOLISHED TO CONCRETE SUBSTRATE
	DENOTES NEW STATIC DISSIPATIVE TILE (SDT) FLOORING		DENOTES CEILING ASSEMBLY TO BE DEMOLISHED
	DENOTES NEW ACT CEILING ASSEMBLY		DENOTES DUCTLESS SPLIT SYSTEM UNIT TO BE DEMOLISHED
	DENOTES NEW OR EXISTING FIRE EXTINGUISHER		DENOTES GYPSUM CEILING ASSEMBLY TO BE DEMOLISHED
	DENOTES NEW 1' x 4' LIGHT FIXTURE, SEE ELECTRICAL		DENOTES 1' x 4' LIGHT FIXTURE TO BE REMOVED, SEE ELECTRICAL
	DENOTES NEW 2' x 4' LIGHT FIXTURE, SEE ELECTRICAL		DENOTES 2' x 4' LIGHT FIXTURE TO BE REMOVED, SEE ELECTRICAL
	DENOTES NEW OR RELOCATED SPRINKLER HEAD, SEE FIRE PROTECTION		DENOTES SPRINKLER HEAD TO BE REMOVED, SEE FIRE PROTECTION
	DENOTES NEW DUCT FREE SPLIT SYSTEM UNIT, SEE MECHANICAL		DENOTES EXISTING EXHAUST DIFFUSER TO BE REMOVED, SEE MECHANICAL
	DENOTES NEW SUPPLY DIFFUSER, SEE MECHANICAL		DENOTES EXISTING SUPPLY DIFFUSER TO BE REMOVED, SEE MECHANICAL
	DENOTES NEW GYPSUM CEILING ASSEMBLY		DENOTES GYPSUM CEILING ASSEMBLY TO BE DEMOLISHED
	DENOTES NEW OR EXISTING DUAL AUTHENTICATION CARD READER, SEE TELECOMMUNICATION SECURITY DRAWINGS		

GENERAL NOTES	DEMOLITION COORDINATION NOTES
<p>NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING IN BLDG 21.</p> <ol style="list-style-type: none"> <li>SEE LIMITED ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT FOR SCOPE OF WORK IN EACH TELECOMMUNICATIONS ROOM (TR).</li> <li>SEE ELECTRICAL DRAWINGS FOR TYPICAL TR ROOM ELECTRICAL DEMOLITION.</li> <li>PROVIDE TEMPORARY PROTECTION AT EXISTING AND NEW TR DOORS DURING CONSTRUCTION.</li> <li>INSTALL STATIC DISSIPATIVE TILE (SDT) FLOORING AT ALL FLOORS IN TELECOMMUNICATIONS ROOM (TR); SEE FINISH SCHEDULE.</li> <li>NO CEILING GRID AND ACOUSTICAL CEILING TILE IN TR ROOMS.</li> <li>PATCH EXISTING WALLS TO MATCH NEW TR ROOM FINISH WALLS.</li> <li>FOR INFORMATION TECHNOLOGY (IT) INFORMATION AND SCOPE OF WORK SEE DESIGN NARRATIVE BASIS-OF-DESIGN INCLUDED WITH CURRENT SUBMISSION.</li> <li>VERIFY IN FIELD ALL EXISTING CONDITIONS ILLUSTRATED ON THESE DRAWINGS. CONSTRUCTION DRAWINGS HAVE BEEN DEVELOPED REFERENCING AS-BUILT DRAWINGS PROVIDED BY THE VA AND FIELD VERIFICATION CONDUCTED THROUGH VISUAL INVESTIGATION.</li> <li>FOR NON-ARCHITECTURAL WORK, SEE FIRE PROTECTION, PLUMBING, MECHANICAL, ELECTRICAL AND INFORMATION TECHNOLOGY DRAWINGS FOR WORK BEING PERFORMED.</li> <li>ALL EXISTING WALLS WITHIN NEW TR ROOM SHALL HAVE CONTINUOUS FIRE RESISTANT SEALANT ALONG TOP AND BOTTOM.</li> </ol>	<ol style="list-style-type: none"> <li>DEMOLITION COORDINATION NOTES ARE IN ADDITION TO THE GENERAL DEMOLITION NOTES FOUND ON SHEET 6003.</li> <li>SEE CIVIL, FIRE PROTECTION, PLUMBING, MECHANICAL, ELECTRICAL, AND INFORMATION TECHNOLOGY DRAWINGS FOR RELATED DISCIPLINE SPECIFIC DEMOLITION NOTES.</li> <li>SEE ABATEMENT DRAWINGS FOR ASBESTOS AND LEAD ABATEMENT WORK TO BE PERFORMED BY ASBESTOS / LEAD ABATEMENT CONTRACTOR.</li> <li>DASHED LINES INDICATE DEMOLITION WORK INCLUDING, BUT NOT LIMITED TO, PARTITIONS, DOORS, WINDOWS, FLOOR AND WALL FINISHES, FIXED MILLWORK AND EQUIPMENT, UNLESS NOTED OTHERWISE. INDIVIDUALLY IDENTIFIED ITEMS ARE FOR FURTHER CLARIFICATION ONLY AND ARE NOT INTENDED TO BE ALL INCLUSIVE. FOR CLARITY, ADDITIONAL BUILDING DEMOLITION ITEMS MAY ALSO BE INDICATED THROUGHOUT THE DRAWINGS.</li> <li>THE DRAWINGS DO NOT PURPORT TO SHOW ALL OBJECTS EXISTING WITHIN THE SCOPE OF WORK. EXISTING LAYOUTS, CONFIGURATIONS AND PROPOSED DEMOLITION ARE BASED ON PARTIAL DOCUMENTS FROM PREVIOUS CONSTRUCTION AND LIMITED FIELD OBSERVATION. PORTIONS OF THE EXISTING CONSTRUCTION ARE CONCEALED AND MAY EXPOSE UNFORESEEN CONDITIONS DURING DEMOLITION. ACTUAL CONFIGURATIONS MAY VARY AND CRITICAL DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE GC PRIOR TO DEMOLITION.</li> <li>ALL CONSTRUCTION TO REMAIN AFFECTED BY DEMOLITION SHALL BE PATCHED, PLASTERED AND BE PROPERLY MEMBER AND ALIGNED SO AS TO LEAVE NO EVIDENCE OF PATCHING OR REPAIR. ALL ADJACENT FLOORS AND CEILING SO AFFECTED BY DEMOLITION SHALL BE PATCHED AS TO LEAVE NO EVIDENCE OF PATCHING OR REPAIR.</li> </ol>

FLOOR PLAN KEY NOTES	DEMOLITION KEY NOTES
<p>NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING IN BLDG 21.</p> <ol style="list-style-type: none"> <li>4x8 AC GRADE 3/4" GRADE SIZE PLYWOOD BACKBOARD FOR SERVICE PROVIDER / SECURITY / VIDEO ETC. AROUND THE WALLS OF THE TELECOMMUNICATIONS ROOMS (TR) AS SHOWN.</li> <li>BEFORE INSTALLING PLYWOOD BACKBOARD, GYPSUM WALLBOARD TO BE PATCHED/REPAIRED AND PROVIDE ONE (1) COAT OF PRIMER AND TWO (2) COATS OF PAINT. PAINT TO BE SHERWIN WILLIAMS OR VA APPROVED EQUAL, WITH REMAINING PAINT TO BE TURNED OVER TO VA UPON COMPLETION OF JOB.</li> <li>NEW INFILL WALLS TO BE PATCHED / REPAIRED WHERE JOINING / MEETING EXISTING WALLS. PROVIDE ONE (1) COAT OF PRIMER AND TWO (2) COATS OF PAINT AT NEW INFILL WALLS. FINISH COLOR TO MATCH EXISTING. PAINT TO BE SHERWIN WILLIAMS OR VA APPROVED EQUAL, WITH REMAINING PAINT TO BE TURNED OVER TO VA UPON COMPLETION OF JOB.</li> <li>INSTALL FIRE RATED PLYWOOD SUB FLOORING AND STATIC DISSIPATIVE TILE (SDT) FLOORING IN TR CLOSET. SEE ROOM FINISH SCHEDULE FOR MORE INFORMATION.</li> <li>NEW FIRE EXTINGUISHERS TO SERVICE NEW TR ROOM TO BE ABC CLEAN AGENT FIRE EXTINGUISHER WITH SEMI-RECESSED CABINET.</li> <li>NEW DUCT FREE SPLIT SYSTEM UNIT, SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.</li> </ol>	<p>NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING IN BLDG 21.</p> <ol style="list-style-type: none"> <li>DEMOLISH EXISTING DOOR AND HARDWARE. REMOVE DOOR FRAME IN ITS ENTIRETY, AND SUPPORTS.</li> <li>DEMOLISH EXISTING PARTITION CORNER TO CORNER INCLUDING ALL FRAMING, BRACING, AND SUPPORTS.</li> <li>REMOVE IN THEIR ENTIRETY ALL EXISTING WALL-MOUNTED ITEMS. COORDINATE ITEM DISPLACEMENT WITH THE VA.</li> <li>REMOVE EXISTING LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.</li> <li>SUPPLY AND INSTALL WALK OFF MAT(S).</li> <li>SUPPLY AND INSTALL TEMPORARY MELAMINE COATED MDF BARRIER. REFER TO 71A511 FOR TEMPORARY BARRIER ASSEMBLY.</li> </ol>



Revisions:	Date:
ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
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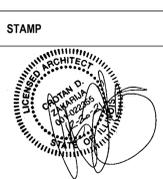
<b>CONSULTANT</b>
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**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

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www.bancroft-ae.com  
BAE PROJECT NO. 18-121



**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

Drawing Title  
**ARCHITECTURAL - ENLARGED PLAN - SECOND FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title <b>EHRM INFRASTRUCTURE UPGRADES</b>	Project Number <b>636A6-21-101</b>
Location <b>DES MOINES, IOWA</b>	Building Number 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28
Issue Date <b>09/02/2022</b>	Checked <b>YH/MG</b>
Drawn <b>MG/YH</b>	Drawing Number <b>21-A402</b>

K:\COC\_PROJECTS\2018\18-121\_36C26319D0044\_VSN\_23\_IDIQ (North Dakota + Iowa)\36A6-21-101 - EHRM Infrastructure Upgrades - Des Moines, IA\Mod\_2\bae\bae\22\Drawing\CONTR\AutoCAD\36A6-21-101\_21-A402.dwg 8/19/2022 2:15:01 PM

**GENERAL FIRE PROTECTION NOTES**

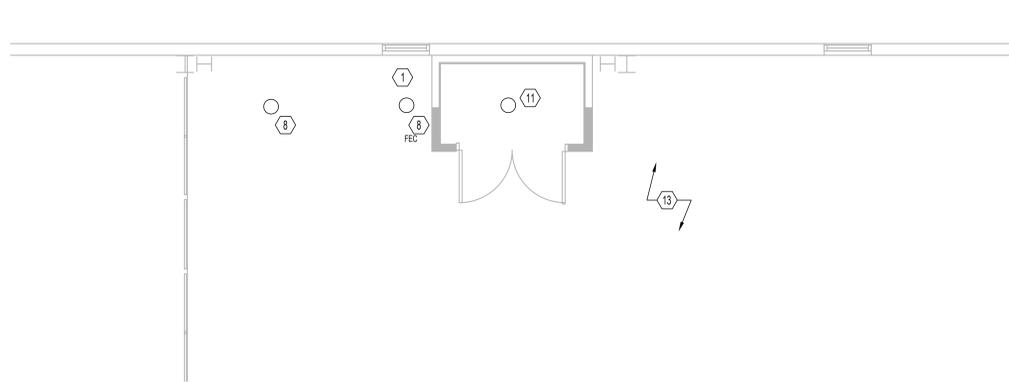
- A. THE FIRE PROTECTION DRAWINGS ARE CONCEPTUAL FOR GENERAL INFORMATION ONLY AND SHALL NOT BE CONSTRUED AS FINAL DESIGN OR INSTALLATION DOCUMENTS. THE SPRINKLER DESIGN AND INSTALLATION SHALL BE THE RESPONSIBILITY OF THE DESIGN BUILD FIRE PROTECTION CONTRACTOR. THIS INCLUDES THE RELOCATION OF SPRINKLER MAINS, BRANCH PIPING AND HEADS AS NECESSARY FOR THE NEW DESIGN. REFER TO SPECIFICATION FOR DESIGN CRITERIA.
- B. DESIGN TO BE IN ACCORDANCE WITH THE E VA FIRE PROTECTION DESIGN MANUAL, DATED JUNE 1, 2021.
- C. CONTRACTOR TO PROTECT EXISTING HEADS FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
- D. CONTRACTOR TO UTILIZE EXISTING BRANCH LINES, CROSS MAINS, AND FEED MAINS, SERVING NEW SPRINKLER LOCATIONS WITH MODIFIED ARMORER CONNECTIONS FED FROM EXISTING OUTLET. SHOW ALL PIPING ON SHOP DRAWING SUBMITTAL.
- E. CONTRACTOR TO TURN VERTICAL POSITION OF BRANCH 90 DEGREE FITTING FROM FACING DOWNWARD TO UPWARD AND INSTALL NEW UPRIGHT AUTOMATIC SPRINKLER HEAD TO MAINTAIN FIRE SUPPRESSION PIPING ACTIVE DURING THE CONSTRUCTION. AT THE CONCLUSION OF THE CONSTRUCTION, REVERSE THE 90 DEGREE FITTING TO ITS ORIGINAL CONFIGURATION, AND PENDENT AUTOMATIC SPRINKLER HEADS WILL BE INSTALLED, WHERE REQUIRE.
- F. AT LOCATIONS WHERE THE EXISTING AUTOMATIC SPRINKLERS ARE REMOVED, RELOCATED, OR RE-INSTALLED, ONLY NEW AUTOMATIC SPRINKLER HEADS SHALL BE USED. NO AUTOMATIC SPRINKLER HEADS SHALL BE RE-USED, IN ACCORDANCE WITH THE NFPA #13 REQUIREMENTS.

**DEMOLITION KEY NOTES**

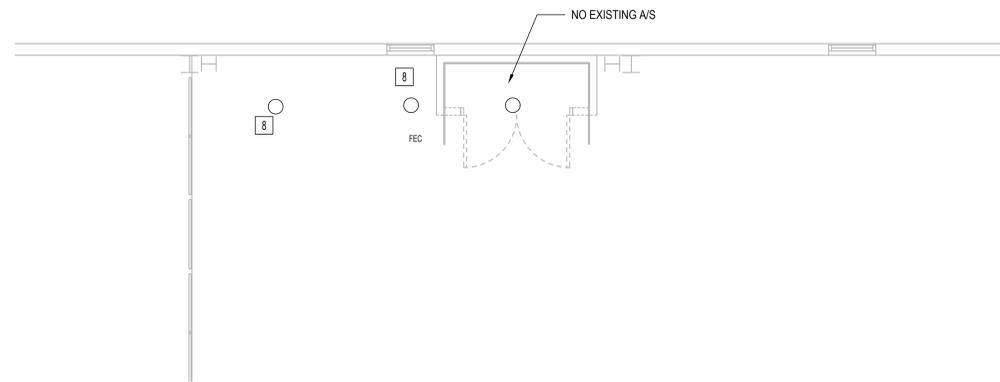
- 1. EXISTING CONDITION: NO CEILING
- 2. EXISTING CONDITION: LAY - IN TILE TO BE REMOVED BY GENERAL CONTRACTOR
- 3. EXISTING CONDITION: LAY - IN TILE TO REMAIN
- 4. EXISTING CONDITION: LAY - IN TILE TO BE REMOVED AND REPLACED WITH NEW LAY-IN TILE CEILING BY GENERAL CONTRACTOR.
- 5. EXISTING CONDITION: PLASTER CEILING - TO BE REMOVED BY GENERAL CONTRACTOR
- 6. EXISTING AUTOMATIC SPRINKLER HEAD - TO REMAIN
- 7. EXISTING AUTOMATIC SPRINKLER HEAD - TO BE REMOVED
- 8. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE CHANGED TO NEW UPRIGHT HEAD
- 9. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE RELOCATED WITH NEW AUTOMATIC SPRINKLER HEAD OF SAME TYPE
- 10. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE RELOCATED WITH NEW SEMI-RECESSED AUTOMATIC SPRINKLER HEAD
- 11. NO AUTOMATIC SPRINKLER HEAD IN THIS LOCATION
- 12. NEW ROOM/CEILING CONFIGURATION WILL REQUIRE ADJUSTMENT TO EXISTING AUTOMATIC SPRINKLER LAYOUT IN FIELD.
- 13. EXISTING AUTOMATIC SPRINKLER TO BE REMOVED AND REPLACED WITH NEW AUTOMATIC SPRINKLER HEAD OF SAME TYPE AFTER CEILING IS REPLACED
- 14. EXISTING AUTOMATIC SPRINKLER TO BE REMOVED AND REPLACED WITH NEW UPRIGHT AIS HEAD

**FIRE PROTECTION KEY NOTES**

- 1. NO CEILING
- 2. LAY-IN TILE REMOVED BY GENERAL CONTRACTOR
- 3. EXISTING LAY-IN TILE TO REMAIN
- 4. NEW LAY IN TILE CEILING BY GENERAL CONTRACTOR
- 5. NEW PLASTER CEILING BY GENERAL CONTRACTOR
- 6. EXISTING AUTOMATIC SPRINKLER HEAD - TO REMAIN
- 7. EXISTING AUTOMATIC SPRINKLER BRANCH CAPPED
- 8. EXISTING AUTOMATIC SPRINKLER HEAD - TO BE CHANGED TO NEW UPRIGHT HEAD
- 9. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE RELOCATED WITH AUTOMATIC SPRINKLER HEAD OF SAME TYPE
- 10. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE RELOCATED WITH NEW SEMI-RECESSED AUTOMATIC SPRINKLER HEAD
- 11. NEW AUTOMATIC SPRINKLER HEAD - UPRIGHT STYLE
- 12. NEW ROOM/CEILING CONFIGURATION WILL REQUIRE ADJUSTMENT TO EXISTING AUTOMATIC SPRINKLER LAYOUT IN FIELD.
- 13. EXISTING AUTOMATIC SPRINKLER TO BE REMOVED AND REPLACED WITH NEW AUTOMATIC SPRINKLER HEAD OF SAME TYPE AFTER CEILING IS REPLACED
- 14. EXISTING AUTOMATIC SPRINKLER TO BE REMOVED AND REPLACED WITH NEW UPRIGHT AIS HEAD



**1 ARCHITECTURAL - BUILDING 21 - SECOND FLOOR - PROPOSED**  
1/8"=1'-0"



**2 ARCHITECTURAL - BUILDING 21 - SECOND FLOOR - DEMOLITION**  
1/8"=1'-0"

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
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Revisions:	Date:

**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

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**STAMP**

PAID 10/02/2022

PAID 09/02/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**FIRE PROTECTION - ENLARGED PLAN - SECOND FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
**JPK**

Drawn  
**JV**

Project Number  
**636A6-21-101**

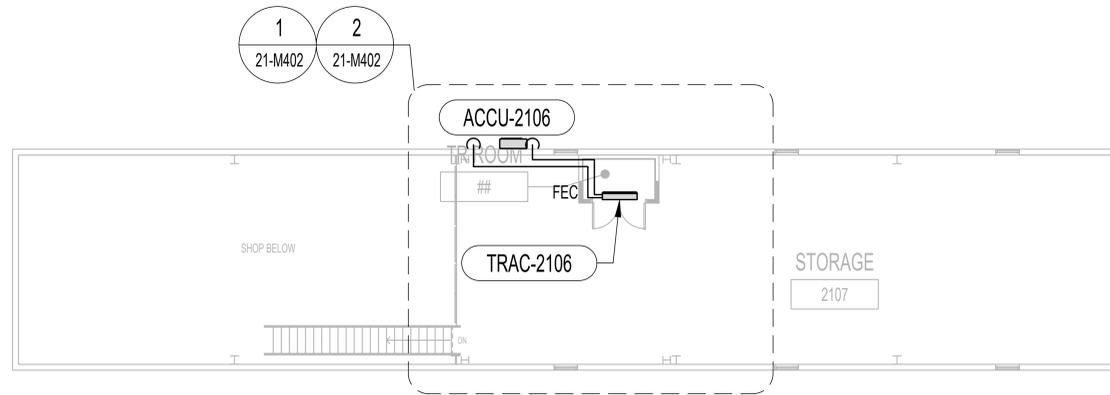
Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**21-FP402**

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**MECHANICAL GENERAL NOTES**

- A. SEE ENLARGED TELECOMMUNICATION ROOM MECHANICAL PLANS PER CIRCLE TAG DESIGNATIONS.
- B. SEE COMBINED OVERALL FLOOR AND ROOF PLANS FOR SPLIT SYSTEM AIR COOLED CONDENSING UNIT (ACCU) LOCATIONS AND PIPING ROUTES.



1 MECHANICAL - BUILDING 21 - SECOND FLOOR - OVERALL  
1/8"=1'-0"

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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
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Revisions:	Date:

CONSULTANT

ARCHITECT/ENGINEER OF RECORD

*Bancroft*

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**MECHANICAL - BUILDING 21 - SECOND FLOOR - OVERALL**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
**DG**

Drawn  
**IL**

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**21-M102**

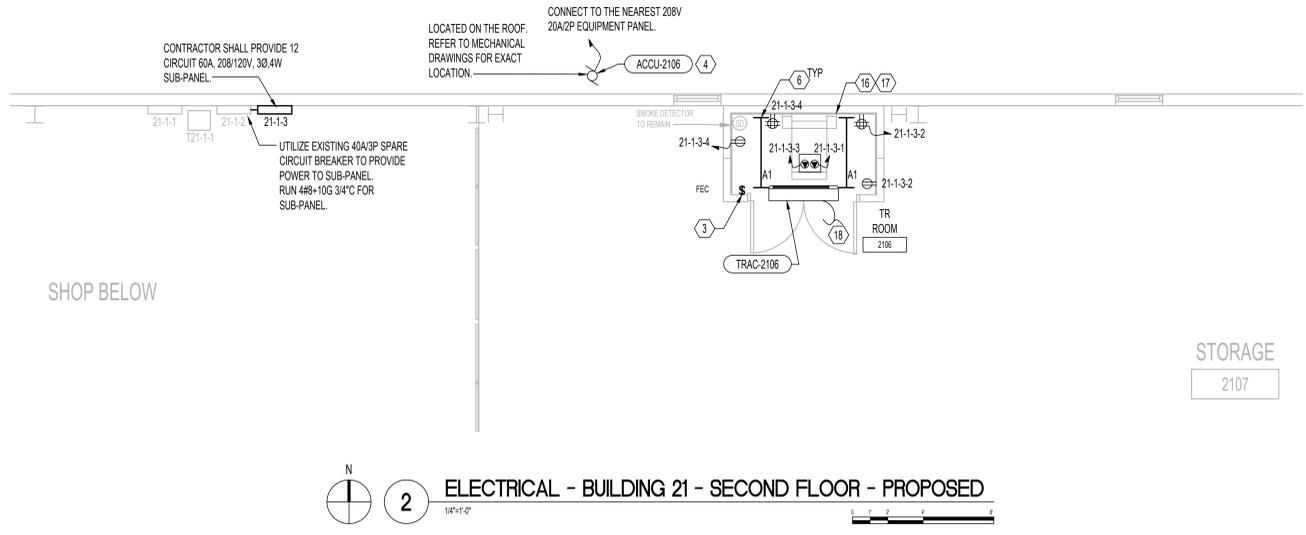


**(X) ELECTRICAL KEY NOTES**

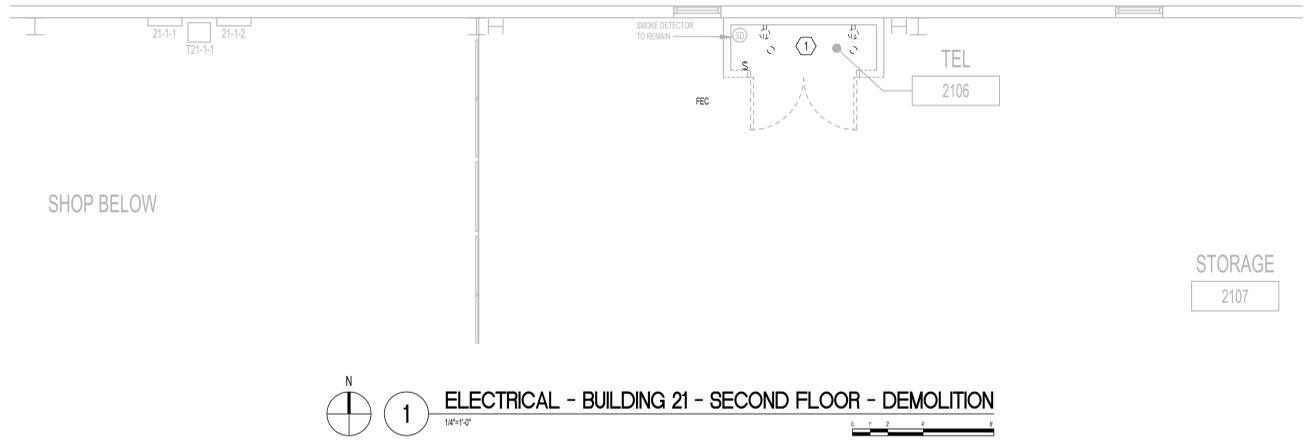
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
- ALL DATA RACK(S), LIGHTS AND RECEPTACLES SHALL REMAIN ACTIVE UNTIL NEW DATA RACKS ARE INSTALLED AND FUNCTIONING PROPERLY. ONCE NEW TR SPACE IS ACTIVE CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING EQUIPMENT WITH ALL ASSOCIATED CONDUIT AND WIRING BACK TO SOURCE. CONTRACTOR SHALL UTILIZE EXISTING CIRCUITS WHEREVER POSSIBLE.
  - CONTRACTOR SHALL PROVIDE OVERHEAD POWER DROP CORD WITH ONE (1) CRITICAL AND ONE (1) NORMAL TWIST LOCK RECEPTACLE:  
 1 RACK - (2) 208V/3P; L21-20R  
 2 RACKS - (2) 208V/3P; L21-30R  
 3 RACKS - (2) 208V/3P; 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD)  
 4 RACKS - (2) 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD) AND (2) 208V/3P; L21-20R.  
 RECEPTACLES SHALL BE 8.5 FEET AFF. COORDINATE EXACT LOCATION WITH IT DRAWINGS AND VA PRIOR TO ROUGH-IN AND INSTALLATION.
  - CONTRACTOR SHALL PROVIDE NEW LIGHT SWITCH.
  - RUN 2#10+12G IN 3/4" C TO ACCU WITH 20A/2P CIRCUIT BREAKER. DISCONNECT SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL DRAWINGS. PROVIDE WHILE IN USE WEATHER PROOF/OFCI RECEPTACLE WITHIN 25FT OF MECHANICAL UNIT. CONTRACTOR SHALL ACCOMMODATE FOR VOLTAGE DROP.
  - CONTRACTOR SHALL PROVIDE ONE (1) 5KVA UPS POWER SUPPLY PER RACK WITH NEMA 20A, L21-20P INPUT AND L21-20R OUTPUT.
  - CONTRACTOR SHALL EXTEND CRITICAL CIRCUIT TO LIGHT FIXTURE FROM DEMOLISHED TR SPACE. CONDUIT AND WIRING SHALL MATCH EXISTING.
  - IN TR SPACE WITH ONE (1) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 20A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#12+12G IN 3/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - IN TR SPACE WITH TWO (2) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 30A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#10+12G IN 3/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - IN TR SPACE WITH THREE (3) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 60A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#6+10G IN 1-1/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
  - CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING TO PROVIDE NORMAL POWER TO TR RACK.
  - CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING TO PROVIDE CRITICAL POWER TO TR RACK.
  - CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL, AND DATA DEVICES. FIRE ALARM DEVICES SHALL REMAIN IN PLACE. CONTRACTOR SHALL PROPERLY COVER ANY DEVICES WHICH MAY ACTIVATE DURING CONSTRUCTION DUE TO DUST AND/OR CONTAMINANTS. ALL DEVICES ARE NOT SHOWN FOR CLARITY.
  - NEW LOCATION OF RELOCATED DEVICES. EXTEND CONDUIT AND WIRING. WIRING TYPE TO MATCH EXISTING. ALL DEVICES ARE NOT SHOWN FOR CLARITY.
  - CONTRACTOR SHALL CONNECT TO 120/208V NORMAL PANEL. PROVIDE OR UTILIZE EXISTING 20A, 1P BREAKER AND RUN 2#12+12G IN 3/4" CONDUIT AS REQUIRED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING.
  - CONTRACTOR SHALL CONNECT TO 120/208V CRITICAL PANEL. PROVIDE OR UTILIZE EXISTING 20A, 1P BREAKER AND RUN 2#12+12G IN 3/4" CONDUIT AS REQUIRED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING.
  - TELECOM ENCLOSURE: CONTRACTOR SHALL PROVIDE OVERHEAD (8.5 AFF) 120V; L5-30R POWER DROP CORD WITH (1) CRITICAL/EMERGENCY AND (1) NORMAL TWIST LOCK RECEPTACLE. IF THERE IS NO EMERGENCY POWER IN THE BUILDING, CONTRACTOR SHALL UTILIZE (2) NORMAL CIRCUITS. PROVIDE (2) 120V-30A/1P CIRCUIT BREAKER AND RUN 2#10+10G - 3/4" C TO PANELBOARD.
  - PROVIDE RACK MOUNT UPS L5-30 INPUT / L5-30 OUTPUT, 2880VA, 2RU (RACK UNIT), APC SMX3000RMLV2U OR APPROVED EQUAL.
  - INDOOR UNIT POWERED FROM ROOF MOUNTED OUTDOOR UNIT. PROVIDE POWER MANUFACTURER RECOMMENDED CONDUCTORS IN 3/4" C FOR CONNECTION TO OUTDOOR UNIT.

**GENERAL NOTES**

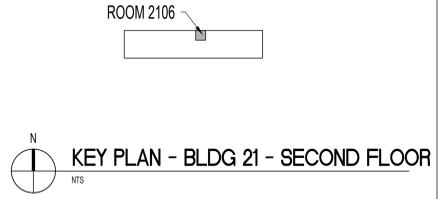
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
- REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR PLANS. REFER TO TECHNOLOGY, MECHANICAL, AND FIRE PROTECTION DRAWINGS FOR EXACT LOCATION OF EQUIPMENT.
  - REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
  - REFER TO ONE-LINE FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
  - ALL SERVICE INTERRUPTIONS TO THE EXISTING FACILITY MUST BE SCHEDULED AT LEAST TWO WEEKS IN ADVANCE AND BE KEPT TO A MINIMUM. COORDINATE ALL POTENTIAL DISTRIBUTIONS AND OUTAGE REQUIREMENTS WITH THE VA. ALL DISTRIBUTIONS MUST BE COORDINATED AND APPROVED BY THE COR.
  - ALL DEVICES BEING DEMOLISHED WITH ASSOCIATED CONDUIT AND WIRING SHALL BE REMOVED BACK TO SOURCE. PROVIDE NEW PANEL SCHEDULE DIRECTORY AND LABEL ALL DEMOLISHED CIRCUIT BREAKERS AS "SPARE" AND TURN OFF.
  - PATCH AND PAINT WALL AS REQUIRED WHERE DEVICES, BOXES, ETC ARE REMOVED OR REWORKED.
  - CONTRACTOR SHALL EXTEND CONDUIT AND WIRING TO NEW LOCATION OF TR SPACE. WIRING AND CONDUIT SIZE TO MATCH EXISTING.
  - COORDINATE EXACT LOCATION OF DEVICES WITH IT CONTRACTOR PRIOR TO INSTALLATION.
  - CONTRACTOR SHALL CREATE OPENING TO PROPERLY INSTALL DUPLEX RECEPTACLE(S). PROVIDE FIRESTOP SUCH AS EZ-PATH OR APPROVED EQUAL FOR ANY OPENINGS.
  - ALL DUPLEX AND LIGHTING CIRCUITS SHALL BE 2#12+12EG - 3/4" C, UON.
  - ALL LIGHT FIXTURES IN TR SPACES SHALL BE SUSPENDED 11'-0" AFF. CONTRACTOR SHALL FIELD COORDINATE LIGHT FIXTURES IF NECESSARY.
  - ALL LIGHT FIXTURES IN DATA CENTER SHALL BE SUSPENDED 7'-0" AFF. CONTRACTOR SHALL FIELD COORDINATE LIGHT FIXTURES IF NECESSARY.
  - EXISTING SMOKE DETECTORS SHALL BE UTILIZED AND RELOCATED IN EXISTING SPACE. NO NEW SMOKE DETECTORS SHALL BE INSTALLED.



