ADDENDUM NUMBER 2

July 14, 2023

PROJECT: **SHELBY COUNTY JAIL EXPANSION**
FOR THE SHELBY COUNTY COMMISSION
COLUMBIANA, ALABAMA
GMC PROJECT NO. AMGM220005
Local Funds

AD2-1 GENERAL:

A. The following revisions and/or additions to the Drawings and Project Manual are hereby made a part of same, and shall be incorporated in the Work of the Contract the same as if originally included in the Bid and Construction Documents.
B. Bidders shall acknowledge receipt of this Addendum in writing, as provided on the Proposal Form.
C. When a revision and/or addition is called for to the Drawings or Project Manual, they shall be fully coordinated with and carried through all applicable Drawings and portions of the Project Manual, including in part, all related Civil, Landscaping, Architectural, Structural, Plumbing, Mechanical, Electrical, and other Documents.

AD2-2 PROJECT MANUAL AND SPECIFICATIONS:

A. SECTION 000300 – PROPOSAL FORM AND SAMPLE BID BOND
   a. Replace this section in its entirety

B. SECTION 012200 - UNIT PRICES
   a. Replace this section in its entirety

C. SECTION 013300 - SUBMITTAL PROCEDURES
   a. Replace this section in its entirety

D. SECTION 055963 - DETENTION ENCLOSURES
   a. Remove this section in its entirety

E. SECTION 090000 - MATERIAL AND FINISH CODES
   a. Replace this section in its entirety

F. SECTION 268100 - FIRE ALARM SYSTEM
   a. Replace this section in its entirety

AD2-3 DRAWINGS:

A. Add the following Electrical drawings in their entirety:
   a. E301A.1, E301D, E302A.1, E302B, E303A.1, E303B

B. Replace the following Electrical drawings in their entirety:
   a. E301A, E301B, E301C, E302A, E303A, E401, E602

C. Revise the following Plumbing drawings in their entirety:
   a. Replace sheet P400 with attached sheet P500
   b. Replace sheet P401 with attached sheet P501 (Refer to item D for new P401 sheet)

D. Replace and add the following Plumbing drawings in their entirety relating to the following scope:

a. P001, P401, P402, P403, P404, P405, P406

Scope Description: Provide complete replacement of the entire (3) hot water recirculation systems (one for the kitchen hot water system, one for the laundry hot water system, and one for the balance of the building including pods, segregation, medical, booking, and administrative). This includes:

b. Replacement of existing hot water return piping as shown on drawings. The minimum hot water return piping size shall be 3/4". Piping shall be Type L hard copper pipe with soldered joints. Include fiberglass insulation with all service jackets.
c. Replacement of all balancing valves with new ones, as shown on drawings. These are equal to the circuit solver by Thermomegatech (does not require balancing).
d. Replacement and resizing of existing recirculation pumps for kitchen and laundry system and balance of building system. Pumps shall be equal to Armstrong ECM pumps.
e. Removal of (2) existing tank-type water heaters and associated piping located in the existing pods (these were added to address poor recirculation).

AD2-4 MISCELLANEOUS:

A. Pre-Bid Meeting – Meeting Minutes
   a. Refer to attached Meeting Minutes from the Mandatory Pre-Bid Conference held on July 11, 2023

B. Pre-Bid RFI's
   a. Refer to attached Exhibit PB-01 for the current questions and answers from bidders

C. Site Logistics Reference Plan
   a. Refer to the attached Exhibit EX-01 for a preliminary logistics site plan (FOR REFERENCE ONLY)
   b. Contractor responsible for final logistics plan related to their scope of work and proposed phasing

D. Geotechnical Report
   a. Refer to the attached Geotechnical Engineering Report dated July 11, 2022 (Terracon Project No. E1125078)

END OF ADDENDUM NUMBER 2

PREPARED BY

GMC

2660 EastChase Lane, Suite 200 | Montgomery, Alabama 36117
Tel 334.271.3200 | **GMCNETWORK.COM**
Goodwyn, Mills and Cawood, Inc.

Bids shall be submitted in triplicate.

DATE: _____

TO: Mr. Chad Scroggins
Shelby County Commission
200 West College Street
Columbiana, AL 35051

_____
Bidding Contractor

1. Pursuant to and in compliance with the Invitation to Bid and the proposed Contract Documents relating to the construction of:

Shelby County Jail Expansion Project–

Shelby County, AL

Including Addenda _____

The undersigned, having become thoroughly familiar with the terms and conditions of the proposed Contract Documents and with local conditions affecting the performance and costs of the Work at the place where the Work is to be completed, and having fully inspected the site in all particulars, hereby proposes and agrees to fully perform the Work within the time stated and in strict accordance with the proposed Contract Documents, including furnishing any and all labor and materials, and to do all work required to construct and complete said Work in accordance with the Contract Documents, for the following sum of money:

BASE BID:

Total project excluding the new housing pod and associated scope. See plans for complete scope:
Total Base Bid Amount -_____

ADD ALTERNATE BID:

Housing pod, exterior holding area and associated scope. See plans for complete scope
Total Add Alternate Bid Amount -_____

2. I understand that Shelby County reserves the right to reject this Bid, but that this Bid shall remain open and not be withdrawn for a period of sixty (60) days from the date prescribed for its receiving.

3. There will be a pre-bid meeting for this project. Any questions or clarifications regarding the bid should be submitted in writing and answers will be provided.

4. The Bidder, if awarded the contract, hereby agrees to commence work under this contract on or before a date to be specified in a written Notice to Proceed from the Owner and to fully complete work as specified in the required timeframe.

5. If written notice of the acceptance of this Bid is mailed or delivered to the undersigned within sixty (60) days after the date set for the receiving of this Bid, or at any other time thereafter before it is withdrawn, the undersigned shall execute and deliver the Contract Documents to the Owner in accordance with this Bid as accepted, and will also furnish and deliver to the Owner the proof of insurance coverage, within ten (10) days after personal delivery or any deposit in the mails of the notification of acceptance of this Bid.

6. Notice of Acceptance or request for additional information may be addressed to the undersigned at the address set forth in Item 7 below.

7. The names of all persons interested in foregoing Bid as principals are:

BID FORM – Attachment A: Unit Prices

UNIT PRICES:

The following items of work are anticipated during construction of this contract; however, the exact quantity of each work item may not be determinable prior to bidding. The Contractor, shall therefore, include in his Lump Sum Base and / or Alternate Bid (as applicable), an allowance for the following items in the quantities indicated:

Allowance Unit Prices include all charges for labor, materials and equipment, shoring, layout, supervision (field and home), general expenses, taxes, insurance, overhead and profit, but not limited to, for accomplishment of the Allowance item(s). Where quantities of same items of work are defined and are quantified in the bid documents, the allowance quantities indicated hereinafter shall be in addition to those which are indicated. (Example: if the site grading plan indicates new and existing grades, the bidder shall compute the quantity of earthwork required and include that quantity of work in the bid the same as if no "allowance quantity was specified. If an additional allowance quantity of earthwork is stipulated, that stipulated allowance quantity of work shall also be included in addition to the quantity computed from the bidder's earthwork "take off")

The following Unit Prices Quoted are for increases (additive change orders) or decreases (deductive change orders) in the above quantities included in the lump sum Bas and /or Alternate Bids. These Unit Prices include all charges for labor, materials and equipment, shoring, layout, supervision (field and home), general expenses, taxes, insurance, overhead and profit, but not limited to, for accomplishment of the Bid Price Item(s). This requirements shall supplement the requirements of the General Conditions, and Instruction to Bidders. Changes in the contract amount which are computed using the Stated Allowances and Unit Prices shall be figured at the same unit price whether additive or deductive.

Schedule of Unit Prices: See Section 01 22 00 – Unit Prices
Follow all instructions and include all Base Bid Unit Prices, Add Alternate Unit Prices, and associated documentation as part of the Bid Form.

