

# IOWA DEPARTMENT OF NATURAL RESOURCES

## CONSTRUCTION DRAWINGS FOR BUILD-OUT PHASE I AT RATHBUN WILDLIFE UNIT APPANOOSE COUNTY, IOWA

PROJECT # 24-05-04-01

PLANS PREPARED BY

LAND AND WATERS BUREAU

CONSERVATION AND RECREATION DIVISION



| SHEET INDEX   |                             |
|---------------|-----------------------------|
| SHEET NO.     | SHEET TITLE                 |
| ARCHITECTURAL |                             |
| A-001         | COVER SHEET                 |
| A-002         | PROJECT LOCATION            |
| A-003         | WALL TYPES, NOTES & SYMBOLS |
| A-005         | DEMOLITION FLOOR PLAN       |
| A-100         | REFERENCE FLOOR PLAN        |
| A-101         | DIMENSION FLOOR PLAN        |
| A-110         | REFLECTED CEILING PLAN      |
| A-400         | BUILDING SECTIONS           |
| A-600         | SCHEDULES AND DETAILS       |
| ELECTRICAL    |                             |
| E-000         | ELECTRICAL GENERAL NOTES    |
| E-101         | ELECTRICAL POWER            |
| E-201         | ELECTRICAL LIGHTING         |
| E-301         | ELECTRICAL SCHEDULE         |
| MECHANICAL    |                             |
| M-000         | MECHANICAL GENERAL NOTES    |
| M-101         | MECHANICAL HVAC PLAN        |
| P-101         | PLUMBING PLAN               |

I hereby certify that this architectural document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Architect under the laws of the State of Iowa.

RYAN E. RICHEY \_\_\_\_\_ DATE \_\_\_\_\_

My license renewal date is June 30, 2025.

Pages or sheets covered by this seal:  
**A-001 – A-600**

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly LICENSED Professional ENGINEER under the laws of the State of Iowa.

ANDREW J. VERSLUYS \_\_\_\_\_ DATE \_\_\_\_\_

My license renewal date is DECEMBER 31, 2024.

Pages or sheets covered by this seal:  
**E-000 – E-301**

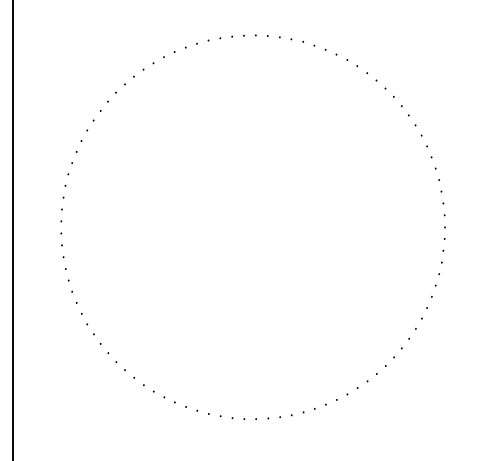
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly LICENSED Professional ENGINEER under the laws of the State of Iowa.

CHAD D. BASS \_\_\_\_\_ DATE \_\_\_\_\_

My license renewal date is DECEMBER 31, 2025.

Pages or sheets covered by this seal:  
**M-000 – P-101**

CONSULTANT:



**IOWA DEPARTMENT OF NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.6200  
F: 515.725.6202



| BID ITEMS |                               |                    |
|-----------|-------------------------------|--------------------|
| ITEM #    | ITEM DESCRIPTION              | ESTIMATED QUANTITY |
| 1         | MOBILIZATION                  | 1 LS               |
| 2         | CONCRETE SLAB DEMOLITION      | 1 LS               |
| 3         | ELECTRICAL AND LIGHTING       | 1 LS               |
| 4         | PLUMBING AND PIPING           | 1 LS               |
| 5         | SHOP HEATERS AND ACCESSORIES  | 1 LS               |
| 6         | FRAMING AND STEEL LINER PANEL | 1 LS               |
| 7         | RESTROOM CONCRETE             | 1 LS               |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |
|           |                               |                    |

PROJECT DATA – OFFICE BUILDING

PROJECT NARRATIVE

The contractor shall be responsible for providing and installing all items within this narrative, the drawings, and project manual unless specifically noted. This narrative is not meant to be a comprehensive account of all items to be covered by the contract, review all documents. The contractor is responsible for field verifying all dimensions and establishing all quantities that are dictated as "lump sum".

This project, Rathbun Wildlife Unit – Office Build-out, shall commence after the contract is executed and shall be completed no later than the completion date stated on the contract.

The contractor shall saw-cut out the concrete floor where shown for water and sanitary sewer service lines.

The contractor shall bring service lines, capped on exterior and interior, into the building through the removed concrete floor and pour a new concrete slab, thickness to match existing slab, with #4 dowels around the perimeter of the slab, as shown. The contractor shall install new partition walls as shown on A-100, refer to wall types A-002, and lurr-out all existing post-frame walls with 2x4 rollers. The contractor shall install 2x4 framing between the trusses for new ceiling finish and lighting installation. Contractor shall cover all Heated Garage 103 walls with 29ga steel liner panel, include all trims required.

The contractor shall then run electric throughout the space as shown on the electrical plans. Contractor shall install outlets and lights in the Heated Garage 103 and rough-in electrical and fiber in Open Office 100 as shown. The contractor shall run rough-in water and sanitary lines, as shown on the plumbing and mechanical drawings. The contractor shall install a unit heater and shown on the mechanical plans.

AUTHORIZATION TO BID

\_\_\_\_\_ DATE \_\_\_\_\_

ENGINEERING BUREAU CHIEF

\_\_\_\_\_ DATE \_\_\_\_\_

AUTHORIZED - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT

| DIRECTORY           |                                      |                     |                                      |
|---------------------|--------------------------------------|---------------------|--------------------------------------|
| OWNER               |                                      | DISTRICT INSPECTOR  |                                      |
| COMPANY             | IOWA DEPARTMENT OF NATURAL RESOURCES | COMPANY             | IOWA DEPARTMENT OF NATURAL RESOURCES |
| ADDRESS             | 502 E. 9TH ST.                       | ADDRESS             |                                      |
| CITY,STATE,ZIP      | DES MOINES, IA 50319                 | CITY,STATE,ZIP      | INDIANOLA, IA                        |
| CONTACT             | N/A                                  | CONTACT             | JASON KRUSE                          |
| TELEPHONE           | 515.725.8200                         | TELEPHONE           | 515-250-3707                         |
| FAX                 | 515.725.8202                         | FAX                 | -                                    |
| EMAIL               | N/A                                  | EMAIL               | JASON.KRUSE@DNR.IOWA.GOV             |
| ARCHITECT           |                                      | ELECTRICAL DESIGNER |                                      |
| COMPANY             | IOWA DEPARTMENT OF NATURAL RESOURCES | COMPANY             | KCL ENGINEERING                      |
| ADDRESS             | 502 E. 9TH ST.                       | ADDRESS             | 300 4TH STREET                       |
| CITY,STATE,ZIP      | DES MOINES, IA 50319                 | CITY,STATE,ZIP      | WEST DES MOINES, IA 50265            |
| CONTACT             | RYAN RICHEY                          | CONTACT             | JON LACROIX                          |
| TELEPHONE           | 515.979.0107                         | TELEPHONE           | 515-344-2960                         |
| FAX                 | -                                    | FAX                 | -                                    |
| EMAIL               | RYAN.RICHEY@DNR.IOWA.GOV             | EMAIL               | JLACROIX@KCLENGINEERING.COM          |
| MECHANICAL ENGINEER |                                      | ELECTRICAL ENGINEER |                                      |
| COMPANY             | KCL ENGINEERING                      | COMPANY             | KCL ENGINEERING                      |
| ADDRESS             | 218 1/2 5TH STREET                   | ADDRESS             | 300 4TH STREET                       |
| CITY,STATE,ZIP      | WEST DES MOINES, IA 50265            | CITY,STATE,ZIP      | WEST DES MOINES, IA 50265            |
| CONTACT             | CHAD BASS                            | CONTACT             | ANDREW VERSLUYS                      |
| TELEPHONE           | 515-205-1397                         | TELEPHONE           | -                                    |
| FAX                 | -                                    | FAX                 | -                                    |
| EMAIL               | CBASS@KCLENGINEERING.COM             | EMAIL               | -                                    |

COVER SHEET

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

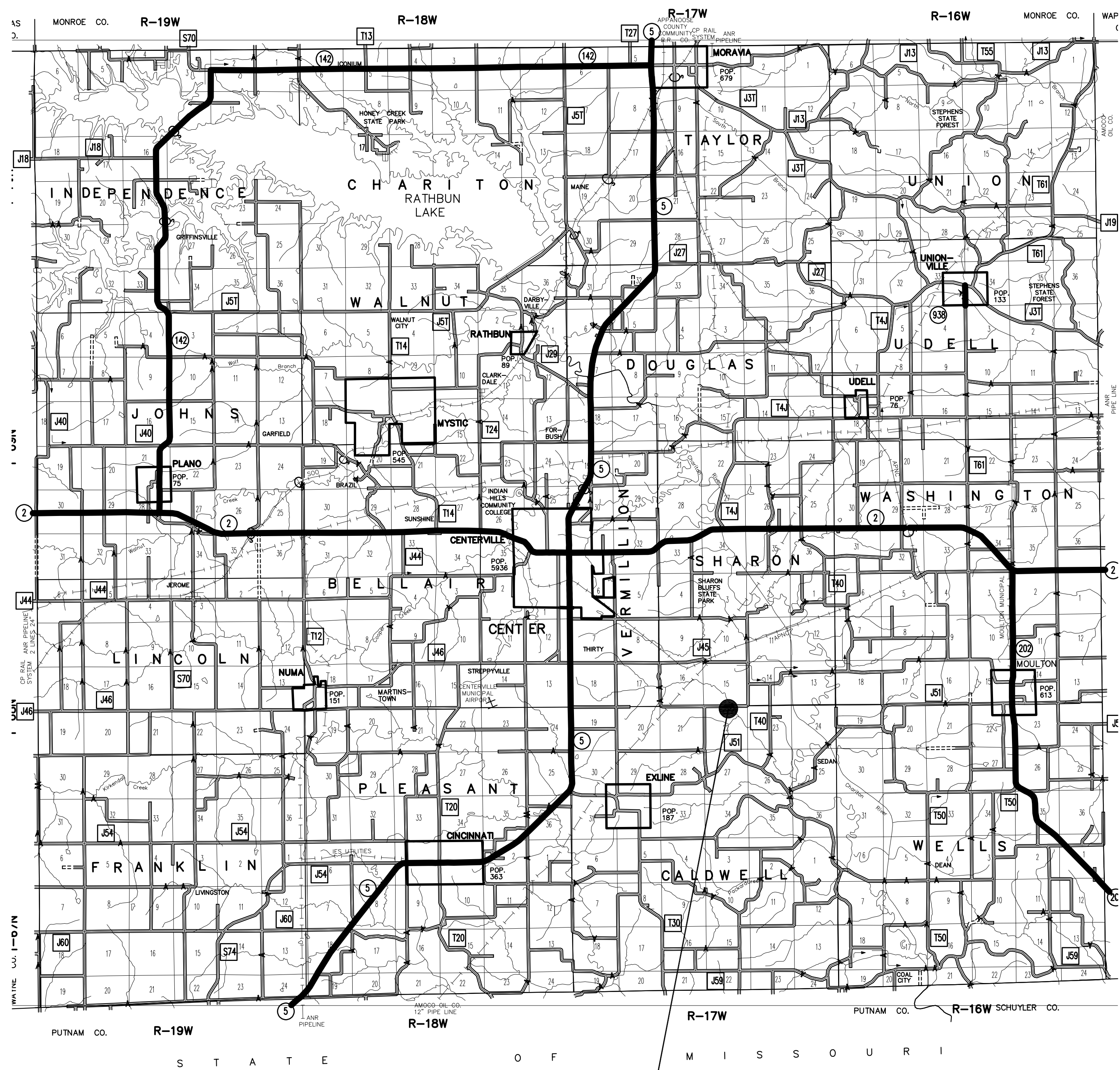
APPANOOSE COUNTY, IA 52544  
50TH STREET

| NO. | BY DATE | REVISION |
|-----|---------|----------|
|     |         |          |
|     |         |          |
|     |         |          |
|     |         |          |
|     |         |          |
|     |         |          |