**2 ELECTRICAL - BUILDING 21 - SECOND FLOOR - PROPOSED**



**1 ELECTRICAL - BUILDING 21 - SECOND FLOOR - DEMOLITION**



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ISSUE FOR BID	Date
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/27/2022
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Revisions:	10/07/2021

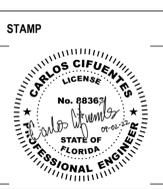
**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

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**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

Drawing Title  
**ELECTRICAL - ENLARGED PLAN - SECOND FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title			Project Number
EHRM INFRASTRUCTURE UPGRADES			636A6-21-101
Location			Building Number
DES MOINES, IOWA			1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28
Issue Date	Checked	Drawn	Drawing Number
09/02/2022	cc	FK	21-E402

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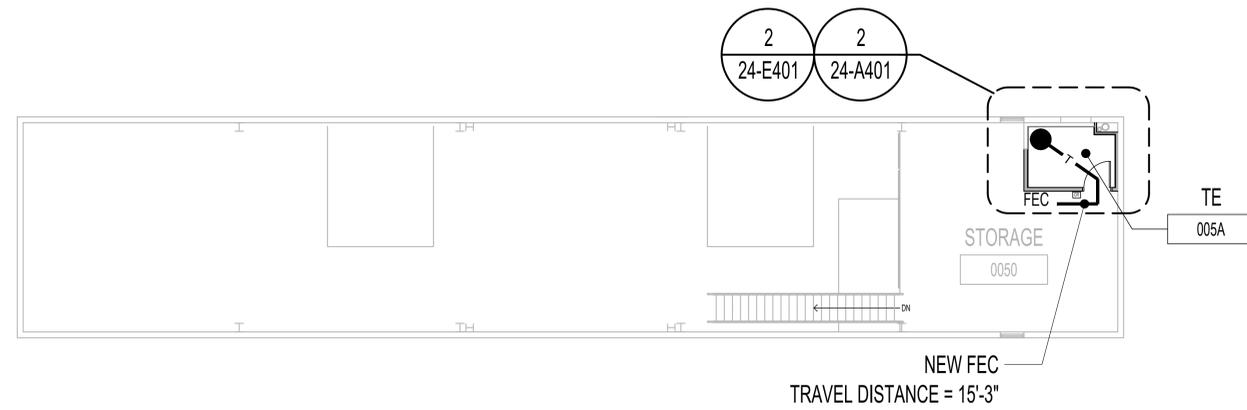
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E

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1 ARCHITECTURAL - BUILDING 24 - SECOND FLOOR OVERALL  
1/8"=1'-0"



NOTE: NEW FIRE EXTINGUISHERS TO SERVICE NEW TR ROOM TO BE ABC CLEAN AGENT FIRE EXTINGUISHER WITH SEMI-RECESSED CABINET.

K:\COC\_PROJECTS\2018\18-121\_36C26319D0044\_VSN\_23\_IDIQ\_North Dakota + Iowa\636A6-21-101 - EHRM Infrastructure Upgrades - Des Moines, IA\A00\_Dwg\A002.dwg Drawing\WORKING\A002.dwg 6/26/2022 2:49:38 PM

ISSUE FOR BID	09/02/2022
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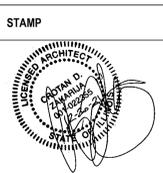
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**ARCHITECTURAL - FLOOR PLAN - SECOND FLOOR - OVERALL**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
**YH/MG**

Drawn  
**MG/YH**

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**24-A002**

TR 3: NEW TELECOMMUNICATION ROOM AT NEW LOCATION - ESTIMATE 5 WEEKS. SEE SHEET 61005 FOR ADDITIONAL INFORMATION.

FLOOR/RCP PLAN LEGEND	
	EXISTING CONSTRUCTION
	DENOTES NEW PARTITION
	DENOTES NEW CMU PARTITION
	DENOTES NEW DOOR AND FRAME
	DENOTES NEW STATIC DISSIPATIVE TILE (SDT) FLOORING
	DENOTES NEW ACT CEILING ASSEMBLY
	DENOTES NEW OR EXISTING FIRE EXTINGUISHER
	DENOTES NEW 1' x 4' LIGHT FIXTURE, SEE ELECTRICAL
	DENOTES NEW 2' x 4' LIGHT FIXTURE, SEE ELECTRICAL
	DENOTES NEW OR RELOCATED SPRINKLER HEAD, SEE FIRE PROTECTION
	DENOTES NEW DUCT FREE SPLIT SYSTEM UNIT, SEE MECHANICAL
	DENOTES NEW SUPPLY DIFFUSER, SEE MECHANICAL
	DENOTES NEW GYPSUM CEILING ASSEMBLY
	DENOTES NEW OR EXISTING DUAL AUTHENTICATION CARD READER, SEE TELECOMMUNICATION SECURITY DRAWINGS

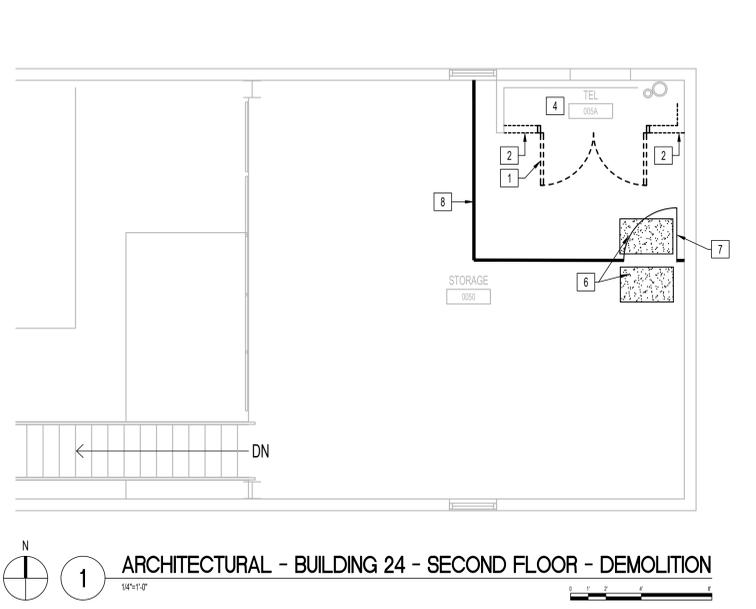
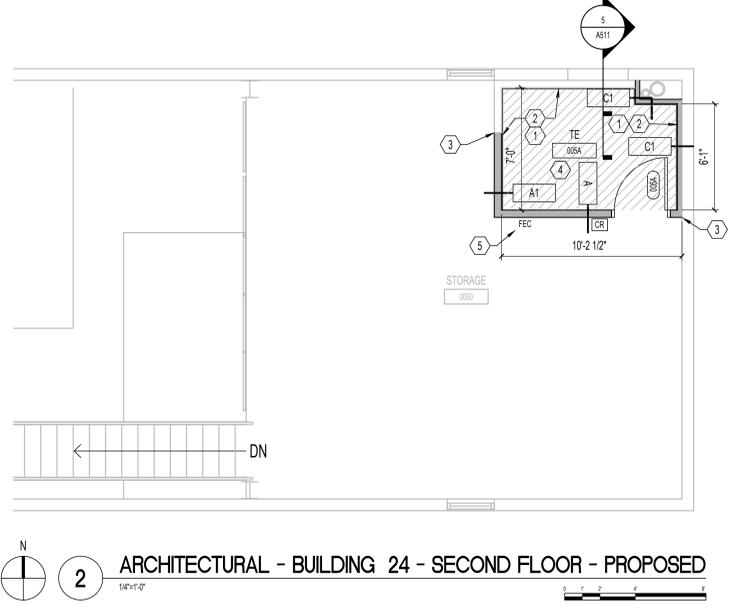
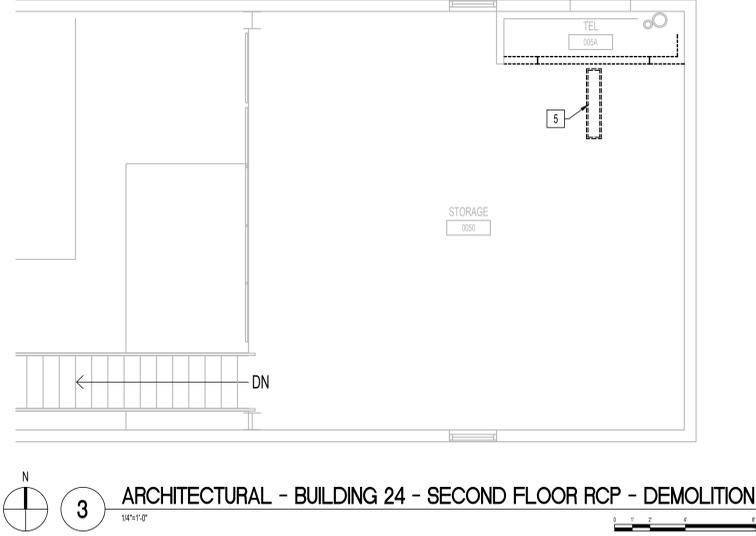
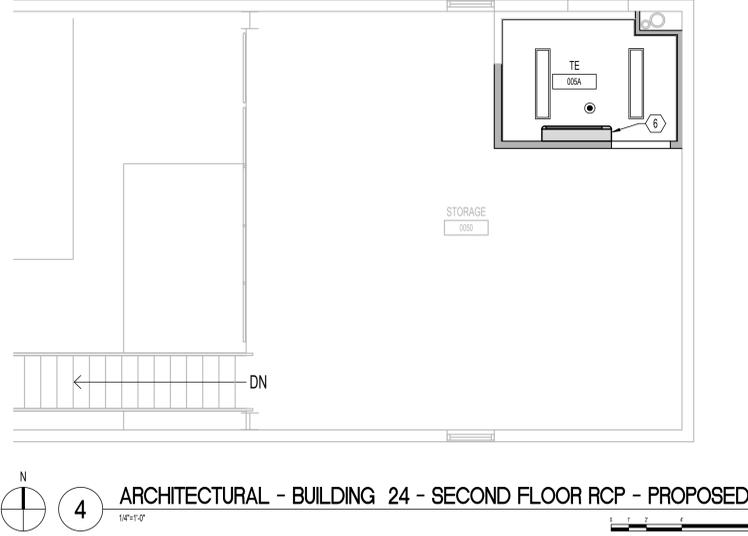
DEMOLITION PLAN LEGEND	
	EXISTING CONSTRUCTION TO REMAIN
	DENOTES BUILDING COMPONENTS TO BE DEMOLISHED (UNO)
	DENOTES DOOR TO BE DEMOLISHED
	DENOTES FLOOR FINISH TO BE DEMOLISHED TO CONCRETE SUBSTRATE
	DENOTES CEILING ASSEMBLY TO BE DEMOLISHED
	DENOTES DUCTLESS SPLIT SYSTEM UNIT TO BE DEMOLISHED
	DENOTES 1' x 4' LIGHT FIXTURE TO BE REMOVED, SEE ELECTRICAL
	DENOTES 2' x 4' LIGHT FIXTURE TO BE REMOVED, SEE ELECTRICAL
	DENOTES SPRINKLER HEAD TO BE REMOVED, SEE FIRE PROTECTION
	DENOTES EXISTING EXHAUST DIFFUSER TO BE REMOVED, SEE MECHANICAL
	DENOTES EXISTING SUPPLY DIFFUSER TO BE REMOVED, SEE MECHANICAL
	DENOTES GYPSUM CEILING ASSEMBLY TO BE DEMOLISHED

- ### GENERAL NOTES
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING IN BLDG 24.
- SEE LIMITED ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT FOR SCOPE OF WORK IN EACH TELECOMMUNICATIONS ROOM (TR).
  - SEE ELECTRICAL DRAWINGS FOR TYPICAL TR ROOM ELECTRICAL DEMOLITION.
  - PROVIDE TEMPORARY PROTECTION AT EXISTING AND NEW TR DOORS DURING CONSTRUCTION.
  - INSTALL STATIC DISSIPATIVE TILE (SDT) FLOORING AT ALL FLOORS IN TELECOMMUNICATIONS ROOM (TR). SEE FINISH SCHEDULE.
  - NO CEILING GRID AND ACOUSTICAL CEILING TILE IN TR ROOMS.
  - PATCH EXISTING WALLS TO MATCH NEW TR ROOM FINISH WALLS.
  - FOR INFORMATION TECHNOLOGY (IT) INFORMATION AND SCOPE OF WORK SEE DESIGN NARRATIVE BASIS-OF-DESIGN INCLUDED WITH CURRENT SUBMISSION.
  - VERIFY IN FIELD ALL EXISTING CONDITIONS ILLUSTRATED ON THESE DRAWINGS. CONSTRUCTION DRAWINGS HAVE BEEN DEVELOPED REFERENCING AS-BUILT DRAWINGS PROVIDED BY THE VA AND FIELD VERIFICATION CONDUCTED THROUGH VISUAL INVESTIGATION.
  - FOR NON-ARCHITECTURAL WORK, SEE FIRE PROTECTION, PLUMBING, MECHANICAL, ELECTRICAL, AND INFORMATION TECHNOLOGY DRAWINGS FOR WORK BEING PERFORMED.
  - ALL EXISTING WALLS WITHIN NEW TR ROOM SHALL HAVE CONTINUOUS FIRE RESISTANT SEALANT ALONG TOP AND BOTTOM.

- ### DEMOLITION COORDINATION NOTES
- DEMOLITION COORDINATION NOTES ARE IN ADDITION TO THE GENERAL DEMOLITION NOTES FOUND ON SHEET 61003.
  - SEE CIVIL, FIRE PROTECTION, PLUMBING, MECHANICAL, ELECTRICAL, AND INFORMATION TECHNOLOGY DRAWINGS FOR RELATED DISCIPLINE SPECIFIC DEMOLITION NOTES.
  - SEE ABATEMENT DRAWINGS FOR ASBESTOS AND LEAD ABATEMENT WORK TO BE PERFORMED BY ASBESTOS / LEAD ABATEMENT CONTRACTOR.
  - DASHED LINES INDICATE DEMOLITION WORK INCLUDING, BUT NOT LIMITED TO, PARTITIONS, DOORS, WINDOWS, FLOOR AND WALL FINISHES, FIXED MILLWORK AND EQUIPMENT, UNLESS NOTED OTHERWISE. INDIVIDUALLY IDENTIFIED ITEMS ARE FOR FURTHER CLARIFICATION ONLY AND ARE NOT INTENDED TO BE ALL INCLUSIVE. FOR CLARITY, ADDITIONAL BUILDING DEMOLITION ITEMS MAY ALSO BE INDICATED THROUGHOUT THE DRAWINGS.
  - THE DRAWINGS DO NOT PURPORT TO SHOW ALL OBJECTS EXISTING WITHIN THE SCOPE OF WORK. EXISTING LAYOUTS, CONFIGURATIONS AND PROPOSED DEMOLITION ARE BASED ON PARTIAL DOCUMENTS FROM PREVIOUS CONSTRUCTION AND LIMITED FIELD OBSERVATION. PORTIONS OF THE EXISTING CONSTRUCTION ARE CONCEALED AND MAY EXPOSE UNFORESEEN CONDITIONS DURING DEMOLITION. ACTUAL CONFIGURATIONS MAY VARY AND CRITICAL DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE GC PRIOR TO DEMOLITION.
  - ALL CONSTRUCTION TO REMAIN AFFECTED BY DEMOLITION SHALL BE PATCHED, PLASTERED AND BE PROPERLY MEMBER AND ALIGNED SO AS TO LEAVE NO EVIDENCE OF PATCHING OR REPAIR. ALL ADJACENT FLOORS AND CEILING SO AFFECTED BY DEMOLITION SHALL BE PATCHED AS TO LEAVE NO EVIDENCE OF PATCHING OR REPAIR.

- ### FLOOR PLAN KEY NOTES
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING IN BLDG 24.
- 4x8 AC GRADE 3/4" GRADE SIZE PLYWOOD BACKBOARD FOR SERVICE PROVIDER / SECURITY / VIDEO ETC. AROUND THE WALLS OF THE TELECOMMUNICATIONS ROOMS (TR) AS SHOWN.
  - BEFORE INSTALLING PLYWOOD BACKBOARD, GYPSUM WALLBOARD TO BE PATCHED/REPAIRED AND PROVIDE ONE (1) COAT OF PRIMER AND TWO (2) COATS OF PAINT. PAINT TO BE SHERWIN WILLIAMS OR VA APPROVED EQUAL, WITH REMAINING PAINT TO BE TURNED OVER TO VA UPON COMPLETION OF JOB.
  - NEW INFILL WALLS TO BE PATCHED / REPAIRED WHERE JOINING / MEETING EXISTING WALLS. PROVIDE ONE (1) COAT OF PRIMER AND TWO (2) COATS OF PAINT AT NEW INFILL WALLS. FINISH COLOR TO MATCH EXISTING. PAINT TO BE SHERWIN WILLIAMS OR VA APPROVED EQUAL, WITH REMAINING PAINT TO BE TURNED OVER TO VA UPON COMPLETION OF JOB.
  - INSTALL FIRE RATED PLYWOOD SUB FLOORING AND STATIC DISSIPATIVE TILE (SDT) FLOORING IN TR CLOSE.
  - NEW FIRE EXTINGUISHERS TO SERVICE NEW TR ROOM TO BE ABC CLEAN AGENT FIRE EXTINGUISHER WITH SEMI-RECESSED CABINET.
  - NEW DUCT FREE SPLIT SYSTEM UNIT, SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.

- ### DEMOLITION KEY NOTES
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING IN BLDG 24.
- DEMOLISH EXISTING DOOR AND HARDWARE. REMOVE DOOR FRAME IN ITS ENTIRETY.
  - DEMOLISH A PORTION OF EXISTING WALL PARTITION.
  - DEMOLISH EXISTING PARTITION IN ITS ENTIRETY INCLUDING ALL FRAMING, BRACING, AND SUPPORTS.
  - REMOVE IN THEIR ENTIRETY ALL EXISTING WALL-MOUNTED ITEMS. COORDINATE ITEM DISPLACEMENT WITH THE VA.
  - REMOVE EXISTING LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
  - SUPPLY AND INSTALL WALK OFF MATS.
  - SUPPLY AND INSTALL TEMPORARY DOOR.
  - SUPPLY AND INSTALL TEMPORARY MELAMINE COATED MDF BARRIER. REFER TO 71A511 FOR TEMPORARY BARRIER ASSEMBLY.



KEY PLAN - BLDG 24 - SECOND FLOOR

K:\COG\_PROJECTS\2018\18-121\_36C26319D0044\_VSN\_23\_IDIQ (North Dakota) - Iowa\3636A6-21-101 - EHRM Infrastructure Upgrades - Des Moines, IA\Mod\_Demolition\2-Drawing\WORKING\AutoCAD\3636A6-21-101\_24-A402.dwg 8/19/2022 2:03:02 PM

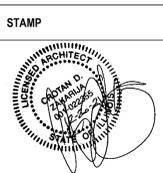
ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
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Revisions:	Date:

CONSULTANT

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VA CONTRACT NO. 36C26319D0044 BAE PROJECT NO. 18-121



Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**ARCHITECTURAL - ENLARGED PLAN - SECOND FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
**YH/MG**

Drawn  
**MG/YH**

Project Number  
**636A6-21-101**

Building Number  
**1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28**

Drawing Number  
**24-A402**

**GENERAL FIRE PROTECTION NOTES**

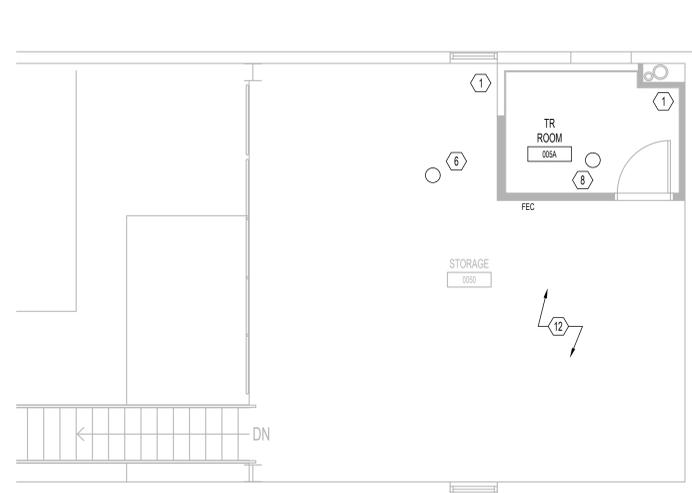
- A. THE FIRE PROTECTION DRAWINGS ARE CONCEPTUAL, FOR GENERAL INFORMATION ONLY AND SHALL NOT BE CONSTRUED AS FINAL DESIGN OR INSTALLATION DOCUMENTS. THE SPRINKLER DESIGN AND INSTALLATION SHALL BE THE RESPONSIBILITY OF THE DESIGN BUILD FIRE PROTECTION CONTRACTOR. THIS INCLUDES THE RELOCATION OF SPRINKLER MAINS, BRANCH PIPING AND HEADS AS NECESSARY FOR THE NEW DESIGN. REFER TO SPECIFICATION FOR DESIGN CRITERIA.
- B. DESIGN TO BE IN ACCORDANCE WITH THE E VA FIRE PROTECTION DESIGN MANUAL, DATED JUNE 1, 2021.
- C. CONTRACTOR TO PROTECT EXISTING HEADS FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
- D. CONTRACTOR TO UTILIZE EXISTING BRANCH LINES, CROSS MAINS, AND FEED MAINS, SERVING NEW SPRINKLER LOCATIONS WITH MODIFIED ARMOUR CONNECTIONS FED FROM EXISTING OUTLET. SHOW ALL PIPING ON SHOP DRAWING SUBMITTAL.
- E. CONTRACTOR TO TURN VERTICAL POSITION OF BRANCH 90 DEGREE FITTING FROM FACING DOWNWARD TO UPWARD AND INSTALL NEW UPRIGHT AUTOMATIC SPRINKLER HEAD TO MAINTAIN FIRE SUPPRESSION PIPING ACTIVE DURING THE CONSTRUCTION. AT THE CONCLUSION OF THE CONSTRUCTION, REVERSE THE 90 DEGREE FITTING TO ITS ORIGINAL CONFIGURATION, AND PENDENT AUTOMATIC SPRINKLER HEADS WILL BE INSTALLED, WHERE REQUIRE.
- F. AT LOCATIONS WHERE THE EXISTING AUTOMATIC SPRINKLERS ARE REMOVED, RELOCATED, OR RE-INSTALLED, ONLY NEW AUTOMATIC SPRINKLER HEADS SHALL BE USED. NO AUTOMATIC SPRINKLER HEADS SHALL BE RE-USED, IN ACCORDANCE WITH THE NFPA #13 REQUIREMENTS.

**DEMOLITION KEY NOTES**

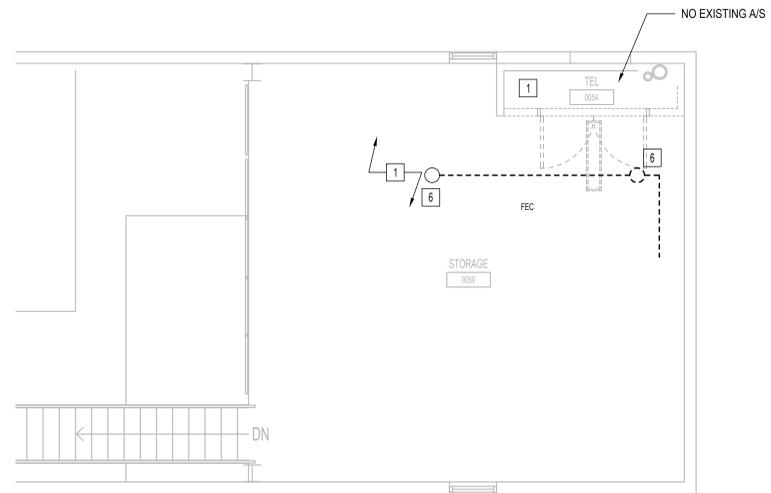
- 1. EXISTING CONDITION: NO CEILING
- 2. EXISTING CONDITION: LAY-IN TILE TO BE REMOVED BY GENERAL CONTRACTOR
- 3. EXISTING CONDITION: LAY-IN TILE TO REMAIN
- 4. EXISTING CONDITION: LAY-IN TILE TO BE REMOVED AND REPLACED WITH NEW LAY-IN TILE CEILING BY GENERAL CONTRACTOR.
- 5. EXISTING CONDITION: PLASTER CEILING - TO BE REMOVED BY GENERAL CONTRACTOR
- 6. EXISTING AUTOMATIC SPRINKLER HEAD - TO REMAIN
- 7. EXISTING AUTOMATIC SPRINKLER HEAD - TO BE REMOVED
- 8. EXISTING AUTOMATIC SPRINKLER HEAD LOCATION - TO BE CHANGED TO NEW UPRIGHT HEAD
- 9. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE RELOCATED WITH NEW AUTOMATIC SPRINKLER HEAD OF SAME TYPE
- 10. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE RELOCATED WITH NEW SEMI-RECESSED AUTOMATIC SPRINKLER HEAD
- 11. NO AUTOMATIC SPRINKLER HEAD IN THIS LOCATION
- 12. NEW ROOM/CEILING CONFIGURATION WILL REQUIRE ADJUSTMENT TO EXISTING AUTOMATIC SPRINKLER LAYOUT IN FIELD.
- 13. EXISTING AUTOMATIC SPRINKLER TO BE REMOVED AND REPLACED WITH NEW AUTOMATIC SPRINKLER HEAD OF SAME TYPE AFTER CEILING IS REPLACED
- 14. EXISTING AUTOMATIC SPRINKLER TO BE REMOVED AND REPLACED WITH NEW UPRIGHT AIS HEAD

**FIRE PROTECTION KEY NOTES**

- 1. NO CEILING
- 2. LAY-IN TILE REMOVED BY GENERAL CONTRACTOR
- 3. EXISTING LAY-IN TILE TO REMAIN
- 4. NEW LAY IN TILE CEILING BY GENERAL CONTRACTOR
- 5. NEW PLASTER CEILING BY GENERAL CONTRACTOR
- 6. EXISTING AUTOMATIC SPRINKLER HEAD - TO REMAIN
- 7. EXISTING AUTOMATIC SPRINKLER BRANCH CAPPED
- 8. EXISTING AUTOMATIC SPRINKLER HEAD - TO BE CHANGED TO NEW UPRIGHT HEAD
- 9. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE RELOCATED WITH AUTOMATIC SPRINKLER HEAD OF SAME TYPE
- 10. EXISTING AUTOMATIC SPRINKLER LOCATION - TO BE RELOCATED WITH NEW SEMI-RECESSED AUTOMATIC SPRINKLER HEAD
- 11. NEW AUTOMATIC SPRINKLER HEAD - UPRIGHT STYLE
- 12. NEW ROOM/CEILING CONFIGURATION WILL REQUIRE ADJUSTMENT TO EXISTING AUTOMATIC SPRINKLER LAYOUT IN FIELD.
- 13. EXISTING AUTOMATIC SPRINKLER TO BE REMOVED AND REPLACED WITH NEW AUTOMATIC SPRINKLER HEAD OF SAME TYPE AFTER CEILING IS REPLACED
- 14. EXISTING AUTOMATIC SPRINKLER TO BE REMOVED AND REPLACED WITH NEW UPRIGHT AIS HEAD



**1 FIRE PROTECTION - BUILDING 24 - SECOND FLOOR - PROPOSED**  
1/4"=1'-0"



**2 FIRE PROTECTION - BUILDING 24 - SECOND FLOOR - DEMOLITION**  
1/4"=1'-0"

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Revisions:	Date:

**CONSULTANT**

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

BANCROFT ARCHITECTS + ENGINEERS  
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BAE PROJECT NO. 18-121

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PAID HAWK  
JAN 27 2022

*Paul Horn*  
09/02/2022

Office of  
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and Facilities  
Management

VA U.S. Department  
of Veterans Affairs

Drawing Title  
**FIRE PROTECTION - ENLARGED  
PLAN - SECOND FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION  
DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE  
UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
**JPK**

Drawn  
**JPK**

Project Number  
**636A6-21-101**

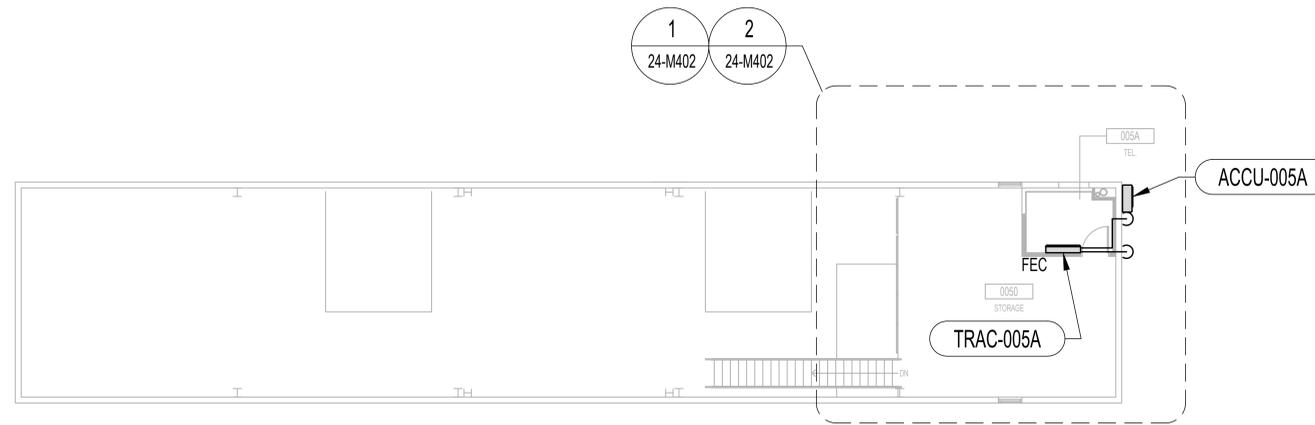
Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10,  
11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**24-FP402**

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**MECHANICAL GENERAL NOTES**

- A. SEE ENLARGED TELECOMMUNICATION ROOM MECHANICAL PLANS PER CIRCLE TAG DESIGNATIONS.
- B. SEE COMBINED OVERALL FLOOR AND ROOF PLANS FOR SPLIT SYSTEM AIR COOLED CONDENSING UNIT (ACCU) LOCATIONS AND PIPING ROUTES.



N  
1 MECHANICAL - BUILDING 24 - SECOND FLOOR - OVERALL  
1/16"=1'-0"

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ISSUE FOR BID	09/02/2022
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DESIGN PROFESSIONAL SEAL  
 PAUL HANCOCK  
 09/02/2022

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**MECHANICAL - BUILDING 24 - SECOND FLOOR - OVERALL**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

FULLY SPRINKLERED

Project Title  
 EHRM INFRASTRUCTURE UPGRADES

Location  
 DES MOINES, IOWA

Issue Date  
 09/02/2022

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 DG

Drawn  
 IL

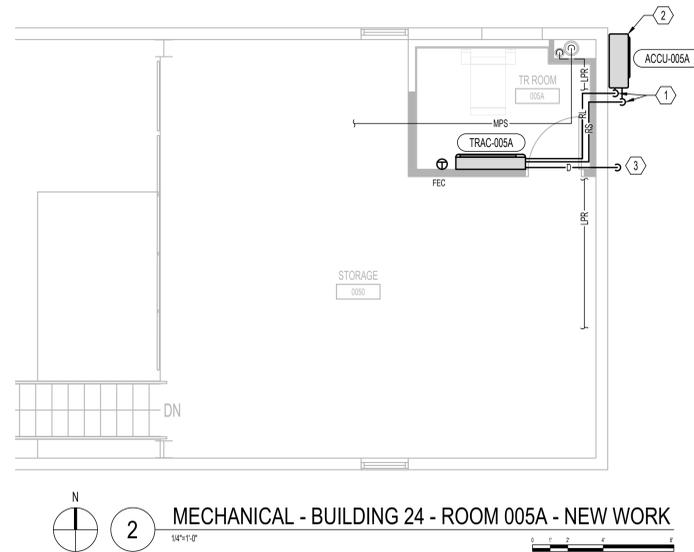
Project Number  
 636A6-21-101

Building Number  
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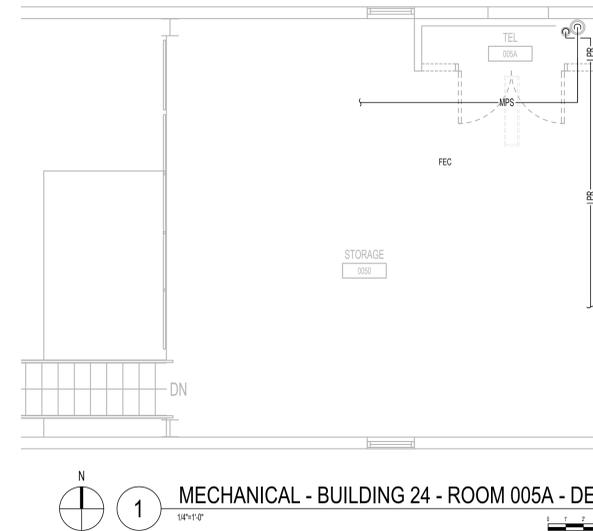
Drawing Number  
**24-M102**

**(X) MECHANICAL KEY NOTES**

1. NEW REFRIGERANT LIQUID AND SUCTION PIPING DOWN.
2. ACCU TO BE WALL MOUNTED 2' MINIMUM ABOVE ROOF OR GRADE.
3. NEW 3/4" CONDENSATE DRAIN PIPING DOWN. TERMINATE 6" ABOVE GRADE.