Base Bid Unit Prices:

Item	Unit	Quantity	Unit Price	Total
1. Undercut and Replacement Backfill in Building Control Area	CY	260	$ x 260 CY =	
2. Geogrid Soil Reinforcement	SY	100	$ x 100 SY =	
3. Replacement of the hot water return within the existing facility	LS	1	1	
4. Replacement *of the fire alarm system within the existing facility.*	LS	1	1	
TOTAL				

Add Alternate Unit Prices:

Item	Unit	Quantity	Unit Price	Total
1. Undercut and Replacement Backfill in Building Control Area	CY	400	$ x 400 CY =	
2. Geogrid Soil Reinforcement	SY	250	$ x 250 SY =	
TOTAL				

IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give legal name of corporation, state where incorporated, and names of president and secretary; if a partnership, give name of firm and names of all individual co-partners composing the firm; if Bidder or interested person is an individual, give first and last names in full.)

_____

_____

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

The Bidder acknowledges by his signature that he agrees to requirements contained in the Invitation to Bid and the Instructions to Bidders, and that should he fail to execute a Contract with the Owner, should the Owner award said Contract to him, that the Owner may rightfully collect the sum of the Bid Bond. The required Bid Bond is attached to this Bid.

NAME OF FIRM: _____

ADDRESS: _____

ALABAMA GENERAL CONTRACTOR'S LICENSE #: _____

SIGNED: _____

PRINT NAME: _____

TITLE: _____

Note: If a corporation, Bid must be signed by person authorized by corporation by-laws to bind it to a contract.

The entirety of this project shall be bid as a **"LUMP SUM BID".** The Bidder agrees to perform all necessary work described in the **CONTRACT DOCUMENTS** for the project, constituted by the **LUMP SUM BID**.

FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That the contractor, as Principal, and _____
(Name of Surety)

_____, as Surety, are held and firmly bound unto
(Address)

the **SHELBY COUNTY COMMISSION** as Obligee in the full and just sum of five percent (5%) of amount bid (Maximum amount - $10,000.00), lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal is herewith submitting its proposal for

PROJECT NAME: _____

The condition of this obligation is such that:

If the aforesaid Principal shall be awarded the contract and said Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation will be void; otherwise, the Principal and the Surety will pay unto the Obligee the difference in money between the amount of the contract as awarded and the amount of the proposal of the next lowest acceptable bidder, but not to exceed the total amount of the proposal guaranty. If no other bids are received, the full amount of the proposal guaranty shall be retained and/or recovered as liquidated damages for such default.

Witness our hands and seals this _____day of _____, 20_____.

SIGNATURE OF INDIVIDUAL BIDDER: (USE ONLY WHERE BIDDER IS AN INDIVIDUAL)

_____, Doing Business As, _____
(Name of Individual) (Business Name)

Business Mailing Address: _____

NAME OF PARTNERSHIP, JOINT VENTURE OR CORPORATION:
(Name of Partnership, Joint Venture or Corporation*) – (If Two Corporations**)

Business Mailing
Address: _____ BY: _____(L.S.)
(Signature and Position or Title of
_____ Officer Authorized to Sign Bids and
Contracts for the Firm)

Business Mailing
Address: _____ BY: _____(L.S.)
(Signature and Position or Title of
_____ Officer Authorized to Sign Bids and
Contracts for the Firm)

Business Mailing
Address: _____ BY: _____(L.S.)
(Signature and Position or Title of
_____ Officer Authorized to Sign Bids and
Contracts for the Firm)

* (Corporate Seal)
Attest:

_____
(Secretary)

Name of State under the laws of which the Corporation was chartered:

_____

** (Corporate Seal)
Attest:

_____
(Secretary)

Name of State under the laws of which the Corporation was chartered:

_____

_____
(Name of Surety)

BY: _____
(Attorney-in-Fact)

PROPOSAL WILL NOT BE ACCEPTED UNLESS THIS FORM FOR BID BOND IS USED, AND BIDS WILL NOT BE CONSIDERED UNLESS THIS FORM IS SIGNED BY PRINCIPAL AND SURETY OR A CERTIFIED CHECK IN THE PROPER AMOUNT IS FURNISHED. CASHIER'S CHECK IS NOT ACCEPTABLE.

PLEASE LEAVE ATTACHED IN YOUR BIDDING FORM

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS:

Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES:

Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES:

Base Bid Unit Prices

Unit Price No. 1: Undercut & Replacement Backfill in Building Control Areas. (Base bid without housing Pod)

1. Description: Undercutting below planned subgrade in building control areas, and at least 10-feet beyond, as required due to careful inspection by probing, proofrolling, and testing shall be paid on a unit price basis per cubic yard of undercut. Unit price shall include excavation and legal off-site disposal of unsuitable material and replacement with compacted controlled fill back to subgrade elevation in cuts and back to original grade in fills in accordance with Section 31 3200 - "Earth Moving" as directed by the Owner's Geotechnical Engineer. This shall not apply to previously prepared areas of the site that may become unstable due to construction traffic, rain, etc.
2. Unit of Measurement: Cubic Yard (CY) of unsuitable material.

Unit Price No. 2: Geogrid. (**Base bid without housing Pod)**

1. Description: Provide geogrid meeting the specifications of Tensar BX-1100 or Pre-Approved Equivalent, including purchase, any applicable fees, taxes, delivery to job site, installation and all related costs, as indicated on the Drawings and in various additional portions of the Project Manual.
2. Unit of Measurement: Square yard in-place (SY) of geogrid.

Unit Price No. 3: Removal and replacement of the hot water return within the existing facility.

1. Scope Description: Provide complete replacement of the entire (3) hot water recirculation systems (one for the kitchen hot water system, one for the laundry hot water system, and one for the balance of the building including pods, segregation, medical, booking, and administrative). This includes:
    a. Replacement of existing hot water return piping as shown on drawings. The minimum hot water return piping size shall be 3/4". Piping shall be Type L hard copper pipe with soldered joints. Include fiberglass insulation with all service jackets.
    b. Replacement of all balancing valves with new ones, as shown on drawings. These are equal to the circuit solver by Thermomegatech (does not require balancing).
    c. Replacement and resizing of existing recirculation pumps for kitchen and laundry system and balance of building system. Pumps shall be equal to Armstrong ECM pumps.
    d. Removal of (2) existing tank-type water heaters and associated piping located in the existing pods (these were added to address poor recirculation).
2. Unit of Measurement: Lump Sum (LS).

Unit Price No. 4: Removal and replacement of the fire alarm system hot water return within the existing facility.

1. Scope as defined in the documents

2. Unit of Measurement: Lump Sum (LS).

Add Alternate Unit Prices

Unit Price No. 1: Undercut & Replacement Backfill in Building Control Areas. **(Entire project included add alternate housing pod.)**

1. Description: Undercutting below planned subgrade in building control areas, and at least 10-feet beyond, as required due to careful inspection by probing, proofrolling, and testing shall be paid on a unit price basis per cubic yard of undercut. Unit price shall include excavation and legal off-site disposal of unsuitable material and replacement with compacted controlled fill back to subgrade elevation in cuts and back to original grade in fills in accordance with Section 31 3200 - "Earth Moving" as directed by the Owner's Geotechnical Engineer. This shall not apply to previously prepared areas of the site that may become unstable due to construction traffic, rain, etc.
2. Unit of Measurement: Cubic Yard (CY) of unsuitable material.

Unit Price No. 2: Geogrid. (Entire project included add alternate housing pod.)

3. Description: Provide geogrid meeting the specifications of Tensar BX-1100 or Pre-Approved Equivalent, including purchase, any applicable fees, taxes, delivery to job site, installation and all related costs, as indicated on the Drawings and in various additional portions of the Project Manual.
4. Unit of Measurement: Square yard in-place (SY) of geogrid.