DRAWN BY: PROJECT NUMBER:  
24-05-04-01

CHECKED BY: DATE:  
02.20.2024

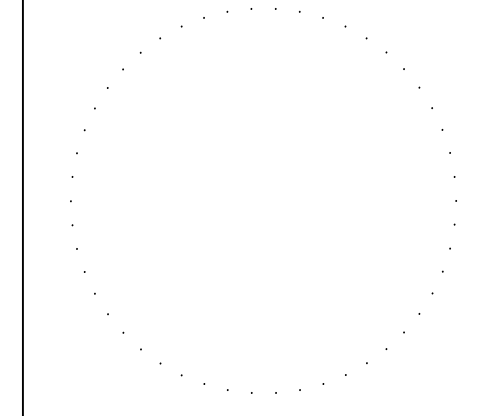
SHEET No: **A-001**



PROJECT LOCATION



CONSULTANT:



**IOWA DEPARTMENT OF  
NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.8200  
F: 515.725.8202



PROJECT LOCATION

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

APPANOOSE COUNTY, IA 52544  
550TH STREET

| NO. | BY DATE | REVISION |
|-----|---------|----------|
|     |         |          |
|     |         |          |
|     |         |          |
|     |         |          |
|     |         |          |

DRAWN BY: PROJECT NUMBER:  
24-05-04-01

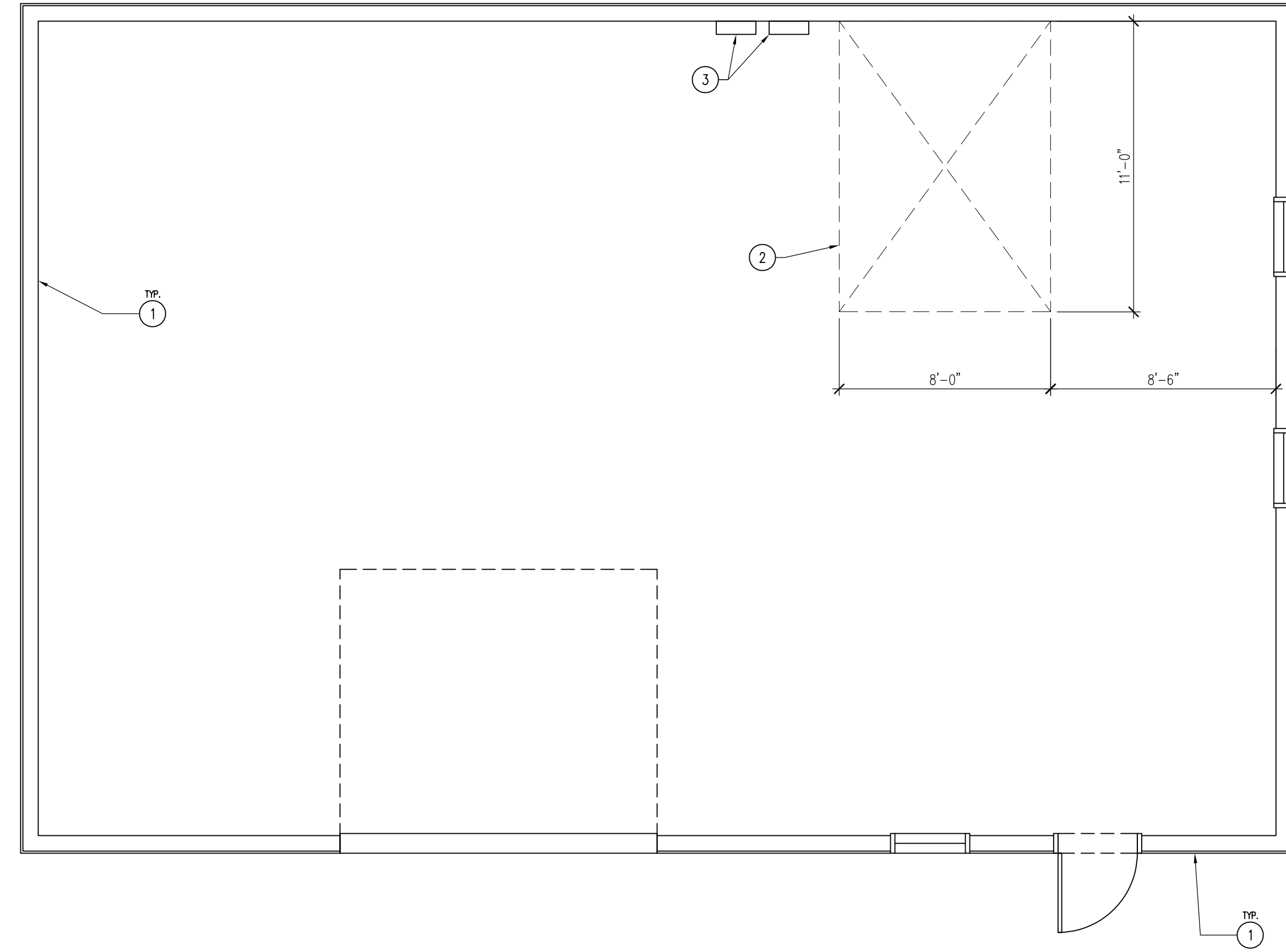
CHK'D BY: DATE:  
02.20.2024

SHEET No:  
**A-002**



02 NOT USED  
SCALE: 1/4" = 1'-0"

01 DEMOLITION FLOOR PLAN  
SCALE: 1/4" = 1'-0"



KEYNOTES

GENERAL NOTES

1. EXISTING POST-FRAME BUILDING TO REMAIN, STUB WATER AND SEWER SERVICE LINES TO BUILDING THROUGH SAW-CUT FLOORING INSIDE TO 5'-0" OUTSIDE BUILDING.
2. SAW-CUT INTERIOR SLAB OF BUILDING AND DEMOLISH AND REMOVE CONCRETE IN AREA SHOWN. RUN UTILITIES INTO BUILDING IN SAW-CUT AREA AS SHOWN ON DRAWINGS AND PREP FOR NEW CONCRETE.
3. PULL ELECTRICAL PANELS FROM WALL, REMOUNT PANELS ON SURFACE OF STEEL PANELING WHEN DONE. RUN ELECTRICAL CIRCUITS THROUGHOUT THE BUILDING FROM THESE PANELS, REFER TO ELECTRICAL SHEETS.

- A. CONTRACTOR TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO WORK COMMENCING.
- B. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- C. CONTRACTOR SHALL CAULK ALL INTERIOR CONCRETE SAW-CUT JOINTS AND ALL EXPANSION JOINTS WITH FLOWABLE URETHANE SEALANT, COLOR TO BE GRAY.

DEMOLITION FLOOR PLAN

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

50TH STREET  
APPANOOSE COUNTY, IA 52544

NO. BY DATE REVISION

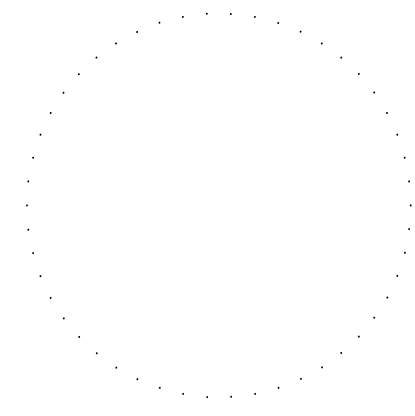
DRAWN BY: PROJECT NUMBER:  
24-05-04-01

CHK'D BY: DATE:  
02.20.2024

SHEET No:

**A-005**

CONSULTANT:



**IOWA DEPARTMENT OF  
NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.8200  
F: 515.725.8202



03  
A-400

02  
A-400

01  
A-400

01

6

03

03

8

05

14

MECHANICAL  
101

3

RESTROOM  
102

1 7

04

13

TRP  
11

13

TRP  
2

103

04

04  
A-400

04

HEATED GARAGE  
103

14

TRP  
12

02

14

OPEN OFFICE  
100

05

3

8

5

01

3

05

4

01 REFERENCE FLOOR PLAN  
SCALE: 1/2" = 1'-0"

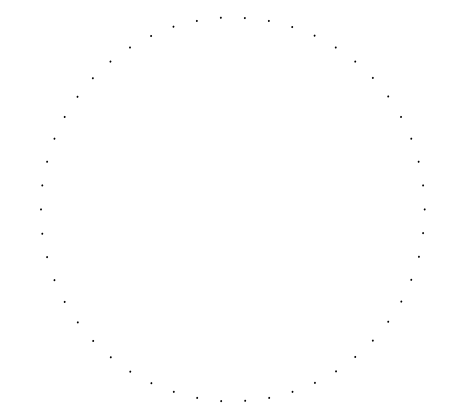
KEYNOTES

GENERAL NOTES

1. FUTURE ADA COMPLIANT RESTROOM, PLUMBING TO BE STUBBED OUT AND ROUGHED IN, REFER TO PLUMBING PLANS.
2. DOOR AS SCHEDULED, REFER TO SHEET A-600.
3. EXISTING WINDOW TO REMAIN.
4. EXISTING DOOR TO REMAIN.
5. EXISTING OVERHEAD DOOR TO REMAIN.
6. SURFACE MOUNT EXISTING ELECTRICAL PANELS, REFER TO ELECTRICAL DRAWINGS. INSULATE BEHIND PANELS WITH CLOSED-CELL POLYURETHANE FOAM TO MATCH EXISTING INSULATION.
7. 5" THICK CONCRETE IN-FILL FLOOR SLAB WITH #4 REBAR 24" O.C., DOWEL INTO EXISTING SLAB WITH #4 DONNELS X 12" LONG, 12" O.C., SMOOTH TROWEL FINISH AND SEAL. REFER TO SHEET A-600. HIDE CONCRETE COLD JOINTS WITH WALL FRAMING.
8. EXISTING POST-FRAME BUILDING TO REMAIN.
9. NOT USED.
10. NOT USED.
11. 2X4 INTERIOR PARTITION WALL, REFER TO WALL TYPES SHEET A-002.
12. 2X6 INTERIOR DEMISING WALL WITH R-19 INSULATION, REFER TO WALL TYPES SHEET A-002.
13. 2X6 DOOR HEADER ABOVE FOR FUTURE DOOR.
14. EXISTING CONCRETE SLAB TO REMAIN, CLEAN AND SEAL, REFER TO FINISH SCHEDULE SHEET A-600.

- A. REFER TO FINISH SCHEDULE, SHEET A-600.
- B. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- C. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- D. FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL PLAN.
- E. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING AND POWER LAYOUTS.