**2 MECHANICAL - BUILDING 24 - ROOM 005A - NEW WORK**  
1/4"=1'-0"



**1 MECHANICAL - BUILDING 24 - ROOM 005A - DEMOLITION**  
1/4"=1'-0"

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 Management

VA U.S. Department  
 of Veterans Affairs

Drawing Title  
**MECHANICAL - ENLARGED PLAN -  
 SECOND FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION  
 DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE  
 UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
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Project Number  
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Drawing Number  
**24-M402**

**(X) ELECTRICAL KEY NOTES**

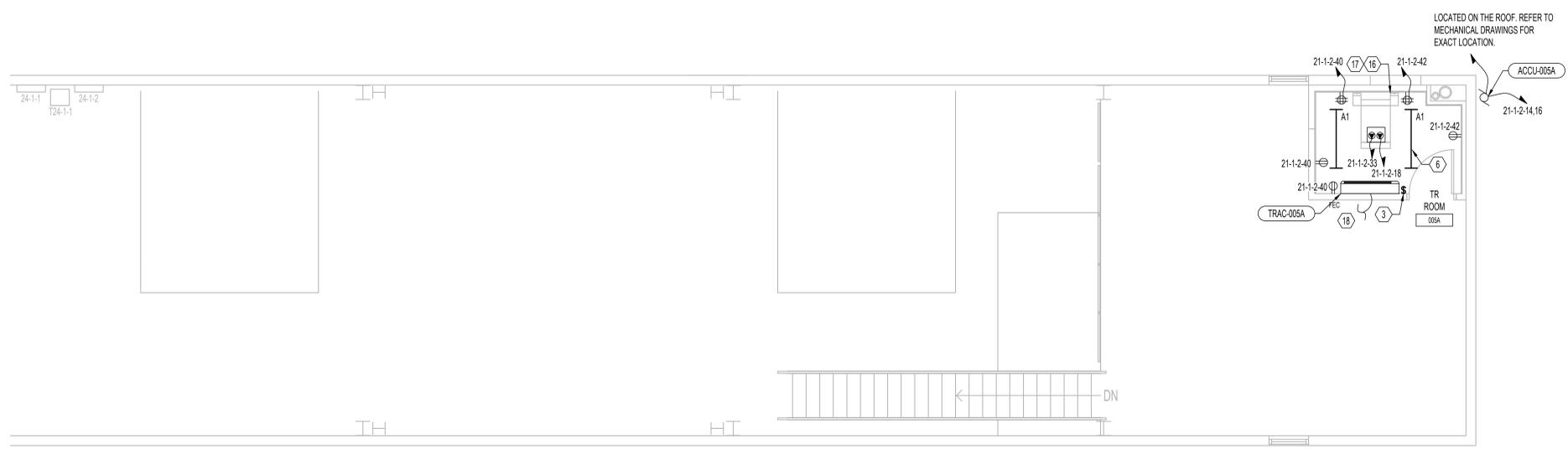
NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.

- ALL DATA RACK(S), LIGHTS AND RECEPTACLES SHALL REMAIN ACTIVE UNTIL NEW DATA RACKS ARE INSTALLED AND FUNCTIONING PROPERLY. ONCE NEW TR SPACE IS ACTIVE CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING EQUIPMENT WITH ALL ASSOCIATED CONDUIT AND WIRING BACK TO SOURCE. CONTRACTOR SHALL UTILIZE EXISTING CIRCUITS WHEREVER POSSIBLE.
- CONTRACTOR SHALL PROVIDE OVERHEAD POWER DROP CORD WITH ONE (1) CRITICAL AND ONE (1) NORMAL TWIST LOCK RECEPTACLE:
  - 1 RACK - (2) 208V/3P; L21-20R
  - 2 RACKS - (2) 208V/3P; L21-30R
  - 3 RACKS - (2) 208V/3P; 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD)
  - 4 RACKS - (2) 60A JUNCTION BOXES (HARDWIRED TO PANELBOARD) AND (2) 208V/3P; L21-20R.
 RECEPTACLES SHALL BE 8.5 FEET AFF. COORDINATE EXACT LOCATION WITH IT DRAWINGS AND VA PRIOR TO ROUGH-IN AND INSTALLATION.
- CONTRACTOR SHALL PROVIDE NEW LIGHT SWITCH.
- RUN 2#10+12G IN 3/4" C TO ACCU WITH 20A/2P CIRCUIT BREAKER. DISCONNECT SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL DRAWINGS. PROVIDE WHILE IN USE WEATHER PROOF/OFCI RECEPTACLE WITHIN 25FT OF MECHANICAL UNIT. CONTRACTOR SHALL ACCOMMODATE FOR VOLTAGE DROP.
- CONTRACTOR SHALL PROVIDE ONE (1) 5KVA UPS POWER SUPPLY PER RACK WITH NEMA 20A, L21-20P INPUT AND L21-20R OUTPUT.
- CONTRACTOR SHALL EXTEND CRITICAL CIRCUIT TO LIGHT FIXTURE FROM DEMOLISHED TR SPACE. CONDUIT AND WIRING SHALL MATCH EXISTING.
- IN TR SPACE WITH ONE (1) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 20A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#12+12G IN 3/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
- IN TR SPACE WITH TWO (2) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 30A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#10+12G IN 3/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
- IN TR SPACE WITH THREE (3) RACK SYSTEM: CONTRACTOR SHALL PROVIDE (2) 60A/3P CIRCUIT BREAKERS TO PROVIDE POWER TO PDU. RUN 4#6+10G IN 1-1/4" C. CIRCUIT BREAKER TYPE SHALL BE ELECTRONIC TRIP AND MATCH EXISTING AIC RATING. REARRANGE CIRCUIT BREAKERS AND UPDATE PANEL DIRECTORY AS REQUIRED.
- CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING TO PROVIDE NORMAL POWER TO TR RACK.
- CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKER. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING TO PROVIDE CRITICAL POWER TO TR RACK.
- CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL, AND DATA DEVICES. FIRE ALARM DEVICES SHALL REMAIN IN PLACE. CONTRACTOR SHALL PROPERLY COVER ANY DEVICES WHICH MAY ACTIVATE DURING CONSTRUCTION DUE TO DUST AND/OR CONTAMINANTS. ALL DEVICES ARE NOT SHOWN FOR CLARITY.
- NEW LOCATION OF RELOCATED DEVICES. EXTEND CONDUIT AND WIRING. WIRING TYPE TO MATCH EXISTING. ALL DEVICES ARE NOT SHOWN FOR CLARITY.
- CONTRACTOR SHALL CONNECT TO 120/208V NORMAL PANEL. PROVIDE OR UTILIZE EXISTING 20A, 1P BREAKER AND RUN 2#12+12G IN 3/4" CONDUIT AS REQUIRED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING.
- CONTRACTOR SHALL CONNECT TO 120/208V CRITICAL PANEL. PROVIDE OR UTILIZE EXISTING 20A, 1P BREAKER AND RUN 2#12+12G IN 3/4" CONDUIT AS REQUIRED. CIRCUIT BREAKER TYPE AND AIC RATING SHALL MATCH EXISTING.
- TELECOM ENCLOSURE: CONTRACTOR SHALL PROVIDE OVERHEAD (8.5 AFF) 120V; L5-30R POWER DROP CORD WITH (1) CRITICAL/EMERGENCY AND (1) NORMAL TWIST LOCK RECEPTACLE. IF THERE IS NO EMERGENCY POWER IN THE BUILDING, CONTRACTOR SHALL UTILIZE (2) NORMAL CIRCUITS. PROVIDE (2) 120V-30A/1P CIRCUIT BREAKER AND RUN 2#10+10G - 3/4" C TO PANELBOARD.
- PROVIDE RACK MOUNT UPS L5-30 INPUT / L5-30 OUTPUT, 2880VA, 2RU (RACK UNIT), APC SMX3000RMLV2U OR APPROVED EQUAL.
- INDOOR UNIT POWERED FROM ROOF MOUNTED OUTDOOR UNIT. PROVIDE POWER MANUFACTURER RECOMMENDED CONDUCTORS IN 3/4" C FOR CONNECTION TO OUTDOOR UNIT.

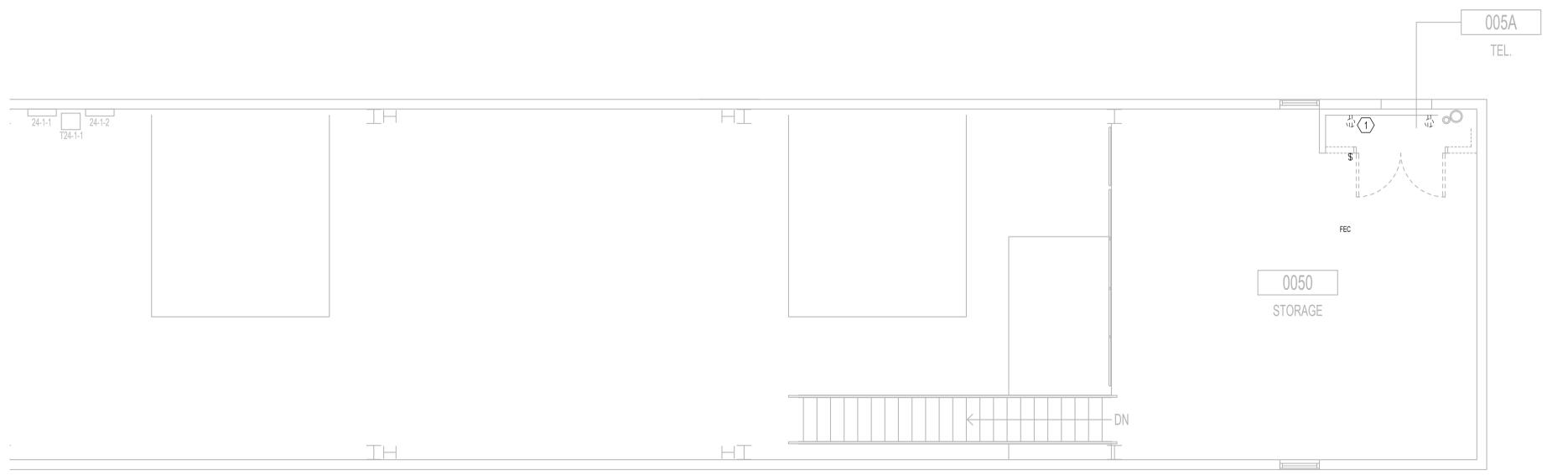
**GENERAL NOTES**

NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.

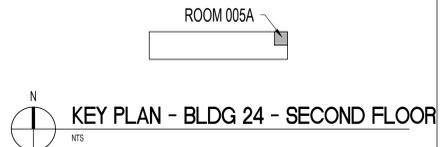
- REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR PLANS. REFER TO TECHNOLOGY, MECHANICAL, AND FIRE PROTECTION DRAWINGS FOR EXACT LOCATION OF EQUIPMENT.
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- REFER TO ONE-LINE FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- ALL SERVICE INTERRUPTIONS TO THE EXISTING FACILITY MUST BE SCHEDULED AT LEAST TWO WEEKS IN ADVANCE AND BE KEPT TO A MINIMUM. COORDINATE ALL POTENTIAL DISTRIBUTIONS AND OUTAGE REQUIREMENTS WITH THE VA. ALL DISTRIBUTIONS MUST BE COORDINATED AND APPROVED BY THE COR.
- ALL DEVICES BEING DEMOLISHED WITH ASSOCIATED CONDUIT AND WIRING SHALL BE REMOVED BACK TO SOURCE. PROVIDE NEW PANEL SCHEDULE DIRECTORY AND LABEL ALL DEMOLISHED CIRCUIT BREAKERS AS "SPARE" AND TURN OFF.
- PATCH AND PAINT WALL AS REQUIRED WHERE DEVICES, BOXES, ETC ARE REMOVED OR REWORKED.
- CONTRACTOR SHALL EXTEND CONDUIT AND WIRING TO NEW LOCATION OF TR SPACE. WIRING AND CONDUIT SIZE TO MATCH EXISTING.
- COORDINATE EXACT LOCATION OF DEVICES WITH IT CONTRACTOR PRIOR TO INSTALLATION.
- CONTRACTOR SHALL CREATE OPENING TO PROPERLY INSTALL DUPLEX RECEPTACLE(S). PROVIDE FIRESTOP SUCH AS EZ-PATH OR APPROVED EQUAL FOR ANY OPENINGS.
- ALL DUPLEX AND LIGHTING CIRCUITS SHALL BE 2#12+12EG - 3/4" C, UON.
- ALL LIGHT FIXTURES IN TR SPACES SHALL BE SUSPENDED 11'-0" AFF. CONTRACTOR SHALL FIELD COORDINATE LIGHT FIXTURES IF NECESSARY.
- ALL LIGHT FIXTURES IN DATA CENTER SHALL BE SUSPENDED 7'-0" AFF. CONTRACTOR SHALL FIELD COORDINATE LIGHT FIXTURES IF NECESSARY.
- EXISTING SMOKE DETECTORS SHALL BE UTILIZED AND RELOCATED IN EXISTING SPACE. NO NEW SMOKE DETECTORS SHALL BE INSTALLED.



**2 ELECTRICAL - BUILDING 24 - SECOND FLOOR - PROPOSED**  
1/8"=1'-0"



**1 ELECTRICAL - BUILDING 24 - SECOND FLOOR - DEMOLITION**  
1/8"=1'-0"



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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
100% CONSTRUCTION DOCUMENTS SUBMISSION	03/14/2022
95% CONSTRUCTION DEVELOPMENT SUBMISSION	02/10/2022
65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

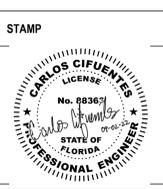
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**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

Drawing Title  
**ELECTRICAL - ENLARGED PLAN - SECOND FLOOR**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
**cc**

Drawn  
**FK**

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**24-E402**

A

B

C

D

E

F

A

B

C

D

E

F

ABBREVIATIONS		TELECOMMUNICATIONS SYMBOLS		GENERAL TELECOMMUNICATIONS NOTES		TELECOMMUNICATIONS DRAWING LIST		TELECOMMUNICATIONS DRAWING LIST	
A/C UNIT	AIR CONDITIONING UNIT		OUTLET, COMBINATION TELEPHONE/DATA COMMUNICATION	<p>1. FOR GENERAL TELECOMMUNICATION INFORMATION AND HOW SEE DESIGN NARRATIVE/BASIS OF DESIGN NARRATIVE.</p> <p>2. CONTRACTOR SHALL FURNISH A QUANTITY OF TWELVE (12) BLACK IEC C13/C14 POWER CORDS AND TWELVE (12) GRAY IEC C13/C14 POWER CORDS PER NETWORK CABINET AND PER SERVER CABINET LOCATED WITHIN DATA CENTER RM B409. CORDS SHALL BE 2.0 m / 6.6 FT. IN LENGTH.</p> <p>3. ALL AREAS SHALL BE CONSIDERED PLENUM SPACES, UNLESS OTHERWISE NOTED. COMPLY WITH ALL CODES PERTAINING TO PLENUM SPACES. PROVIDE WIRE OR CABLE RATED PLENUM AND OEM CERTIFIED FOR USE IN AIR PLENUMS.</p> <p>4. FIBER OPTIC CABLE SHALL BE CONSTRUCTED WITH AN ALUMINUM INTERLOCKING ARMORED JACKET.</p> <p>5. NO SYSTEMS OR COMPONENTS SHALL BE DISRUPTED OUT OF PROJECT SEQUENCE; COORDINATE ALL SERVICE DISRUPTIONS WITH THE VA.</p> <p>6. CARE SHALL BE TAKEN AS TO NOT DISRUPT OR DAMAGE EXISTING SYSTEMS INCLUDING BUT NOT LIMITED TO: CATV, ACCESS CONTROL, FIRE ALARM, NURSE CALL, BUILDING AUTOMATION, DISTRIBUTED ANTENNA, PAGING AND BIO-MED.</p> <p>7. ALL EQUIPMENT ADDED TO TELECOM ROOMS SHALL BE BONDED TO THE GROUNDING SYSTEM IN THAT ROOM IN ACCORDANCE WITH SPECIFICATION SECTION 27 05 26. REFER TO SHEET TT-TD703 FOR RISER DIAGRAM. REFER TO SHEET TT-TD502 FOR DETAILS.</p> <p>8. CONTRACTOR SHALL VERIFY ALL COMPONENTS BONDED TO EXISTING TELECOMMUNICATION GROUNDING BUSBARS HAVE BEEN TAKEN OUT OF SERVICE OR HAVE BEEN BONDED TO THE NEW TELECOMMUNICATION GROUNDING/BONDING SYSTEM PRIOR TO REMOVING EXISTING GROUNDING COMPONENTS.</p> <p>9. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROMPTLY REPORT ANY DRAWING DISCREPANCIES TO THE VA AND ARCHITECT.</p> <p>10. CONTRACTOR TO PROVIDE BASKET TYPE CABLE TRAY ALONG PRIMARY CABLE PATHWAYS CABLE TRAY TO BE SIZED AS PER DETAIL 1 ON DRAWING TT-TD506 ASSUMING 40% FILL AND 50% SPARE CAPACITY.</p> <p>11. IN ADDITION TO PRIMARY PATHWAYS, CABLE TRAYS SHALL BE PROVIDED FOR CABLE BUNDLES EXCEEDING 12 CABLES.</p> <p>12. FIRE RATED MECHANICAL SLEEVE ASSEMBLIES SHALL BE PROVIDED WHEN PASSING THROUGH PARTITIONS ASSUMING 40% FILL AND 50% SPARE CAPACITY.</p> <p>13. CONTRACTOR SHALL ENSURE THAT ALL PENETRATIONS ARE SEALED ON BOTH SIDES AS REQUIRED TO MEET EXISTING RATINGS. REFER TO SPECIFICATION 07 84 00.</p> <p>14. EXISTING ROUTING FOR TELECOM OUTLETS SHALL BE MAINTAINED TO THE FULLEST EXTENT POSSIBLE. IT IS UNDERSTOOD THAT SOME OF THE NEW CABLES WILL BE PLACED WITHIN THE NEWLY PROPOSED CABLE TRAYS, HOWEVER THE EXISTING CONDUITS TO THE DATA DROPS SHALL BE REUSED.</p> <p>15. THE INDUSTRY STANDARD OF 295 FEET COPPER CABLE DISTANCE LIMITATION SHALL BE RESPECTED. IF THIS REQUIREMENT CANNOT BE MET, CONTACT THE VA IMMEDIATELY.</p> <p>16. ALL CABLE TO WIRELESS ACCESS POINTS (WAPS) SHALL BE REPLACED WITH CAT 6A CABLES. PROVIDE A MINIMUM OF 10' CAT6A SERVICE LOOP AND A NEW CAT 6A SINGLE JACK SURFACE MOUNTED BOX (AKA BISCUIT) OR MODULAR PLUG TERMINATED LINK (MPLT) ABOVE THE CEILING WHERE EXISTING WAPS ARE LOCATED. ALL EXISTING WIRELESS ACCESS POINT DEVICES SHALL REMAIN IN PLACE.</p> <p>17. HYBRID CABLES FOR THE ISP MM/SM FIBER OPTIC CABLES ARE ACCEPTABLE INSTEAD OF SEPARATE CABLES AS INDICATED CURRENTLY IN THE TELECOMMUNICATIONS BACKBONE CABLING RISER DIAGRAM (DWG. TT-TD-701).</p> <p>18. OSP OS2 CABLES TO OUTBUILDINGS SHALL BE INDOOR/OUTDOOR RATED SO THAT BUILDING DISTRIBUTORS ARE NOT BE REQUIRED AT BUILDING ENTRANCE POINTS.</p> <p>19. CONTRACTOR SHALL MAINTAIN A MAXIMUM OF 40% RACEWAY FILL FACTOR.</p> <p>20. CONTRACTOR TO LOCATE EXISTING REINFORCING PRIOR TO DRILLING CORES FOR CONDUITS. DO NOT CUT REINFORCING. CORES SHALL HAVE 4" CLEAR MINIMUM BETWEEN THEM. ADJUST CORE LOCATIONS AS NEEDED. AT LOCATIONS WITH MORE THAN (2) CORES GOING THROUGH A CMU WALL, SPACE CORES AT 16" MINIMUM.</p> <p>21. ANY AND ALL PERSONNEL ENTERING PATIENT MENTAL HEALTH WARD MUST HAVE ADDITIONAL TRAINING AND APPROVAL FROM NURSE MANAGER PRIOR TO ENTERING AREA.</p> <p>22. IF FLOOR OR RATED WALL PENETRATIONS CANNOT BE FIRESTOPPED AT THE END OF THE WORK SHIFT DUE TO THE NEED TO PULL ADDITIONAL CABLES, TEMPORARY FIRESTOPPING COMPOSED OF MINERAL WOOL SHOULD BE INSTALLED IN THE PENETRATION TO PROVIDE PROTECTION AGAINST FIRE/SMOKE SPREAD THROUGH THE UNSEALED PENETRATION.</p> <p>23. ALL NEWLY INSTALLED DUCT BANKS SHALL BE PROVIDED WITH TRACER WIRES.</p> <p>24. ESTIMATED AVERAGE CABLE LENGTHS PROVIDED FOR REFERENCE ONLY. CONTRACTOR IS SOLELY RESPONSIBLE FOR CABLE LENGTHS AND PROVIDING A COMPLETE INSTALLATION AS DESCRIBED THROUGHOUT THE CONTRACT DOCUMENTS.</p> <p>25. NEW CAT 6A CABLES ARE TO BE PROVIDED FOR WIRELESS ACCESS POINTS. CABLES ARE TO BE TERMINATED UTILIZING SURFACE MOUNT "BISCUIT" JACK OR MODULAR PLUG TERMINATED LINK (MPLT). 10 FT. MINIMUM SERVICE LOOP TO BE PROVIDED AT OUTLET LOCATION. WIRELESS ACCESS POINT LOCATIONS SHOWN ON DRAWINGS FOR REFERENCE.</p> <p>26. CONTRACTOR TO PROVIDE WIRE BASKET STYLE CABLE TRAY AS SPECIFIED. EXISTING CABLE TRAY MAY BE UTILIZED IF FOUND TO MEET SPECIFICATIONS AND SUPPORT CABLE WITHOUT EXCEEDING PERMISSIBLE 40% FILL RATIO. ALL CABLE TRAY IS TO BE BONDED TOGETHER WITH BONDING CONDUCTORS AND THE SYSTEM BONDED TO THE BONDING BUSBAR. ALL EXISTING ACTIVE CABLES TO REMAIN IN PLACE UNTIL NEW CAT6A CABLES IS INSTALLED, CERTIFIED, AND MADE ACTIVE. AFTER NEW CABLES IS MADE ACTIVE AND ACCEPTED, THE NO LONGER USED CABLES AND ASSOCIATED SUPPORTS ARE TO BE REMOVED AND PENETRATIONS PATCHED ACCORDINGLY. IF EXISTING CABLE TRAY IS UTILIZED IN- LIEU OF NEW, CONTRACTOR TO PROVIDE A CREDIT TO THE VA FOR THE AMOUNT OF CABLE TRAY NOT PROVIDED. ALL CABLE TRAY SHALL BE DOCUMENTED, INCLUDING TYPE, SIZE, AND LOCATION AND INCLUDED AS PART OF CONTRACTOR'S AS-BUILT SUBMITTALS.</p>	<p><b>TELECOM SHEET INDEX</b></p> <p>SHEET 00-T001 00-T002</p> <p><b>BUILDING 01</b></p> <p>01-T004 A 01-T000 B 01-T000 C 01-T001 A 01-T001 B 01-T001 C 01-T002 A 01-T002 B 01-T002 C 01-T003 A 01-T003 B 01-T003 C 01-T004 A 01-T004 B 01-T004 C 01-T005 01-T006 01-T006P 01-T007 01-T007P 01-T008 01-T008P</p> <p><b>BUILDING 02</b></p> <p>02-T004 A 02-T000 B 02-T000 C 02-T001 A 02-T001 B 02-T001 C 02-T002 A 02-T002 B 02-T002 C 02-T003 A 02-T003 B 02-T003P</p> <p><b>BUILDING 03</b></p> <p>03-T004 A 03-T000 C 03-T001 A 03-T001 B 03-T002 C 03-T002P</p> <p><b>BUILDING 04</b></p> <p>04-T000 A 04-T000 B 04-T001 A 04-T001 B 04-T001 C 04-T002 A 04-T002 B 04-T002 C 04-T003 A 04-T003 B 04-T003P 04-T004P 04-T005P</p> <p><b>BUILDING 05</b></p> <p>05-T000 05-T001 A 05-T001 B 05-T002 A 05-T002 C 05-T003 05-T003P 05-T004P 05-T005P</p> <p><b>BUILDING 06</b></p> <p>06-T001 A 06-T001 B 06-T001P</p> <p><b>BUILDING 07</b></p> <p>07-T001 A 07-T001 C 07-T001P</p> <p><b>BUILDING 08</b></p> <p>08-T000 08-T001 08-T001 A 08-T001 B 08-T001P</p> <p><b>BUILDING 09</b></p> <p>09-T000 09-T001 09-T001P</p> <p><b>BUILDING 10</b></p> <p>10-T000 10-T001 A 10-T001 C 10-T001P</p> <p><b>BUILDING 11</b></p> <p>11-T001 11-T001P</p> <p><b>BUILDING 12</b></p> <p>12-T000 A 12-T000 B 12-T000 C 12-T001 A 12-T001 B 12-T001 C 12-T002 A 12-T002 B 12-T002 C 12-T003 A 12-T003 B 12-T003P 12-T004P 12-T005P</p> <p><b>BUILDING 13</b></p> <p>13-T001</p> <p><b>BUILDING 21</b></p> <p>21-T001 21-T002 21-T002P</p> <p><b>BUILDING 24</b></p> <p>24-T001 24-T002 24-T002P</p> <p><b>BUILDING 25</b></p> <p>25-T001 A 25-T001 C 25-T001P</p>	<p><b>TELECOM SHEET INDEX (CONTINUED)</b></p> <p><b>BUILDING 27</b></p> <p>27-T001 27-T001P</p> <p><b>BUILDING 28</b></p> <p>28-T001 28-T001P</p> <p><b>TELECOM DETAILS</b></p> <p>TT-TD501 TT-TD502 TT-TD503 TT-TD504 TT-TD505 TT-TD506 TT-TD507</p> <p><b>TELECOM ELEVATIONS AND SCHEDULES</b></p> <p>TT-TD601 TT-TD602 TT-TD603 TT-TD604 TT-TD605 TT-TD606</p> <p><b>TELECOM RISERS</b></p> <p>TT-TD701 TT-TD702 TT-TD703</p>			
BLDG	BUILDING		TELEPHONE LINE = T						
CAT	CONDUIT CATEGORY		TELECOMMUNICATIONS MANHOLE						
CCTV	CLOSED CIRCUIT TELEVISION COMMUNICATION		FLOOR RECEPTACLE, TELEPHONE						
COMM	COMMUNICATION		OUTLET TELEPHONE; LETTER INDICATES AS FOLLOWS: J = JACK TYPE W = WALL TYPE						
DEMOW	DEMOLITION DRAWING		OUTLET DATA ONLY - "X" INDICATES QUANTITY OF DATA OUTLETS						
ELEV	ELECTRIC OR ELECTRICAL		OUTLET; LETTER INDICATES AS FOLLOWS: A = AUDIO V = VIDEO I = INTERCOM						
EMT	ELECTRICAL METALLIC TUBING		WIRELESS ACCESS POINT DATA OUTLET - "XX" INDICATES DEVICE NAME (1)ON CAT6A CABLE - SINGLE SURFACE MOUNT "BISCUIT" JACK OR MODULAR PLUG TERMINATED LINK (MPLT) WITH 10 FT. SERVICE LOOP.						
ENCL	ENCLOSURE		48RU TELECOMMUNICATION CHANNEL RACK, WITH 6.45" VERTICAL CABLE MANAGEMENT						
FLEX	FLEXIBLE METALLIC CONDUIT FT OR FOOT		STANDARD DENSITY (SD) OR HIGH DENSITY (HD) SERVER CABINET - DATA CENTER						
G OR GND	GROUND OR GENERATOR		40" WIDE NETWORK CABINET - DATA CENTER						
HZ	HERTZ		PRIMARY BONDING BUSBAR (PBB) OR SECONDARY BONDING BUSBAR (SBB)						
IMC	INTERMEDIATE METAL CONDUIT		MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION						
IR	INFRARED		TELECOMMUNICATIONS WIRE MESH CABLE TRAY						
J-BOX	JUNCTION BOX		TELECOMMUNICATIONS VERTICAL LADDER RACK (SEE DETAIL 3 ON DWG. TT-TD501)						
LF	LINEAR FEET (FOOT)	<b>NOTE:</b> SEE VA BARRIER FREE DESIGN GUIDE PG-18-13							
LV	LOW VOLTAGE	<b>RATED PARTITION LEGEND</b>							
MAX	MAXIMUM	CONTRACTOR IS REQUIRED TO MAINTAIN ALL RATED PARTITIONS.							
MECH	MECHANICAL								
MH	MANHOLE								
MIN	MINIMUM								
NA	NOT APPLICABLE	<b>INDUSTRY STANDARDS</b>							
NEC	NATIONAL ELECTRICAL CODE	1.8.2.8 TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA):							
NIC	NOT IN CONTRACT	(a) TIA-120 Series - Telecommunications Land Mobile communications (APCO/Project 25).							
NTS	NOT TO SCALE	(b) TIA-155 - Guidelines for the Assessment and Mitigation of Installed Category 6 Cabling to Support 10GBASE-T.							
OD	OUTSIDE DIAMETER	(c) TIA-TSB - 162 - A - Telecommunications Cabling Guidelines for Wireless Access Points.							
PA	PUBLIC ADDRESS	(d) TIA - 222 - Structural Standard for Antenna Supporting Structures and Antennas.							
PH	PHASE	(e) TIA - 4722000 - B - Fiber Optic Communications Cable for Outside Plant Use.							
PVC	POLYVINYL CHLORIDE (PLASTIC)	(f) TIA - 568 - Revision/Edition: C Commercial Building Telecommunications Cabling Standard Set:							
PWR	POWER	• TIA - 568.0 (REV. E) Generic Telecommunications Cabling for Customer Premises.							
RCP	REFLECTED CEILING PLAN	• TIA - 568.1 (REV. E) Commercial Building Telecommunications Cabling Standard Part 1: General Requirements.							
RGS	RIGID GALVANIZED STEEL	• TIA - 568.2 (REV. D) Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted Pair Cabling Components.							
SF	SQUARE FOOT (FEET)	• TIA - 568.3 (REV. D) Optical Fiber Cabling Components Standard, and							
SPEC	SPECIFICATION	• TIA - 568.4 (REV. D) Broadband Coaxial Cabling and Components Standard (with addendums and errata).							
TYP	TYPICAL	(g) TIA - 569 (REV. E)- TELECOMMUNICATIONS PATHWAYS AND SPACES.							
UL	UNDERWRITERS LABORATORY	(h) TIA/EIE - 590 (REV. A) - Standard for Physical Location and Protection of Below Ground Fiber Optic Cable Plant.							
UPS	UNINTERRUPTIBLE POWER SUPPLY	(i) ANSI/TIA - 606 (REV. D) - Administration Standard for Telecommunications Infrastructure.							
UTP	UNSHIELDED TWISTED PAIR	(j) TIA - 607 (REV. D) - Generic Telecommunications Bonding and Grounding (Earthing) For Customer Premises.							
V	VOLT	(k) ANSI/TIA - 738 (REV. B) - Customer-owned Outside Plant Telecommunication Infrastructure Standard.							
		(l) ANSI/TIA - 862 (REV. B) - Building Automation Systems Cabling Standard.							
		(m) TIA - 942 (REV. B) - Telecommunications Infrastructure Standard for Data Centers.							
		(n) TIA - 1179 (REV. A)- Healthcare Facility Telecommunications Infrastructure Standard.							

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - SYMBOLS AND ABBREVIATIONS**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked BY  
**CF**

Drawn CF

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**00-T001**

A B C D E F

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1, THROUGH BUILDING 5, TO TR 140 IN BUILDING 6, THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWGS 06-T001.A & 05-T000.A

NEW 24 STRANDS OS1 (ROUTE B) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 149 IN BUILDING 6, THROUGH THE NEW TELECOM DUCT BANK. FOR CONTINUATION, REFER TO DWG 06-T001.A

NEW 24 STRANDS OS1 (ROUTE B) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 217 IN BUILDING 5, THROUGH THE NEW TELECOM DUCT BANK. FOR CONTINUATION, REFER TO DWG 05-T000.A

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 217 IN BUILDING 5, THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWG 05-T000.A

CONTRACTOR TO ENSURE THAT THERE SHALL BE NO DISRUPTION TO THE EXISTING TELECOM INFRASTRUCTURE WHILE BUILDING THE NEWLY PROPOSED DUCT BANK, AND THAT THE NEW AND EXISTING DUCT BANKS ARE PHYSICALLY SEPARATED. IT IS TO NOTE THAT ROUTE B AT THIS LOCATION IS INTENDED TO SERVE BUILDINGS 12 & 25 WHILE ROUTE A IS INTENDED TO SERVE BUILDINGS 5, 6 & 7. THEREFORE, THE FIBER OPTIC PHYSICAL REDUNDANCY REQUIREMENT IS STILL APPLICABLE.