END OF UNIT PRICES

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Requirements:

1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Section 013200 "Construction Progress Documentation" for submitting schedules and reports including Contractor's construction schedule.
3. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
4. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
5. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals"

B. Informational Submittals: Written and graphic information that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering,

manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal: Submit concurrently with initial construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Six-Week Look-Ahead Schedules: Maintain and update submittal schedules to reflect current conditions at the project site and project status. Submit revised submittal schedules highlighting the submittals planned in the subsequent six weeks.
4. Format: Arrange the following information in a tabular format:
    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal category: Action; informational.
    d. Name of subcontractor.
    e. Description of the Work covered.
    f. Scheduled date for Architect's final release or approval.
    g. Scheduled date of fabrication.
    h. Scheduled dates for purchasing.
    i. Scheduled dates for installation.
    j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Electronic Data: Electronic digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals upon execution of the “Electronic Data Transfer Agreement” included at the end of Section 017839 “Project Record Documents.”

B. Architect’s Process: The Architect will use web-based Construction Contract Administration (CCA) software system for tracking and responding to communications from the Contractor and for submitting requests and information to the Contractor. Forms included in the Project Manual are printed facsimiles of the response forms that will be generated by the CCA software.

1. Contractor shall submit through (CCA) software.

C. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Submittal items required for each Specification Section shall be submitted concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.

3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.

4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

5. Arrange for preparation of required submittals in sufficient detail to permit analysis and review by Architect sufficiently early to allow for review, and accommodate the rate of construction progress required under the Contract. Delete or mark out extraneous material not relevant to the Project.

D. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on the first full working day following Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 10 consecutive working days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals or if concurrent review is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination or concurrent review.

2. Resubmittal Review: Allow 10 consecutive working days for review of each resubmittal.

E. Electronic Submittals: Two-dimensional documents, such as schedules, shop drawings, product data, and general information, shall be submitted electronically using the CCA software. Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.

2. File Naming: Each Submission shall have a file name consisting of the project name, submittal section name, item number, and revision number. The A/E Project Shop Drawing review stamp will read and incorporate this file name. It is therefore imperative that each submittal file use the following naming convention:

    a. Each submittal shall be created with a four-part alpha numeric file naming system, with each part separate by a dash. Each item is bolded and underlined to draw attention to it in the examples below:

        1. The first part is the project abbreviation (e.g. **IDENT**-061000-0001-01)

        2. The second part is the specification section number (e.g. IDENT-**061000-0001**-01)

        3. The third part is the item number of each Submittal required in that specific section. Each item shall have an individual number. Do not group multiple items in a single item number, as they will be returned not logged in and without action reserved for proper submissions. The first item shall be 0001, next 0002, ect. (e.g. IDENT-061000-**0001**-01)

4. The fourth part represents the number of times the items has been submitted for review. **No submission shall start with 00**. The first submission shall be 01, the second shall be 02, ect. (e.g. IDENT-061000-0001-**01**)
5. The fifth part represents the submittal description (e.g. IDENT-061000-0001-01-**Trussed Rafter Shop Drawings**)
6. Place a single dash between part of the file name.

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect
4. Transmittal Form for Electronic Submittals: Use electronic facsimile of form included at the end of this Section
5. Metadata: Include the following information as keywords in the electronic submittal file metadata:
   a. Project name.
   b. Number and title of appropriate Specification Section.
   c. Manufacturer name.
   d. Product name.

F. Options: Identify options requiring selection by Architect.

G. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Post electronic submittals as PDF electronic files directly to Project Web site specifically established for Project.

a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2. Submit electronic submittals via electronic transfer as PDF electronic files.

a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.

2.2 ACTION SUBMITTALS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.

2. Mark each copy of each submittal to show which products and options are applicable. Delete or mark out extraneous material that is not applicable to the Work. Edit material to conform to project requirements, and to clearly show model number, type and size proposed. Provide additional information as necessary to supplement standard information.

3. Include the following information, as applicable:

a. Manufacturer's catalog cuts.

b. Manufacturer's product specifications.

c. Manufacturer's written recommendations.

d. Standard color charts.

e. Statement of compliance with specified referenced standards.

f. Testing by recognized testing agency.

g. Application of testing agency labels and seals.

h. Notation of coordination requirements.

i. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

a. Wiring diagrams showing factory-installed wiring.

b. Printed performance curves.

c. Operational range diagrams.

d. Mill reports.

e. Standard product operating and maintenance manuals.

f. Compliance with recognized trade association standards.

g. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.

6. Submit Product Data in the following format:
    a. PDF electronic file.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    a. Dimensions.
    b. Identification of products.
    c. Fabrication and installation drawings.
    d. Roughing-in and setting diagrams.
    e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
    f. Shop fabrication instructions.
    g. Templates and patterns.
    h. Schedules.
    i. Design calculations.
    j. Compliance with specified standards.
    k. Notation of coordination requirements.
    l. Notation of dimensions established by field measurement.
    m. Relationship and attachment to adjoining construction clearly indicated.
    n. Seal and signature of professional engineer if specified.
    o. Highlight deviations from the Contract Documents.
2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
3. Do not use Shop Drawings for ordering, fabrication, or construction without an appropriate final stamp from the Contractor and Architect indicating action taken in connection with construction.
4. Submit Shop Drawings in the following format:
    a. PDF electronic file.
5. Samples: Submit Samples for review of size, kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
6. Samples are required only for comparable products, substitutions, and custom fabricated items, unless samples are specifically required by the individual Sections.
    a. Samples are not required and will not be reviewed if a specified item is being provided.
    b. Samples are required and action will be taken if the specified item is no longer available, the manufacturer's current catalog numbers vary from those specified, named manufacturer's product data differs from requirements, or where custom colors require evaluation.
7. Transmit Samples that contain multiple, related components such as accessories

together in one submittal package.

8. Mount, or display, Samples to facilitate review of qualities specified. Prepare Samples to match the Architect's sample. Include the following identification label on unexposed side of Samples that includes the following:
    a. Generic description of Sample.
    b. Product name and name of manufacturer.
    c. Sample source.
    d. Number and title of applicable Specification Section.
    e. Specification paragraph number, submittal number, and generic name of each item.
    f. Compliance with recognized standards.
    g. Availability and delivery time.
9. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
10. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
11. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
12. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
    a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.
        1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
        2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three > sets of paired units that show approximate limits of variations.

2.3 INFORMATIONAL SUBMITTALS

A. Contractor's Submittal Schedule: Comply with requirements specified in this Section under SUBMITTAL ADMINISTRATIVE REQUIREMENTS.

B. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."

C. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

D. Coordination Drawing Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."

E. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."

F. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.
5. Submit product schedule in the following format:
    a. PDF electronic file.

G. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

H. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 - "Quality Requirements."

I. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

J. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

K. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

L. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

M. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

N. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

O. Product Test Reports: Submit written reports indicating that current product produced

by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

P. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

Q. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

R. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

S. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

T. Preconstruction Photographs: Before starting construction, submit photographs of Project site and surrounding properties, including existing items to remain during construction.

1. Provide photographs showing existing conditions adjacent to property before starting the Work.
2. Provide photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
3. Provide photographs as required to record settlement or cracking of adjacent structures, pavements and improvements.

U. Progress Photographs: Submit photographs taken on the date coinciding with the cutoff date associated with each Application for Payment.

V. Material Safety Data Sheets (MSDSs):

1. Retain MSDSs for Contractor’s safety program at Project site; do not submit to Architect.
    a. Architect will not review MSDSs for conformance with the specifications and will return them marked “NO ACTION TAKEN.”

2.4 CLOSEOUT SUBMITTALS

A. General: The following closeout submittals complement the closeout requirements specified in Section 017700 “Closeout Submittals.”

B. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."

C. Project Record Documents: Comply with requirements specified in Section 017839, “Project Record Documents.”

D. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."

E. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

F. Final Completion Construction Photographs: Submit photographs of existing conditions of structural surfaces, equipment; finishes and surrounding properties which could be misconstrued as damage resulting from demolition and other construction operations; file copies with Owner's Representative prior to commencing Work.