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES  
ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.6200  
F: 515.725.6202



REFERENCE FLOOR PLAN

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

APPANOOSE COUNTY, IA 52544

SOUTH STREET

NO. BY DATE REVISION

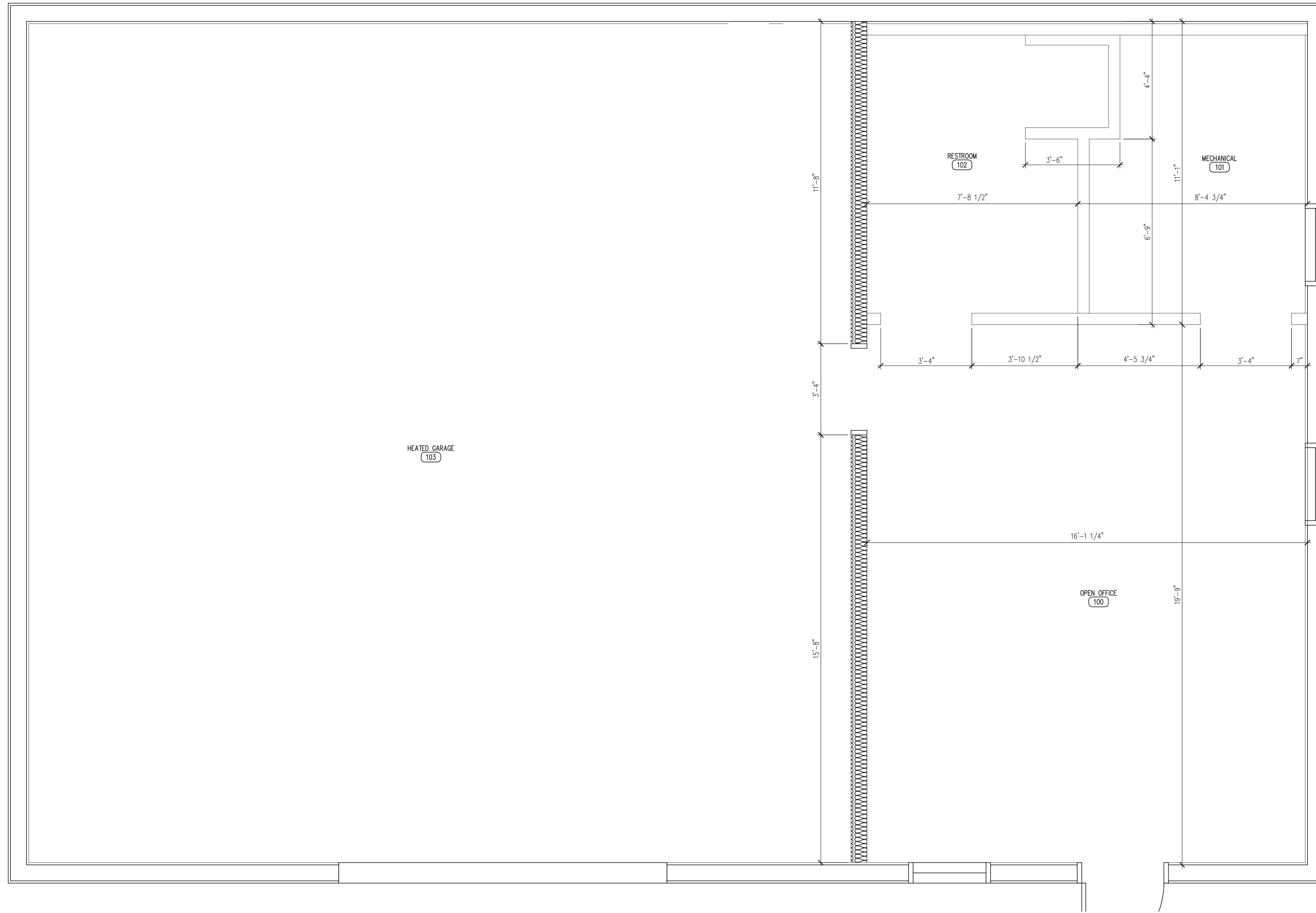
|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

DRAWN BY: PROJECT NUMBER:  
24-05-04-01

CHK'D BY: DATE:  
02.20.2024

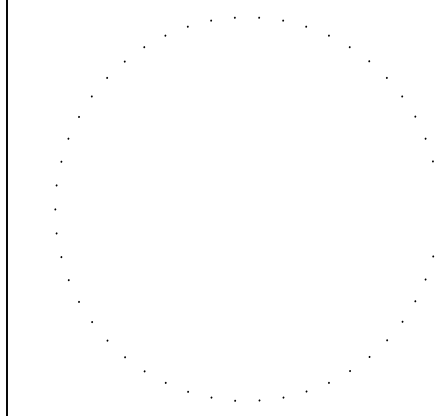
SHEET NO:

**A-100**



01 DIMENSION FLOOR PLAN  
 SCALE: 1/2" = 1'-0"

CONSULTANT:



**IOWA DEPARTMENT OF NATURAL RESOURCES**  
 ENGINEERING SERVICES - WALLACE BUILDING  
 502 E. 9TH ST., DES MOINES, IA 50319-0034  
 P: 515.725.8200  
 F: 515.725.8202



DIMENSION FLOOR PLAN

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

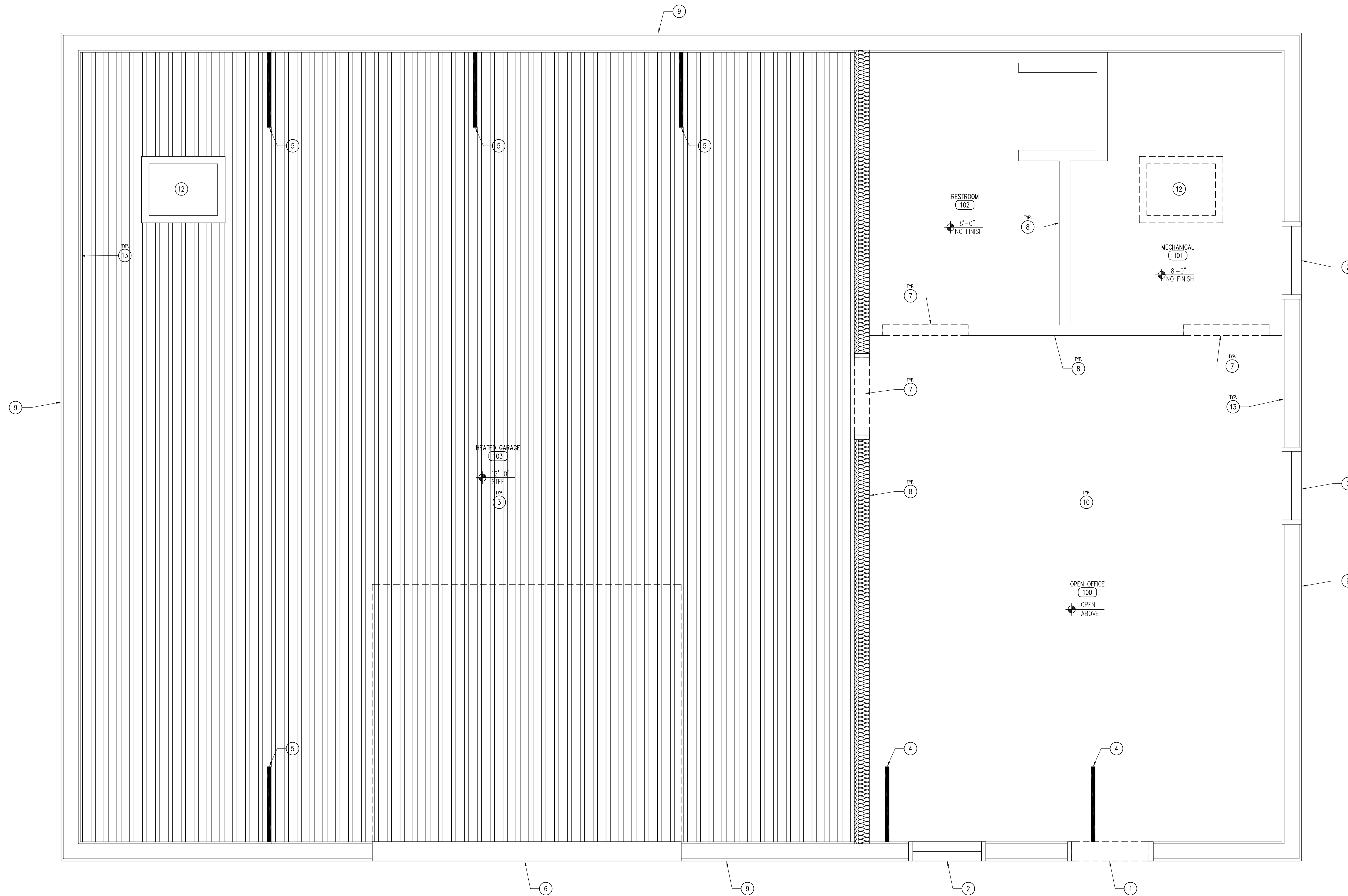
550TH STREET  
 APPANOOSE COUNTY, IA 52544

| NO. | BY DATE | REVISION |
|-----|---------|----------|
|     |         |          |
|     |         |          |
|     |         |          |
|     |         |          |
|     |         |          |


|           |                 |
|-----------|-----------------|
| DRAWN BY: | PROJECT NUMBER: |
| CHK'D BY: | DATE:           |
| SHEET No: |                 |

**A-101**



**01 REFLECTED CEILING PLAN**  
SCALE: 1/2" = 1'-0"

**LEGEND**

 29 GAUGE LINER PANEL

**KEYNOTES**

1. EXISTING DOOR.
2. EXISTING WINDOW TO REMAIN.
3. 29 GAUGE LINER PANEL OVER 2X4 FRAMING (#1 SYP) ON END @ 24" O.C., COLOR TO BE WHITE. INSTALL FRAMING BETWEEN TRUSSES WITH LU24 HANGERS, 2X4 BLOCKING 48" O.C. BETWEEN.
4. EXISTING KICKERS TO REMAIN.
5. EXISTING 2X6 KICKERS, WRAP ENTIRE KICKER IN WHITE BREAK METAL TO MATCH CEILING.
6. EXISTING OVERHEAD DOOR TO REMAIN.
7. 2X6 DOOR HEADER ABOVE, REFER TO SCHEDULE A-600.
8. PARTITION WALL, REFER TO WALL TYPES A-002.
9. EXISTING BUILDING TO REMAIN.
10. 2X4 FRAMING (#1 SYP) ON END @ 24" O.C., INSTALL FRAMING BETWEEN TRUSSES WITH LU24 HANGERS, 2X4 BLOCKING 48" O.C. BETWEEN.
11. NO FINISH ON BOTTOM OF CEILING JOISTS, REFER TO SECTIONS A-400.
12. 24 X 36 SCUTTLE HOLE, FRAME WITH 2X4 BLOCKING AND PROVIDE 2" PLYWOOD PLUG WITH TRIM IN HEATED GARAGE 103, PROVIDE 2X4 BLOCKING FRAME ONLY IN OPEN OFFICE 100.
13. INSTALL 2X8 LEDGER, CONTINUOUS AGAINST COLUMNS TO HANG 2X4 CEILING FRAMING. INSTALL WITH THREE (3) 5" RSS SCREWS AT EACH COLUMN INTERSECTION. LEDGERS TO SPAN 3 COLUMNS MINIMUM.

**GENERAL NOTES**

- A. REFER TO FINISH SCHEDULE, SHEET A-600.
- B. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- C. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- D. FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL PLAN.
- E. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING AND POWER LAYOUTS.

**REFLECTED CEILING PLAN**

**RATHBUN WILDLIFE UNIT**

BUILD-OUT PHASE I FOR:

550TH STREET APPANOOSE COUNTY, IA 52544

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:  
24-05-04-01

CHK'D BY: DATE:  
02.20.2024

SHEET NO:

**A-110**

CONSULTANT:

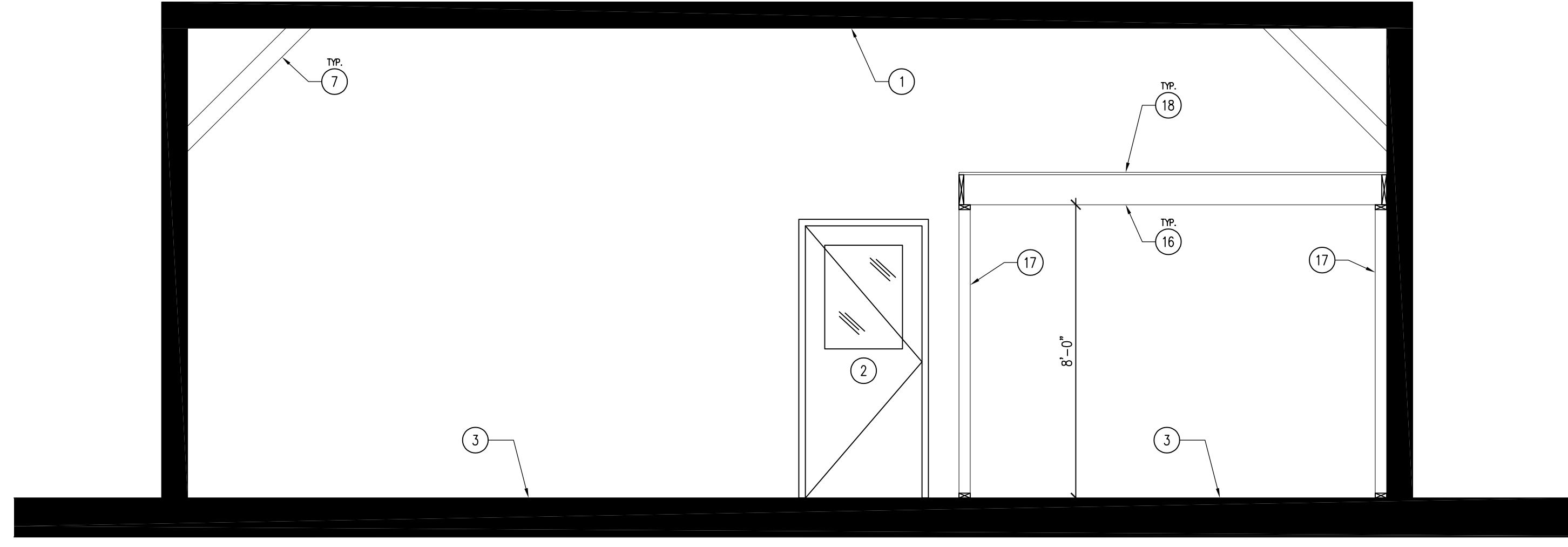
**IOWA DEPARTMENT OF  
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.8200  
F: 515.725.8202