**NOTES**

- 1- THE EXISTING TELECOM INFRASTRUCTURE SHALL BE USED FOR FIBER OPTIC ROUTE A TO CAMPUS BUILDINGS, EXCEPT FOR THE ROUTE A TO BUILDINGS 4 & 27 WHICH IS USING A NEWLY PROPOSED DUCT BANK.
- 2- THE NEWLY PROPOSED TELECOM INFRASTRUCTURE SHALL BE USED FOR FIBER OPTIC ROUTE B TO CAMPUS BUILDINGS, EXCEPT FOR THE ROUTE A TO BUILDINGS 4 & 27 WHICH IS USING A NEWLY PROPOSED DUCT BANK.
- 3- FOR EXACT LOCATION OF THE NEW DUCT BANK INFRASTRUCTURE AND MANHOLES DETAILS, REFER TO CIVIL DESIGN DRAWINGS.
- 4- PROVIDE 3-4" CONDUITS FROM THE CRAWLSPACE OF BUILDING 1 TO THE SECOND FLOOR COMMUNICATIONS ROOM IN BUILDING 4. CONDUITS SHALL EXTEND THROUGH THE CRAWLSPACES TO THE TELECOMMUNICATIONS ROOM IN THE BASEMENT OF BUILDING 1 AND TO THE SECOND FLOOR COMMUNICATIONS ROOM IN BUILDING 4. ALIGN BORE AND SLEEVE CONDUITS UNDER LOADING DOCK AND PARKING AREA PAVED ACCESS ROAD. PROVIDE 3 - 1/2" INNERDUCTS IN TWO OF THE 4" CONDUITS. PROVIDE A 100 PAIR TELEPHONE BACKBONE CABLE AND TERMINATE ON THE EXISTING PUNCHDOWN BLOCKS IN BUILDINGS 1 AND 4. PROVIDE SURGE PROTECTIVE DEVICES IN BUILDING 1 AND 4. PROVIDE AN RG-11 COAX TRUNK CABLE FROM THE CATV DEMARCATION POINT IN BUILDING 1 TO THE COMMUNICATION ROOM IN BUILDING 4. TERMINATE WITH F-SERIES CONNECTORS ON THE EXISTING EQUIPMENT IN BOTH BUILDINGS. PROVIDE A 12 CONDUCTOR MULTIMODE FIBER OPTIC CABLE AND A 12 CONDUCTOR SINGLE MODE FIBER OPTIC CABLE BETWEEN THE DATA ROOM IN BUILDING 1 AND THE TELECOM ROOM ON THE SECOND FLOOR OF BUILDING 4. TERMINATE FIBERS ONTO EXISTING EQUIPMENT IN BOTH BUILDINGS. PROVIDE A 4 CONDUCTOR MULTIMODE FIBER OPTIC CABLE IN A SEPARATE INNERDUCT FOR FIRE ALARM. TERMINATE AT A FIRE ALARM PANEL IN BUILDING 1 AND BUILDING 4 TO MAKE A LOOPED SYSTEM BETWEEN FIRE ALARM PANELS. CABLES SHALL BE INSTALLED, TERMINATED AND TESTED BEFORE THE EXISTING CABLE TRAY OR DUCT BANK INSTALLED COMMUNICATION CABLES CAN BE REMOVED.
- 5- ALL NEWLY INSTALLED DUCT BANKS SHALL BE PROVIDED WITH TRACER WIRES.

**LEGEND**

- B- NEW 2x2 4" CONDUIT DUCT BANK FOR FIBER OPTIC ROUTE B
- B- NEW 1x2 2" CONDUIT DUCT BANK FOR FIBER OPTIC ROUTE B
- A- NEW 1x2 2" CONDUIT DUCT BANK FOR FIBER OPTIC ROUTE A
- A- NEW 1x3 4" CONDUIT DUCT BANK FOR FIBER OPTIC ROUTE A
- A- EXISTING TELECOM DUCT BANK FOR FIBER OPTIC ROUTE A
- MH MANHOLE
- HH HANDHOLE

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1, THROUGH BUILDINGS 5 & 6, TO TR 177 IN BUILDING 7, THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWGS 07-T001.A, 06-T001.A & 05-T000.A

NEW 24 STRANDS OS1 (ROUTE B) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 177 IN BUILDING 7, THROUGH THE NEW TELECOM DUCT BANK. FOR CONTINUATION, REFER TO DWG 07-T001.A

NEW 24 STRANDS OS1 (ROUTE B) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 1037 IN BUILDING 25, THROUGH THE NEW TELECOM DUCT BANK.

THE NEW 24 STRANDS OS1 (ROUTE A) TO BUILDING 25 IS ROUTED INTERNALLY THROUGH BUILDINGS 2 AND 12.

NEW 24 STRANDS OS1 (ROUTE B) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO EACH OF TRs C000, A100A, A200A & A300A IN BUILDING 12, THROUGH THE NEW TELECOM DUCT BANK. FOR CONTINUATION, REFER TO DWG 12-T000.A

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO EACH OF TRs C000, A100A, A200A & A300A IN BUILDING 12, THROUGH THE INTERCONNECTED BASEMENT LEVEL. FOR CONTINUATION, REFER TO DWGS 01-T000.A & 12-T000.A

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 1019 IN BUILDING 9, THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWGS 09-T001.A & 01-T000.A

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1, THROUGH BUILDINGS 2 & 9, TO TR 005A IN BUILDING 24, THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWGS 24-T002.A & 09-T001.A

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1, THROUGH BUILDING 2 & 9, TO TR 107 IN BUILDING 10, THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWGS 10-T001.A & 09-T001.A

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1, THROUGH BUILDING 2, 9 & 10, TO TR 101B IN BUILDING 11, THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWGS 11-T001.A, 10-T001.A & 09-T001.A

FOR THIS CONNECTION, THE CONTRACTOR'S SCOPE INCLUDES THE ACTIONS LISTED UNDER NOTE NO. 4 ABOVE. IN ADDITION, NEW 1x24 STRANDS OM4 & 1x12 STRANDS OS1 (ROUTE A) SHALL BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 1141 IN BUILDING 4, THROUGH THE NEW TELECOM DUCT BANK. FOR CONTINUATION, REFER TO DWG 04-T000.A

NEW 1x24 STRANDS OM4 & 1x12 STRANDS OS1 (ROUTE B) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 1141 & TR 2109 IN BUILDING 4, THROUGH THE NEW TELECOM DUCT BANK. FOR CONTINUATION, REFER TO DWG 04-T000.A

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1 TO TR 1019 IN BUILDING 27, THROUGH THE NEW TELECOM DUCT BANK. FOR CONTINUATION, REFER TO DWGS 02-T000.A & 27-T001.

NEW 24 STRANDS OS1 (ROUTE A) TO BE ROUTED FROM DC B409 IN BUILDING 1, THROUGH BUILDINGS 2 & 9, TO TR 2106 IN BUILDING 21, THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWGS 21-T001.A & 09-T001.A

**1 TELECOMMUNICATION - SITE PLAN**



ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
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Revisions:	Date:

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VA CONTRACT NO. 36C26319D0044  
BAE PROJECT NO. 18-121

**Office of Construction and Facilities Management**

U.S. Department of Veterans Affairs

Drawing Title: **TELECOMMUNICATIONS - SITE PLAN**

Approved: Project Director

Phase: **CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title: **EHRM INFRASTRUCTURE UPGRADES**

Location: **DES MOINES, IOWA**

Issue Date: **09/02/2022**

Checked BY: **CF**

Drawn CF

Project Number: **636A6-21-101**

Building Number: **1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28**

Drawing Number: **00-T002**

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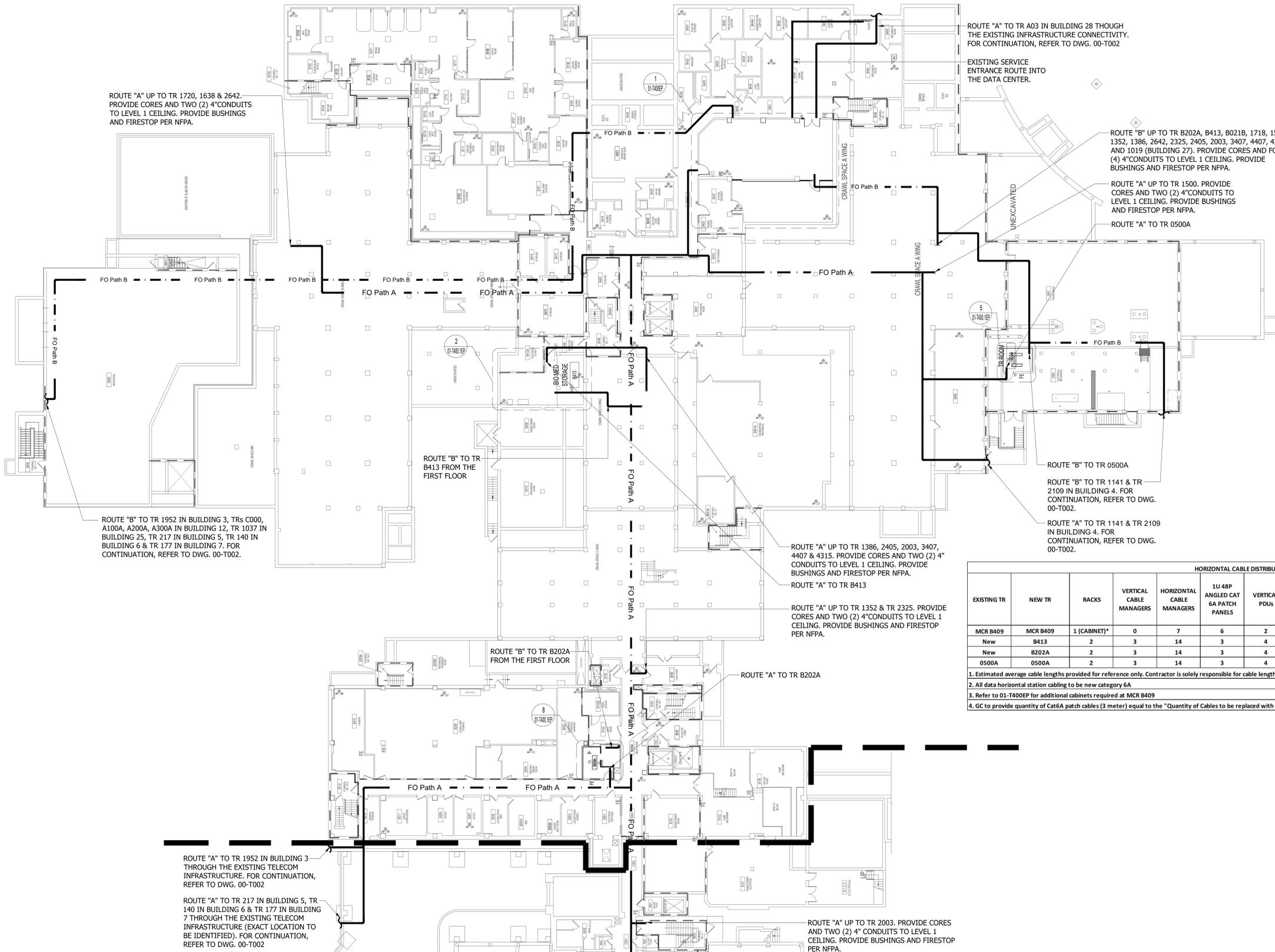
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ROUTE "A" UP TO TR 1720, 1638 & 2642. PROVIDE CORES AND TWO (2) 4" CONDUITS TO LEVEL 1 CEILING. PROVIDE BUSHINGS AND FIRESTOP PER NFPA.

ROUTE "A" TO TR A03 IN BUILDING 28 THROUGH THE EXISTING INFRASTRUCTURE CONNECTIVITY. FOR CONTINUATION, REFER TO DWG. 00-T002

EXISTING SERVICE ENTRANCE ROUTE INTO THE DATA CENTER.

ROUTE "B" UP TO TR B202A, B413, B021B, 1718, 1500, 1352, 1386, 2642, 2325, 2405, 2003, 3407, 4407, 4315 AND 1019 (BUILDING 27). PROVIDE CORES AND FOUR (4) 4" CONDUITS TO LEVEL 1 CEILING. PROVIDE BUSHINGS AND FIRESTOP PER NFPA.

ROUTE "A" UP TO TR 1500. PROVIDE CORES AND TWO (2) 4" CONDUITS TO LEVEL 1 CEILING. PROVIDE BUSHINGS AND FIRESTOP PER NFPA.

ROUTE "A" TO TR 0500A

ROUTE "B" TO TR 1952 IN BUILDING 3, TRS C000, A100A, A200A, A300A IN BUILDING 12, TR 1037 IN BUILDING 25, TR 217 IN BUILDING 5, TR 140 IN BUILDING 6 & TR 177 IN BUILDING 7. FOR CONTINUATION, REFER TO DWG. 00-T002.

ROUTE "B" TO TR B413 FROM THE FIRST FLOOR

ROUTE "A" UP TO TR 1386, 2405, 2003, 3407, 4407 & 4315. PROVIDE CORES AND TWO (2) 4" CONDUITS TO LEVEL 1 CEILING. PROVIDE BUSHINGS AND FIRESTOP PER NFPA.

ROUTE "A" UP TO TR 1352 & TR 2325. PROVIDE CORES AND TWO (2) 4" CONDUITS TO LEVEL 1 CEILING. PROVIDE BUSHINGS AND FIRESTOP PER NFPA.

ROUTE "B" TO TR 0500A

ROUTE "B" TO TR 1141 & TR 2109 IN BUILDING 4. FOR CONTINUATION, REFER TO DWG. 00-T002.

ROUTE "A" TO TR 1141 & TR 2109 IN BUILDING 4. FOR CONTINUATION, REFER TO DWG. 00-T002.

ROUTE "B" TO TR B202A FROM THE FIRST FLOOR

ROUTE "A" TO TR B202A

ROUTE "A" TO TR 1952 IN BUILDING 3 THROUGH THE EXISTING TELECOM INFRASTRUCTURE. FOR CONTINUATION, REFER TO DWG. 00-T002

ROUTE "A" TO TR 217 IN BUILDING 5, TR 140 IN BUILDING 6 & TR 177 IN BUILDING 7 THROUGH THE EXISTING TELECOM INFRASTRUCTURE (EXACT LOCATION TO BE IDENTIFIED). FOR CONTINUATION, REFER TO DWG. 00-T002

ROUTE "A" UP TO TR 2003. PROVIDE CORES AND TWO (2) 4" CONDUITS TO LEVEL 1 CEILING. PROVIDE BUSHINGS AND FIRESTOP PER NFPA.

HORIZONTAL CABLE DISTRIBUTION QUANTITIES												
EXISTING TR	NEW TR	RACKS	VERTICAL CABLE MANAGERS	HORIZONTAL CABLE MANAGERS	1U 48P ANGLED CAT 6A PATCH PANELS	VERTICAL PDUs	30A ZONE PDUs	60A ZONE PDUs	5KW UPSs	QUANTITY OF CABLES TO BE REMOVED	QUANTITY OF CABLES TO BE REPLACED WITH CAT 6A	ESTIMATED AVERAGE CABLE LENGTH
MCR B409	MCR B409	1 (CABINET)*	0	7	6	2	0	0	0	216	216	90'
New	B413	2	3	14	3	4	1	0	2	0	120	140'
New	B202A	2	3	14	3	4	1	0	2	110	110	95
0500A	0500A	2	3	14	3	4	1	0	2	109	109	110'

1. Estimated average cable lengths provided for reference only. Contractor is solely responsible for cable lengths and providing a complete installation as described throughout the contract documents.  
 2. All data horizontal station cabling to be new category 6A  
 3. Refer to 01-T400EP for additional cabinets required at MCR B409  
 4. GC to provide quantity of Cat6A patch cables (3 meter) equal to the "Quantity of Cables to be replaced with Cat 6A" for each TR and MCR

1 BUILDING 1 - OVERALL BASEMENT ROUTING PLAN  
1/16"=1'-0"

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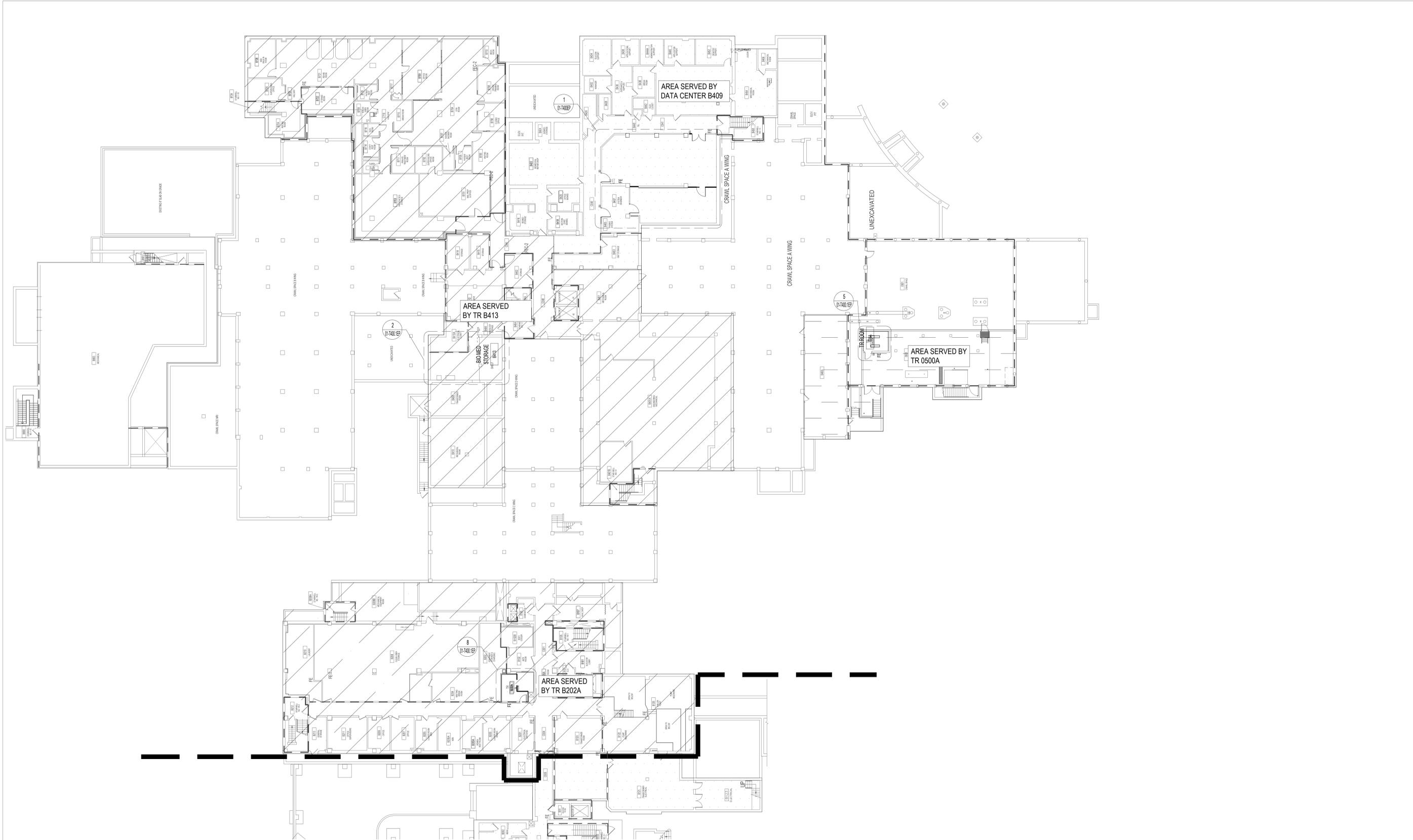
Office of Construction and Facilities Management  
 VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - BASEMENT ROUTING PLAN**  
 Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**  
 FULLY SPRINKLERED

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**  
 Location  
 DES MOINES, IOWA  
 Issue Date  
 09/02/2022  
 Checked BY  
 Drawn CF

Project Number  
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 Building Number  
 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28  
 Drawing Number  
**01-T000.A**



**1** BUILDING 1 - OVERALL BASEMENT - ZONING PLAN  
1/16"=1'-0"

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**VA** U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - BASEMENT ZONING PLAN**  
Approved: Project Director

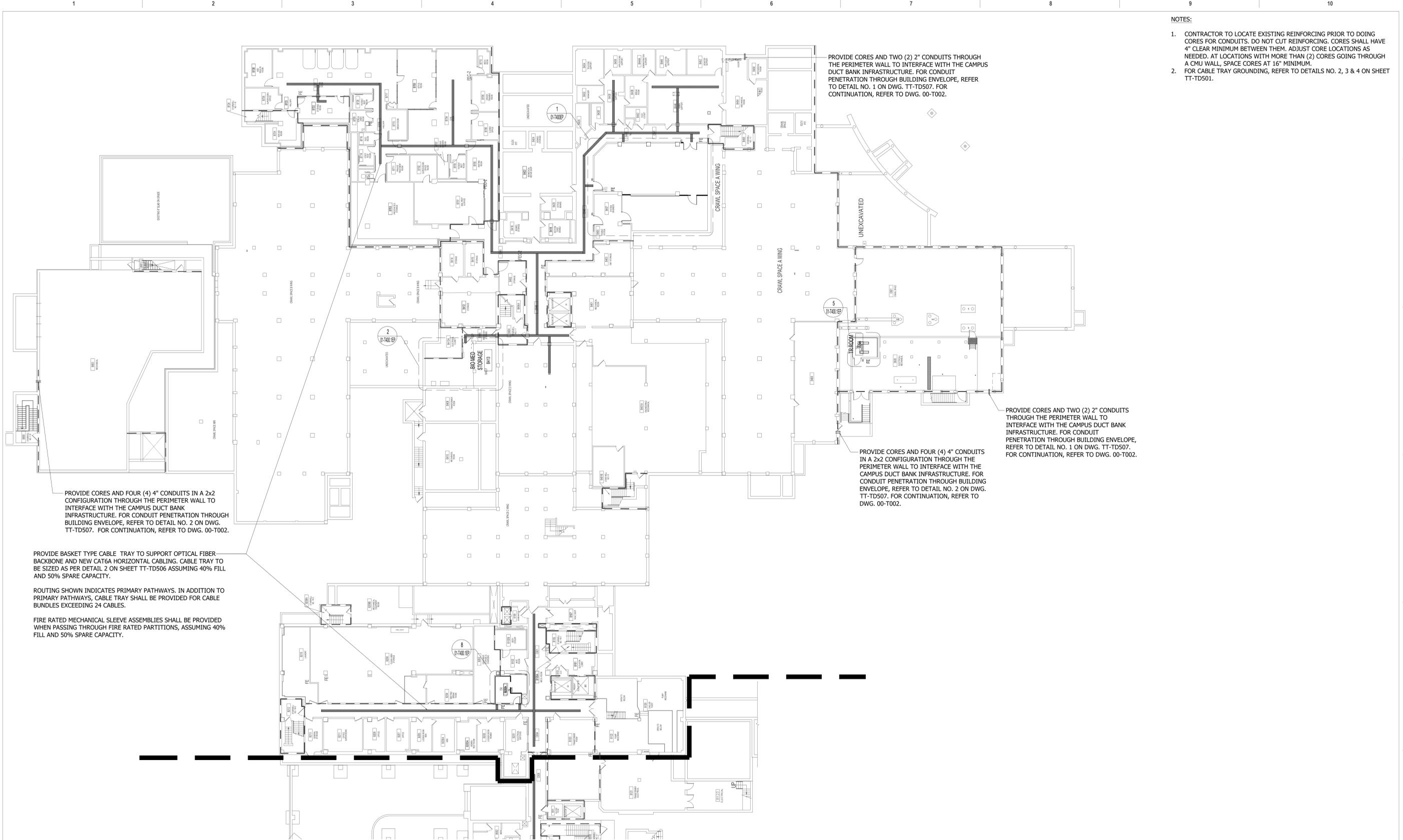
Phase  
CONSTRUCTION DOCUMENTS  
**FULLY SPRINKLERED**

Project Title  
EHRM INFRASTRUCTURE UPGRADES  
Location  
DES MOINES, IOWA  
Issue Date  
09/02/2022  
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Drawn CF

Project Number  
636A6-21-101  
Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28  
Drawing Number  
**01-T000.B**

NOTES:

1. CONTRACTOR TO LOCATE EXISTING REINFORCING PRIOR TO DOING CORES FOR CONDUITS. DO NOT CUT REINFORCING. CORES SHALL HAVE 4" CLEAR MINIMUM BETWEEN THEM. ADJUST CORE LOCATIONS AS NEEDED. AT LOCATIONS WITH MORE THAN (2) CORES GOING THROUGH A CMU WALL, SPACE CORES AT 16" MINIMUM.
2. FOR CABLE TRAY GROUNDING, REFER TO DETAILS NO. 2, 3 & 4 ON SHEET TT-TD501.



PROVIDE CORES AND FOUR (4) 4" CONDUITS IN A 2x2 CONFIGURATION THROUGH THE PERIMETER WALL TO INTERFACE WITH THE CAMPUS DUCT BANK INFRASTRUCTURE. FOR CONDUIT PENETRATION THROUGH BUILDING ENVELOPE, REFER TO DETAIL NO. 2 ON DWG. TT-TD507. FOR CONTINUATION, REFER TO DWG. 00-T002.

PROVIDE BASKET TYPE CABLE TRAY TO SUPPORT OPTICAL FIBER-BACKBONE AND NEW CAT6A HORIZONTAL CABLING. CABLE TRAY TO BE SIZED AS PER DETAIL 2 ON SHEET TT-TD506 ASSUMING 40% FILL AND 50% SPARE CAPACITY.

ROUTING SHOWN INDICATES PRIMARY PATHWAYS. IN ADDITION TO PRIMARY PATHWAYS, CABLE TRAY SHALL BE PROVIDED FOR CABLE BUNDLES EXCEEDING 24 CABLES.

FIRE RATED MECHANICAL SLEEVE ASSEMBLIES SHALL BE PROVIDED WHEN PASSING THROUGH FIRE RATED PARTITIONS, ASSUMING 40% FILL AND 50% SPARE CAPACITY.

PROVIDE CORES AND TWO (2) 2" CONDUITS THROUGH THE PERIMETER WALL TO INTERFACE WITH THE CAMPUS DUCT BANK INFRASTRUCTURE. FOR CONDUIT PENETRATION THROUGH BUILDING ENVELOPE, REFER TO DETAIL NO. 1 ON DWG. TT-TD507. FOR CONTINUATION, REFER TO DWG. 00-T002.

PROVIDE CORES AND FOUR (4) 4" CONDUITS IN A 2x2 CONFIGURATION THROUGH THE PERIMETER WALL TO INTERFACE WITH THE CAMPUS DUCT BANK INFRASTRUCTURE. FOR CONDUIT PENETRATION THROUGH BUILDING ENVELOPE, REFER TO DETAIL NO. 2 ON DWG. TT-TD507. FOR CONTINUATION, REFER TO DWG. 00-T002.

PROVIDE CORES AND TWO (2) 2" CONDUITS THROUGH THE PERIMETER WALL TO INTERFACE WITH THE CAMPUS DUCT BANK INFRASTRUCTURE. FOR CONDUIT PENETRATION THROUGH BUILDING ENVELOPE, REFER TO DETAIL NO. 1 ON DWG. TT-TD507. FOR CONTINUATION, REFER TO DWG. 00-T002.

**1** BUILDING 1 - OVERALL BASEMENT - CABLE TRAY PLAN  
1/16"=1'-0"

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ISSUE FOR BID	09/02/2022
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Revisions:	Date:

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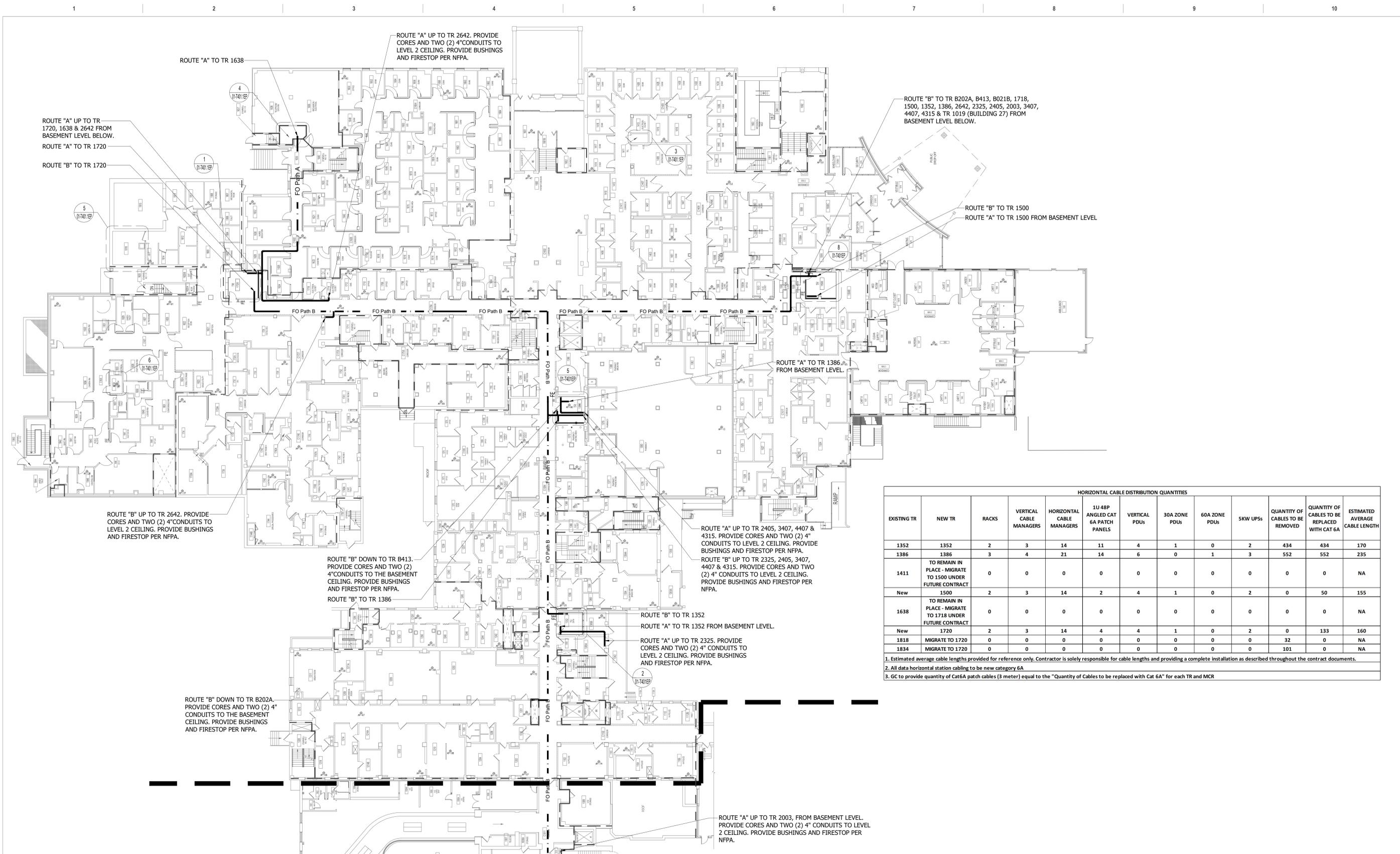
Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - BASEMENT CABLE TRAY PLAN**  
Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS  
  
FULLY SPRINKLERED

Project Title  
EHRM INFRASTRUCTURE UPGRADES  
Location  
DES MOINES, IOWA  
Issue Date  
09/02/2022  
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Drawn CF

Project Number  
636A6-21-101  
Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28  
Drawing Number  
01-T000.C



**HORIZONTAL CABLE DISTRIBUTION QUANTITIES**

EXISTING TR	NEW TR	RACKS	VERTICAL CABLE MANAGERS	HORIZONTAL CABLE MANAGERS	1U 48P ANGLED CAT 6A PATCH PANELS	VERTICAL PDUs	30A ZONE PDUs	60A ZONE PDUs	SKW UPSs	QUANTITY OF CABLES TO BE REMOVED	QUANTITY OF CABLES TO BE REPLACED WITH CAT 6A	ESTIMATED AVERAGE CABLE LENGTH
1352	1352	2	3	14	11	4	1	0	2	434	434	170
1386	1386	3	4	21	14	6	0	1	3	552	552	235
1411	TO REMAIN IN PLACE - MIGRATE TO 1500 UNDER FUTURE CONTRACT	0	0	0	0	0	0	0	0	0	0	NA
New	1500	2	3	14	2	4	1	0	2	0	50	155
1638	TO REMAIN IN PLACE - MIGRATE TO 1718 UNDER FUTURE CONTRACT	0	0	0	0	0	0	0	0	0	0	NA
New	1720	2	3	14	4	4	1	0	2	0	133	160
1818	MIGRATE TO 1720	0	0	0	0	0	0	0	0	32	0	NA
1834	MIGRATE TO 1720	0	0	0	0	0	0	0	0	101	0	NA

1. Estimated average cable lengths provided for reference only. Contractor is solely responsible for cable lengths and providing a complete installation as described throughout the contract documents.  
 2. All data horizontal station cabling to be new category 6A  
 3. GC to provide quantity of Cat6A patch cables (3 meter) equal to the "Quantity of Cables to be replaced with Cat 6A" for each TR and MCR