2.5 DELEGATED-DESIGN SERVICES

A. Fabrication Engineering Review: The Architect/Engineer is entitled to rely upon the adequacy, accuracy and completeness of the engineering provided by the Contractor and the Contractor’s Engineering Professional. The Architect/Engineer review of these submittals shall be limited to the verification that the Contractor’s fabrication engineering documents:

1. Are in general conformance with the design intent, including design criteria, performance requirements contained in technical sections of the specifications, and other requirements contained in technical sections of the specifications, ant other requirements of the Contract documents.

2. Are in general conformance with the overall Project Design, and

3. Can be integrated into the

PART 3 - EXECUTION

3.1 CONTRACTOR’S REVIEW

A. Contractor’s Review/Approval Stamp: Insert a uniform, approval stamp on each submittal. Include the Project name and location, submittal number, Specifications Section title and number, name of reviewer, date of Contractor’s approval, and statement certifying that submittal has been reviewed, checked and approved for compliance with the Contract Documents.

1. Language on the Contractor’s submittal review stamp shall be consistent with the Agreement and requirements of the General Conditions of the Contract for Construction. A stamp containing language which defers or assigns Contractor’s responsibilities to subcontractor will not be permitted.

2. Contractor’s Review Stamp shall include notation on each submittal, “I affirmatively state that there are no material deviations from the requirement of the Contract Documents.”

3. Architect/Engineer will take no action on submittals that do not have the Contractor’s stamp and that have not been certified.

4. Any delay due to such rejections will not be grounds for an extension of time.

B. Processing of Submittals to the Architect/Engineer is an Acknowledgement that the Contractor has fully reviewed submittals against the Contract Documents the work of other trades and fully coordinated work shown on the submittal, whether or not it contains a Contractor's stamp.

3.2 ARCHITECT/ENGINEER ACTION

A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will insert an action stamp on each submittal, marked appropriately to indicate required action, as follows:

1. A - APPROVED: Submittal has been reviewed for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents and no exceptions are taken. Proceed with work represented in the submittal. Architect/Engineer's review is not for determining the accuracy or completeness of other details, such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment and systems, remain the responsibility of the Contractor. Review shall not constitute approval or safety precautions, or of means, method and techniques, sequences or procedures. Approval of a specific items shall not indicate approval of an assembly of which the items is a component. Comments and corrections do not authorize changes to the contract Documents.

2. B – APPROVED AS NOTED: Submittal has been reviewed as stated in Subparagraph 1. above, but certain exceptions are noted. Contractor may proceed with work represented in submittal, provided Contractor agrees to incorporate comments and corrections noted by Architect/Engineer. Resubmittal is not required. Comments do not authorize changes To the Contract Documents.

3. C – REVISE AS NOTED & RESUBMIT: Submittal has been reviewed as stated in Subparagraph 1. above, but certain exceptions are noted, that as a minimum, are necessary for conformance with the design concept expressed in the Contract Documents. Do not proceed with work covered by this submittal. Revise submittal responding to comments and correction and resubmit to Architect/Engineer for review until "APPROVED" or "APPROVED AS NOTED" action is given. In resubmission, limit corrections made to items noted in submittal.

4. D - REJECTED: Submittal has been reviewed as stated in Subparagraph 1. above and is not acceptable. Contractor shall not proceed with work represented for one or more of the following reasons:

a. Work represented in submittal does not fulfill the requirements of the Contract Documents; submit specified item.

b. Submittal has not been made in accordance with procedures specified.

c. Insufficient and incomplete information is provided; accurate determination is not possible.

d. Submittal contains errors or omissions; accurate determination is not possible.

e. Information provided does not conform to information included in the Contract Documents.

f. Submittal contains extraneous materials; accurate determination is not possible.

B. Informational Submittals: Architect is not required to review informational submittals. Informational submittals will be returned if contradictions are discovered.

1. E – REVIEWED FOR INFORMATION: Submittal is for information only.
    a. Submittal is for information only and does not require Architect's review.
2. F - REVIEWED FOR INFORMATION as Noted: Submittal is for information only.
    a. Resubmittal only if noted in submittal.

C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect

END OF SECTION 013300

SECTION 090000 – MATERIAL AND FINISH CODES

TAG	DIVISION	SPECIFICATION SECTION	DESCRIPTION
AC	095100	ACOUSTICAL PANEL CEILINGS	
AC-01	095100	ACOUSTICAL CEILING TILE	
		Manufacturer	ARMSTRONG
		Product Name	OPTIMA - 1410WH
		Grid	SQUARE TEGULAR 9/16"
		Size	2' X 2'
		Color / Finish	WHITE
		NRC Rating	0.95 NRC
AWP	098433	SOUND ABSORBING WALL UNITS	
AWP-01	098433	ACOUSTICAL WALL PANEL	
		Manufacturer	ARMSTRONG
		Product Name	TECTUM FINALE WALL PANELS
		Size	2'X4 / 4'X4' / 4'X8'
		Color / Finish	COLOR TO MATCH PT-02, PT-07, PT-08, PT-09
		NRC Rating	0.90 NRC
CPT	096810	CARPET	
CPT-01	096810	CARPET TILE	
		Manufacturer	FORBO
		Product Name	FLOTEX CONVERGE
		Size	40"X10"
		Color / Finish	AURORA - 141002
		Installation Method	HERRINGBONE
PL	064000	ARCHITECTURAL WOODWORK	
PL-01	064000	PLASTIC LAMINATE CABINET	
		Manufacturer	FORMICA COLORCORE2
		Product Name	928C-58
		Color / Finish	STORM / MATTE

PT	099100	PAINTING	
PT-01	099100	PAINT	NOT USED
PT-02	099103	PAINT	GENERAL WALL PAINT
		Manufacturer	SHERWIN WILLIAMS
		Product Name/Color	GENERAL WHITE - SW 7008 ALABASTER
		Finish	EPOXY
		Location	
PT-03	99000	PAINT	NOT USED
PT-04	099103	PAINT	GENERAL WALL PAINT
		Manufacturer	SHERWIN WILLIAMS
		Product Name/Color	ACCENT GRAY - SW 7643 PUSSYWILLOW
		Finish	EPOXY
		Location	
PT-05	099103	PAINT	DOOR/GLAZING FRAMES
		Manufacturer	SHERWIN WILLIAMS
		Product Name/Color	SW 7069 IRON ORE
		Finish	EPOXY
		Location	
PT-06	099103	PAINT	ACCENT PAINT
		Manufacturer	SHERWIN WILLIAMS
		Product Name/Color	SW 9056 FRENCH MOIRE
		Finish	EPOXY
		Location	MENTAL HEALTH DOOR FRAMES
PT-07	099103	PAINT	ACCENT PAINT
		Manufacturer	SHERWIN WILLIAMS
		Product Name/Color	SW 7742 AGATE GREEN
		Finish	EPOXY
		Location	
PT-08	099103	PAINT	ACCENT PAINT

		Manufacturer	SHERWIN WILLIAMS
		Product Name/Color	SW 9058 SECRET COVE
		Finish	EPOXY
		Location	MENTAL HEALTH
PT-09	099103	PAINT	ACCENT PAINT
		Manufacturer	SHERWIN WILLIAMS
		Product Name/Color	SW 6550 MYTHICAL
		Finish	EPOXY
		Location	
PT-10	099100	PAINT	CEILING PAINT
		Manufacturer	SHERWIN WILLIAMS
		Product Name/Color	SW 7008 ALABASTER
		Finish	FLAT
		Location	
RF	096500	RESILIENT FLOORING AND ACCESSORIES	
LVT-01	965000	RESILIENT FLOORING	
		Manufacturer	INTERFACE
		Product Name	BRUSHED LINES
		Size / Thickness	25CMX1M
		Color / Finish	SANDALWOOD A01608
		Location	CONTROL ROOM
RB-01	965000	RESILIENT BASE	
		Manufacturer	TARKETT
		Product Name	TRADITIONAL RUBBER BASE
		Size / Thickness	4"
		Color / Finish	BURNT UMBER
		Location	EXAM
SSM	123661	SIMULATED STONE COUNTERTOPS	
SSM-01	123661	SOLID SURFACE COUNTERTOP	
		Manufacturer	KRION
		Product Name	SOLID SURFACE