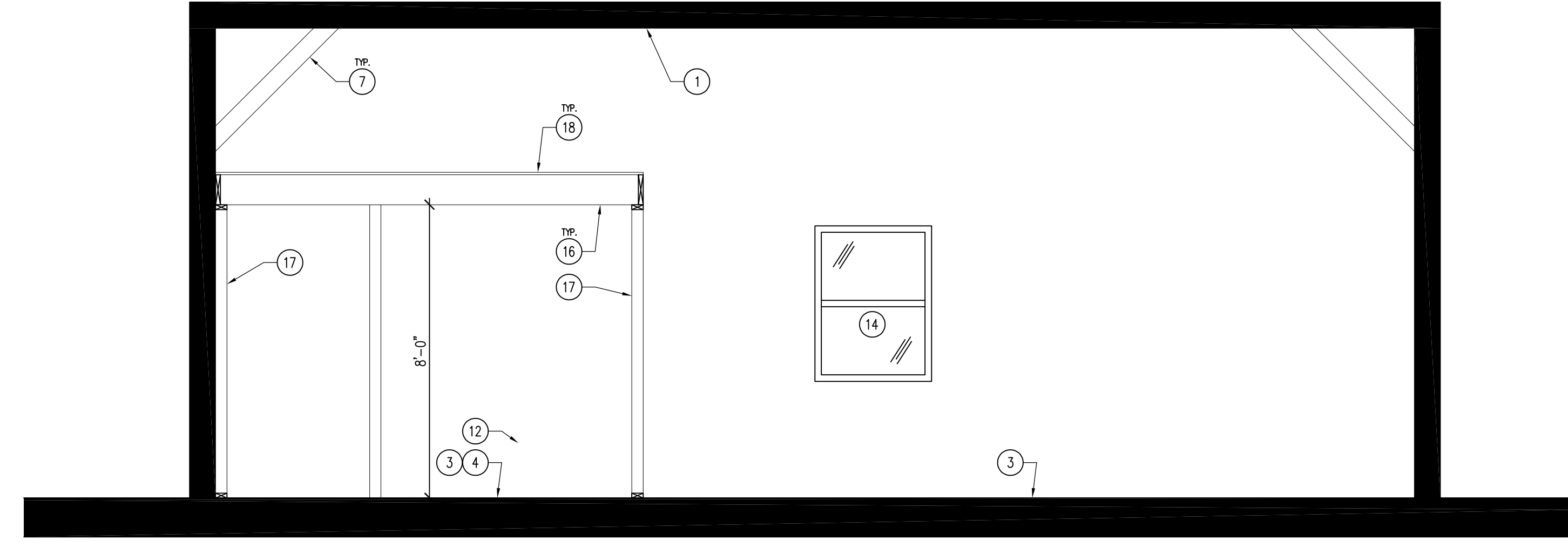


04 NOT USED  
SCALE: 3/4" = 1'-0"

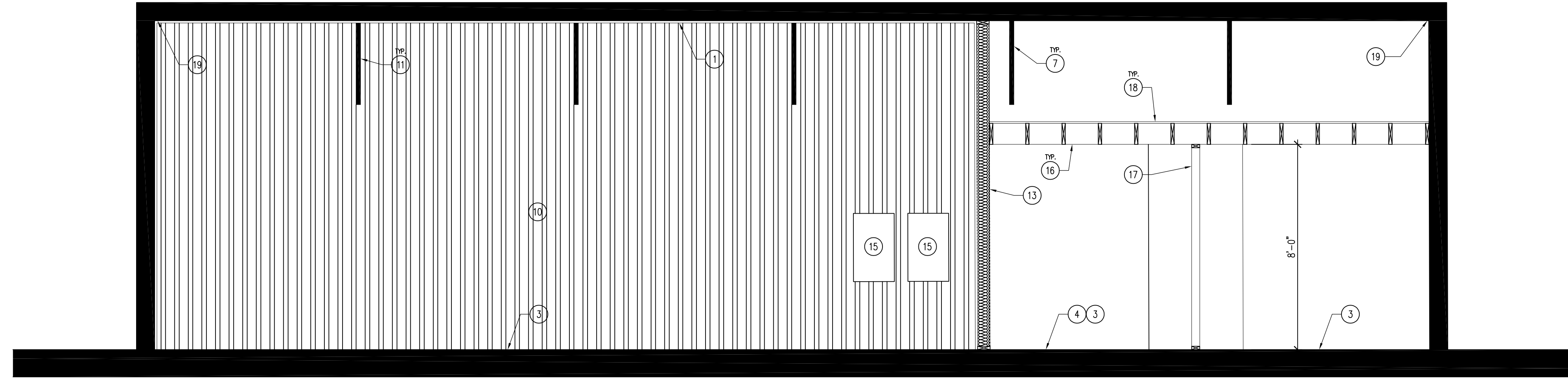
03 SECTION - HEATED GARAGE, RESTROOM, AND MECHANICAL ROOM  
SCALE: 3/8" = 1'-0"



02 SECTION - RESTROOM AND OFFICE AREA  
SCALE: 3/8" = 1'-0"



01 SECTION - RESTROOM AND OFFICE AREA  
SCALE: 3/8" = 1'-0"



KEYNOTES

GENERAL NOTES

1. CEILING AS SCHEDULED, REFER TO REFLECTED CEILING PLAN SHEET A-110. 2X4 FRAMING BETWEEN TRUSSES AT 16" O.C., HANG WITH LU24 HANGERS. BLOCK BETWEEN 2X4 FRAMING 48" O.C.
2. DOOR AS SCHEDULED, REFER TO SHEET A-600.
3. CLEAN CONCRETE SLAB AND SEAL, REFER TO FINISH SCHEDULE SHEET A-600.
4. 5" CONCRETE SLAB WITH #4 REBAR 24" O.C. BOTH DIRECTIONS. DOWEL INTO EXISTING CONCRETE SLAB WITH 1'-6" - #4 DOWELS, 1'-0" O.C.
5. NOT USED.
6. NOT USED.
7. EXISTING STRUCTURAL KICKERS TO REMAIN.
8. WALL FINISH AS SCHEDULED, REFER TO FINISH SCHEDULE SHEET A-600.
9. NOT USED.
10. 29 GA WHITE LINER PANEL WITH ALL TRIMS AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
11. EXISTING STRUCTURAL KICKERS, WRAP IN WHITE BREAK METAL TO MATCH LINER PANEL.
12. INSTALL 2X6 LEDGER, CONTINUOUS AGAINST COLUMNS TO HANG 2X4 CEILING FRAMING. INSTALL WITH THREE (3) 5" RSS SCREWS AT EACH COLUMN INTERSECTION. LEDGERS TO SPAN 3 COLUMNS MINIMUM.
13. 2X6 WOOD STUD DEMISING WALL, REFER TO WALL TYPES SHEET A-002.
14. EXISTING WINDOW TO REMAIN.
15. EXISTING ELECTRICAL PANELS, SURFACE MOUNT ON STEEL PANELS. INSTALL 2X BLOCKING AS NEEDED, REFER TO ELECTRICAL DRAWINGS.
16. 2X10 FLOOR JOISTS @ 16" O.C. WITH 2X10 BLOCKING 48" O.C. LAG BOLT LEDGER TO POST-FRAME BUILDING COLUMNS. SECURE RIM JOIST AND LEDGER TO STUD WALL BELOW.

17. 2X4 WOOD STUD WALL, REFER TO WALL TYPES SHEET A-002.
18. 3/4" T&G PLYWOOD SUB-FLOOR OVER ENTIRE CEILING STRUCTURE, ATTACH TO CEILING JOISTS WITH #10 2 1/2" LONG EXTERIOR COATED DECK SCREWS.
19. INSTALL 2X6 LEDGER, CONTINUOUS AGAINST COLUMNS TO HANG 2X4 CEILING FRAMING. INSTALL WITH THREE (3) 5" RSS SCREWS AT EACH COLUMN INTERSECTION. LEDGERS TO SPAN 3 COLUMNS MINIMUM.

- A. REFER TO FINISH SCHEDULE, SHEET A-600.
- B. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.
- C. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- D. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- E. FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL PLAN.

ENLARGED PLAN AND SECTIONS

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

APPANOOSE COUNTY, IA 52544  
SOUTH STREET

**IOWA DEPARTMENT OF  
NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.6200  
F: 515.725.6202

CONSULTANT:

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:

24-05-04-01

CHK'D BY: DATE:

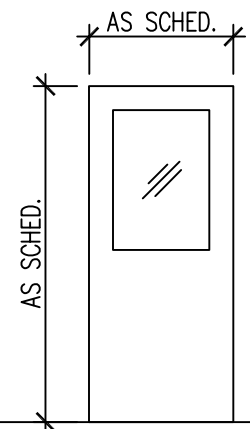
02.20.2024

SHEET NO:

**A-400**

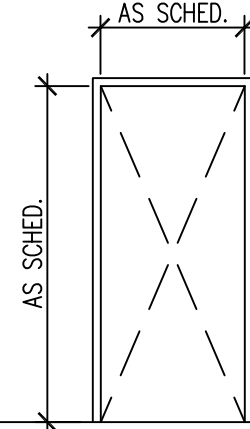


DOOR TYPES



D-1  
20GA GALV. STEEL  
EXTERIOR FLUSH  
POLYSTYRENE CORE

FRAME TYPES



F-1  
16GA GALV. STEEL  
FLUSH HOLLOW METAL  
DOUBLE RABBIT

ROOM SCHEDULE

| ROOM # | ROOM NAME     | FLOORING | BASE | NORTH WALL FINISH | EAST WALL FINISH | SOUTH WALL FINISH | WEST WALL FINISH | CEILING | NOTES                                      |
|--------|---------------|----------|------|-------------------|------------------|-------------------|------------------|---------|--|
| 100    | OPEN OFFICE   | CONC-1   | -    | -                 | -                | -                 | -                | -       | OPEN FRAMING, NO WALL OR CEILING FINISH    |
| 101    | MECHANICAL    | CONC-1   | -    | -                 | -                | -                 | -                | -       | OPEN FRAMING, NO WALL OR CEILING FINISH    |
| 102    | RESTROOM      | CONC-1   | -    | -                 | -                | -                 | -                | -       | OPEN FRAMING, NO WALL OR CEILING FINISH    |
| 103    | HEATED GARAGE | CONC-1   | -    | ST-1              | ST-1             | ST-1              | ST-1             | ST-1    | 29 GAUGE STEEL LINER PANEL WALLS & CEILING |

HARDWARE SCHEDULE

- A. ALL HARDWARE MODEL NUMBERS BASED ON SCHLAGE "NO-SERIES" LOCKSETS (ATHENS) AND "YES" HARDWARE, OR APPROVED EQUAL.
- B. HARDWARE FINISH TO BE : "SATIN CHROMIUM 626", UNLESS NOTED OTHERWISE.
- C. CHECK ALL QUANTITIES, DIMENSIONS AND FINISHES BEFORE ORDERING.
- D. ALL STEEL DOORS TO BE GALVANIZED. PAINT ALL STEEL DOORS AND FRAMES WHITE TO MATCH LINER PANEL.
- E. ALL GLASS ON WALK-THROUGH DOORS TO BE INSULATED, LOW-E, TEMPERED GLASS.