**1 BUILDING 1 - OVERALL FIRST FLOOR ROUTING PLAN**  
 1/16"=1'-0"

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**Office of Construction and Facilities Management**  
 VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - FIRST FLOOR ROUTING PLAN**  
 Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**  
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Project Title  
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 DES MOINES, IOWA  
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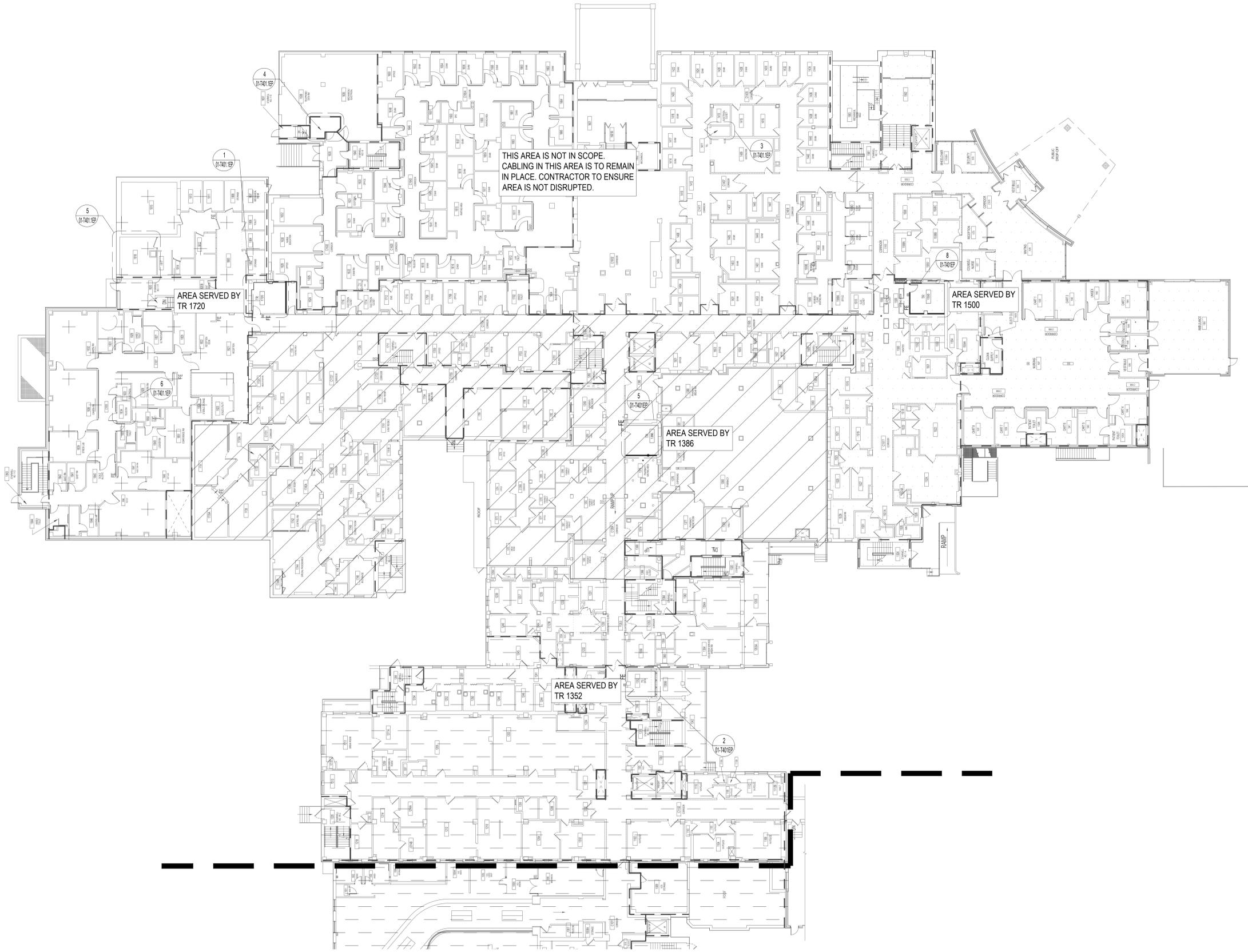
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**1** BUILDING 1 - OVERALL FIRST FLOOR - ZONING PLAN  
 1/16"=1'-0"

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**Office of Construction and Facilities Management**  
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Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - FIRST FLOOR ZONING PLAN**  
 Approved: Project Director

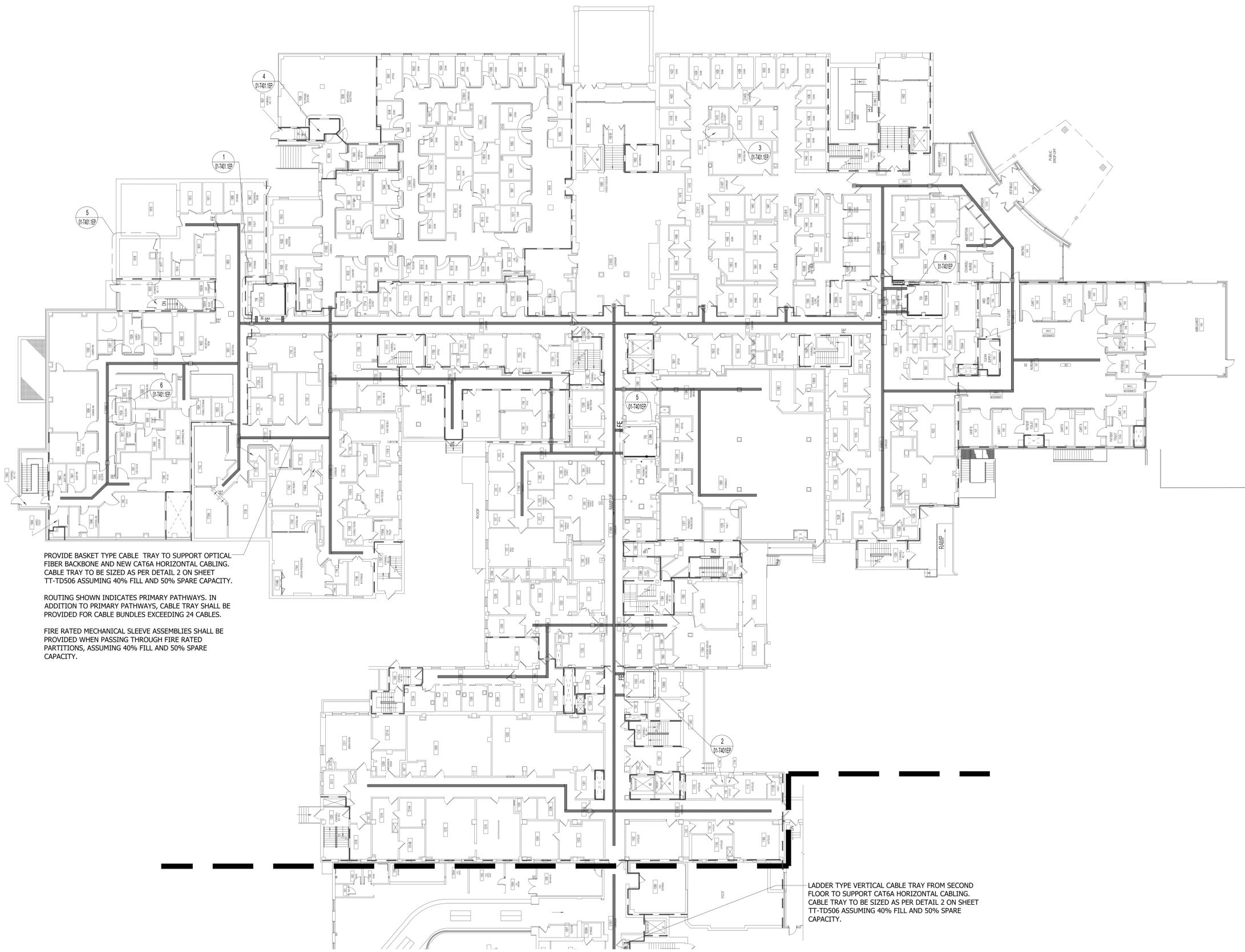
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**01-T001.B**

NOTES:

1. CONTRACTOR TO LOCATE EXISTING REINFORCING PRIOR TO DOING CORES FOR CONDUITS. DO NOT CUT REINFORCING. CORES SHALL HAVE 4" CLEAR MINIMUM BETWEEN THEM. ADJUST CORE LOCATIONS AS NEEDED. AT LOCATIONS WITH MORE THAN (2) CORES GOING THROUGH A CMU WALL, SPACE CORES AT 16" MINIMUM.
2. FOR CABLE TRAY GROUNDING, REFER TO DETAILS NO. 2, 3 & 4 ON SHEET TT-TD501.



PROVIDE BASKET TYPE CABLE TRAY TO SUPPORT OPTICAL FIBER BACKBONE AND NEW CAT6A HORIZONTAL CABLING. CABLE TRAY TO BE SIZED AS PER DETAIL 2 ON SHEET TT-TD506 ASSUMING 40% FILL AND 50% SPARE CAPACITY.

ROUTING SHOWN INDICATES PRIMARY PATHWAYS. IN ADDITION TO PRIMARY PATHWAYS, CABLE TRAY SHALL BE PROVIDED FOR CABLE BUNDLES EXCEEDING 24 CABLES.

FIRE RATED MECHANICAL SLEEVE ASSEMBLIES SHALL BE PROVIDED WHEN PASSING THROUGH FIRE RATED PARTITIONS, ASSUMING 40% FILL AND 50% SPARE CAPACITY.

LADDER TYPE VERTICAL CABLE TRAY FROM SECOND FLOOR TO SUPPORT CAT6A HORIZONTAL CABLING. CABLE TRAY TO BE SIZED AS PER DETAIL 2 ON SHEET TT-TD506 ASSUMING 40% FILL AND 50% SPARE CAPACITY.

1 BUILDING 1 - OVERALL FIRST FLOOR - CABLE TRAY PLAN  
1/16"=1'-0"

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3300 Dundee Road  
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T: 847.952.9362  
BAE PROJECT NO. 18-121

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
TELECOMMUNICATIONS - BUILDING 1 - FIRST FLOOR CABLE TRAY PLAN

Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title  
EHRM INFRASTRUCTURE UPGRADES

Location  
DES MOINES, IOWA

Issue Date  
09/02/2022

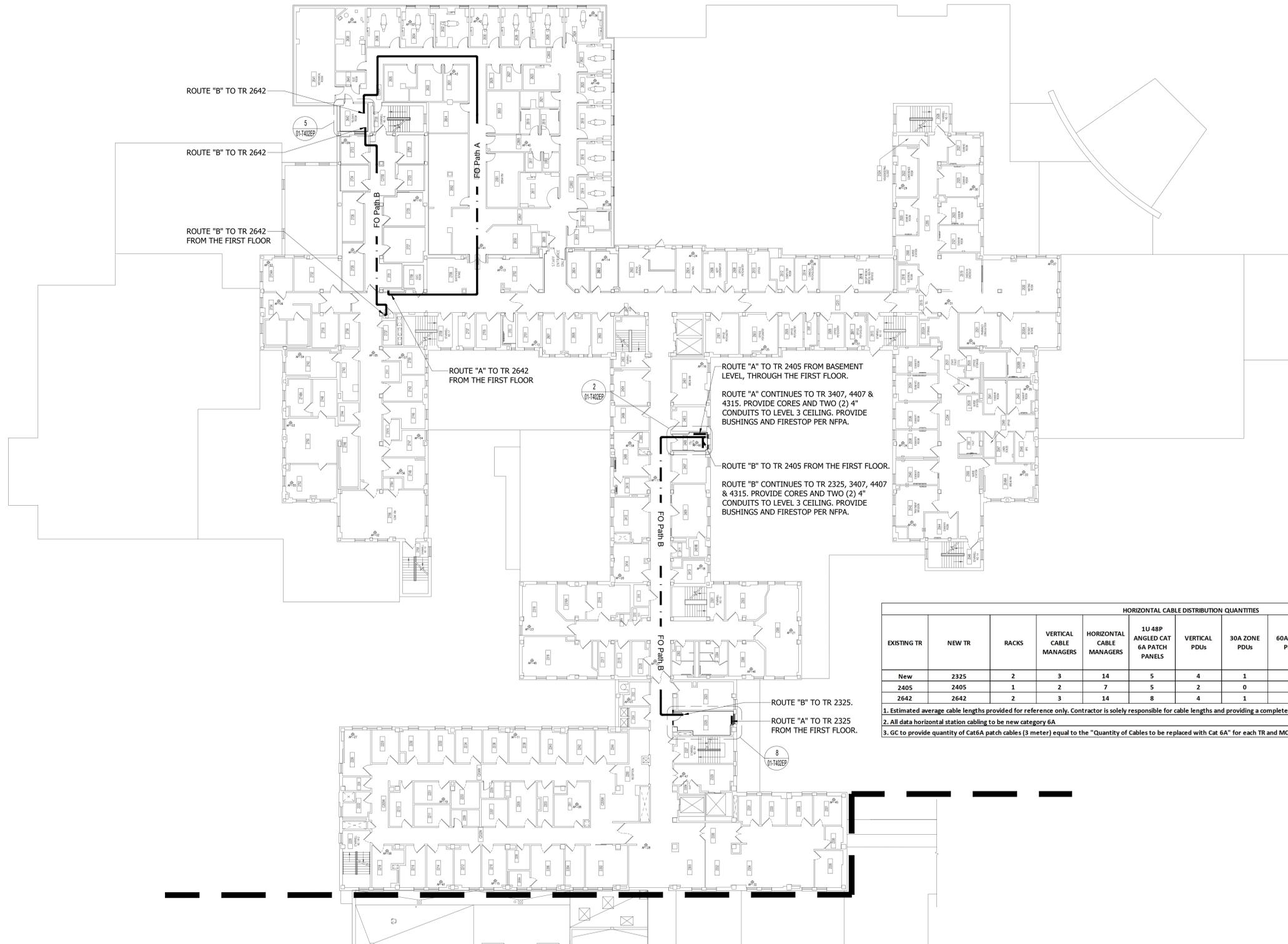
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Drawn CF

Project Number  
636A6-21-101

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
01-T001.C



HORIZONTAL CABLE DISTRIBUTION QUANTITIES												
EXISTING TR	NEW TR	RACKS	VERTICAL CABLE MANAGERS	HORIZONTAL CABLE MANAGERS	1U 48P ANGLED CAT 6A PATCH PANELS	VERTICAL PDUs	30A ZONE PDUs	60A ZONE PDUs	5KW UPSs	QUANTITY OF CABLES TO BE REMOVED	QUANTITY OF CABLES TO BE REPLACED WITH CAT 6A	ESTIMATED AVERAGE CABLE LENGTH
New	2325	2	3	14	5	4	1	0	2	0	187	185
2405	2405	1	2	7	5	2	0	0	1	374	187	220
2642	2642	2	3	14	8	4	1	0	2	320	320	190

1. Estimated average cable lengths provided for reference only. Contractor is solely responsible for cable lengths and providing a complete installation as described throughout the contract documents.  
 2. All data horizontal station cabling to be new category 6A  
 3. GC to provide quantity of Cat6A patch cables (3 meter) equal to the "Quantity of Cables to be replaced with Cat 6A" for each TR and MCR

1 BUILDING 1 - OVERALL SECOND FLOOR ROUTING PLAN  
 1/16"=1'-0"

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
100% CONSTRUCTION DEVELOPMENT SUBMISSION	03/14/2022
95% CONSTRUCTION DEVELOPMENT SUBMISSION	02/10/2022
65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**

Telecom:  
 Bright Tree Studios  
 301 Brush Creek Road  
 Warrendale, PA 15238  
 (412)-212-7515

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

BANCROFT ARCHITECTS + ENGINEERS  
 VA CONTRACT NO. 36C26319D0044  
 3300 Dundee Road  
 Northbrook, IL 60062  
 T: 847.952.9362  
 www.bancroft-ae.com  
 BAE PROJECT NO. 18-121

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Office of Construction and Facilities Management  
 VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - SECOND FLOOR ROUTING PLAN**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

FULLY SPRINKLERED

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
 DES MOINES, IOWA

Issue Date  
 09/02/2022

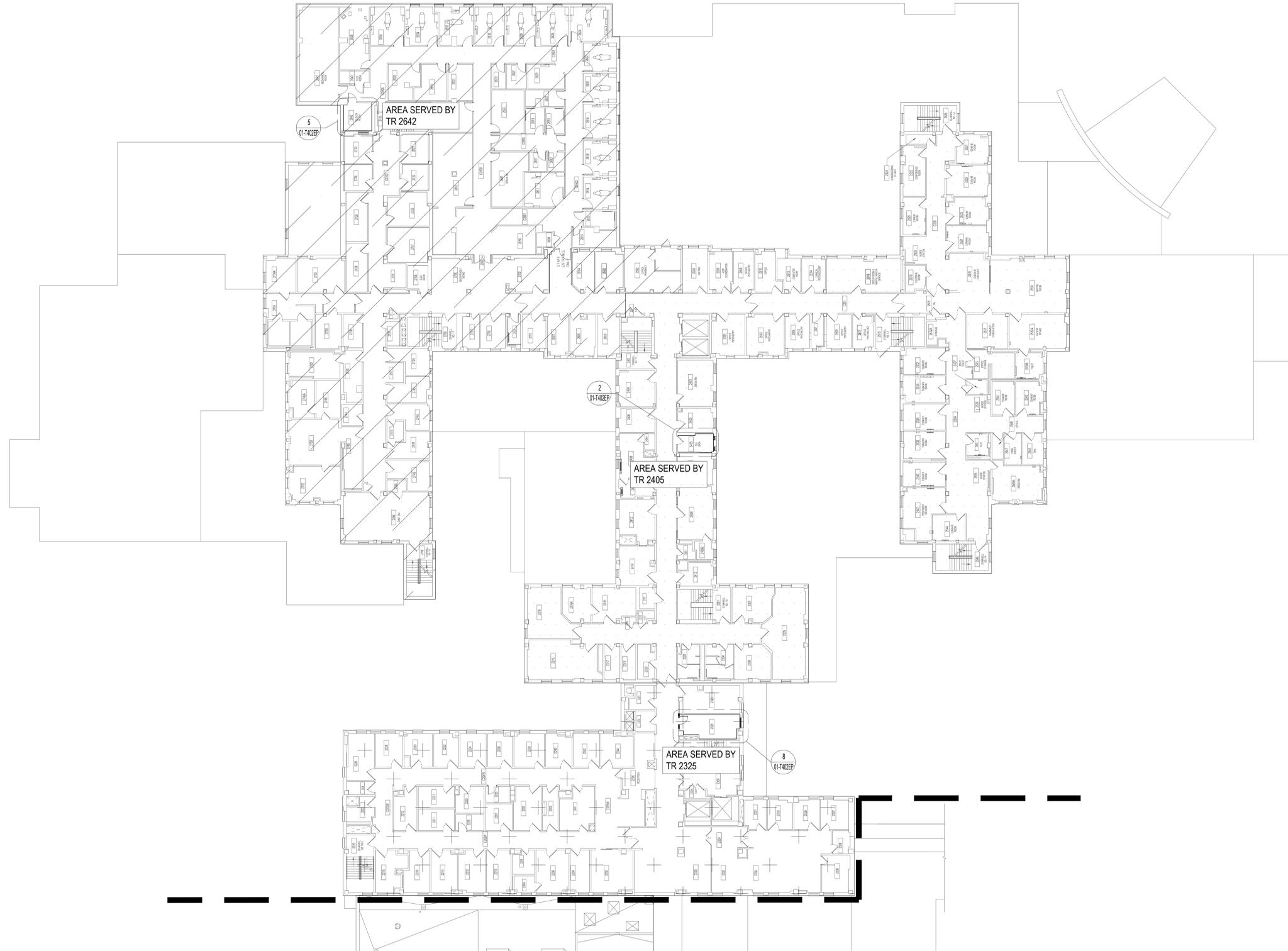
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Drawn CF

Project Number  
 636A6-21-101

Building Number  
 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**01-T002.A**



1 BUILDING 1 - OVERALL SECOND FLOOR ZONING PLAN  
1/16"=1'-0"

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
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BAE PROJECT NO. 18-121

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Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - SECOND FLOOR ZONING PLAN**  
Approved: Project Director

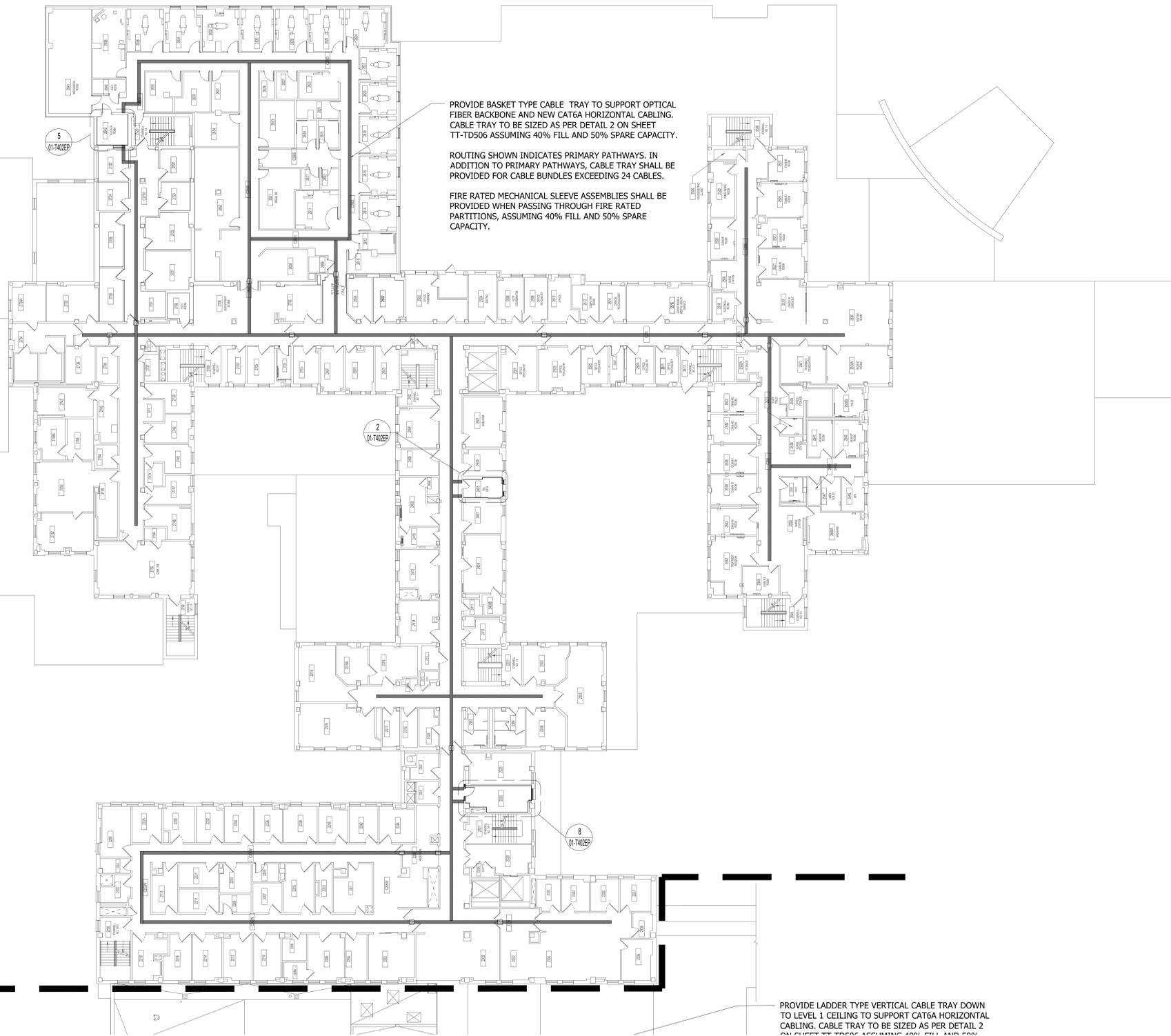
Phase  
CONSTRUCTION DOCUMENTS  
  
FULLY SPRINKLERED

Project Title  
EHRM INFRASTRUCTURE UPGRADES  
Location  
DES MOINES, IOWA  
Issue Date  
09/02/2022  
Checked BY  
Drawn CF

Project Number  
636A6-21-101  
Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28  
Drawing Number  
01-T002.B

NOTES:

1. CONTRACTOR TO LOCATE EXISTING REINFORCING PRIOR TO DOING CORES FOR CONDUITS. DO NOT CUT REINFORCING. CORES SHALL HAVE 4" CLEAR MINIMUM BETWEEN THEM. ADJUST CORE LOCATIONS AS NEEDED. AT LOCATIONS WITH MORE THAN (2) CORES GOING THROUGH A CMU WALL, SPACE CORES AT 16" MINIMUM.
2. FOR CABLE TRAY GROUNDING, REFER TO DETAILS NO. 2, 3 & 4 ON SHEET TT-TD501.



PROVIDE BASKET TYPE CABLE TRAY TO SUPPORT OPTICAL FIBER BACKBONE AND NEW CAT6A HORIZONTAL CABLING. CABLE TRAY TO BE SIZED AS PER DETAIL 2 ON SHEET TT-TD506 ASSUMING 40% FILL AND 50% SPARE CAPACITY.

ROUTING SHOWN INDICATES PRIMARY PATHWAYS. IN ADDITION TO PRIMARY PATHWAYS, CABLE TRAY SHALL BE PROVIDED FOR CABLE BUNDLES EXCEEDING 24 CABLES.

FIRE RATED MECHANICAL SLEEVE ASSEMBLIES SHALL BE PROVIDED WHEN PASSING THROUGH FIRE RATED PARTITIONS, ASSUMING 40% FILL AND 50% SPARE CAPACITY.

PROVIDE LADDER TYPE VERTICAL CABLE TRAY DOWN TO LEVEL 1 CEILING TO SUPPORT CAT6A HORIZONTAL CABLING. CABLE TRAY TO BE SIZED AS PER DETAIL 2 ON SHEET TT-TD506 ASSUMING 40% FILL AND 50% SPARE CAPACITY.

1 BUILDING 1 - OVERALL SECOND FLOOR - CABLE TRAY PLAN  
1/16"=1'-0"

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
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35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

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BAE PROJECT NO. 18-121

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - SECOND FLOOR CABLE TRAY PLAN**

Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title  
EHRM INFRASTRUCTURE UPGRADES

Location  
DES MOINES, IOWA

Issue Date  
09/02/2022

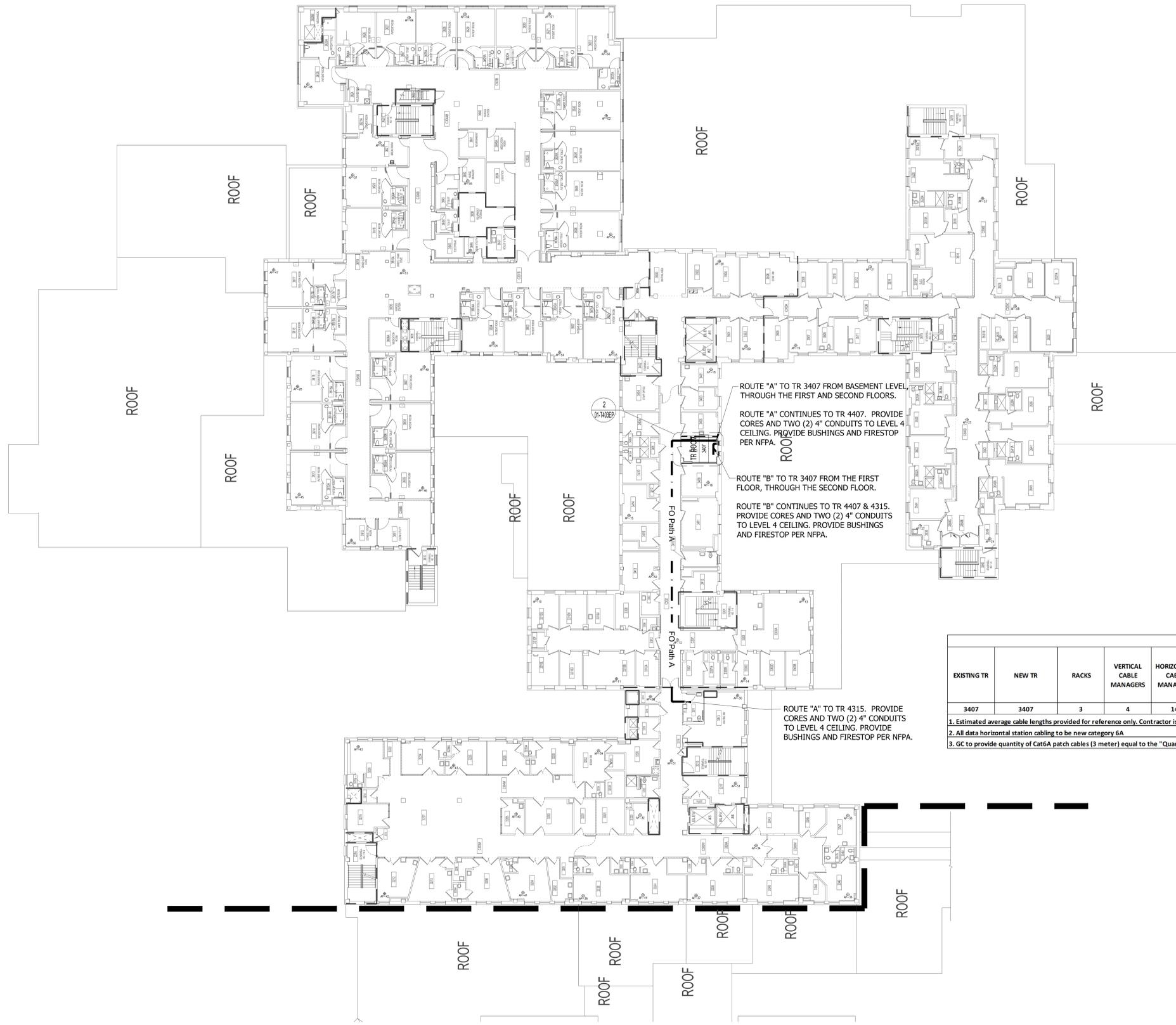
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Drawn CF

Project Number  
636A6-21-101

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
01-T002.C



ROUTE "A" TO TR 3407 FROM BASEMENT LEVEL THROUGH THE FIRST AND SECOND FLOORS.

ROUTE "A" CONTINUES TO TR 4407. PROVIDE CORES AND TWO (2) 4" CONDUITS TO LEVEL 4 CEILING. PROVIDE BUSHINGS AND FIRESTOP PER NFPA.

ROUTE "B" TO TR 3407 FROM THE FIRST FLOOR, THROUGH THE SECOND FLOOR.

ROUTE "B" CONTINUES TO TR 4407 & 4315. PROVIDE CORES AND TWO (2) 4" CONDUITS TO LEVEL 4 CEILING. PROVIDE BUSHINGS AND FIRESTOP PER NFPA.