		Size / Thickness	N/A
		Color / Finish	STAR SERIES / GREY STAR / 7905
SC	033543	POLISHED CONCRETE FINISHING	
CS-01		SEALED CONCRETE	
		Manufacturer	EUCLID CHEMICAL CO.
		Product Name	EUCO DIAMOND HARD
		Size / Thickness	N/A
		Color / Finish	CLEAR
HPC	099613	SPECIALTY FINISH	
HPC-01	099613	SPECIALTY FINISH	
		Manufacturer	PRIMECOAT - SEAMLESS COATING SYSTEM
		Product Name	SEAMLESS SYSTEM 5130
		Size / Thickness	
		Color / Finish	White - C-18
DPS	111940	DETENTION PADDED SURFACE SYSTEMS	
DPS-01	111940	DETENTION PADDED SURFACE	
		Manufacturer	PRIMECOAT - SAFETY PADDING
		Product Name	PRIME FLEX 4730
		Size / Thickness	PER SPECIFICATIONS
		Color / Finish	White - C-18
SC			
SC-01		SUSPENDED CEILING	
		Manufacturer	NOT USED
		Product Name	
		Grid	
		Size	
		Color / Finish	
		NRC Rating	
SC-02		SUSPENDED CEILING	NOT USED
		Manufacturer	
		Product Name	

		Grid	
		Size	
		Color / Finish	
		NRC Rating	
		Notes	
SC-03		SUSPENDED CEILING	
		Manufacturer	TRUSSBILT- BASIS OF DESIGN
		Product Name	TRUSSDEK - DOUBLE SKIN SHIP-LAP JOINT PLANK CEILING SYSTEM
		Grid	
		Size	24"X6' / 24"X8' / 24"X10'
		Color / Finish	WHITE
		NRC Rating	
		Notes	EXCLUDE ACOUSTIC PERFORATIONS

SECTION 090001 – FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	CEILING	WALL FINISH COMMENTS
M- 124	ENTRY	CS-01	PT	Open to Struct	
M-131	OFFICE	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
M-132	OFFICE	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
M-133	EQUIP STORAGE	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
M-134	CORRIDOR	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
M-135	SOILED LAUNDRY	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
M-136	CLEAN LAUNDRY	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
M-137	NURSE STATION	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
M-138	CORRIDOR	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
M-139	VESTIBULE	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
M-140	2-BED ISOLATION	CS-01	PT	SC-03	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
M-141	VESTIBULE	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
M-142	2-BED ISOLATION	CS-01	PT	SC-03	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
M-143	VESTIBULE	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
M-144	2-BED ISOLATION	CS-01	PT	SC-03	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
M-145	VESTIBULE	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
M-146	1-BED ADA OBS	CS-01	PT	SC-03	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
M-147	2-BED OBS	CS-01	PT	SC-03	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL.

					MATCH HEIGHT OF EXISTING GREY PAINT, UON.
M-148	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
M-149	SGT OFC	CPT-04	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
M-150	2-BED OBS	CS-01	PT	SC-03	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
M-151	2-BED OBS	CS-01	PT	SC-03	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
M-152	2-BED OBS	CS-01	PT	SC-03	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
M- 153	MED CHASE 1	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
M- 154	MED CHASE 2	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1301	VESTIBULE	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1302	CONTROL	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1303	VESTIBULE	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1304	REC YARD	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1305	VESTIBULE	CS-01	PT	GYP & Open to Struct	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-04 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON. SEE ELEVATION FOR ACOUSTIC WALL PANEL REQUIREMENTS. GPY BOARD CEILING AT ENTRANCE OF VESTIBULE TO BE PAINTED PT-10. SEE REFLECTED CEILING PLAN FOR SPECIFIC LOCATION.
H- 1306	1-BED CELL	CS-01	PT	SC-03	REAR PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.

H- 1307	1-BED CELL	CS-01	PT	SC-03	REAR PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H- 1308	2-BED CELL	CS-01	PT	SC-03	REAR PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H- 1309	2-BED CELL	CS-01	PT	SC-03	REAR PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H- 1310	2-BED CELL	CS-01	PT	SC-03	REAR SOUTH AND SOUTHEAST PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PAINTED PT-06, EXCLUDING CELL DOOR.
H- 1311	TOILET	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
H- 1312	ADA SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1313	INTERVIEW	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
H- 1314	INTERVIEW	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
H-1315	1-BED ADA CELL	CS-01	PT	SC-03	ENTIRE WEST WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H-1316	1-BED ADA CELL	CS-01	PT	SC-03	ENTIRE WEST WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H- 1317	INTERVIEW	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
H-1318	INTERVIEW	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
H- 1319	ADA SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.

H-1320	VESTIBULE	CS-01	PT	GYP & Open to Struct	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-04 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON. SEE ELEVATION FOR ACOUSTIC WALL PANEL REQUIREMENTS. GPY BOARD CEILING AT ENTRANCE OF VESTIBULE TO BE PAINTED PT-10. SEE REFLECTED CEILING PLAN FOR SPECIFIC LOCATION.
H- 1321	JANITOR	CS-01	PT	SC-03	REAR PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H-1322	1-BED CELL	CS-01	PT	SC-03	REAR PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H-1323	2-BED CELL	CS-01	PT	SC-03	REAR PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H-1324	2-BED CELL	CS-01	PT	SC-03	REAR PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H-1325	2-BED CELL	CS-01	PT	SC-03	REAR NORTH AND NORTHEAST PLUMBING WALL TO BE PAINTED PT-08. CELL WINDOW AND DOOR FRAMES TO BE PATINED PT-06, EXCLUDING CELL DOOR.
H-1326	2-BED CELL	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H- 1401	NURSE OFC	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H- 1402	INTERIVEW	CS-01	PT	SC-03	ALL WALLS TO BE PAINTED PT-02
H- 1403	PADDED CELL	DPS-01	DPS-01	SC-03 WITH HPC-01	PAINT PRIME COATED CEILING PANELS WITH HPC-01
H- 1404	1-BED ADA CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.

H-1405	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1406	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1407	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1408	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1409	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1410	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1411	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1412	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1413	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.

H-1414	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1415	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H- 1416	REC YARD	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1417	SALLY PORT	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1418	REC YARD	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1419	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1420	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1422	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1423	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1424	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1425	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.

H-1426	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1427	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1428	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1429	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1430	1-BED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1431	PADDED CELL	CS-01	PT	CS-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H- 1432	SGT OFC	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H- 1433	CORRIDOR	CS-01	PT	GYP & Open to Struct	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-04 ON BOTTOM HALF OF WALL. MATCH HEIGHT OF EXISTING GREY PAINT, UON. SEE ELEVATION FOR ACOUSTIC WALL PANEL REQUIREMENTS. GPY BOARD CEILING AT ENTRANCE OF CORRIDOR TO BE PAINTED PT-10. SEE REFLECTED CEILING PLAN FOR SPECIFIC LOCATION.
H- 1444	STORAGE	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1443	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.