HARDWARE SET NO. 1 - DOORS: 103  
 3 EA. HINGES FB8179 4 1/2 X 4 1/2  
 1 EA. PASSAGE LOCKSET ND10  
 3 EA. PERIMETER SEALS BLACK GASKET  
 1 EA. THRESHOLD SEAL BLACK BROOM TYPE  
 1 EA. ADA THRESHOLD SATIN NICKEL  
 1 EA. CLOSER LCN 4111

FINISH SCHEDULE

| FINISH MARK            | MATERIAL           | MANUFACTURER INFO |                   | DIMENSION | COLOR       | FINISH     | COMMENTS                       |
|------------------------|--------------------|-------------------|-------------------|-----------|-------------|------------|--------------------------------|
|                        |                    | COMPANY NAME      | PRODUCT NUMBER    |           |             |            |                                |
| <b>FLOOR FINISH</b>    |                    |                   |                   |           |             |            |                                |
| CONC-1                 | PENETRATING SEALER | -                 | -                 | -         | CLEAR       | MATTE      | SILANE, SILOXANE OR SILICONATE |
| <b>CEILING FINISH</b>  |                    |                   |                   |           |             |            |                                |
| ST-1                   | STEEL LINER PANEL  | -                 | -                 | 29 GAUGE  | WHITE       | MANUF.     | INCLUDE REQUIRED TRIMS         |
| <b>INTERIOR FINISH</b> |                    |                   |                   |           |             |            |                                |
| ST-1                   | STEEL LINER PANEL  | -                 | -                 | 29 GAUGE  | WHITE       | MANUF.     | INCLUDE REQUIRED TRIMS         |
| PNT-1                  | STEEL DOOR PAINT   | SHERWIN WILLIAMS  | SNAP-DRY EXTERIOR | -         | EXTRA WHITE | SEMI-GLOSS | PAINT TWO COATS                |

KEYNOTES

- 1. WALL FINISH AS SCHEDULED.
- 2. DOOR AS SCHEDULED.
- 3. 2X6 WOOD HEADER.
- 4. DOOR FRAME AS SCHEDULED.
- 5. 2X WOOD JAMB.
- 6. 2X WOOD STUD WALL.

DOOR SCHEDULE

| DOOR NUMBER | DOOR      |        |        |      |        |        | FRAME    |          |           |      |        | FIRE RATING LABEL | HARDWARE |                     | COMMENTS |
|-------------|-----------|--------|--------|------|--------|--------|----------|----------|-----------|------|--------|-------------------|----------|---------------------|----------|
|             | DIMENSION |        |        | TYPE | GLASS  | FINISH | DETAILS  |          |           | TYPE | FINISH |                   | SET #    | KEYSIDE ROOM NUMBER |          |
|             | WIDTH     | HEIGHT | THICK. |      |        |        | HEAD     | JAMB     | THRESHOLD |      |        |                   |          |                     |          |
| 103         | 3'-0"     | 7'-0"  | 1 3/4" | D-1  | TEMPER | PNT-1  | 04/A-600 | 01/A-600 | -         | F-1  | PNT-1  | 1                 | -        | -                   |          |

12 NOT USED  
SCALE: 6" = 1'-0"

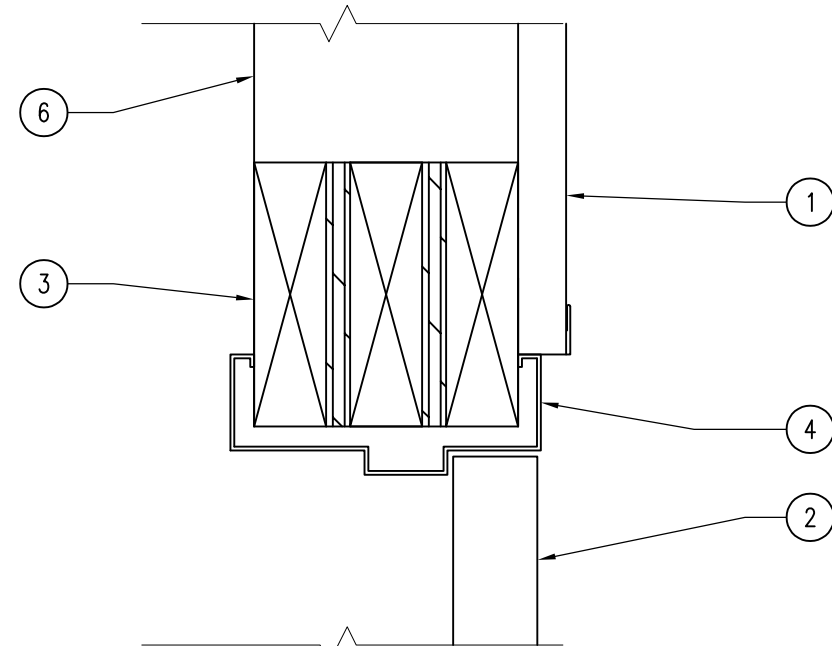
11 NOT USED  
SCALE: 1 1/2" = 1'-0"

10 NOT USED  
SCALE: 1 1/2" = 1'-0"

09 NOT USED  
SCALE: 3" = 1'-0"

08 NOT USED  
SCALE: 3" = 1'-0"

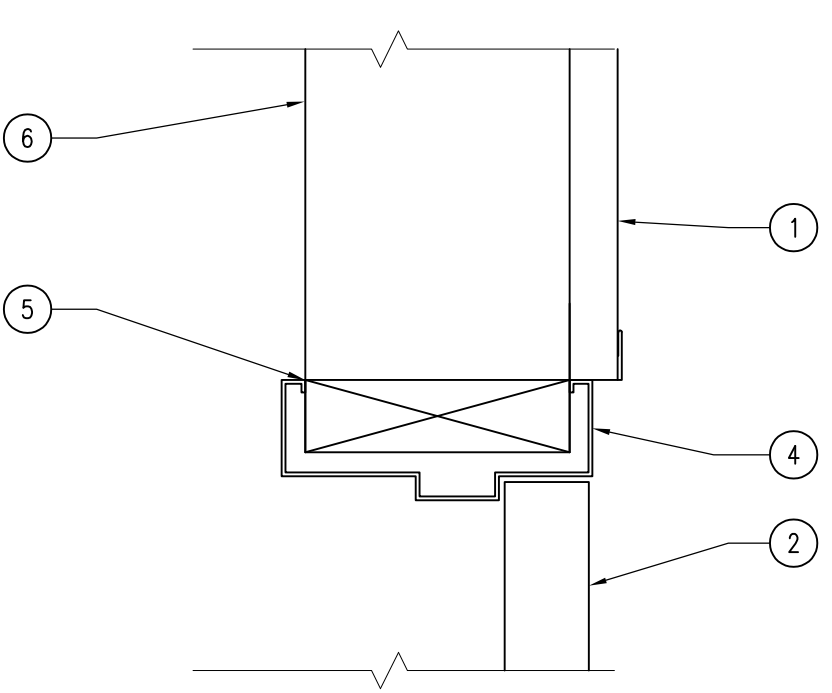
07 NOT USED  
SCALE: 3" = 1'-0"



04 DOOR DETAIL - HEADER  
SCALE: 3" = 1'-0"

06 NOT USED  
SCALE: 3" = 1'-0"

05 NOT USED  
SCALE: 3" = 1'-0"



01 DOOR DETAIL - JAMB  
SCALE: 3" = 1'-0"

03 NOT USED  
SCALE: 3" = 1'-0"

02 NOT USED  
SCALE: 6" = 1'-0"

CONSULTANT:

**IOWA DEPARTMENT OF NATURAL RESOURCES**  
 ENGINEERING SERVICES - WALLACE BUILDING  
 502 E. 9TH ST., DES MOINES, IA 50319-0034  
 P: 515.725.6200  
 F: 515.725.6202



SCHEDULES AND DETAILS

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

APPANOOSE COUNTY, IA 52544  
 530TH STREET

| NO. | BY | DATE | REVISION |
|-----|----|------|----------|
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |

DRAWN BY: PROJECT NUMBER:  
 24-05-04-01

CHK'D BY: DATE:  
 02.20.2024

SHEET No:  
**A-600**

**INSTALLATION NOTES - ELECTRICAL**

- BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BID.
- INCREASE CONDUCTOR SIZES ON 20A 120V-1 PHASE CIRCUITS EXCEEDING 100 FEET TO CENTER OF LOAD TO ACCOUNT FOR VOLTAGE DROP.
- RACEWAYS AND BOXES ARE SHOWN DIAGRAMMATICALLY ONLY AND INDICATE GENERAL AND APPROXIMATE LOCATIONS. LAYOUTS DO NOT ALWAYS SHOW THE TOTAL NUMBER OF RACEWAYS OR BOXES FOR THE CIRCUITS REQUIRED, NOR ARE THE LOCATIONS OF INDICATED RUNS INTENDED TO SHOW THE ACTUAL ROUTING OF THE RACEWAYS.
- LIGHT FIXTURES, SWITCHES, DEVICES, ETC. ARE SHOWN IN PREFERRED LOCATION. MODIFY CONDUIT, HANGERS, CIRCUITING, ETC. TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- PROVIDE A DEDICATED GREEN INSULATED GROUND CONDUCTOR TO ALL DEVICES. DO NOT USE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUNDING METHOD.
- BALANCE PANEL LOADS DURING INSTALLATION. CIRCUIT NUMBERING SHOWN ON PLANS MAY BE ADJUSTED TO ACCOMMODATE.
- PROVIDE TYPED PANEL DIRECTORY AT PROJECT COMPLETION FOR NEW PANELS AND EXISTING PANELS WITH CIRCUITS MODIFIED AS A RESULT OF THIS PROJECT. USE OWNER'S CURRENT ROOM NUMBERS AND EQUIPMENT NAMES.
- CONTRACTOR IS RESPONSIBLE FOR OPENINGS IN WALLS, FLOORS, CEILINGS, AND ROOFS THAT ARE REQUIRED TO COMPLETE THEIR SCOPE OF WORK. SEAL PENETRATIONS IN ACCORDANCE WITH THE RATING OF THE AFFECTED ASSEMBLY. REFER TO ARCHITECTURAL CODE PLAN FOR RATED WALLS, FLOORS, AND CEILINGS.

**DEVICE INSTALLATION AND MATERIALS - ELECTRICAL**

- PROVIDE NORMAL WIRING DEVICES AS WHITE IN FINISHED SPACES AND GRAY IN GARAGE SPACE.
- PLASTIC TO MATCH DEVICE IN FINISH SPACES AND STAINLESS STEEL IN GARAGE SPACE.
- PROVIDE GFCI TYPE RECEPTACLES AT ALL LOCATIONS REQUIRED BY THE NEC.
- INSTALL WALL MOUNTED RECEPTACLES AT +18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- INSTALL WALL MOUNTED JUNCTION BOXES FOR LIGHT SWITCHES AT +46" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. EXCEPTION: INSTALL ABOVE AN OBSTRUCTED HIGH FORWARD REACH OBSTACLE GREATER THEN 20 INCHES IN DEPTH AT +42".

**INSTALLATION NOTES - LIGHTING**

- UNLESS NOTED OTHERWISE, CONNECT ALL EMERGENCY BATTERY FIXTURES WITH AN UN-SWITCHED LEG OF THE LIGHTING CIRCUIT THAT SERVES THE FIXTURES SPACE. MAINTAIN NORMAL SWITCHING SCHEME OF EMERGENCY FIXTURES UNDER NORMAL OPERATION. INSTALL PER EMERGENCY FIXTURE OR TRANSFER DEVICE INSTRUCTIONS.
- VERIFY CEILING TYPE (IE. GRID, GYP) WITH ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO RELEASE OF LIGHTING FIXTURE EQUIPMENT PACKAGE. ADJUST FIXTURE TYPE, CONSTRUCTION, FLANGE, OR OTHER COORDINATION DETAILS AS REQUIRED FOR CEILING TYPE.
- LIGHTING CONTROLS SENSORS ARE SHOWN ON PLANS AT SUGGESTED LOCATIONS ONLY. VERIFY LOCATIONS WITH MANUFACTURER GUIDELINES AND INSTALLATION RECOMMENDATIONS. ADJUST LOCATIONS AS REQUIRED TO MEET MANUFACTURER GUIDELINES.
- PROVIDE LIGHTING CONTROLS AS A COMPLETE SYSTEM AND INCLUDE MATERIAL AND INSTALLATION FOR ALL POWER PACKS, ACCESSORIES, CONTROLLERS, AND WIRING REQUIRED FOR OPERATION.