HORIZONTAL CABLE DISTRIBUTION QUANTITIES												
EXISTING TR	NEW TR	RACKS	VERTICAL CABLE MANAGERS	HORIZONTAL CABLE MANAGERS	1U 48P ANGLED CAT 6A PATCH PANELS	VERTICAL PDUs	30A ZONE PDUs	60A ZONE PDUs	5KW UPSs	QUANTITY OF CABLES TO BE REMOVED	QUANTITY OF CABLES TO BE REPLACED WITH CAT 6A	ESTIMATED AVERAGE CABLE LENGTH
3407	3407	3	4	14	5	2	0	1	3	179	179	250
1. Estimated average cable lengths provided for reference only. Contractor is solely responsible for cable lengths and providing a complete installation as described throughout the contract documents. 2. All data horizontal station cabling to be new category 6A 3. GC to provide quantity of Cat6A patch cables (3 meter) equal to the "Quantity of Cables to be replaced with Cat 6A" for each TR and MCR												

1 BUILDING 1 - OVERALL THIRD FLOOR ROUTING PLAN  
1/16"=1'-0"

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35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**

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Warrendale, PA 15238  
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**ARCHITECT/ENGINEER OF RECORD**

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3300 Dundee Road  
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T: 847.952.9362  
BAE PROJECT NO. 18-121

**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - THIRD FLOOR ROUTING PLAN**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

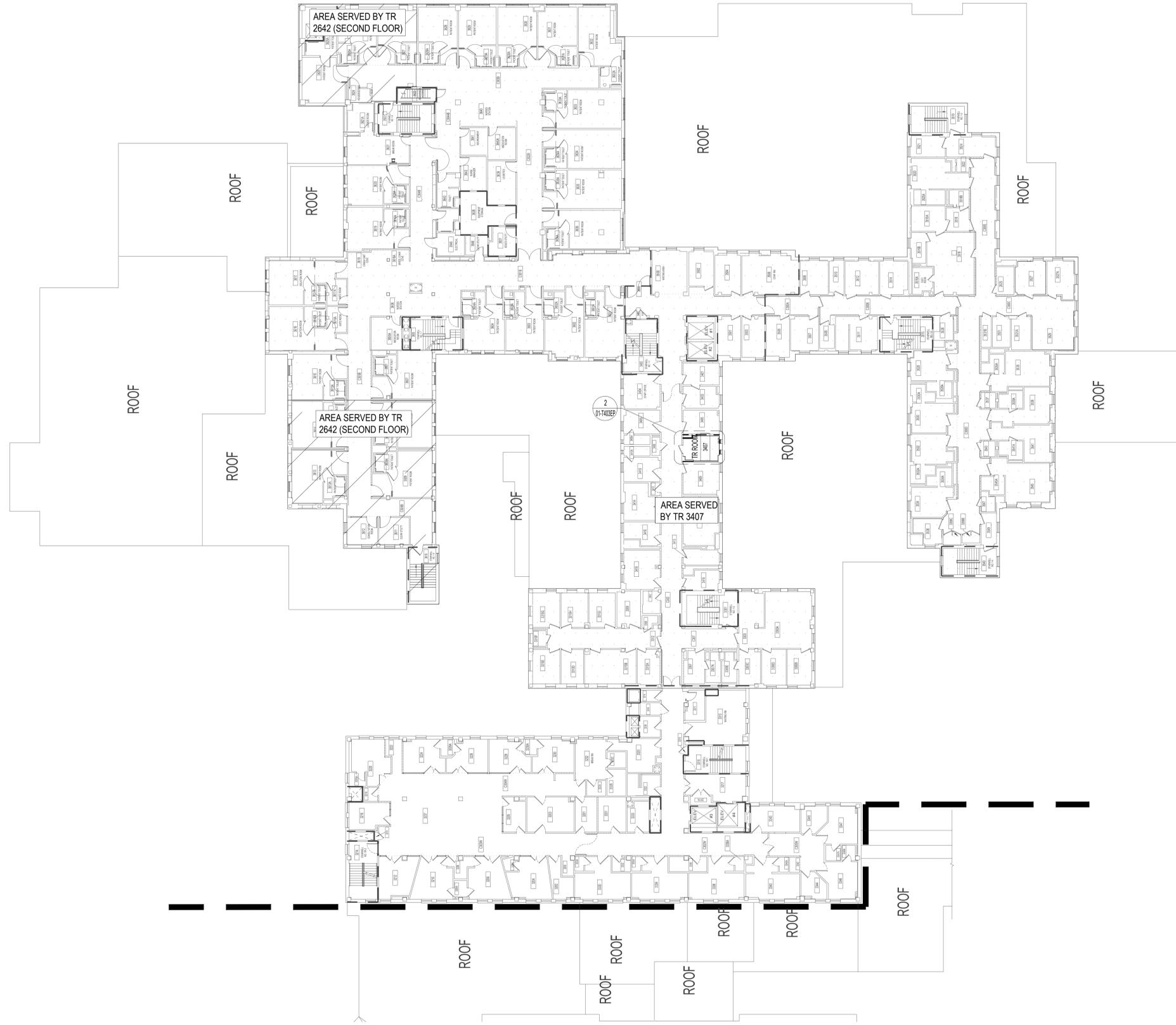
Checked BY  
**CF**

Drawn CF

Project Number  
**636A6-21-101**

Building Number  
1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**01-T003.A**



1 BUILDING 1 - OVERALL THIRD FLOOR ZONING PLAN  
1/16"=1'-0"

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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
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Revisions:	Date:

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Office of  
 Construction  
 and Facilities  
 Management

VA U.S. Department  
 of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1  
 - THIRD FLOOR ZONING PLAN**

Approved: Project Director

Phase  
**CONSTRUCTION  
 DOCUMENTS**

**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE  
 UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
 BY

Drawn  
 CF

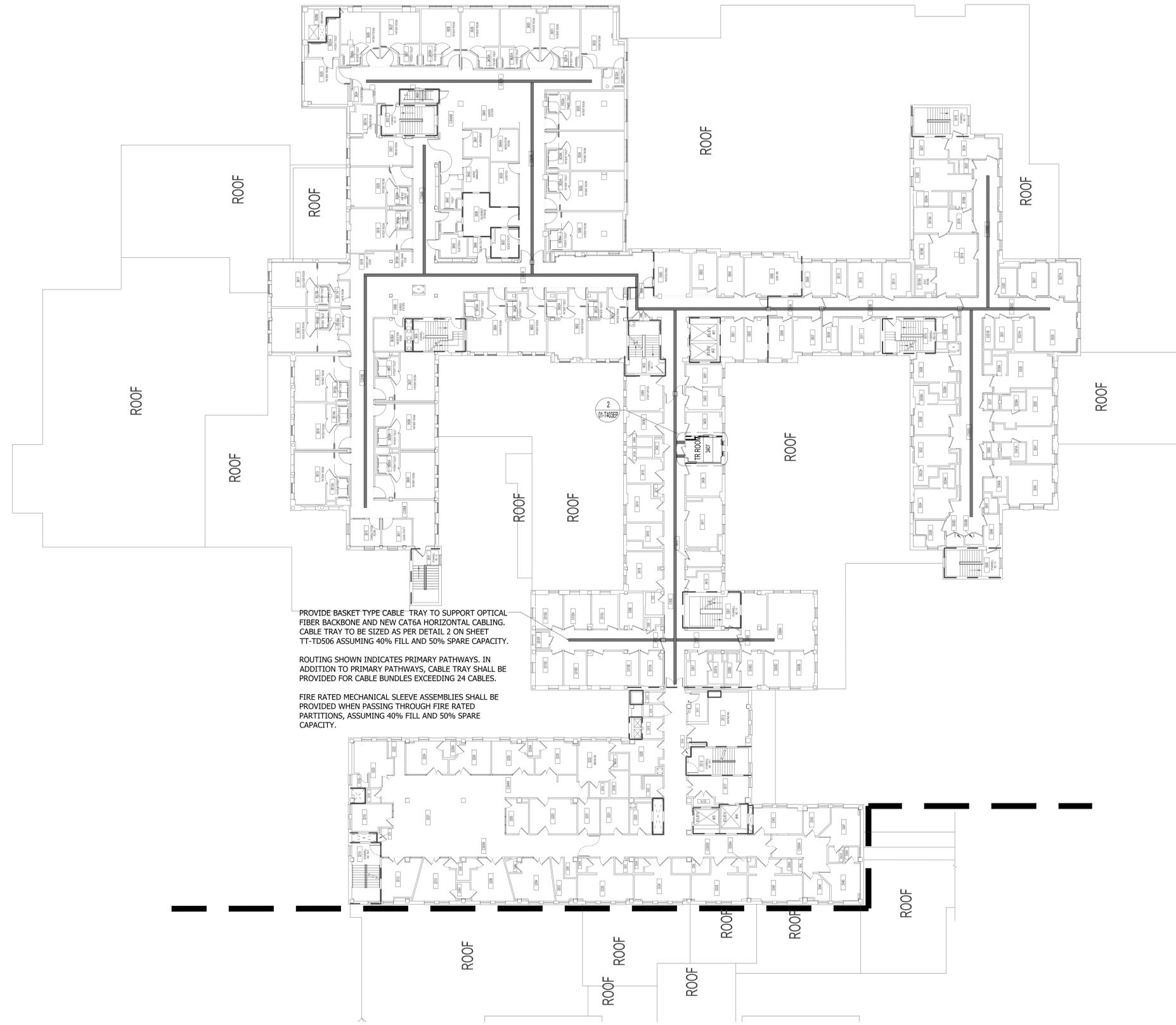
Project Number  
**636A6-21-101**

Building Number  
 1, 2, 3, 4, 5, 6M, 7M, 9, 10,  
 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**01-T003.B**

NOTES:

1. CONTRACTOR TO LOCATE EXISTING REINFORCING PRIOR TO DOING CORES FOR CONDUITS. DO NOT CUT REINFORCING. CORES SHALL HAVE 4" CLEAR MINIMUM BETWEEN THEM. ADJUST CORE LOCATIONS AS NEEDED. AT LOCATIONS WITH MORE THAN (2) CORES GOING THROUGH A CMU WALL, SPACE CORES AT 16" MINIMUM.
2. FOR CABLE TRAY GROUNDING, REFER TO DETAILS NO. 2, 3 & 4 ON SHEET TT-TD501.



PROVIDE BASKET TYPE CABLE TRAY TO SUPPORT OPTICAL FIBER BACKBONE AND NEW CAT6A HORIZONTAL CABLING. CABLE TRAY TO BE SIZED AS PER DETAIL 2 ON SHEET TT-TD506 ASSUMING 40% FILL AND 50% SPARE CAPACITY.

ROUTING SHOWN INDICATES PRIMARY PATHWAYS. IN ADDITION TO PRIMARY PATHWAYS, CABLE TRAY SHALL BE PROVIDED FOR CABLE BUNDLES EXCEEDING 24 CABLES.

FIRE RATED MECHANICAL SLEEVE ASSEMBLIES SHALL BE PROVIDED WHEN PASSING THROUGH FIRE RATED PARTITIONS, ASSUMING 40% FILL AND 50% SPARE CAPACITY.

1 BUILDING 1 - OVERALL THIRD FLOOR - CABLE TRAY PLAN  
1/16"=1'-0"

ISSUE FOR BID	09/02/2022
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Revisions:	Date:

**CONSULTANT**  
Telecom:  
Bright Tree Studios  
301 Brush Creek Road  
Warrendale, PA 15238  
(412)-212-7515

**ARCHITECT/ENGINEER OF RECORD**  
*Bancroft*  
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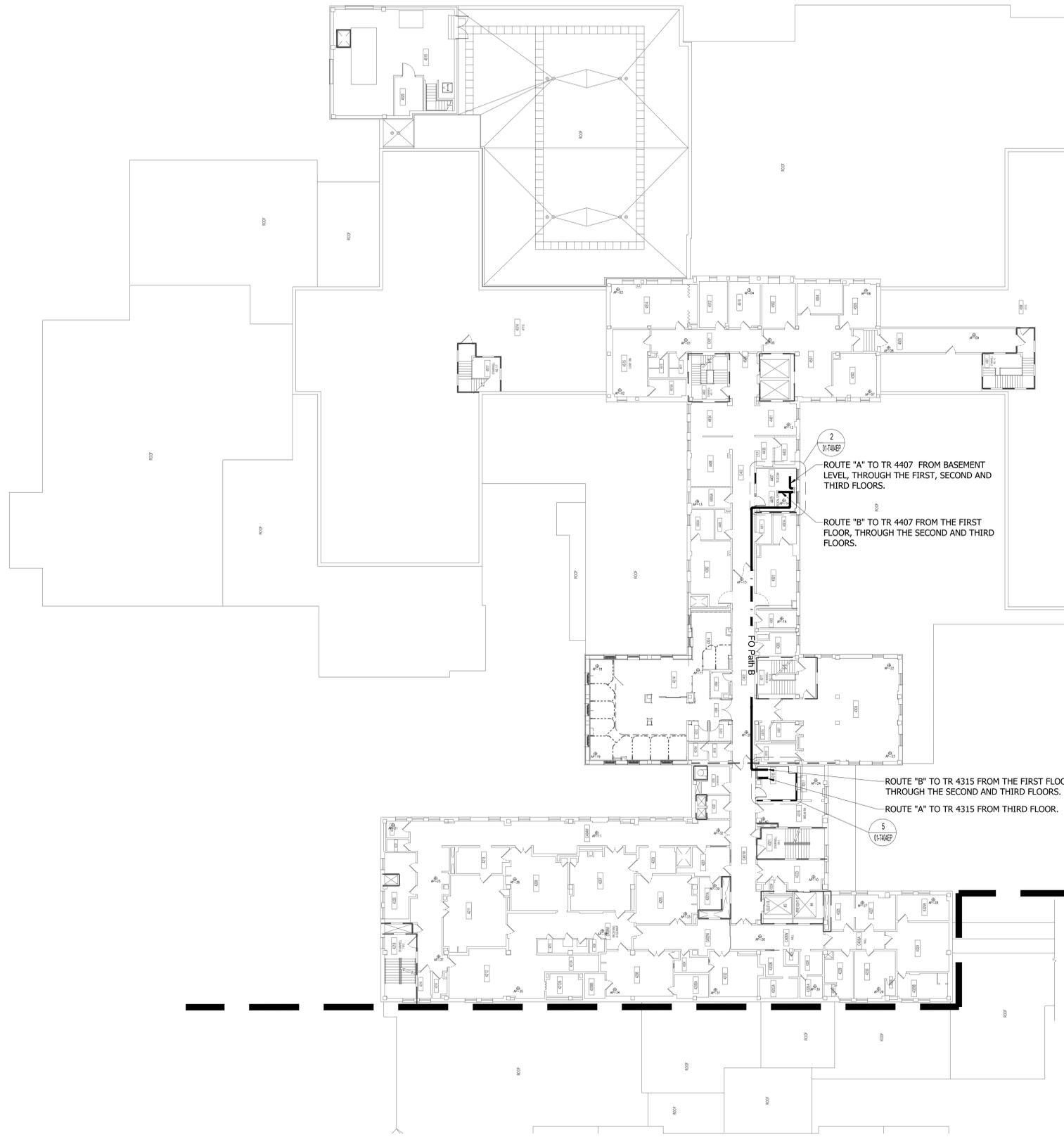
Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - THIRD FLOOR CABLE TRAY PLAN**  
Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS  
FULLY SPRINKLERED

Project Title  
EHRM INFRASTRUCTURE UPGRADES  
Location  
DES MOINES, IOWA  
Issue Date  
09/02/2022  
Checked BY  
Drawn CF

Project Number  
636A6-21-101  
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1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28  
Drawing Number  
01-T003.C

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HORIZONTAL CABLE DISTRIBUTION QUANTITIES												
EXISTING TR	NEW TR	RACKS	VERTICAL CABLE MANAGERS	HORIZONTAL CABLE MANAGERS	1U 48P ANGLED CAT 6A PATCH PANELS	VERTICAL PDUs	30A ZONE PDUs	60A ZONE PDUs	5KW UPSs	QUANTITY OF CABLES TO BE REMOVED	QUANTITY OF CABLES TO BE REPLACED WITH CAT 6A	ESTIMATED AVERAGE CABLE LENGTH
4315	4315	2	3	14	10	4	1	0	2	392	392	175
4407	4407	2	3	14	6	4	1	0	2	206	206	140

1. Estimated average cable lengths provided for reference only. Contractor is solely responsible for cable lengths and providing a complete installation as described throughout the contract documents.  
 2. All data horizontal station cabling to be new category 6A  
 3. GC to provide quantity of Cat6A patch cables (3 meter) equal to the "Quantity of Cables to be replaced with Cat 6A" for each TR and MCR

1 BUILDING 1 - OVERALL FOURTH FLOOR ROUTING PLAN  
 1/16"=1'-0"

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 VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - FOURTH FLOOR ROUTING PLAN**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

FULLY SPRINKLERED

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**

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Issue Date  
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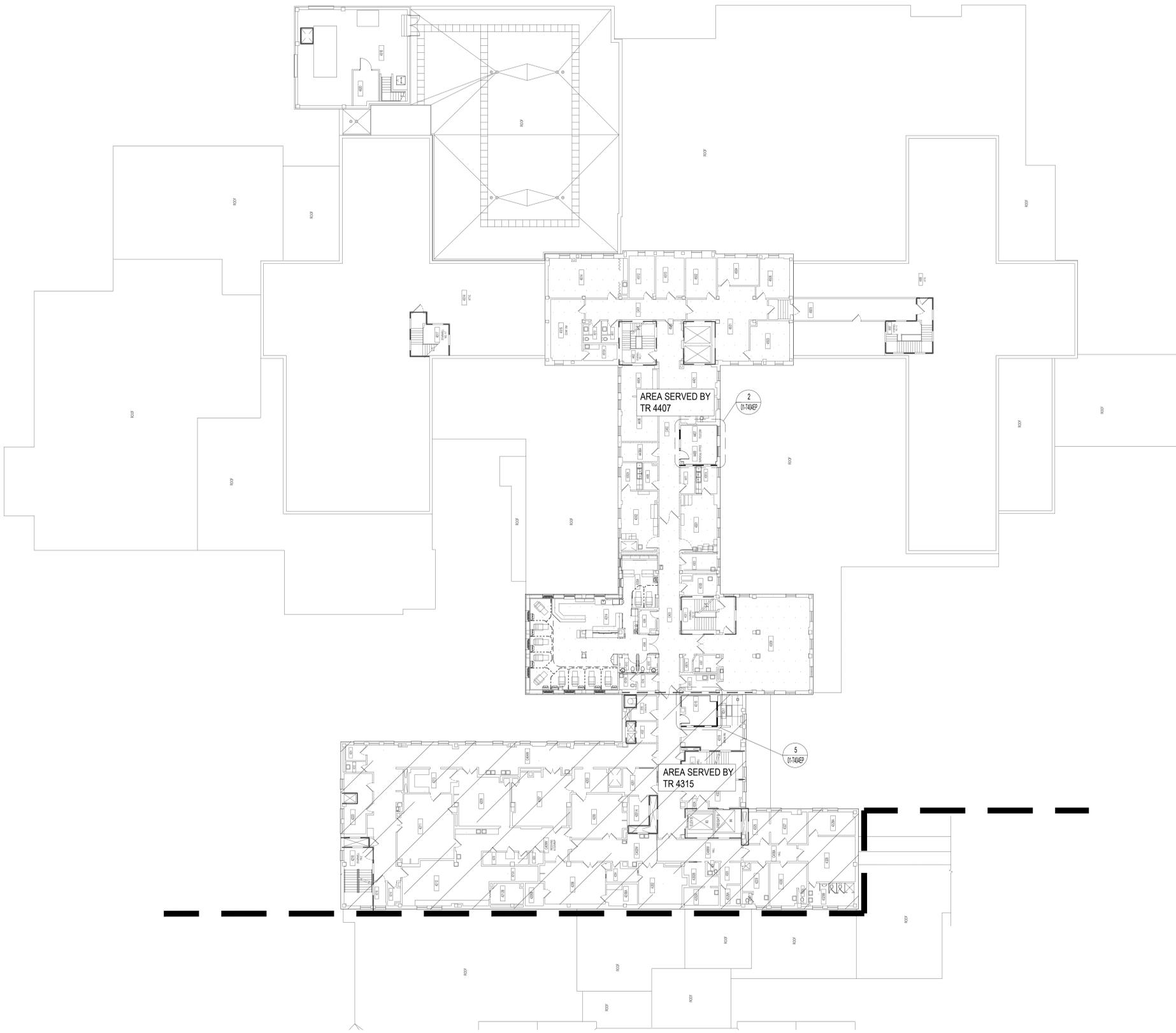
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 CF

Drawn CF

Project Number  
 636A6-21-101

Building Number  
 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**01-T004.A**



1

**BUILDING 1 - OVERALL FOURTH FLOOR ZONING PLAN**

1/16"=1'-0"



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ISSUE FOR BID	09/02/2022
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**CONSULTANT**

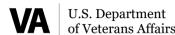
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Office of  
 Construction  
 and Facilities  
 Management



Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1  
 - FOURTH FLOOR ZONING PLAN**

Approved: Project Director

Phase  
**CONSTRUCTION  
 DOCUMENTS**

FULLY SPRINKLERED

Project Title  
**EHRM INFRASTRUCTURE  
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Location  
**DES MOINES, IOWA**

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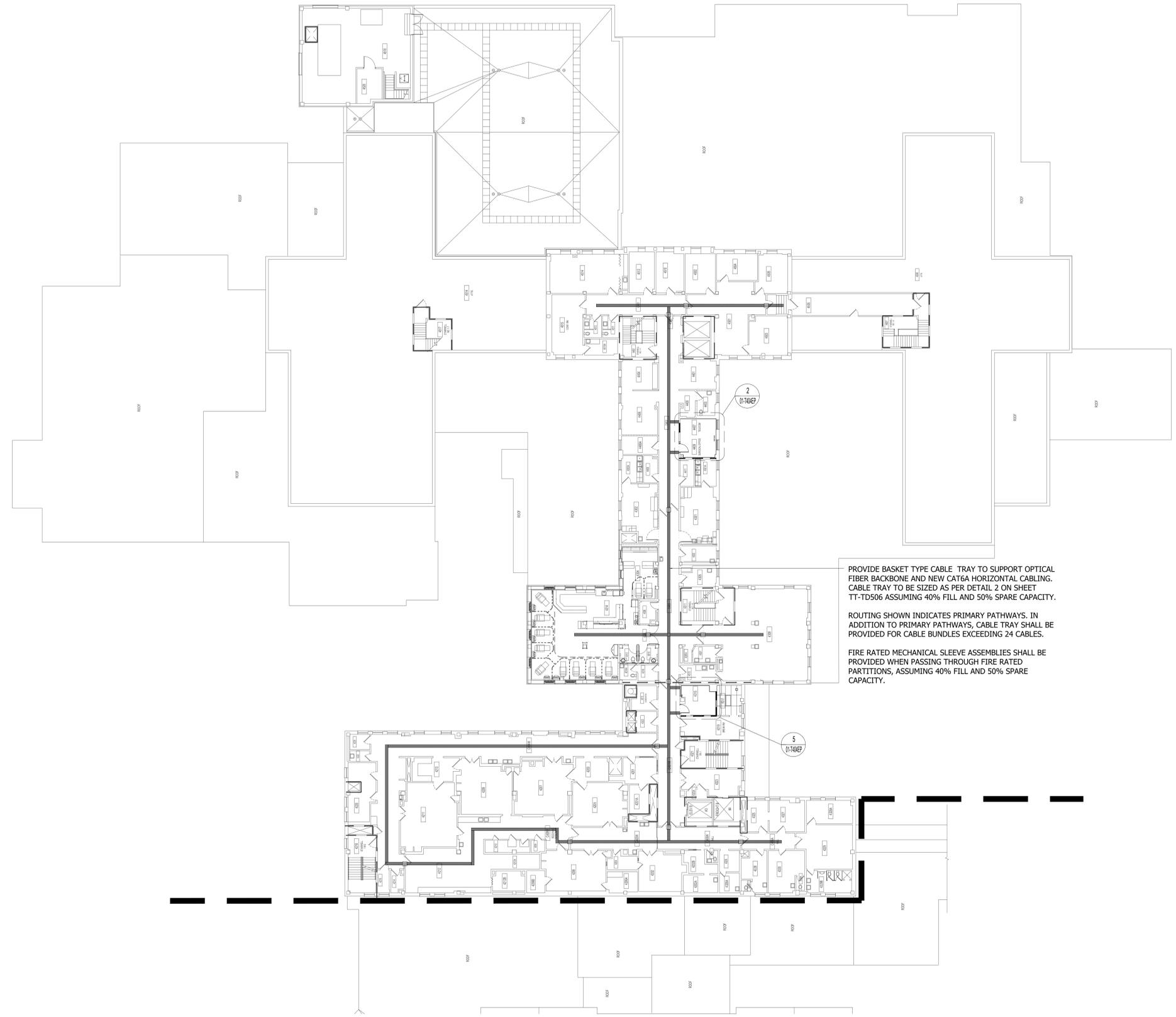
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01-T004.B

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**1 BUILDING 1 - OVERALL FOURTH FLOOR - CABLE TRAY PLAN**  
 1/16"=1'-0"

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
FINAL CONSTRUCTION DOCUMENTS SUBMISSION	03/28/2022
100% CONSTRUCTION DEVELOPMENT SUBMISSION	03/14/2022
95% CONSTRUCTION DEVELOPMENT SUBMISSION	02/10/2022
65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

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 VA CONTRACT NO. 36C26319D0044  
 BAE PROJECT NO. 18-121

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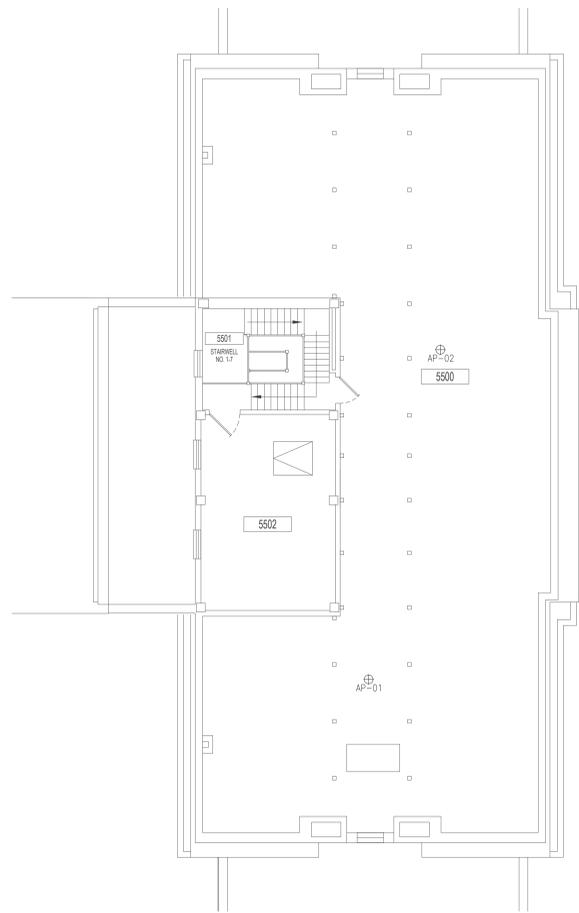
Office of  
 Construction  
 and Facilities  
 Management  
 U.S. Department  
 of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1  
 - FOURTH FLOOR CABLE TRAY PLAN**  
 Approved: Project Director

Phase  
**CONSTRUCTION  
 DOCUMENTS**  
 FULLY SPRINKLERED

Project Title  
**EHRM INFRASTRUCTURE  
 UPGRADES**  
 Location  
 DES MOINES, IOWA  
 Issue Date  
 09/02/2022  
 Checked  
 BY  
 Drawn  
 CF

Project Number  
 636A6-21-101  
 Building Number  
 1, 2, 3, 4, 5, 6M, 7M, 9, 10,  
 11, 12, 21, 24, 25, 27, & 28  
 Drawing Number  
**01-T004.C**



1 BUILDING 1 - OVERALL FIFTH FLOOR ROUTING PLAN  
 1/16"=1'-0"

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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
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**Office of Construction and Facilities Management**  
 VA U.S. Department of Veterans Affairs

Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1 - FIFTH FLOOR ROUTING PLAN**  
 Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**  
**FULLY SPRINKLERED**

Project Title  
**EHRM INFRASTRUCTURE UPGRADES**  
 Location  
**DES MOINES, IOWA**  
 Issue Date  
**09/02/2022**  
 Checked BY  
 Drawn CF

Project Number  
**636A6-21-101**  
 Building Number  
 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28  
 Drawing Number  
**01-T005**

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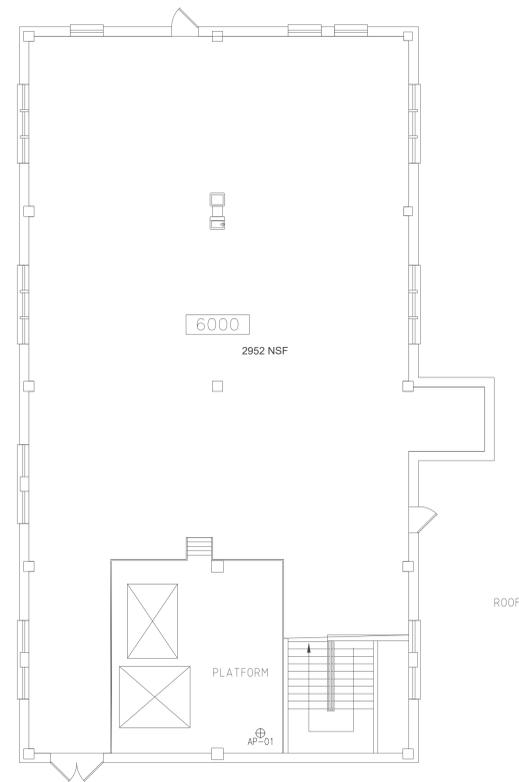
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F



1

**BUILDING 1 - OVERALL SIXTH FLOOR ROUTING PLAN**

1/16"=1'-0"



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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
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65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**

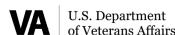
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**ARCHITECT/ENGINEER OF RECORD**

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 BAE PROJECT NO. 18-121

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Office of  
 Construction  
 and Facilities  
 Management



Drawing Title  
**TELECOMMUNICATIONS - BUILDING 1  
 - SIXTH FLOOR ROUTING PLAN**

Approved: Project Director

Phase  
**CONSTRUCTION  
 DOCUMENTS**

FULLY SPRINKLERED

Project Title  
**EHRM INFRASTRUCTURE  
 UPGRADES**

Location  
**DES MOINES, IOWA**

Issue Date  
**09/02/2022**

Checked  
 BY

Drawn  
 CF

Project Number  
**636A6-21-101**

Building Number  
 1, 2, 3, 4, 5, 6M, 7M, 9, 10,  
 11, 12, 21, 24, 25, 27, & 28

Drawing Number  
**01-T006**

### DEMOLITION PLAN LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED IN ITS ENTIRETY, INCLUDING WALL, SWITCHES, OUTLETS, THERMOSTATS, ETC. PATCH ABUTTING WALLS, FLOORS AND CEILINGS AS REQUIRED. REMOVE EXISTING ITEMS SCHEDULED TO REMAIN AS NECESSARY TO ALLOW THE COMPLETE DEMOLITION OF SELECTED ITEMS. REPAIR/REPLACE EXISTING ITEMS ONCE DEMOLITION IS COMPLETED.
- AREA NOT IN CONTRACT

### FLOOR PLAN LEGEND

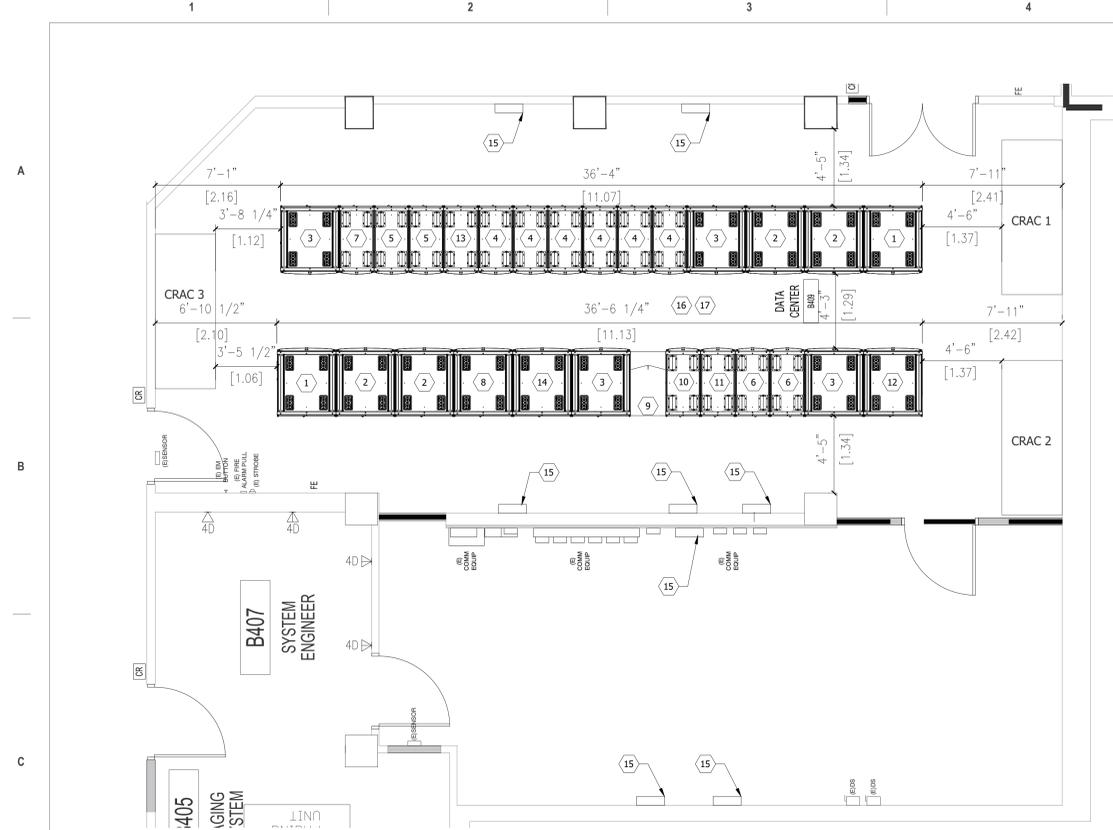
- AREA NOT IN CONTRACT
- EXISTING PARTITION
- NEW PARTITION SURFACE MATERIAL
- EXISTING DOOR
- EXISTING DOOR TO BE REMOVED
- ROOM NAME
- ROOM NUMBER

### GENERAL NOTES

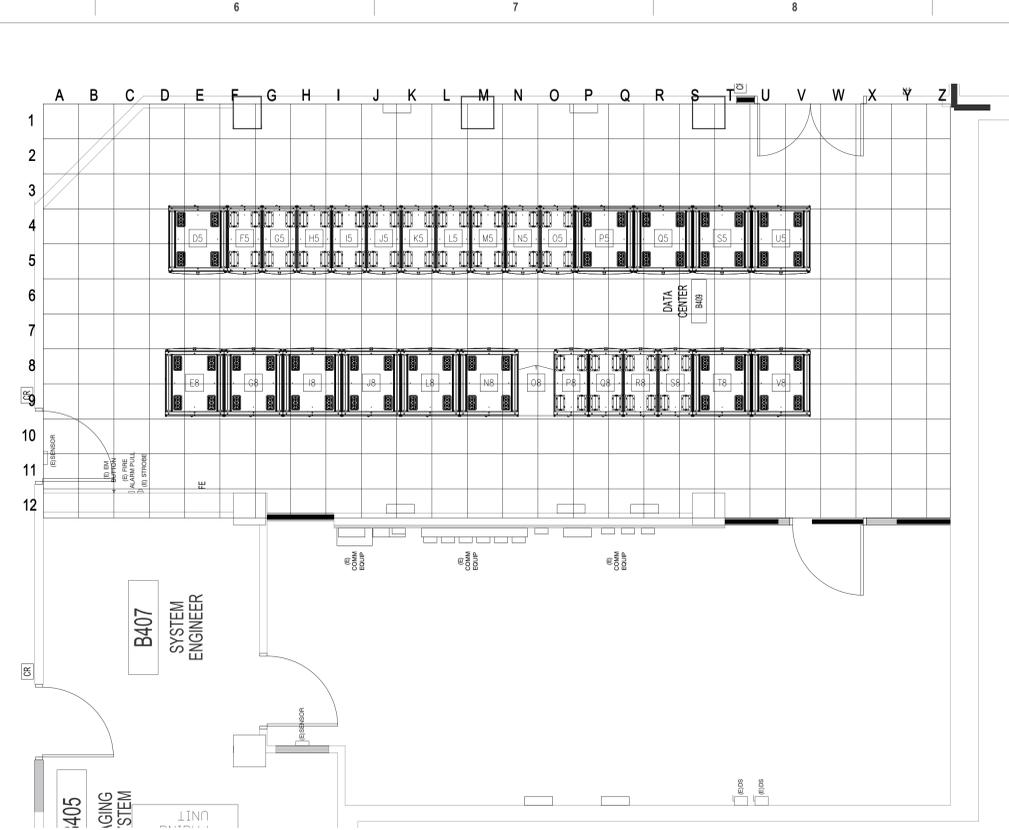
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
- A. PROVIDE BASKET TYPE CABLE TRAY ALONG PRIMARY CABLE PATHWAYS AND WHEN CABLE BUNDLE EXCEEDS 24 CABLES. CABLE TRAY TO BE SIZED AS PER DETAIL 3 ON DRAWING TT-TD506.
  - B. ALL PENETRATIONS TO BE SEALED AS REQUIRED TO MEET EXISTING RATINGS. MECHANICAL FIRE RATED PATHWAYS TO BE PROVIDED AT RATED WALLS AS DEPICTED ON DRAWINGS AND WHEN CABLE BUNDLE EXCEEDS 24 CABLES.
  - C. VERIFY ALL COMPONENTS BONDED TO EXISTING TELECOMMUNICATION GROUNDING BUSBARS HAVE BEEN TAKEN OUT OF SERVICE OR HAS BEEN BANDED TO THE NEW TELECOMMUNICATION GROUNDING/BONDING SYSTEM PRIOR TO REMOVING EXISTING GROUNDING COMPONENTS.
  - D. CARE SHALL BE TAKEN AS TO NOT DISRUPT OR DAMAGE EXISTING SYSTEMS INCLUDING BUT NOT LIMITED TO CATV, ACCESS CONTROL, FIRE ALARM, NURSE CALL, BUILDING AUTOMATION, DISTRIBUTED ANTENNA, PAGING.
  - E. NO CABLES OR COMPONENTS SHALL BE REMOVED FROM SERVICE PRIOR TO AUTHORIZATION FROM PROJECT COR.
  - F. FIELD VERIFY ALL CONDUIT PENETRATIONS AND CORE LOCATIONS.
  - G. FOR IT INFORMATION AND SOW SEE DESIGN NARRATIVE/BASIS OF DESIGN.