H- 1442	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1441	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1440	JANITOR	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H- 1439	ADA SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1438	CHASE	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1437	ADA SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H-1436	PROP STORAGE	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1435	PROP STORAGE	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H 1503	2 BED ADA CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1504 A	ADA SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1504 B	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1505	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H-1506	2-BED ADA CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1507	2-BED ADA CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1508	DAYROOM	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON. ACOUSTIC PANELS TO MATCH PT-07
H-1509	CORRIDOR	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H- 1510	CONTROL	LVT-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H-1511	TOILET	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H-1512	CORRIDOR	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1501	2-BED ADA CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1502	2-BED ADA CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1522	DAYROOM	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-07 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON. ACOUSTIC PANELS TO MATCH PT-07
H-1513	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1514	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1515	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02

H-1516	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1517A	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H-1518	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1517B	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1519	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1520	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1521	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1532	DAYROOM	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-08 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON. ACOUSTIC PANELS TO MATCH PT-08.
H-1523	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1524	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1525	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1526A	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H-1527	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1526B	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1528	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1529	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1530	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1531	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1533	DAYROOM	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-08 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON. ACOUSTIC PANELS TO MATCH PT-08.
H-1534	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1535	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1536	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1537	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1537A	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H-1538	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.

H- 1537B	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1539	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1540	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1541	SALLY PORT	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1552	DAYROOM	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-08 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON. ACOUSTIC PANELS TO MATCH PT-08.
H-1543	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1544	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1545	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H- 1546A	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H-1547	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1546B	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1548	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1549	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1550	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1551	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1562	DAYROOM	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON. ACOUSTIC PANELS TO MATCH PT-09.
H-1553	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1554	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1555	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1556A	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1557	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1556B	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1558	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1559	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1560	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1561	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02

H-1566	DAYROOM	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON. ACOUSTIC PANELS TO MATCH PT-09.
H-1563	2-BED ADA CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1564	2-BED ADA CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1565A	ADA SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1565B	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1571	DAYROOM	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-09 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON. ACOUSTIC PANELS TO MATCH PT-09.
H-1567	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1568	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1569	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-1570A	SHOWER	HPC-01	HPC-01	HPC-01	ALL WALLS TO BE PAINTED HPC-01.
H- 1570B	CHASE	CS-01	PT-02	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1578	CORRIDOR	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-1572	JANITOR	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H-1573	STAFF TOILET	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H-1574	NURSE OFFICE	CPT-01	RB-01	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-08 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1575	INTERVIEW	CPT-01	PT	SC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-08 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON.
H-1576	STORAGE	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
H-1577	MULTI-PURPOSE	CS-01	PT	AC-01	WALLS TO BE TWO TONED. PAINTED PT-02 ON TOP HALF OF WALL AND PT-08 ON BOTTOM HALF OF WALL. ACCENT PAINT TO MATCH HEIGHT OF EXISTING GREY PAINT, UON.

H-1579	REC YARD	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
H-2224	CELL TIER	CS-01	PT	GYP	ALL GYP BOARD CEILINGS TO BE PAINTED PT-10
H-2225	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2226	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2227	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2228	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2229	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2230	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2231	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2232	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2233	CELL TIER	CS-01	PT	GYP	ALL WALLS TO BE PAINTED PT-02. ALL GYP BOARD CEILINGS TO BE PAINTED PT-10
H-2234	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2235	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2236	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2237	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2238	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2239	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2240	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2241	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2242	CELL TIER	CS-01	PT	GYP	ALL WALLS TO BE PAINTED PT-02. ALL GYP BOARD CEILINGS TO BE PAINTED PT-10
H-2243	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2244	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2245	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2246	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2247	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2248	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2249	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2250	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2251	CELL TIER	CS-01	PT	GYP	ALL WALLS TO BE PAINTED PT-02. ALL GYP BOARD CEILINGS TO BE PAINTED PT-10
H-2252	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2253	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02

H-2254	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2255	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2256	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2257	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2258	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2259	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2260	CELL TIER	CS-01	PT	GYP	ALL WALLS TO BE PAINTED PT-02. ALL GYP BOARD CEILINGS TO BE PAINTED PT-10
H-2261	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2262	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2263	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2264	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2265	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2266	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2267	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2268	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2269	CELL TIER	CS-01	PT	GYP	ALL WALLS TO BE PAINTED PT-02. ALL GYP BOARD CEILINGS TO BE PAINTED PT-10
H-2270	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2271	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2272	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2273	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2274	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2275	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2276	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2277	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2278	CELL TIER	CS-01	PT	GYP	ALL WALLS TO BE PAINTED PT-02. ALL GYP BOARD CEILINGS TO BE PAINTED PT-10
H-2279	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2280	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2281	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2282	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2283	CELL TIER	CS-01	PT	GYP	ALL WALLS TO BE PAINTED PT-02. ALL GYP BOARD CEILINGS TO BE PAINTED PT-10

H-2284	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2285	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2286	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
H-2287	2-BED CELL	CS-01	PT	CS-01	ALL WALLS TO BE PAINTED PT-02
S- 2001	MECHANICAL	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S- 120	ELECTRICAL	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S- 121	GENERATOR EQUIPMENT	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-131	CORRIDOR	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-132	CHASE	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-133	STORAGE	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
S-134	ELEC	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
S-135	CHASE	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-136	CHASE	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-137	SEC/IT	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
S-138	MECHANICAL ROOM ACCES	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-140	SUPPORT	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
S-141	SALLY PORT	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-142	SALLYPORT	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-143	CHASE	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
S-145	SALLY PORT	CS-01	PT	Open to Struct	ALL WALLS TO BE PAINTED PT-02
B-132	ISSUE STORAGE	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
B-136	OFFICE	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
B-137	OFFICE	CS-01	PT	AC-01	ALL WALLS TO BE PAINTED PT-02
A-100	CENTRAL CONTROL	CPT-01	PT	EXIST.	ALL WALLS TO BE PAINTED PT-02

SECTION 268100 - FIRE ALARM SYSTEM

PART 1 - GENERAL

1.1 SCOPE

A. The Contractor shall replace the existing fire alarm system with a new complete low voltage, automatic and manual fire alarm system as specified herein and indicated on the drawings. Remove all existing fire alarm system components made obsolete by this renovation. Coordinate all work and down time with existing jail operations.

B. The system shall include a central control panel, power supply, signal initiating devices, audible and visual alarm devices, a conduit and wiring system and all necessary accessories required to provide a complete operating system.

C. The system shall be completely addressable.

D. The system shall comply with the applicable provisions of the National Fire Protection Association Standard Number 72 (National Fire Alarm Code) for fire alarm systems; N.E.C. Article 760; and meet all requirements of the local authorities having jurisdiction.

E. The system shall be provided by a local service organization located within 50 miles of the job site.

1.2 DESCRIPTION OF SYSTEM

A. Conduit, outlet boxes, cabinets, devices and wiring installation for complete fire detection and alarm system.

B. Each and every item of the Fire Alarm System shall be listed as a product of a SINGLE fire alarm system manufacturer under the appropriate category by Underwriter's Laboratories, Inc. (UL), and shall bear the "UL" label. All control equipment shall be listed under UL category UOBZ as a single control unit. Partial listing shall not be acceptable. System controls shall be UL listed for Power Limited Applications per N.E.C. Article 760. All circuits shall be marked in accordance with N.E.C. 760-23.

C. Wiring shown is diagrammatic to define system and is not intended to show every wire. Review drawings prior to bidding and inform Contractor of any additional wiring necessary for installation of systems. Wiring shall comply with pathway survivability requirements defined in NFPA 72. Include cost of all wiring in bid.

D. Submit complete shop drawings of system for review including terminal to terminal connection diagrams for system components and associated equipment interfaces, conduit diagrams, complete descriptive information on each item of equipment including UL listing for all system components, and any other information required by Architect to describe system. Identify color code and terminal numbers on shop drawings.

E. After completion of work, submit one set of record mylar sepias with items for Owner described above. Typical type drawings will not be accepted.

F. Manufacturer's trained technical representative shall supervise installation, connections and tests. The authority having jurisdiction shall be notified prior to installation or alteration of equipment or wiring. Before acceptance, manufacturer's representative will test and certify in writing that system is installed and functioning properly as intended by drawings and specifications. Test includes operation of all devices in entire system.