**BUILDING EQUIPMENT COORDINATION NOTES - ELECTRICAL**

- REFER TO EQUIPMENT CONNECTION SCHEDULE FOR COORDINATION DETAILS BETWEEN MECHANICAL AND ELECTRICAL SYSTEMS.
- PROVIDE AND INSTALL ELECTRICAL SYSTEMS UNDER THIS CONTRACT MEETING THE REQUIREMENTS OF THE SPECIFIED MECHANICAL, FIRE PROTECTION, AND PLUMBING SYSTEMS. REFERENCE THE ENTIRE PROJECT DOCUMENTS, MANUALS, SCHEDULES, DETAILS, AND NOTES.
- PROVIDE ELECTRICAL CONNECTIONS AND ACCESSORIES INCLUDING STARTERS, DISCONNECTS, CONTROL WIRING, ETC. AS REQUIRED FOR THE BUILDING MECHANICAL EQUIPMENT. INFORMATION HEREIN AND ON THE DRAWINGS IS FOR GENERAL DESCRIPTION AND ESTIMATING PURPOSES ONLY. VERIFY VOLTAGE, AMPERAGE, PHASE, INRUSH, ETC. FOR EACH ITEM OF EQUIPMENT BEFORE PROCEEDING WITH INSTALLATION. INSTALL EQUIPMENT PER WIRING DETAILS AND INSTRUCTIONS FURNISHED BY THE SUPPLIERS OF THE EQUIPMENT TO PROVIDE PROPER OPERATION.
- REVIEW MECHANICAL EQUIPMENT SHOP DRAWINGS FOR COMPLIANCE AND COORDINATION WITH ELECTRICAL CONNECTIONS. NOTIFY ENGINEER IF CHANGES TO ELECTRICAL CONNECTIONS, WIRING, AND BREAKER REQUIREMENTS ARE NECESSARY TO ACCOMMODATE EQUIPMENT BEING SUPPLIED.
- PROVIDE DISCONNECTS RATED FOR EQUIPMENT AS REQUIRED AND AS INDICATED WITHIN EQUIPMENT CONNECTION SCHEDULE. COORDINATE DISCONNECT MOUNTING TO ALLOW EQUIPMENT REMOVAL WITHOUT DISCONNECT REMOVAL AND TO MINIMIZE WIRING WORK REQUIRED.
- PROVIDE HEAVY DUTY TYPE DISCONNECTS RATED FOR THE INSTALLED ENVIRONMENT. PROVIDE MINIMUM NEMA 3R RATED DISCONNECTS FOR EXTERIOR INSTALLATIONS OR AS NOTED.
- VERIFY LOCATIONS OF ALL EQUIPMENT. REFER TO MECHANICAL, PLUMBING, AND ARCHITECTURAL DRAWINGS AND COORDINATE WITH THE ASSOCIATED SUB-CONTRACTOR. ADJUST ELECTRICAL INSTALLATION AS REQUIRED.

**ELECTRICAL ABBREVIATIONS**

|      |  |      |   |
|------|--|------|---|
| A    | DEVICE MOUNTED +8" ABOVE COUNTER TOP (VERIFY LOCATION) | NIC  | NOT IN CONTRACT   |
| AFB  | ABOVE FINISHED FLOOR                                   | NM   | NONMETALLIC   |
| ATS  | AUTOMATIC TRANSFER SWITCH                              | NTS  | NOT TO SCALE  |
| C    | CEILING  | OC   | ON CENTER   |
| CB   | CIRCUIT BREAKER  | OFCI | OWNER FURNISHED CONTRACTOR INSTALLED                              |
| CT   | CURRENT TRANSFORMER                                    | OFDI | OWNER FURNISHED, OWNER INSTALLED                                  |
| E    | EXISTING ITEM TO REMAIN                                | OR   | OWNER INSTALLED   |
| EC   | ELECTRICAL CONTRACTOR                                  | RR   | EXISTING ITEM TO BE REMOVED                                       |
| EM   | EMERGENCY LIGHT FIXTURE                                | R    | EXISTING ITEM TO BE REMOVED AND RELOCATED                         |
| ER   | NEW LOCATION OF EXISTING ITEM                          | RN   | EXISTING ITEM TO BE REMOVED AND REPLACED WITH NEW                 |
| F    | ROUGH IN FOR FUTURE DEVICE                             | T    | SHORT CIRCUIT CURRENT RATING                                      |
| FAAP | FIRE ALARM ANNUNCIATOR PANEL                           | SCCR | TEMPERATURE CONTROL CONTRACTOR TELEVISION                         |
| FACP | FIRE ALARM CONTROL PANEL                               | T    | TELEVISION  |
| FSD  | FIRE SMOKE DAMPER                                      | TV   | TYPICAL   |
| G    | GROUND FAULT CIRCUIT INTERRUPTER                       | UPS  | UNINTERRUPTIBLE POWER SUPPLY                                      |
| GND  | GROUND   | V    | VOLTS   |
| KVA  | KILO-VOLT-AMPERES                                      | VA   | VOLT-AMPERES  |
| KW   | KILOWATTS  | WG   | WIREGUARD COVER   |
| MC   | MECHANICAL CONTRACTOR                                  | WP   | WEATHERPROOF DEVICE   |
| MCB  | MAIN CIRCUIT BREAKER                                   | WR   | WEATHER RESISTANT DEVICE  |
| MDP  | MAIN DISTRIBUTION PANEL                                | +24" | INDICATES MOUNTING HEIGHT CENTER LINE OF DEVICE TO FINISHED FLOOR |
| MLO  | MAIN LUGS ONLY   |      |   |
| N    | NEW DEVICE IN EXISTING LOCATION                        |      |   |

**GENERAL NOTES - ELECTRICAL**

- COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. BEGIN INSTALLATION AND ROUGH-IN ONLY AFTER PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION IS COMPLETE. COORDINATE WITH BUILDING STRUCTURE, ARCHITECTURE, MECHANICAL SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, EQUIPMENT ACCESS/CLEARANCE, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR REWORK OF INSTALLED EQUIPMENT RESULTING FROM INSUFFICIENT COORDINATION.
- ELECTRICAL DRAWINGS ARE ONLY A PORTION OF THE COMPLETE SET OF PLANS AND CONTRACT DOCUMENTS. THE ELECTRICAL SCOPE OF WORK IS DEFINED BY THE COMPLETE SET OF CONTRACT DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO REFERENCING ARCHITECTURAL PLANS FOR DIMENSIONS AND DETAILS; EQUIPMENT PLANS FOR ROUGH-IN REQUIREMENTS, MECHANICAL PLANS FOR EQUIPMENT SIZES AND LOCATIONS.

**CODE NOTES - ELECTRICAL**

- PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES.
- THE CURRENT ADOPTED EDITION OF THE ELECTRICAL CODE IS THE STANDARD FOR THE ELECTRICAL INSTALLATION. VERIFY WITH LOCAL OFFICIALS WHEN PERMITS ARE OBTAINED. NOTIFY DESIGN TEAM OF ANY DISCREPANCIES BETWEEN THE PROJECT MANUAL OR DRAWINGS AND THE GOVERNING CODE.
- INSTALLATION SHALL FOLLOW REQUIREMENTS OF THE ADAAG - AMERICANS WITH DISABILITIES ACT.
- REFER TO PROJECT MANUAL AND PROJECT CODE REVIEW SHEET FOR LIST OF APPLICABLE CODES.



**GENERAL NOTE:**

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN SHOWN BASED UPON INFORMATION OBTAINED FROM FIELD LOCATIONS BY UTILITY COMPANIES, AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS ALSO POSSIBLE THAT THERE MAY BE OTHER UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES IN EXISTENCE THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PARTY REFERENCING THIS PLAN TO DETERMINE THE EXACT LOCATION AND TYPE OF UNDERGROUND FACILITIES ON THE SITE. HAND EXCAVATE AT CRITICAL POINTS AS NECESSARY TO VERIFY LOCATIONS, SIZES, ELEVATIONS, FLOW LINES, ETC. IF A PROBLEM OR INTERFERENCE EXISTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING.

**\*\*NOTE: ALL SYMBOLS MAY NOT APPLY TO THIS PROJECT\*\***

**GENERAL SYMBOLS**

- CEILING MOUNT JUNCTION BOX WITH PULL STRING.
- 
- KEYNOTE
- EQUIPMENT IDENTIFICATION TAG. REFER TO EQUIPMENT CONNECTION SCHEDULE

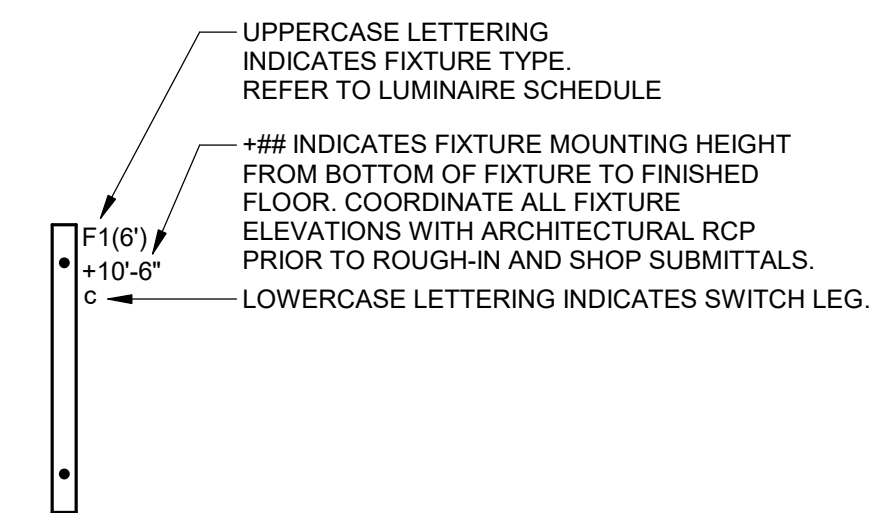
**POWER SYMBOLS**

- DUPLEX RECEPTACLE, CEILING MOUNT
- 
- 
- 
- EQUIPMENT CONNECTION, REFER TO ELECTRICAL EQUIPMENT CONNECTION SCHEDULE FOR CONNECTION TYPE
- 
- SAFETY DISCONNECT SWITCH
- PANELBOARD - SURFACE MOUNTED

**LIGHTING SYMBOLS**

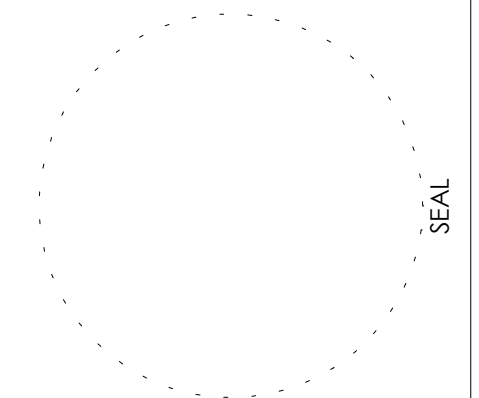
- INDUSTRIAL STRIP LIGHT FIXTURE
- 

**LIGHTING PLANS NOTATION KEY**

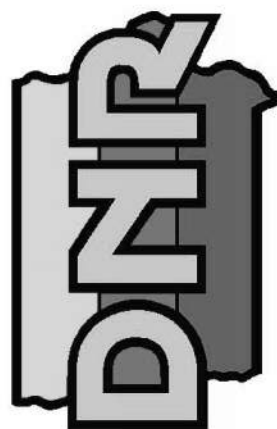


**KCL ENGINEERING**  
300 4th Street  
West Des Moines, Iowa  
50265  
515.724.7938

CONSULTANT:



**IOWA DEPARTMENT OF NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.6200  
F: 515.725.6202



**ELECTRICAL GENERAL NOTES**

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

550TH STREET  
APPANOOSE COUNTY, IA 52544

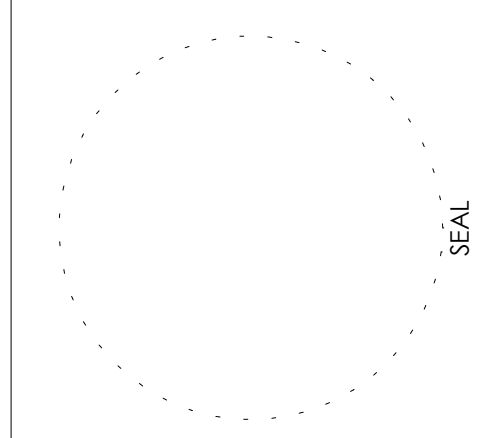
NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:  
24-05-04-01

CHK'D BY: DATE:  
02.20.2024

SHEET No:

**E-000**



**ELECTRICAL POWER**

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

550TH STREET  
APPANOOSE COUNTY, IA 52344

| NO. | BY | DATE | REVISION |
|-----|----|------|----------|
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |

DRAWN BY: PROJECT NUMBER:  
24-05-04-01

CHK'D BY: DATE:  
02.20.2024

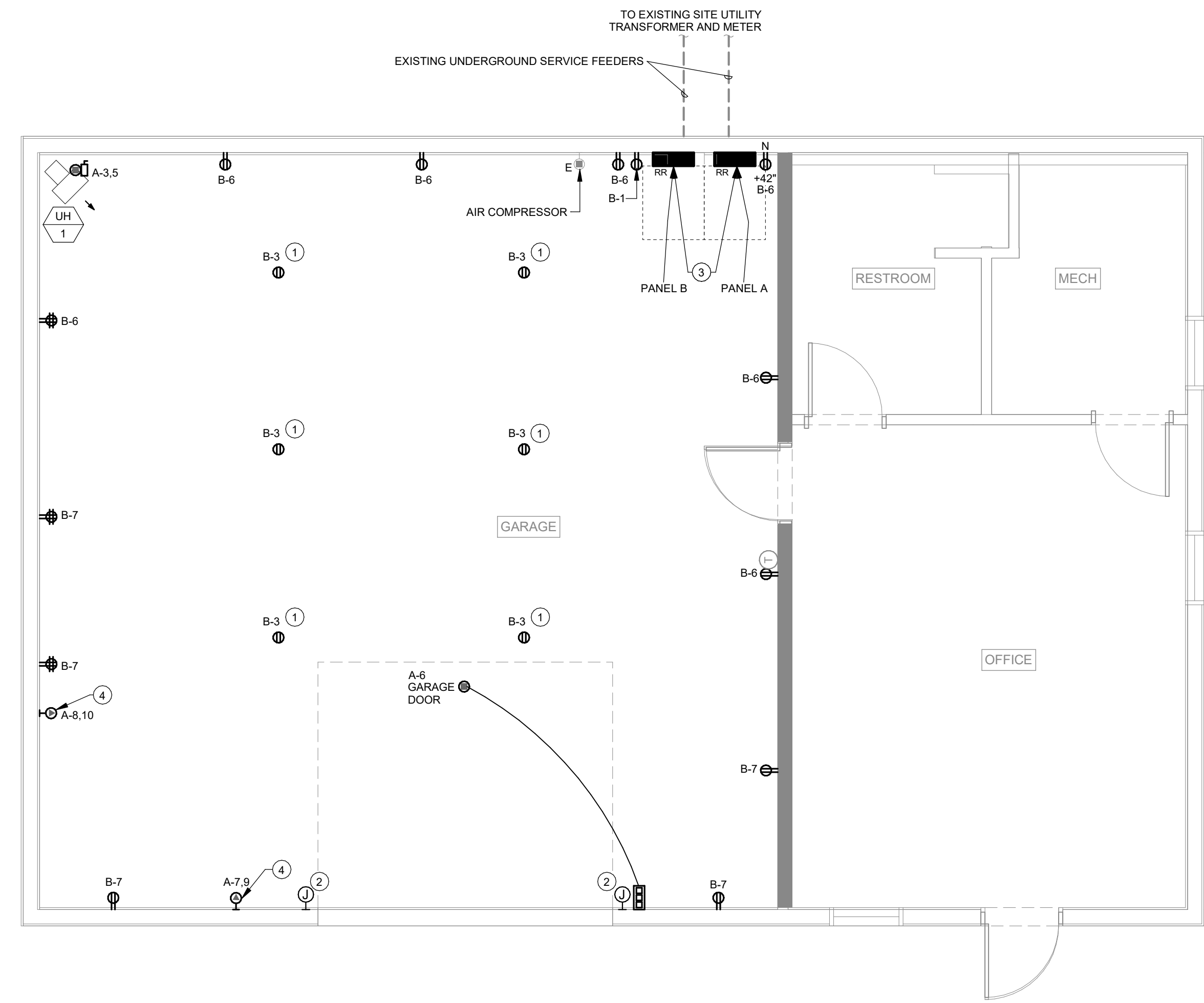
SHEET No:

**POWER GENERAL NOTES**

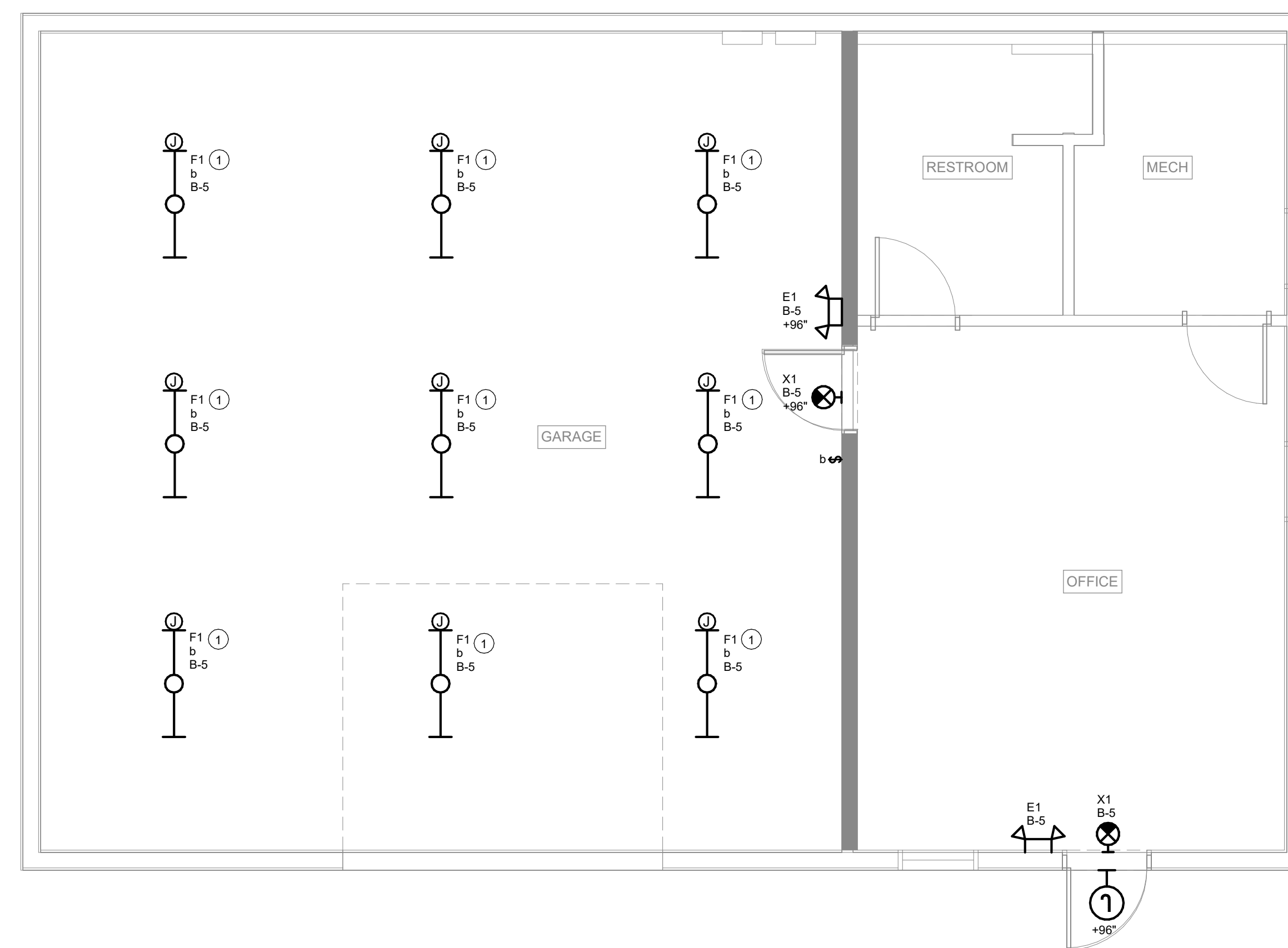
- A. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- B. COORDINATE ELECTRICAL REQUIREMENTS FOR MECHANICAL UNITS WITH MECHANICAL CONTRACTOR AND FINAL MECHANICAL SHOP DRAWINGS.
- C. PROVIDE PENETRATIONS REQUIRED FOR ROUTING RACEWAYS THROUGH THE BUILDING. COORDINATE FIRE RATED WALL PENETRATIONS AND PROVIDE CONDUIT SLEEVES AND FIRE STOPPING TO MAINTAIN RATING.

**KEYNOTES**

- 1 MOUNT RECEPTACLE TO STRUCTURE WITH RECEPTACLE FACE DOWN.
- 2 INSTALL JUNCTION BOX WITH 1-GANG DEVICE RING AND 1/2" CONDUIT UP WALL FOR GARAGE DOOR SAFETY SENSORS.
- 3 DISCONNECT AND RELOCATE EXISTING SURFACE MOUNTED PANELS. MOUNT PANELS IN PLACE AND RECESSED WITHIN NEW WALLS. PROTECT EXISTING ELECTRICAL EQUIPMENT AND PATHWAYS DURING DEMOLITION.
- 4 VERIFY RECEPTACLE TYPE AS NEMA 14-50R, AND BREAKER SIZE AS 60A WITH OWNER PROVIDED EQUIPMENT (TYP).



**1** ELECTRICAL POWER PLAN  
1/4" = 1'-0"



**LIGHTING GENERAL NOTES**

A. COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

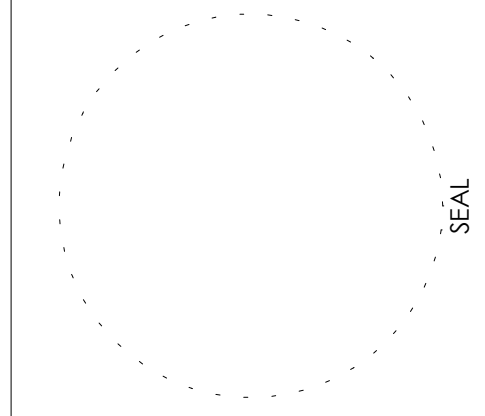
**KEYNOTES** #

1 SUSPEND LUMINAIRE TO 11'-0" VIA CHAIN, TYP. VERIFY WITH EXISTING OVERHEAD DOOR AND OTHER TRADES ON THE CEILING. NOTIFY ENGINEER OTHERWISE.

1 ELECTRICAL LIGHTING PLAN  
1/4" = 1'-0"

**KCL**  
ENGINEERING  
300 4th Street  
West Des Moines, Iowa  
50265  
515.724.7938

CONSULTANT:



**IOWA DEPARTMENT OF  
NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE  
BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.6200  
F: 515.725.6202



**ELECTRICAL LIGHTING**

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

550TH STREET  
APPANOOSE COUNTY, IA 52544

| NO. | BY | DATE | REVISION |
|-----|----|------|----------|
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |
|     |    |      |          |

DRAWN BY: PROJECT NUMBER:  
24-05-04-01

CHK'D BY: DATE:  
02.20.2024

SHEET No:

**E-201**



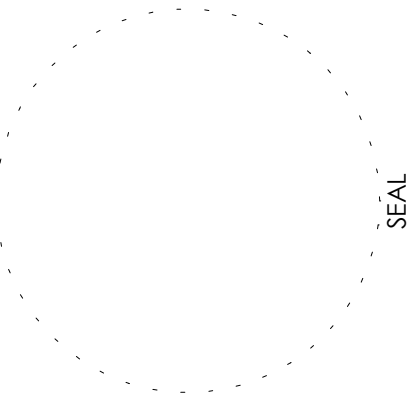


**GENERAL NOTES:**

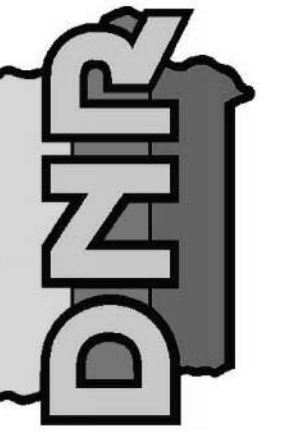
A. REFER TO M-000 FOR GENERAL NOTES & SYMBOLS.