### DATA CENTER KEY NOTES

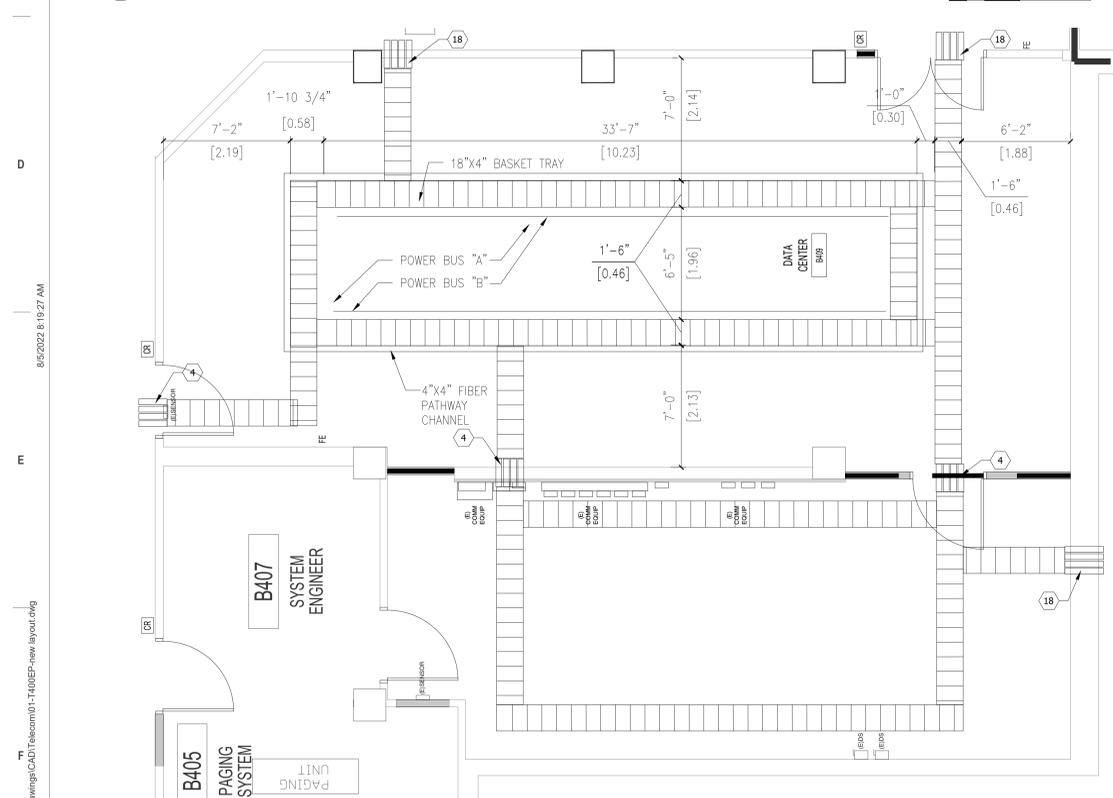
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
1. MAIN DISTRIBUTION AREA (MDA) NETWORK CABINET ALLOCATED FOR FIBER DISTRIBUTION TO TR'S. RATED AT 5KW PER CABINET. REFER TO DETAIL 5 ON SHEET TT-TD505.
  2. MAIN DISTRIBUTION AREA (MDA) NETWORK CABINET ALLOCATED FOR SPINE/AGGREGATION/OOB/LAN ELEMENTS, CORE AND WAN ELEMENTS, AND SECURITY STACK. RATED AT 5KW PER CABINET.
  3. END OF ROW (EOR) HORIZONTAL DISTRIBUTION AREA (HDA) NETWORK CABINET ALLOCATED FOR HORIZONTAL DISTRIBUTION FIBER AND UTP DISTRIBUTION TO EACH CABINET AS WELL AS LAN ELEMENTS AND LEAF OR ACCESS LAYER SWITCHES. RATED AT 5KW PER CABINET.
  4. SERVER CABINET ALLOCATED FOR BIO MED SERVER EQUIPMENT RATED AT 5KW PER CABINET.
  5. SERVER CABINET ALLOCATED FOR CORNER FORWARD DEPLOYED SERVER (FDS) EQUIPMENT RATED AT 5KW PER CABINET.
  6. STANDARD DENSITY SERVER CABINET ALLOCATED FOR MISCELLANEOUS STATION SERVERS AND FUTURE GROWTH. RATED AT 5KW PER CABINET. REFER TO DETAIL 5 ON SHEET TT-TD505.
  7. HIGH DENSITY SERVER CABINET ALLOCATED FOR FUTURE CLOUD BASED SERVICES. RATED AT 10KW PER CABINET.
  8. NETWORK CABINET ALLOCATED TO HOUSE EXISTING SERVICE PROVIDER AND GUEST WIRELESS EQUIPMENT. RATED AT 5KW.
  9. EXISTING "VERIZON" SERVER CABINET TO BE REPOSITIONED TO THIS LOCATION. RATED AT 5KW.
  10. SERVER CABINET ALLOCATED TO HOUSE EXISTING "TELECOM" EQUIPMENT. RATED AT 5KW.
  11. SERVER CABINET ALLOCATED TO HOUSE EXISTING VIDEO SURVEILLANCE SYSTEM SERVER EQUIPMENT. RATED AT 5KW.
  12. NETWORK CABINET ALLOCATED FOR HORIZONTAL DISTRIBUTION TO SERVE "WARMING RACKS" AND LOCAL WORK AREA OUTLETS. RATED AT 5KW.
  13. EXISTING JCI METASYS BAS WORKSTATION / SERVER RACK
  14. NETWORK CABINET ALLOCATED TO SUPPORT EXISTING TV PAGING SYSTEM, TELEMETRY SYSTEM AND ICU SYSTEMS. RATED AT 5KW.
  15. PROVIDE WALL MOUNTED 24P PATCH PANEL (REFER TO DETAIL 2/TT-TD502) WITH 24 CAT 6A LINKS FED FROM MCR/DC 409 HORIZONTAL DISTRIBUTION CABINET.
  16. REFER TO DETAIL 4 ON SHEET TT-TD505 FOR HORIZONTAL DISTRIBUTION FOR HDA TO SD AND HD SERVER CABINETS CABLING REQUIREMENTS.
  17. REFER TO DETAIL 5 ON SHEET TT-TD505 FOR FIRST LEVEL BACKBONE DISTRIBUTION FOR MDA TO HDA CABINETS CABLING REQUIREMENTS.
  18. PROVIDE FOUR (4) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.



**BUILDING 1 - BASEMENT RM B409 - DATA CENTER**  
1/4"=1'-0"



**BUILDING 1 - BASEMENT RM B409 - DATA CENTER - GRID LAYOUT**  
1/4"=1'-0"



**BUILDING 1 - BASEMENT RM B409 - DATA CENTER - CABLE TRAY LAYOUT**  
1/4"=1'-0"

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**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

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BAE PROJECT NO. 18-121

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

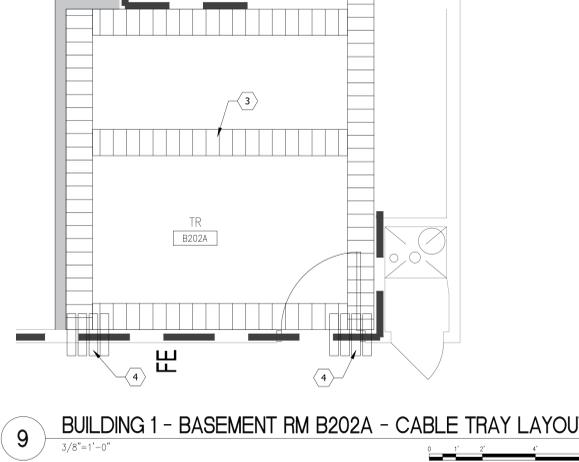
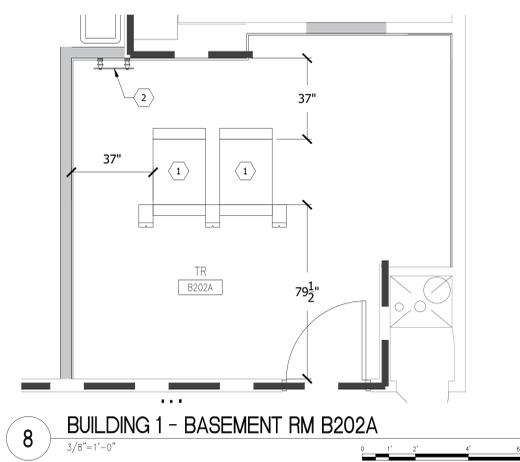
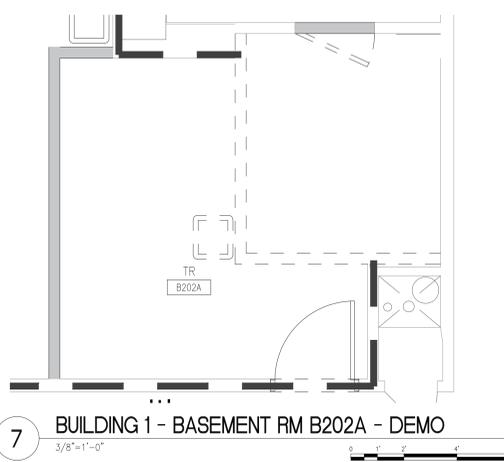
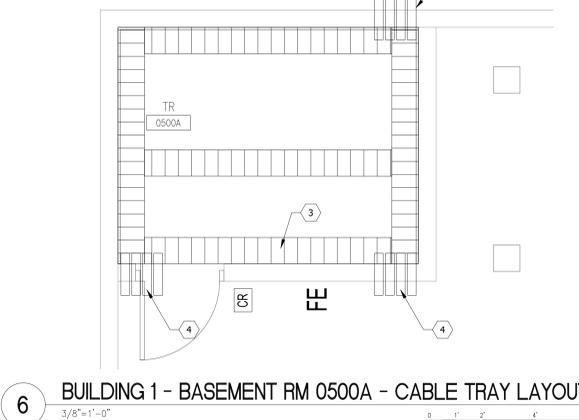
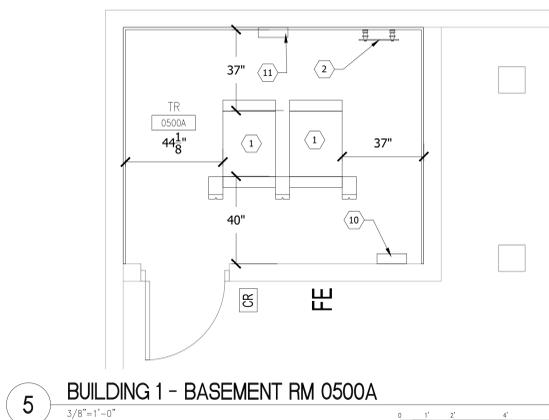
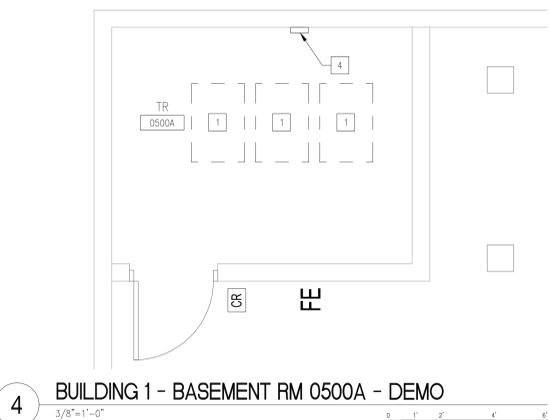
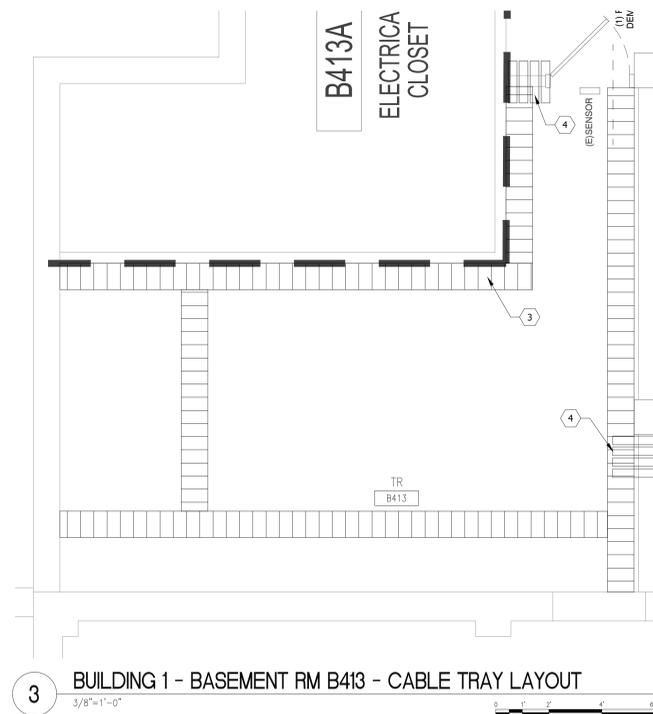
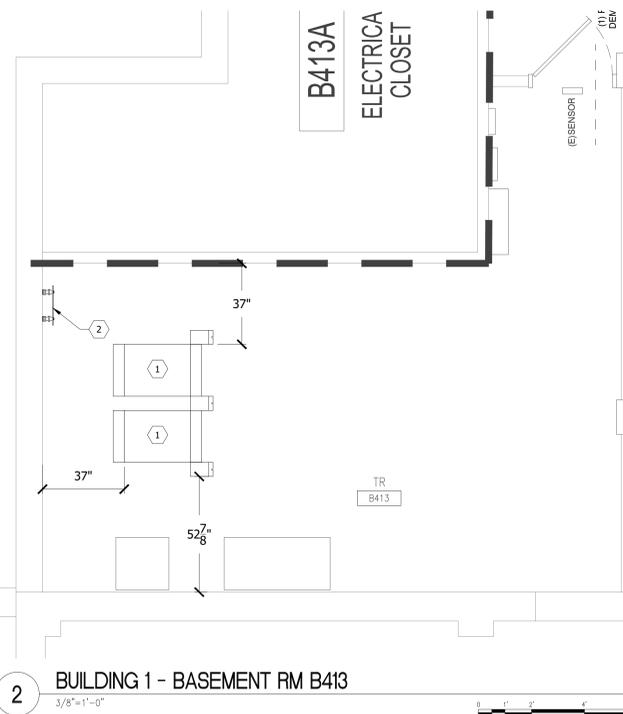
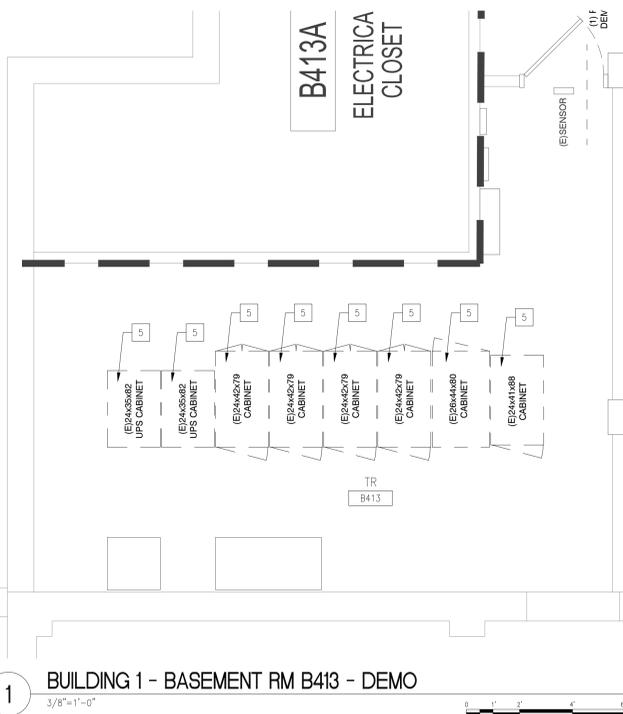
Drawing Title  
ENLARGED PLAN - BUILDING 1 - BASEMENT - DATA CENTER EQUIPMENT PLAN

Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title EHRM INFRASTRUCTURE UPGRADES	Project Number 636A6-21-101
Location DES MOINES, IOWA	Building Number 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28
Issue Date 09/02/2022	Checked BY CF
Drawn CF	Drawing Number 01-T400EP



**DEMOLITION PLAN LEGEND**

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED IN ITS ENTIRETY, INCLUDING WALL SWITCHES, OUTLETS, THERMOSTATS, ETC. PATCH ABUTTING WALLS, FLOORS AND CEILINGS AS REQUIRED. REMOVE EXISTING ITEMS SCHEDULED TO REMAIN AS NECESSARY TO ALLOW THE COMPLETE DEMOLITION OF SELECTED ITEMS. REPAIR/REPLACE EXISTING ITEMS ONCE DEMOLITION IS COMPLETED.
- AREA NOT IN CONTRACT

**FLOOR PLAN LEGEND**

- AREA NOT IN CONTRACT
- EXISTING PARTITION
- NEW PARTITION SURFACE MATERIAL
- EXISTING DOOR
- XXXX ROOM NAME
- 1001 ROOM NUMBER
- EXISTING DOOR TO BE REMOVED

**GENERAL NOTES**

- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
- A. PROVIDE BASKET TYPE CABLE TRAY ALONG PRIMARY CABLE PATHWAYS WHEN THE CABLE BUNDLE EXCEEDS 24 CABLES. CABLE TRAY TO BE SIZED AS PER DETAIL 3 ON DRAWING TT-ID506.
  - B. ALL PENETRATIONS TO BE SEALED AS REQUIRED TO MEET EXISTING RATINGS. MECHANICAL FIRE RATED PATHWAYS TO BE PROVIDED AT RATED WALLS AS DEPICTED ON DRAWINGS AND WHEN CABLE BUNDLE EXCEEDS 24 CABLES.
  - C. VERIFY ALL COMPONENTS BONDED TO EXISTING TELECOMMUNICATION GROUNDING BUSBARS HAVE BEEN TAKEN OUT OF SERVICE OR HAS BEEN BONDED TO THE NEW TELECOMMUNICATION GROUNDING/BONDING SYSTEM PRIOR TO REMOVING EXISTING GROUNDING COMPONENTS.
  - D. CARE SHALL BE TAKEN AS TO NOT DISRUPT OR DAMAGE EXISTING SYSTEMS INCLUDING BUT NOT LIMITED TO CATV, ACCESS CONTROL, FIRE ALARM, NURSE CALL, BUILDING AUTOMATION, DISTRIBUTED ANTENNA, PAGING.
  - E. NO CABLES OR COMPONENTS SHALL BE REMOVED FROM SERVICE PRIOR TO AUTHORIZATION FROM PROJECT COR.
  - F. FIELD VERIFY ALL CONDUIT PENETRATIONS AND CORE LOCATIONS.
  - G. FOR IT INFORMATION AND SOW SEE DESIGN NARRATIVE/BASIS OF DESIGN.
  - H. CONTRACTOR TO LOCATE EXISTING REINFORCING PRIOR TO DOING CORES FOR CONDUIT. DO NOT CUT REINFORCING. CORES SHALL HAVE A MINIMUM OF 4" CLEAR BETWEEN THEM. ADJUST CORE LOCATIONS AS NEEDED. AT LOCATIONS WITH MORE THAN (2) CORES GOING THROUGH A CMU WALL, SPACE CORES AT 16" MINIMUM.

**TELECOM PLAN KEY NOTES**

- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
1. PROVIDE 45RU TELECOMMUNICATION CHANNEL RACK P/N: OR-MM2073038-W (OR EQUIVALENT), WITH 6.45" VERTICAL CABLE MANAGEMENT BETWEEN EACH RACK AND AT THE ENDS OF EACH RACK ROW P/N: OR-MM20VMD708 (OR EQUIVALENT). EACH RACK SHALL BE FASTENED TO THE FLOOR, INCLUDE A RACK BONDING BUS BAR (RBB), WITH (RBB) GROUNDED TO THE SECONDARY BONDING BUSBAR (SBB).
  2. PROVIDE SECONDARY BONDING BUSBAR (SBB), MOUNT AT 72" AFF.
  3. PROVIDE 18" X 4" BASKET TRAY. SECURE TO WALLS AND RACKS. GROUND TO SBB.
  4. PROVIDE FOUR (4) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  5. PROVIDE WALL MOUNTED TELECOM ENCLOSURE.
  6. PROVIDE TWO (2) 4" VERTICAL CORES WITH 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR VERTICAL DISTRIBUTION. PROVIDE 18" LADDER TRAY MOUNTED TO WALL FROM FLOOR TO TRAY ABOVE.
  7. PROVIDE FOUR (4) 4" VERTICAL CORES WITH 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR VERTICAL DISTRIBUTION. PROVIDE 24" WIDE LADDER TRAY MOUNTED TO WALL FROM FLOOR TO TRAY ABOVE. GROUND TO SBB.
  8. PROVIDE TWO (2) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  9. PROVIDE 2 SETS OF FOUR (4) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  10. EXISTING 110 BLOCK VOICE WALL FIELD TO REMAIN.
  11. EXISTING CATV COMPONENTS AND ASSOCIATED CABLEING TO REMAIN.
  12. EXISTING WALL MOUNTED EQUIPMENT RACK AND ASSOCIATED COMPONENTS TO REMAIN.
  13. EXISTING WALL MOUNTED SHELF AND ASSOCIATED COMPONENTS TO BE RELOCATED TO THIS LOCATION. MOUNT AT 96" AFF.
  14. EXISTING 110 BLOCK VOICE WALL FIELD TO BE RELOCATED TO THIS LOCATION.
  15. EXISTING CATV COMPONENTS AND ASSOCIATED CABLEING TO BE RELOCATED TO THIS LOCATION.
  16. EXISTING EQUIPMENT CABINET AND ASSOCIATED CABLEING TO REMAIN AS REQUIRED TO SUPPORT SYSTEMS THAT ARE NOT IN SCOPE.
  17. EXISTING VERIZON WIRELESS EQUIPMENT AND ASSOCIATED CABLEING TO BE RELOCATED TO THIS LOCATION.
  18. EXISTING NURSE CALL PANELS AND ASSOCIATED CABLEING TO REMAIN.
  19. EXISTING SYSTEMS TO BE MIGRATED INTO NEW CHANNEL RACK.

**TELECOM DEMO KEY NOTES**

- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
1. EXISTING FLOOR MOUNTED TWO POST RACK ASSOCIATED HORIZONTAL CABLEING AND PATCH PANELS TO BE REMOVED.
  2. EXISTING FLOOR MOUNTED FOUR POST RACK TO BE REMOVED.
  3. EXISTING WALL MOUNTED RACK ASSOCIATED HORIZONTAL CABLEING AND PATCH PANELS TO BE REMOVED.
  4. EXISTING WALL MOUNTED FIBER PATCH PANEL ASSOCIATED CABLEING AND INNER DUCT TO BE REMOVED.
  5. EXISTING TELECOMMUNICATION GROUND BUS TO BE REMOVED.
  6. EXISTING WALL MOUNTED SHELF AND ASSOCIATED COMPONENTS TO BE RELOCATED.
  7. EXISTING 110 BLOCK VOICE WALL FIELD TO BE RELOCATED.
  8. EXISTING CATV COMPONENTS AND ASSOCIATED CABLEING TO BE RELOCATED.
  9. EXISTING VERIZON WIRELESS EQUIPMENT AND ASSOCIATED CABLEING TO BE RELOCATED.

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STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
ENLARGED PLAN - BUILDING 1 - BASEMENT - TELECOM ROOM EQUIPMENT PLAN

Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title EHRM INFRASTRUCTURE UPGRADES	Project Number 636A6-21-101
Location DES MOINES, IOWA	Building Number 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28
Issue Date 09/02/2022	Checked BY CF
Drawn CF	Drawing Number 01-T400.1EP

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**DEMOLITION PLAN LEGEND**

- EXISTING CONSTRUCTION TO REMAIN
- - - - - EXISTING CONSTRUCTION TO BE REMOVED IN ITS ENTIRETY, INCLUDING WALL SWITCHES, OUTLETS, THERMOSTATS, ETC. PATCH ABUTTING WALLS, FLOORS AND CEILINGS AS REQUIRED. REMOVE EXISTING ITEMS SCHEDULED TO REMAIN AS NECESSARY TO ALLOW THE COMPLETE DEMOLITION OF SELECTED ITEMS. REPAIR/REPLACE EXISTING ITEMS ONCE DEMOLITION IS COMPLETED.
- ▨ AREA NOT IN CONTRACT

**FLOOR PLAN LEGEND**

- ▨ AREA NOT IN CONTRACT
- ▨ EXISTING PARTITION
- ▨ NEW PARTITION SURFACE MATERIAL
- ▨ EXISTING DOOR
- XXXXX ROOM NAME
- 1001 ROOM NUMBER
- ▨ EXISTING DOOR TO BE REMOVED

**GENERAL NOTES**

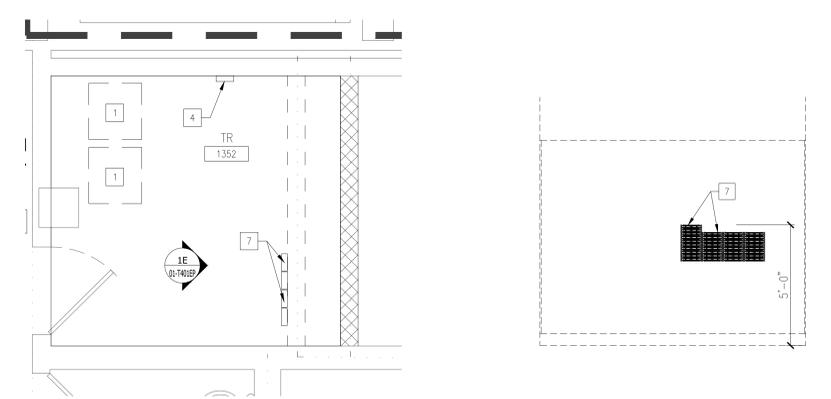
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  - B. ALL PENETRATIONS TO BE SEALED AS REQUIRED TO MEET EXISTING RATINGS. MECHANICAL FIRE RATED PATHWAYS TO BE PROVIDED AT RATED WALLS AS DEPICTED ON DRAWINGS AND WHEN CABLE BUNDLE EXCEEDS 24 CABLES.
  - C. VERIFY ALL COMPONENTS BONDED TO EXISTING TELECOMMUNICATION GROUNDING BUSBARS HAVE BEEN TAKEN OUT OF SERVICE OR HAS BEEN BONDED TO THE NEW TELECOMMUNICATION GROUNDING/BONDING SYSTEM PRIOR TO REMOVING EXISTING GROUNDING COMPONENTS.
  - D. CARE SHALL BE TAKEN AS TO NOT DISRUPT OR DAMAGE EXISTING SYSTEMS INCLUDING BUT NOT LIMITED TO CATV, ACCESS CONTROL, FIRE ALARM, NURSE CALL, BUILDING AUTOMATION, DISTRIBUTED ANTENNA, PAGING.
  - E. NO CABLES OR COMPONENTS SHALL BE REMOVED FROM SERVICE PRIOR TO AUTHORIZATION FROM PROJECT COR.
  - F. FIELD VERIFY ALL CONDUIT PENETRATIONS AND CORE LOCATIONS.
  - G. FOR IT INFORMATION AND SOW SEE DESIGN NARRATIVE/BASIS OF DESIGN.
  - H. CONTRACTOR TO LOCATE EXISTING REINFORCING PRIOR TO DOING CORES FOR CONDUIT. DO NOT CUT REINFORCING. CORES SHALL HAVE A MINIMUM OF 4" CLEAR BETWEEN THEM. ADJUST CORE LOCATIONS AS NEEDED. AT LOCATIONS WITH MORE THAN (2) CORES GOING THROUGH A CMU WALL, SPACE CORES AT 16" MINIMUM.

**TELECOM PLAN KEY NOTES**

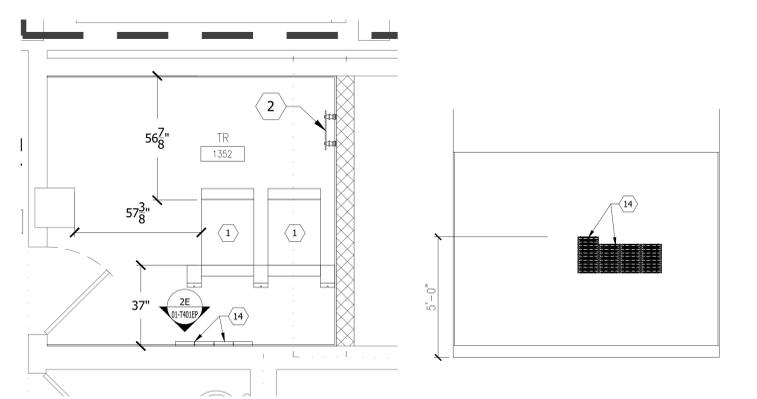
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
1. PROVIDE 45RU TELECOMMUNICATION CHANNEL RACK P/N: OR-MM2073038-W (OR EQUIVALENT), WITH 6.45" VERTICAL CABLE MANAGEMENT BETWEEN EACH RACK AND AT THE ENDS OF EACH RACK ROW P/N: OR-MM20MD706 (OR EQUIVALENT). EACH RACK SHALL BE FASTENED TO THE FLOOR, INCLUDE A RACK BONDING BUS BAR (RBB), WITH (RBB) GROUND TO THE SECONDARY BONDING BUSBAR (SBB).
  2. PROVIDE SECONDARY BONDING BUSBAR (SBB), MOUNT AT 72" AFF.
  3. PROVIDE 18" X 4" BASKET TRAY, SECURE TO WALLS AND RACKS. GROUND TO SBB.
  4. PROVIDE FOUR (4) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  5. PROVIDE WALL MOUNTED TELECOM ENCLOSURE.
  6. PROVIDE TWO (2) 4" VERTICAL CORES WITH 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR VERTICAL DISTRIBUTION. PROVIDE 18" LADDER TRAY MOUNTED TO WALL FROM FLOOR TO TRAY ABOVE.
  7. PROVIDE FOUR (4) 4" VERTICAL CORES WITH 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR VERTICAL DISTRIBUTION. PROVIDE 24" WIDE LADDER TRAY MOUNTED TO WALL FROM FLOOR TO TRAY ABOVE. GROUND TO SBB.
  8. PROVIDE TWO (2) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  9. PROVIDE 2 SETS OF FOUR (4) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  10. EXISTING 110 BLOCK VOICE WALL FIELD TO REMAIN.
  11. EXISTING CATV COMPONENTS AND ASSOCIATED CABLING TO REMAIN.
  12. EXISTING WALL MOUNTED EQUIPMENT RACK AND ASSOCIATED COMPONENTS TO REMAIN.
  13. EXISTING WALL MOUNTED SHELF AND ASSOCIATED COMPONENTS TO BE RELOCATED TO THIS LOCATION. MOUNT AT 96" AFF.
  14. EXISTING 110 BLOCK VOICE WALL FIELD TO BE RELOCATED TO THIS LOCATION.
  15. EXISTING CATV COMPONENTS AND ASSOCIATED CABLING TO BE RELOCATED TO THIS LOCATION.
  16. EXISTING EQUIPMENT CABINET AND ASSOCIATED CABLING TO REMAIN AS REQUIRED TO SUPPORT SYSTEMS THAT ARE NOT IN SCOPE.
  17. EXISTING VERIZON WIRELESS EQUIPMENT AND ASSOCIATED CABLING TO BE RELOCATED TO THIS LOCATION.
  18. EXISTING NURSE CALL PANELS AND ASSOCIATED CABLING TO REMAIN.
  19. EXISTING SYSTEMS TO BE MIGRATED INTO NEW CHANNEL RACK.