G. Guarantee entire system in writing for one year from date of acceptance by Owner. Guarantee will cover completely all components, equipment, wiring, etc. Repair any defects found in the system within the guarantee period without cost to owner.

H. Submit with bid a guaranteed price for complete maintenance and service of system for one year beginning at expiration of guarantee period. Price shall be guaranteed for acceptance by Owner until date of substantial completion of system.

1.3 SYSTEM OPERATION

A. Actuation of any alarm initiating device shall cause all audible alarm signals to sound, all visual indicating appliances to flash, activate an alarm LED and local tone-alert at control panel/annunciator, cause an LCD read-out of point in alarm including type of alarm (smoke detector, manual station, etc.), provide a signal to the mechanical controls to shut down or re-route air handling systems according to established plans. This shall include a suitable addressable relay at each air handling unit to shut down all air handlers in a given zone when system goes into alarm.

B. The general alarm devices may be silenced by authorized personnel only, by entering a locked cabinet and operating the proper silencing switch. A subsequent zone alarm shall reactivate the signals. Operation of the silencing switch shall be indicated by a trouble light and audible signal.

C. Operation of any sprinkler monitoring switch, power failure, opens, grounds, or any disarrangement of the system wiring or components shall be indicated by a visual and audible trouble signal. The audible trouble signal may be silenced; however, the trouble LED shall remain lit until the system has been returned to normal operating condition.

D. Analog Smoke Sensor Operation
1. The smoke sensor shall be a smoke density measuring device having no self contained alarm set-point. The alarm decision for each sensor shall be determined by the control panel. The control panel shall determine the condition of each sensor by comparing the sensor value to stored values.
2. The control panel shall maintain a moving average of the sensors smoke chamber value. Systems that do not automatically maintain a constant smoke obscuration sensitivity for each sensor by compensating for environmental factors and are deemed unacceptable.
3. The system shall automatically indicate when an individual sensor needs cleaning. When a sensor’s average value reaches a predetermined value, a “Dirty Sensor” trouble condition shall be audibly and visually indicated at the control panel for the individual sensor. Additionally, the LED on the sensor base shall glow steady giving a visible indication at the sensor location.
4. If a “Dirty Sensor” is left unattended, and its average value increases to a second predetermined value, an “Excessively Dirty Sensor” trouble condition shall be indicated at the control panel for the individual sensor.

5. The control panel shall automatically perform a daily self-test on each sensor. Checking the electronics in the sensor's base ensures the accuracy of the values being transmitted to the control panel. A sensor which fails the self-test will cause a "Self Test Abnormal" trouble condition at the control panel. A sensor self-test which must be manually initiated by the operator shall not be acceptable.

1.4 SYSTEM FEATURES

A. The fire alarm system shall include the following features as a minimum:
1. Supervision of all field wiring.
2. Microprocessor based solid state modular construction.
3. Ground fault detection and ground fault isolating & supervising circuitry.
4. 80 character LCD display to indicate alarms, supervisory service conditions and troubles.
5. Simultaneous test of all LED's and LCD's from a central point.
6. "Dead Front" design control panel/annunciator with field programmable LED alarm, status and trouble indicators, and all control switches located behind a locked tempered glass door.
7. Fully automatic battery charger and lead alkaline batteries. Batteries shall have capacity to maintain system operation for 24 hours in normal supervisory mode and shall have sufficient capacity remaining to operate in alarm mode for 15 minutes at conclusion of supervisory period. Batteries shall be supervised for connection to the system and for low voltage threshold. Ammeter and voltmeter shall be provided to indicate battery voltage and charging current.
8. Two (2) sets of 2 amp form C auxiliary alarm contacts fused with feedback.
9. One (1) set of 2 amp form C auxiliary trouble contacts.
10. Standard with 127 addressable points (expandable to 508 points) and four input/output (I/0) circuits (expandable to 20 circuits).
11. Basic four (4) amp power supply (expandable as required).
12. 600 event historical logging.
13. System shall be field programmable for offsite monitoring by remote station reverse polarity, local energy master box or shunt master box types.
14. System shall be field programmable for signal circuit type of operation; march time code, temporal code, selective code, zone code, general alarm, time limit cutout and alarm silence inhibit.
15. System shall be field programmable for waterflow/sprinkler supervisory operation on distinct zones as required.
16. Transient suppression protection shall be provided on the system power supply and on the municipal protection circuit to comply with UL 864 requirements. Additionally, surge suppression shall be provided within the control panel on all circuits that extend outside the building (including to roof-mounted HVAC units).
17. Supervised remote annunciator connection circuit.
18. System shall incorporate an alarm/trouble walk test.
19. Resident non-volatile programmable operating system memory for all operating requirements.

PART 2 - PRODUCTS

2.1 FIRE ALARM CONTROL PANELS/ANNUNCIATORS

A. Furnish and install Notifier fire alarm control panel(s) with options and accessories as required. Control panel shall have capacity to serve entire building plus an additional 50%

capacity for future additions.

2.2 MANUAL ALARM STATIONS

A. Manual alarm stations shall be Notifier addressable break glass (double-action). The station body shall be so constructed that chips and scratches will not expose metal. All stations shall be master keyed with the control equipment. When actuated, the "Pull Lever" shall remain at right angle to the station body until reset.

B. **Pull stations in secured areas shall be locking-security type devices**.

C. Boxes:
1. Recessed, two-gang outlet boxes with red, semi-flush trim plates shall be used where possible.
2. Where surface-mount outlet boxes are required, boxes shall be red, cast aluminum

2.3 PHOTOELECTRIC SMOKE SENSOR

A. The smoke sensors shall be of the photoelectric addressable and shall communicate actual smoke chamber values to the system control panel. The smoke sensors shall operate on the light scatter principle. For maximum maintenance free service and low power requirement, light source for detection chamber and visual alarm indication shall be solid state photodiode.

B. **Furnish security type devices in secured areas with tamper resistant wire guards**.

C. Each sensor base shall be visually and electrically supervised.

D. The sensors shall be listed to UL Standard 268 and shall be documented compatible with the control equipment to which they are connected. The sensors shall be listed for both ceiling and wall mount applications.

E. Each sensor base shall contain integral addressable electronics and an LED that will flash each time it is scanned by the control panel (once every 4 seconds). The control panel shall be responsible for drift compensation. When the control panel determines that a sensor is in an alarm or a trouble condition, the control panel shall command the LED on that sensor's base to turn on steady indicating the abnormal condition. Sensors which do not provide a visible indication of an abnormal condition at the sensor location shall not be acceptable. Sensor bases shall be compatible with detachable photoelectric, ionization and heat sensors so that these various sensor types can be easily interchanged to meet specific location requirements. Sensor base shall be addressable type as required.

F. Where required, sensor bases shall be provided with a relay driver output and supervised relay, which are to be controlled either automatically or manually from the control panel.

G. Each sensor base shall be scanned by the control panel for its type identification to prevent inadvertent substitution of the wrong sensor type. The control panel shall operate with the installed device but shall initiate a "Wrong Device" trouble condition until the proper type is installed or the programmed sensor type is changed.

H. Each sensor shall contain a magnetically actuated test switch to provide for easy alarm testing at the sensor location.

I. The sensor's electronics shall be immune from false alarms caused by EMI and RFI.

J. Cover all smoke detection devices with plastic bags immediately after installation to maintain cleanliness, if field conditions so require.

K. Provide a U.L. listed sensor guard for sensors in areas subject to tampering. The guard shall be suitable for ceiling or sidewall mounting and hinged for easy access. The guard shall be securely mounted with tamper-proof screws.

2.4 PHOTOELECTRIC DUCT DETECTOR

A. The detector shall be an addressable, non-polarized 24VDC, which is compatible with the Fire Alarm Control Panel and obtains its operating power from the supervisory current in the fire alarm detection loop. It shall be of the same analog type as the ceiling smoke detectors. Detectors shall be of the solid-state photoelectric type and shall operate on the light scattering, photodiode principle. To minimize nuisance alarms, detectors shall have an insect screen and be designed to ignore invisible airborne particles or smoke densities that are below the factory set alarm point. No radioactive material shall be used.