**KCL**  
ENGINEERING  
300 4th Street  
West Des Moines, Iowa  
50265  
515.724.7938

CONSULTANT:



**IOWA DEPARTMENT OF  
NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE  
BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.8200  
F: 515.725.8202



MECHANICAL HVAC PLAN

BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**

APPANOOSE COUNTY, IA 52544

550TH STREET

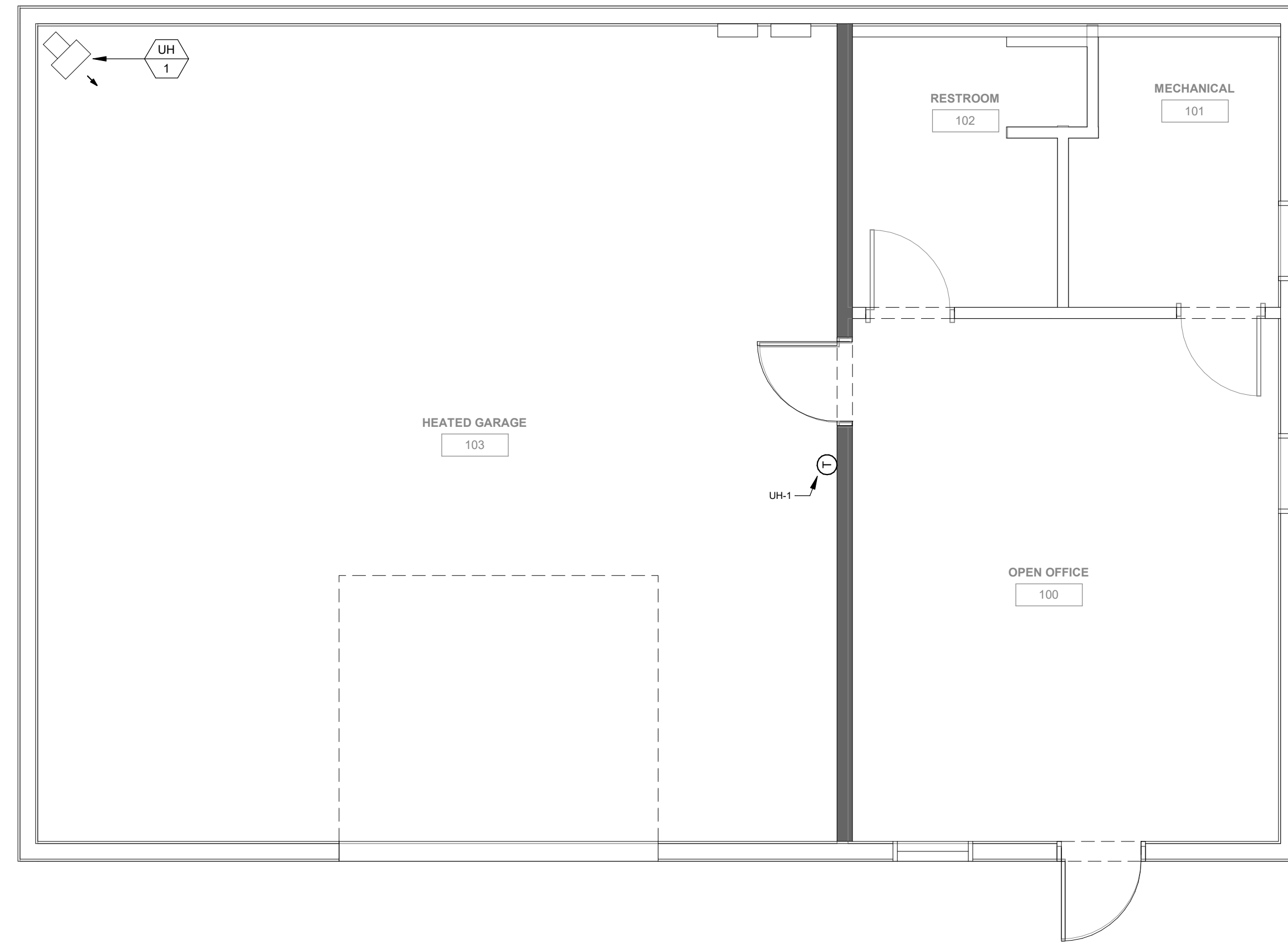
NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:  
24-05-04-01

CHK'D BY: DATE:  
02.20.2024

SHEET No:

**M-101**

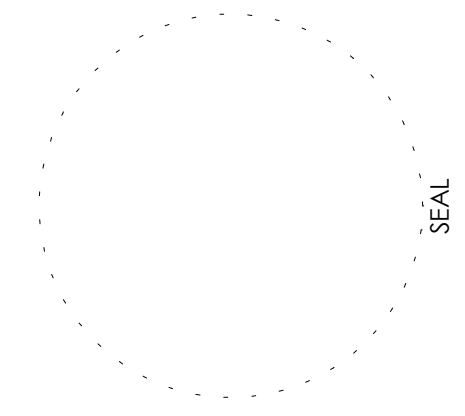


| UNIT HEATER SCHEDULE              |                |
|-----------------------------------|----------------|
| <b>REFERENCE</b>                  | <b>UH-1</b>    |
| MANUFACTURER                      | INDEECO        |
| SERIES                            | UCI            |
| SERVES                            | GARAGE         |
| WEIGHT (LBS)                      | 45             |
| DIMENSIONS - L x W x H (INCHES)   | 17 X 16.5 X 12 |
| TYPE                              | ELECTRIC       |
| CAPACITY (MBH)                    | 35             |
| AIRFLOW (CFM)                     | 700            |
| ELECTRIC COIL (KW)                | 10             |
| DISCHARGE AIR TEMP. RISE (DEG. F) | 45             |
| CONTROL AMPS (24 VOLT)            | 1.0            |
| <b>ELECTRICAL</b>                 |                |
| VOLTAGE - PHASE                   | 240/1          |
| AMPS                              | 42.4           |
| MCA                               | 50             |
| MOP                               | 15             |
| NOTES                             | 1 THROUGH 4    |

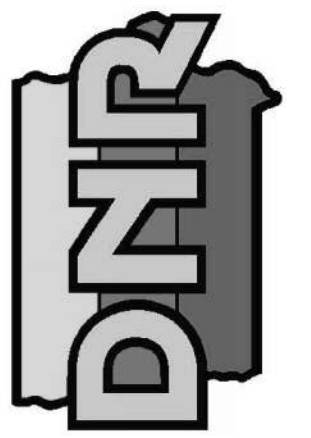
- NOTES:**
1. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION. DISCONNECT BY ELECTRICAL CONTRACTOR.
  2. PROVIDE UNIT WITH LINE VOLTAGE THERMOSTAT. WIRING BY EC
  3. UNIT TO INCLUDE ALL MOUNTING BRACKETS, HARDWARE, ETC. FOR COMPLETE INSTALL.
  4. MOUNT UNIT HEATER WHERE BOTTOM IS AT MINIMUM OF 12'-0" AFF, OR AS RECOMMENDED BY UNIT MFR.

1 MECHANICAL HVAC PLAN  
1/4" = 1'-0"

CONSULTANT:



IOWA DEPARTMENT OF  
NATURAL RESOURCES  
ENGINEERING SERVICES - WALLACE  
BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.725.8200  
F: 515.725.8202



PLUMBING PLAN  
BUILD-OUT PHASE I FOR:  
**RATHBUN WILDLIFE UNIT**  
550TH STREET  
APPANOOSE COUNTY, IA 52544

| NO. | DATE | REVISION |
|-----|------|----------|
|     |      |          |
|     |      |          |
|     |      |          |

|           |                 |
|-----------|-----------------|
| DRAWN BY: | PROJECT NUMBER: |
| CHK'D BY: | DATE:           |
| SHEET No: |                 |

P-101

- GENERAL NOTES:**
- A. REFER TO M-000 FOR GENERAL NOTES & SYMBOLS.
  - B. REFER TO PLUMBING FIXTURE ROUGH-IN SCHEDULE FOR BRANCH PIPE SIZING TO INDIVIDUAL PLUMBING FIXTURES.

| PLUMBING FIXTURE SCHEDULE |      |       |  |  |      |
|---------------------------|------|-------|--|--|------|
| REFERENCE                 | MFR  | MODEL | DESCRIPTION  |  | TRIM |
| GCO-1                     | ZURN | Z1474 | GRADE CLEANOUT, ROUND, DURA-COATED CAST IRON, SIZE AS INDICATED, DOUBLE FLANGED HOUSING, HEAVY DUTY SECURED SCORiated DURA-COATED CAST IRON COVER, LIFTING DEVICE, BRONZE CLEANOUT PLUG WITH GAS/WATER-TIGHT SEAL. |  | NA   |

- NOTES:**
- REFER TO PLUMBING FIXTURE ROUGH-IN SCHEDULE FOR MINIMUM CONNECTION SIZES.

| PLUMBING PIPING AND INSULATION SCHEDULE |                     |              |                        |                        |                        |       |
|---|---------------------|--------------|------------------------|------------------------|------------------------|-------|
| SYSTEM                                  | SIZE RANGE (INCHES) | LOCATION     | PIPE MATERIAL (NOTE 1) | JOINT TYPE (NOTE 1)    | VALVE TYPES (NOTE 3)   | NOTES |
| DOMESTIC COLD                           | 3/4 - 2             | BELOW GROUND | TYPE K COPPER          | SOLDER / BRAZE         | BRONZE BALL W/ SS TRIM |       |
| SANITARY DRAIN (GRAVITY)                | 1 1/2 - 8           | BELOW GROUND | SCH 40 PVC DWV / CI    | SOLVENT / HUB & SPIGOT | N/A                    |       |
| SANITARY VENT PIPING                    | 1 1/4 - 4           | BELOW GROUND | SCH 40 PVC DWV / CI    | SOLVENT / HUB & SPIGOT | N/A                    |       |
| SANITARY VENT PIPING                    | 1 1/4 - 6           | ABOVE GROUND | SCH 40 PVC DWV / CI    | SOLVENT / NO HUB       | N/A                    | 1,2   |

**NOTES:**

- INSULATION APPLIED TO PIPING THAT IS LOCATED IN RETURN AIR PLENUMS SHALL MEET ASTM E 84 25/50 FLAME AND SMOKE SPREAD RATING AND COMPLY WITH NFPA STANDARD 90A.
- VENT PIPING SHALL BE INSULATED A MINIMUM OF 5'-0" FROM EXTERIOR WALL OR ROOF PENETRATION.

| PLUMBING FIXTURE ROUGH-IN SCHEDULE |        |        |       |
|------------------------------------|--------|--------|-------|
| FIXTURE                            | VENT   | WASTE  | NOTES |
| FLOOR DRAIN                        | 1 1/2" | 2"     | 1     |
| LAVATORY                           | 1 1/4" | 1 1/4" | 1,2   |
| MOP BASIN                          | 1 1/2" | 3"     | 1     |
| SHOWER                             | 1 1/2" | 2"     | 1     |
| WATER CLOSET (TANK TYPE)           | 2"     | 4"     | 1     |

**NOTES:**

- ALL SIZES SHOWN ARE MINIMUM CONNECTION SIZES, REFER TO DRAWINGS FOR FINAL SIZES.
- ALL VERTICAL WASTE RISERS TO FIXTURES AND ALL BELOW FLOOR WASTE SIZES SHALL BE A MINIMUM OF 2".