**TELECOM DEMO KEY NOTES**

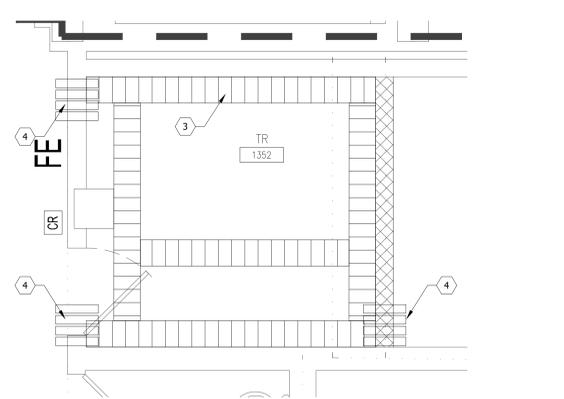
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
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  2. EXISTING WALL MOUNTED RACK ASSOCIATED HORIZONTAL CABLING AND PATCH PANELS TO BE REMOVED.
  3. EXISTING WALL OPTICAL FIBER PATCH PANEL ASSOCIATED CABLING AND INNER DUCT TO BE REMOVED.
  4. EXISTING TELECOMMUNICATION GROUND BUS TO BE REMOVED.
  5. EXISTING FLOOR MOUNTED CABINET AND ASSOCIATED CABLING TO BE REMOVED.
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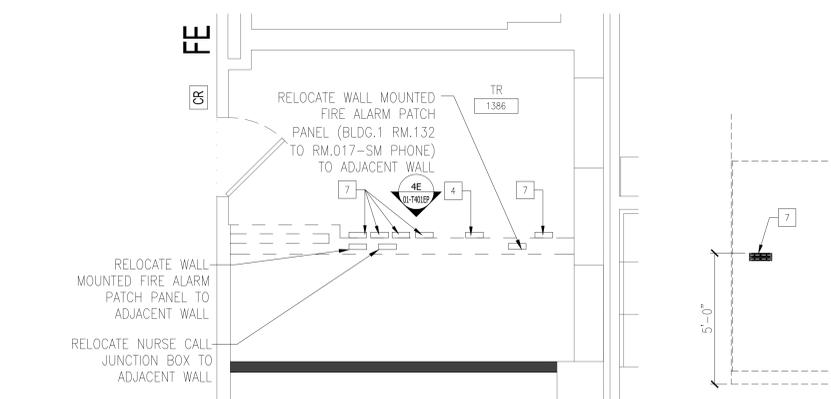
1 BUILDING 1 - FIRST FLOOR RM 1352 - DEMO 3/8"=1'-0"  
1E ELEVATION - RM 1352 DEMO 3/8"=1'-0"



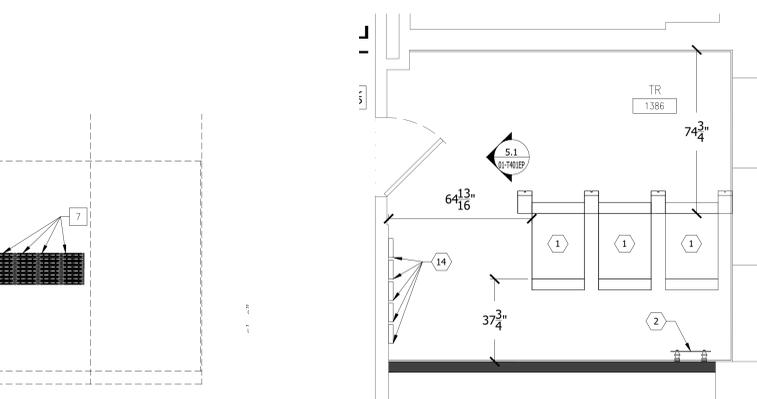
2 BUILDING 1 - FIRST FLOOR RM 1352 3/8"=1'-0"  
2E ELEVATION - RM 1352 3/8"=1'-0"



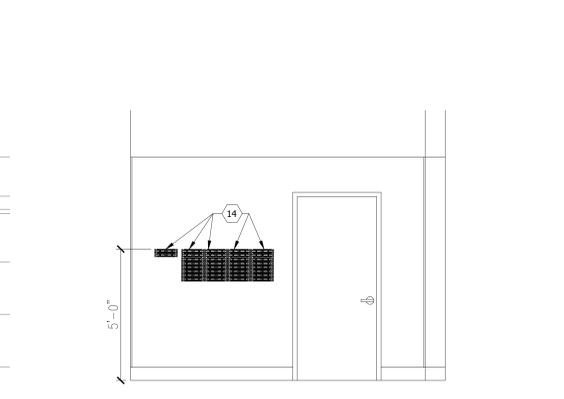
3 BUILDING 1 - FIRST FLOOR RM 1352 - CABLE TRAY LAYOUT 3/8"=1'-0"



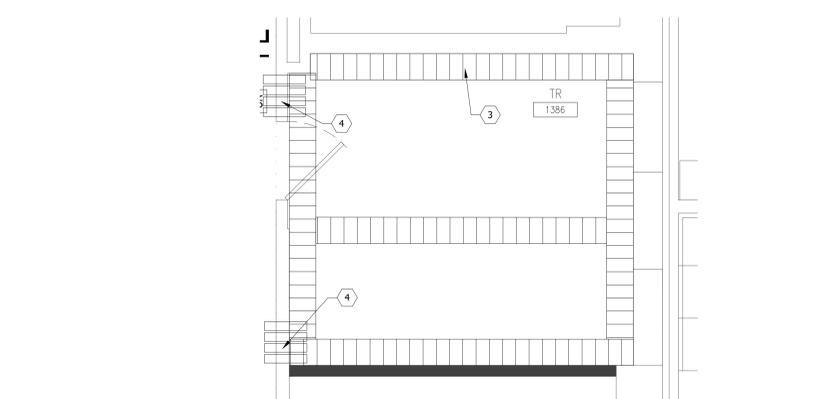
4 BUILDING 1 - FIRST FLOOR RM 1386 - DEMO 3/8"=1'-0"  
4E ELEVATION RM 1386 - DEMO 3/8"=1'-0"



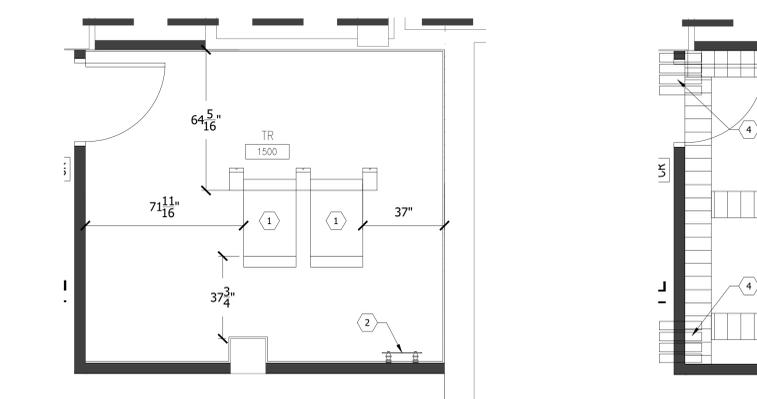
5 BUILDING 1 - FIRST FLOOR RM 1386 3/8"=1'-0"  
5E BUILDING 1 - ELEVATION RM 1386 3/8"=1'-0"



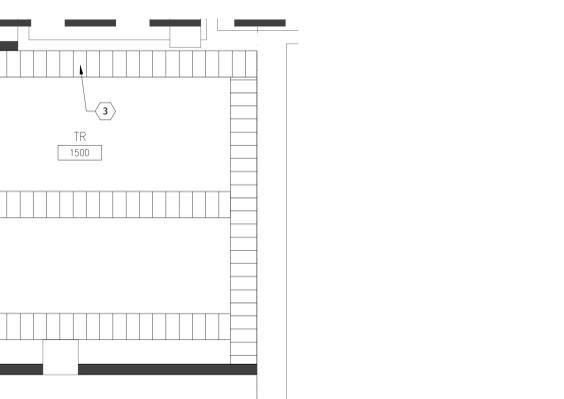
6 BUILDING 1 - FIRST FLOOR RM 1386 - CABLE TRAY LAYOUT 3/8"=1'-0"



6 BUILDING 1 - FIRST FLOOR RM 1386 - CABLE TRAY LAYOUT 3/8"=1'-0"



7 BUILDING 1 - FIRST FLOOR RM 1500 3/8"=1'-0"  
7E ELEVATION RM 1500 - DEMO 3/8"=1'-0"



8 BUILDING 1 - FIRST FLOOR RM 1500 - CABLE TRAY LAYOUT 3/8"=1'-0"

ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 2	06/27/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION + MOD 2	06/10/2022
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100% CONSTRUCTION DOCUMENTS SUBMISSION	03/14/2022
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65% DESIGN DEVELOPMENT SUBMISSION	12/09/2021
35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**  
Telecom:  
Bright Tree Studios  
301 Brush Creek Road  
Warrendale, PA 15238  
(412)-212-7515

**ARCHITECT/ENGINEER OF RECORD**  
STAMP  
*Bancroft*  
BANCROFT ARCHITECTS + ENGINEERS  
VA CONTRACT NO. 36C26319D0044  
www.bancroft-ae.com  
3300 Dundee Road  
Northbrook, IL 60062  
T: 847.952.9362  
BAE PROJECT NO. 18-121

Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

Drawing Title  
ENLARGED PLAN - BUILDING 1 - FIRST FLOOR - TELECOM ROOM EQUIPMENT PLAN  
Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS  
FULLY SPRINKLERED

Project Title EHRM INFRASTRUCTURE UPGRADES	Project Number 636A6-21-101
Location DES MOINES, IOWA	Building Number 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28
Issue Date 09/02/2022	Checked BY Drawn CF
	Drawing Number 01-T401EP

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**DEMOLITION PLAN LEGEND**

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- ▨ AREA NOT IN CONTRACT

**FLOOR PLAN LEGEND**

- ▨ AREA NOT IN CONTRACT
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- ▬ NEW PARTITION SURFACE MATERIAL
- ▬ EXISTING DOOR
- XXXX ROOM NAME
- 1001 ROOM NUMBER
- ⤴ EXISTING DOOR TO BE REMOVED

**GENERAL NOTES**

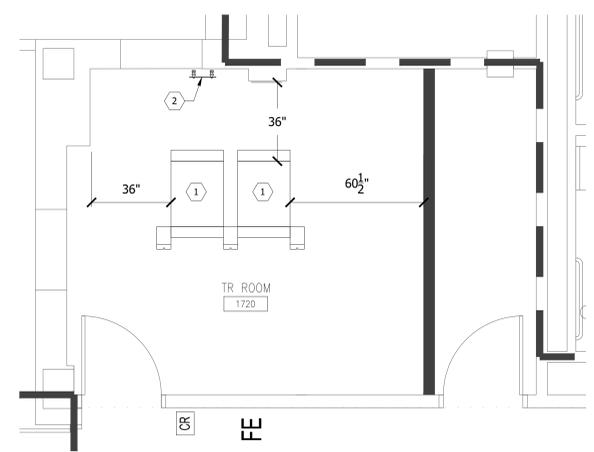
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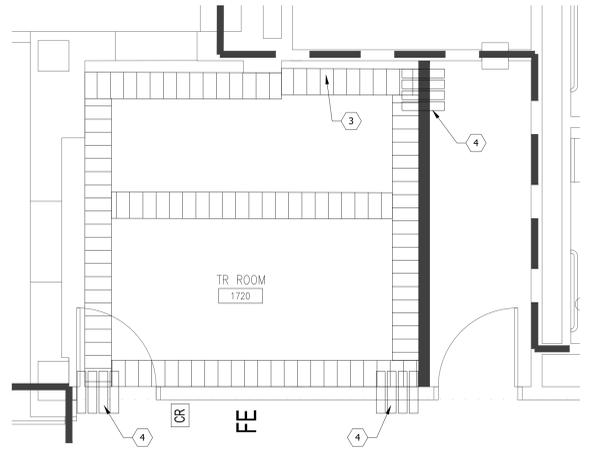
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**TELECOM DEMO KEY NOTES**

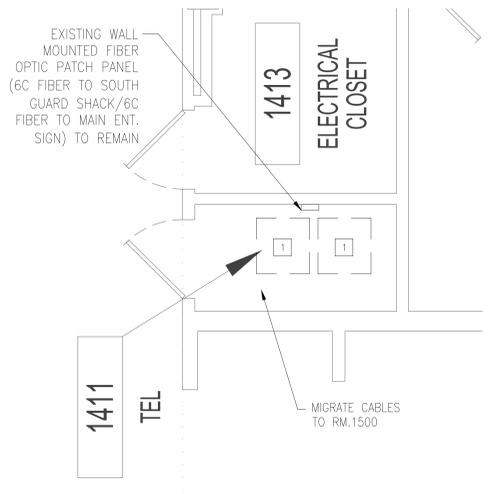
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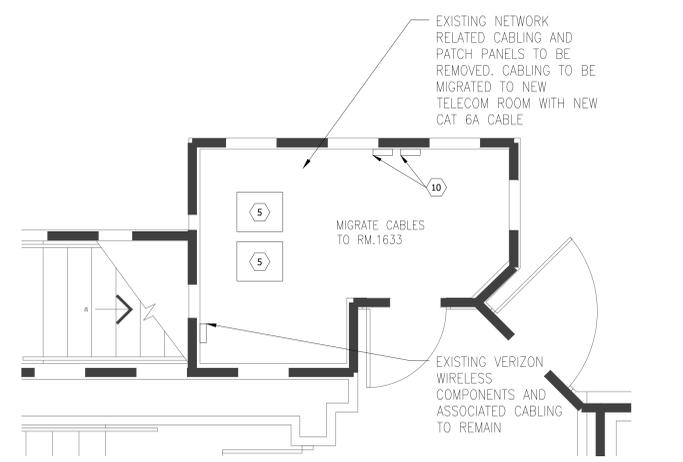
**1 BUILDING 1 - FIRST FLOOR RM 1720**  
3/8"=1'-0"



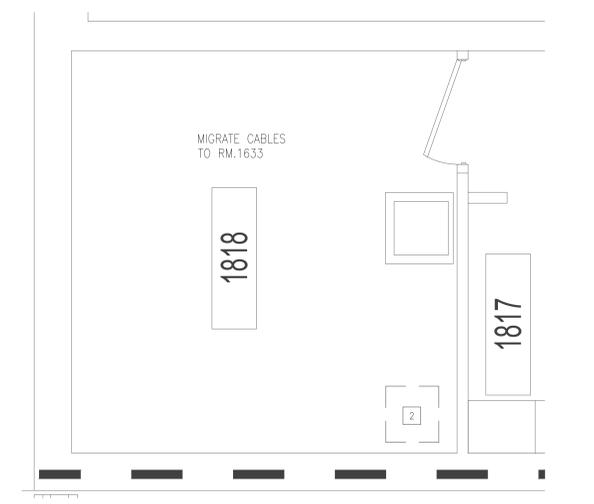
**2 BUILDING 1 - FIRST FLOOR RM. 1720 - CABLE TRAY LAYOUT**  
3/8"=1'-0"



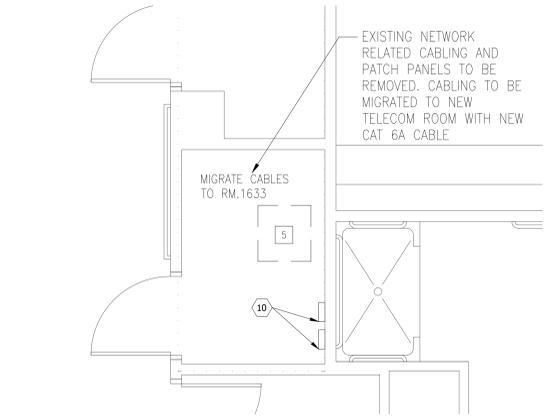
**3 BUILDING 1 - FIRST FLOOR RM 1411 - DEMO**  
3/8"=1'-0"



**4 BUILDING 1 - FIRST FLOOR RM 1638 - DEMO**  
3/8"=1'-0"



**5 BUILDING 1 - FIRST FLOOR RM 1818 - DEMO**  
3/8"=1'-0"



**6 BUILDING 1 - FIRST FLOOR RM 1834 - DEMO**  
3/8"=1'-0"

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ISSUE FOR BID	09/02/2022
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35% DESIGN DEVELOPMENT SUBMISSION	10/07/2021
Revisions:	Date:

**CONSULTANT**

Telecom:  
Bright Tree Studios  
301 Brush Creek Road  
Warrendale, PA 15238  
(412)-212-7515

**ARCHITECT/ENGINEER OF RECORD**

*Bancroft*

3300 Dundee Road  
Northbrook, IL 60062  
T: 847.952.9362  
www.bancroft-ae.com  
VA CONTRACT NO. 36C26319D0044  
BAE PROJECT NO. 18-121

STAMP

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**ENLARGED PLAN - BUILDING 1 - FIRST FLOOR - TELECOM ROOM EQUIPMENT PLAN**

Approved: Project Director

Phase  
**CONSTRUCTION DOCUMENTS**

FULLY SPRINKLERED

Project Title <b>EHRM INFRASTRUCTURE UPGRADES</b>	Project Number <b>636A6-21-101</b>
Location <b>DES MOINES, IOWA</b>	Building Number 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21-24, 25, 27, & 28
Issue Date <b>09/02/2022</b>	Checked BY <b>CF</b>
Drawn <b>CF</b>	Drawing Number <b>01-T401.1EP</b>

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**DEMOLITION PLAN LEGEND**

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- ▨ AREA NOT IN CONTRACT

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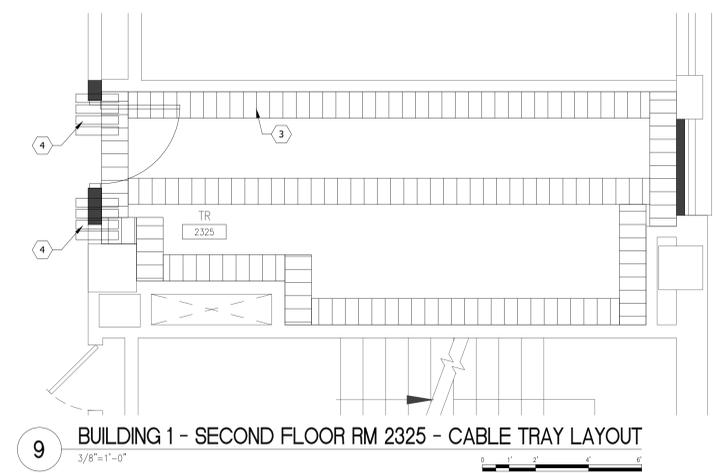
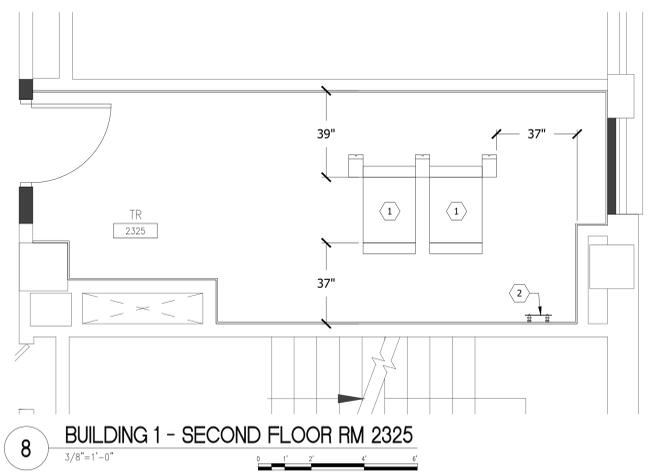
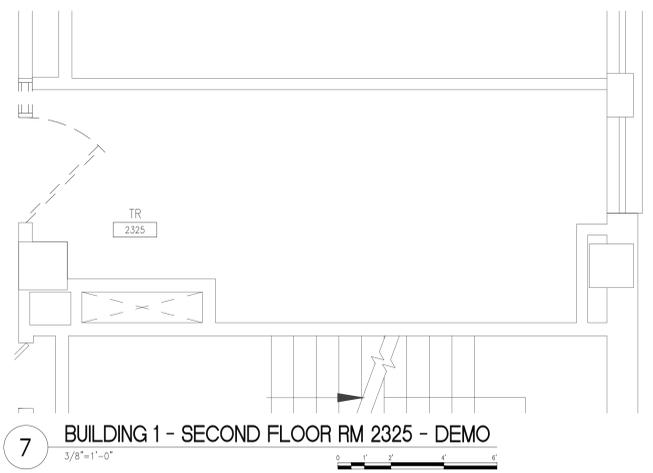
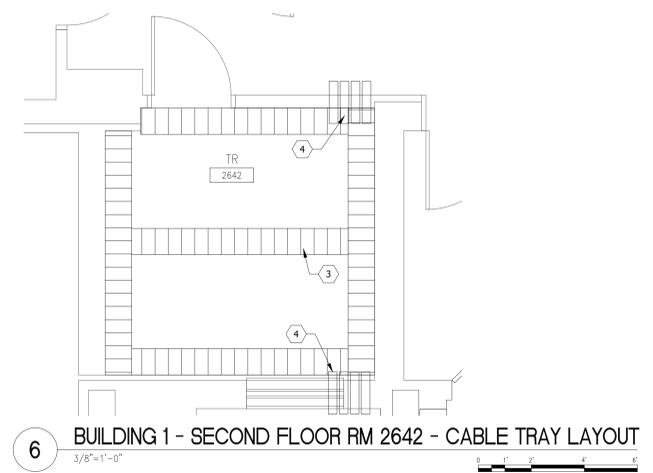
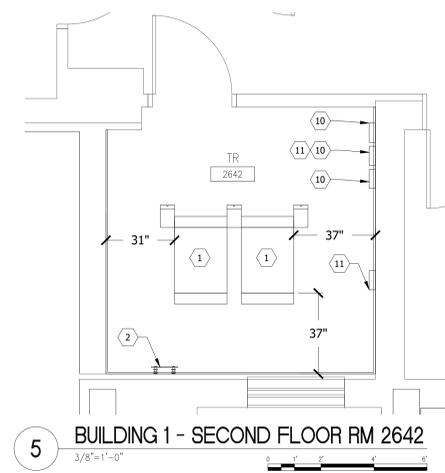
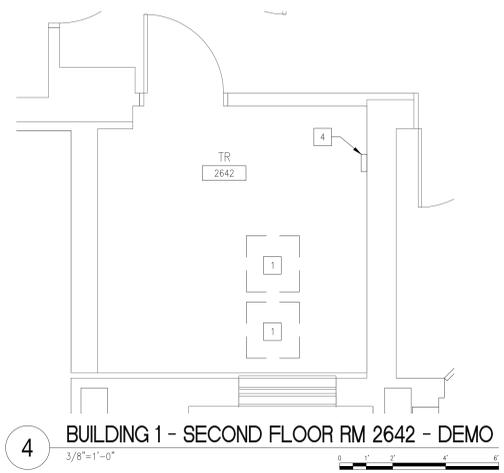
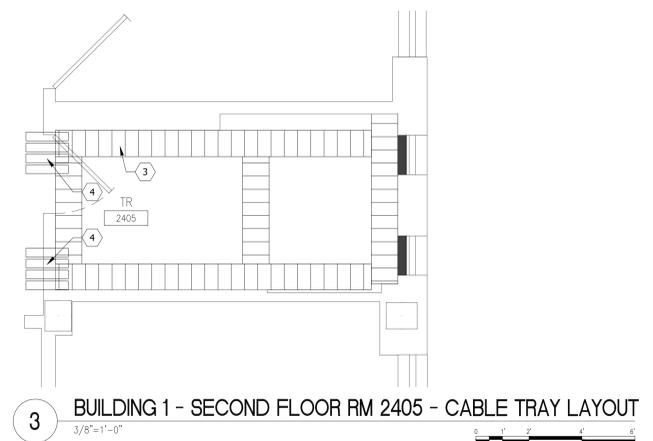
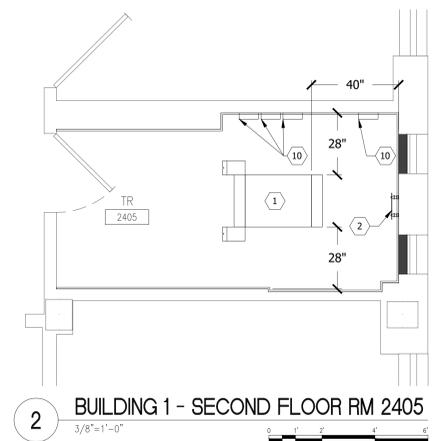
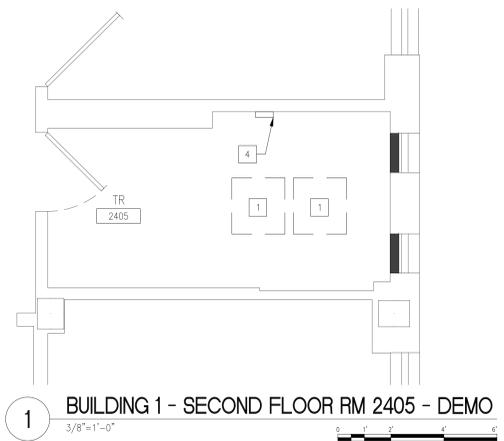
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1. PROVIDE 45RU TELECOMMUNICATION CHANNEL RACK P/N: OR-MM2073038-W (OR EQUIVALENT), WITH 6.45" VERTICAL CABLE MANAGEMENT BETWEEN EACH RACK AND AT THE ENDS OF EACH RACK ROW P/N: OR-MM20VMD706 (OR EQUIVALENT). EACH RACK SHALL BE FASTENED TO THE FLOOR. INCLUDE A RACK BONDING BUS BAR (RBB), WITH (RBB) GROUND TO THE SECONDARY BONDING BUSBAR (SBB).
  2. PROVIDE SECONDARY BONDING BUSBAR (SBB), MOUNT AT 72" AFF.
  3. PROVIDE 18" X 4" BASKET TRAY. SECURE TO WALLS AND RACKS. GROUND TO SBB.
  4. PROVIDE FOUR (4) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  5. PROVIDE WALL MOUNTED TELECOM ENCLOSURE.
  6. PROVIDE TWO (2) 4" VERTICAL CORES WITH 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR VERTICAL DISTRIBUTION. PROVIDE 18" LADDER TRAY MOUNTED TO WALL FROM FLOOR TO TRAY ABOVE.
  7. PROVIDE FOUR (4) 4" VERTICAL CORES WITH 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR VERTICAL DISTRIBUTION. PROVIDE 24" WIDE LADDER TRAY MOUNTED TO WALL FROM FLOOR TO TRAY ABOVE. GROUND TO SBB.
  8. PROVIDE TWO (2) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  9. PROVIDE 2 SETS OF FOUR (4) 4" MECHANICAL FIRE-RATED PATHWAY DEVICES FOR HORIZONTAL DISTRIBUTION.
  10. EXISTING 110 BLOCK VOICE WALL FIELD TO REMAIN.
  11. EXISTING CATV COMPONENTS AND ASSOCIATED CABLING TO REMAIN.
  12. EXISTING WALL MOUNTED EQUIPMENT RACK AND ASSOCIATED COMPONENTS TO REMAIN.
  13. EXISTING WALL MOUNTED SHELF AND ASSOCIATED COMPONENTS TO BE RELOCATED TO THIS LOCATION. MOUNT AT 96" AFF.
  14. EXISTING 110 BLOCK VOICE WALL FIELD TO BE RELOCATED TO THIS LOCATION.
  15. EXISTING CATV COMPONENTS AND ASSOCIATED CABLING TO BE RELOCATED TO THIS LOCATION.
  16. EXISTING EQUIPMENT CABINET AND ASSOCIATED CABLING TO REMAIN AS REQUIRED TO SUPPORT SYSTEMS THAT ARE NOT IN SCOPE.
  17. EXISTING VERIZON WIRELESS EQUIPMENT AND ASSOCIATED CABLING TO BE RELOCATED TO THIS LOCATION.
  18. EXISTING NURSE CALL PANELS AND ASSOCIATED CABLING TO REMAIN.
  19. EXISTING SYSTEMS TO BE MIGRATED INTO NEW CHANNEL RACK.

**TELECOM DEMO KEY NOTES**

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  10. EXISTING FLOOR MOUNTED FOUR POST RACK TO BE REMOVED.
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  4. EXISTING TELECOMMUNICATION GROUND BUS TO BE REMOVED.
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ISSUE FOR BID	09/02/2022
FINAL CONSTRUCTION DOCUMENTS RESUBMISSION 3	08/09/2022
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Revisions:	Date:

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BAE PROJECT NO. 18-121

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
ENLARGED PLAN - BUILDING 1 - SECOND FLOOR - TELECOM ROOM EQUIPMENT PLAN

Approved: Project Director

Phase  
CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

Project Title EHRM INFRASTRUCTURE UPGRADES	Project Number 636A6-21-101
Location DES MOINES, IOWA	Building Number 1, 2, 3, 4, 5, 6M, 7M, 9, 10, 11, 12, 21, 24, 25, 27, & 28
Issue Date 09/02/2022	Checked BY CF
Drawn CF	Drawing Number 01-T402EP

A

B

C

D

E

F

### DEMOLITION PLAN LEGEND

- ===== EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED IN ITS ENTIRETY, INCLUDING WALL SWITCHES, OUTLETS, THERMOSTATS, ETC. PATCH ABUTTING WALLS, FLOORS AND CEILINGS AS REQUIRED. REMOVE EXISTING ITEMS SCHEDULED TO REMAIN AS NECESSARY TO ALLOW THE COMPLETE DEMOLITION OF SELECTED ITEMS. REPAIR/REPLACE EXISTING ITEMS ONCE DEMOLITION IS COMPLETED.
- [Hatched Box] AREA NOT IN CONTRACT

### FLOOR PLAN LEGEND

- [Hatched Box] AREA NOT IN CONTRACT
- ===== EXISTING PARTITION
- ===== NEW PARTITION SURFACE MATERIAL
- [Line with Arrow] EXISTING DOOR
- [Line with Arrow] EXISTING DOOR TO BE REMOVED
- XXXX ROOM NAME
- 1001 ROOM NUMBER

### GENERAL NOTES

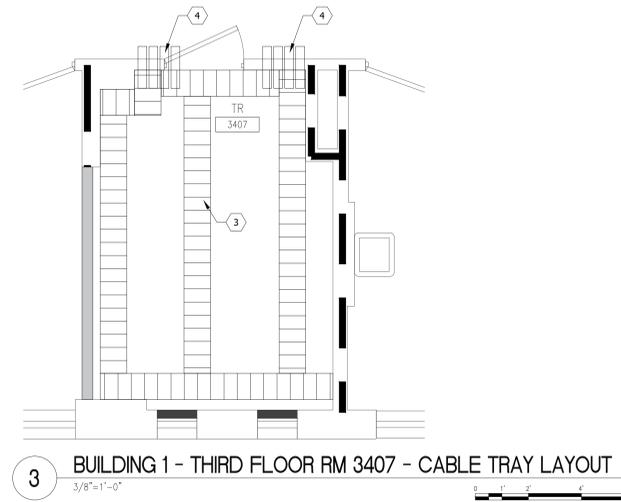
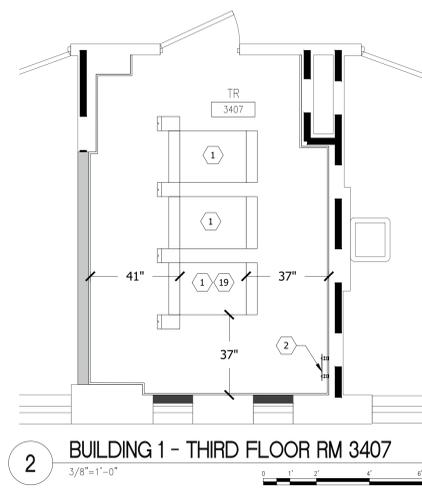
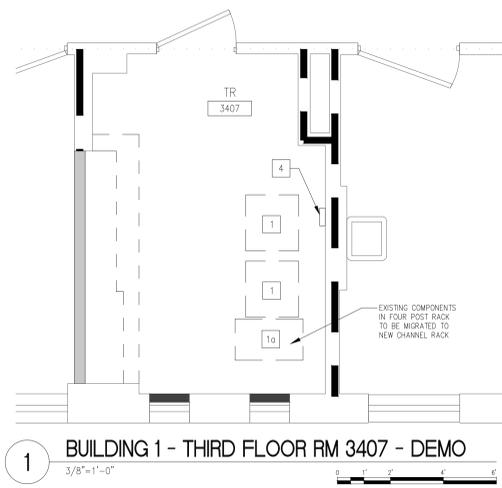
- NOTE: NOT ALL NOTES APPLY TO EVERY DRAWING.
- A. PROVIDE BASKET TYPE CABLE TRAY ALONG PRIMARY CABLE PATHWAYS WHEN THE CABLE BUNDLE EXCEEDS 24 CABLES. CABLE TRAY TO BE SIZED AS PER DETAIL 3 ON DRAWING TT-ID506.
  - B. ALL PENETRATIONS TO BE SEALED AS REQUIRED TO MEET EXISTING RATINGS. MECHANICAL FIRE RATED PATHWAYS TO BE PROVIDED AT RATED WALLS AS DEPICTED ON DRAWINGS AND WHEN CABLE BUNDLE EXCEEDS 24 CABLES.
  - C. VERIFY ALL COMPONENTS BONDED TO EXISTING TELECOMMUNICATION GROUNDING BUSBARS HAVE BEEN TAKEN OUT OF SERVICE OR HAS BEEN BONDED TO THE NEW TELECOMMUNICATION GROUNDING/BONDING SYSTEM PRIOR TO REMOVING EXISTING GROUNDING COMPONENTS.
  - D. CARE SHALL BE TAKEN AS TO NOT DISRUPT OR DAMAGE EXISTING SYSTEMS INCLUDING BUT NOT LIMITED TO CATV, ACCESS CONTROL, FIRE ALARM, NURSE CALL, BUILDING AUTOMATION, DISTRIBUTED ANTENNA, PAGING.
  - E. NO CABLES OR COMPONENTS SHALL BE REMOVED FROM SERVICE PRIOR TO AUTHORIZATION FROM PROJECT COR.
  - F. FIELD VERIFY ALL CONDUIT PENETRATIONS AND CORE LOCATIONS.
  - G. FOR IT INFORMATION AND SOW SEE DESIGN NARRATIVE/BASIS OF DESIGN.
  - H. CONTRACTOR TO LOCATE EXISTING REINFORCING PRIOR TO DOING CORES FOR CONDUIT. DO NOT CUT REINFORCING. CORES SHALL HAVE A MINIMUM OF 4" CLEAR BETWEEN THEM. ADJUST CORE LOCATIONS AS NEEDED. AT LOCATIONS WITH MORE THAN (2) CORES GOING THROUGH A CMU WALL, SPACE CORES AT 16" MINIMUM.

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Drawing Title  
ENLARGED PLAN - BUILDING 1 - THIRD FLOOR - TELECOM ROOM EQUIPMENT PLAN

Approved: Project Director

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