B. The detector head shall be directly interchangeable with an ionization detector type. The 24VDC detector may be reset by actuating the control panel reset switch.

C. Detector construction shall have a mounting base with a twist-lock detecting head that is lockable. The locking feature must be field removable when not required. Contract between the base and head shall be of the bifurcated type utilizing spring type, self-wiping contacts. Removal of the detector head shall interrupt the supervisory circuit of the fire alarm detection loop and cause a trouble signal at the control panel.

D. Sampling tubes sized to match duct size as recommended by equipment manufacturer shall be provided with duct detectors as required.

E. Detector design shall provide compatibility with other normally open fire alarm detection loop devices (heat detectors, pull stations, etc.). It shall be possible to alarm the duct housing by using a test switch. For maintenance purposes, it shall be possible to clean the duct housing sampling tubes by accessing them through the duct housings front cover.

F. To minimize false alarms, voltage and RF transient suppression techniques shall be employed as-well-as smoke signal verification circuit and an insect screen.

G. Separate auxiliary SPDT relays for fan shutdown shall be provided with each duct detector for fan shutdown, smoke evacuation or other purposes as indicated on plans.

H. Remote key operated test stations with LED alarm indicators shall be installed in an accessible, inconspicuous location for each duct detector.

I. Duct detectors shall be installed for the equipment as indicated on plans as follows

(locations shown on plans are diagrammatical only):
1. A minimum of six duct widths downstream from bends or inlets to avoid air turbulence.
2. On the downstream side of filters to detect fires in the filters.
3. In return ducts, ahead of mixing areas.
4. Upstream of air humidifier and cooling coil.
5. With accessibility for test and service.

J. The following duct detector locations shall be avoided:
1. Where dampers closed for comfort control would interfere with airflow.
2. Next to outside air inlets (unless the intent is to monitor smoke entry from that area).
3. In return air damper branch ducts and mixing areas where airflow may be restricted.

K. Where duct detectors are installed in exterior or wet locations, weatherproof duct housing enclosures shall be provided to protect the detectors. Enclosures shall be located to be in shaded areas rather than direct sunlight. Entire installation shall be as directed by the equipment manufacturer.

2.5 HEAT SENSORS

A. Heat sensors shall be U.L. listed, addressable. They shall provide rate-of-rise temperature sensing, fixed temperature sensing (135 degrees F) and utility temperature sensing (32 degrees F to 155 degrees F range).

B. **Furnish security type devices in secured areas with tamper resistant wire guards**.

C. Each sensor base shall be visually and electrically supervised.

D. The sensors shall be listed to UL Standard 268 and shall be documented compatible with the control equipment to which they are connected. The sensors shall be listed for both ceiling and wall mount applications.

E. Each sensor base shall contain integral addressable electronics and an LED that will flash each time it is scanned by the control panel (once every 4 seconds). The control panel shall be responsible for drift compensation. When the control panel determines that a sensor is in an alarm or a trouble condition, the control panel shall command the LED on that sensor's base to turn on steady indicating the abnormal condition. Sensors which do not provide a visible indication of an abnormal condition at the sensor location shall not be acceptable. Sensor bases shall be compatible with detachable photoelectric, ionization and heat sensors so that these various sensor types can be easily interchanged to meet specific location requirements. Sensor base shall be addressable type as required.

F. Where required, sensor bases shall be provided with a relay driver output and supervised relay, which are to be controlled either automatically or manually from the control panel.

G. Each sensor base shall be scanned by the control panel for its type identification to prevent inadvertent substitution of the wrong sensor type. The control panel shall operate with the installed device but shall initiate a "Wrong Device" trouble condition until the proper type is installed or the programmed sensor type is changed.

H. Each sensor shall contain a magnetically actuated test switch to provide for easy alarm testing at the sensor location.

I. The sensor's electronics shall be immune from false alarms caused by EMI and RFI.

J. Heat sensor shall be automatically restorable.

2.6 MAGNETIC DOOR HOLDERS

A. Provide magnetic door holders as required where shown on plans.

2.7 ALARM SIGNALS (AUDIBLE)

A. Horns:
1. Alarm horns shall be polarized and shall be operated by 24 VDC. Each horn assembly shall include separate wire leads for in/out wiring for each leg of the associated signal circuit. T-tapping of signal device conductors to signal circuit conductors shall NOT be accepted. Where horns are shown as a combination audio-visual assembly, they shall be mounted as a combination unit in a single back box). Horns shall be capable of producing 95 dB.

B. **Furnish security type devices in secured areas with tamper resistant wire guards**.

C. Devices required to be surface mounted shall be furnished with surface mounting box and adaptor plate.

D. Devices installed in areas subject to mechanical damage (ie. gymnasiums) shall be furnished with suitable wire guards as indicated on plans.

2.8 ALARM SIGNALS (VISUALS)

A. Visual Flashing Lamps (Xenon Strobe):
1. Furnish and install per plans and specs visible appliance for fire alarm system notification. The appliance shall be 1HZ synchronized (15cd, 30cd, 110cd) with polar distribution or 75 cd illumination as required by the Americans with Disabilities Act (ADA). The appliance shall be U.L. listed to Standard 1971 and have a circumpolar light output allowing mounting in either vertical or horizontal positions or on the ceiling.
2. The light unit shall be of ABS polycarbonate and the lens of high grade, optical quality LEXAN. For optimized light distribution, the xenon flash tube shall be installed perpendicular to the appliance's back plane. A special compound reflector shall be utilized to maximize and best distribute the light pattern in key axis directions.
3. The effect of the illuminated visible appliance shall be observable in a circumpolar pattern. The visible appliance shall be labeled with the word "FIRE" in a contrasting color and the height of each character shall be a minimum of 5/8 inches. In its quiescent state, the word "FIRE" shall be visible.
4. Mounting heights of visual appliances shall in all respects comply with the Americans with Disabilities Act.
5. Visual indicating appliances shall be comprised of a Xenon flashtube and be entirely solid state. These devices shall be U.L. listed and be capable of either ceiling or wall mounting. The LEXAN lens shall be pyramidal in shape to allow better visibility. Visual units shall be of the stand-alone type.

2.9 REMOTE ANNUNCIATOR

A. Where shown on the plans, provide and install an LCD annunciator. The annunciator(s) shall have a stainless-steel finish and shall provide the same functionality as the main control panel front panel display. The annunciator shall communicate to the control panel over one twisted shielded pair of wire and operating power shall be 24VDC and be fused at the control panel. Point-wired annunciators will not be considered as equal.

B. The serial annunciator shall provide a common alarm and trouble circuit consisting of:
1. Control push-button switches – for alarm silence, trouble silence, system reset and manual evacuation duplicating the control panel switches. A key "enable" switch shall be provided to activate or deactivate the control switches.
2. Tone Alert – Duplicates the control panel tone alert during alarm and trouble conditions.
3. System trouble LED.
4. Power on LED.

C. To accommodate and facilitate job site changes the control switches shall have the capability to be programmed on site to provide for manual switch input operation other than their standard purpose.

2.10 SPRINKLER FLOW SWITCHES

A. Sprinkler flow switches and supervisory switches are provided under another section of these specifications. This contractor shall be responsible for electrical connection of these devices to the fire alarm system.

2.11 SMOKE DAMPERS

A. Smoke dampers are provided under another section. This contractor shall be responsible for supplying a source of power and connecting them to the fire alarm system to close on alarm.

2.12 SYSTEM RECORD DOCUMENT CABINET

A. Furnish and install a documentation cabinet at the system control unit or other approved location. All final record documentation shall be stored in the cabinet. Cabinet shall be labeled as "SYSTEM RECORD DOCUMENTS". Cabinet shall include a 4 gigabyte digital flash drive interface with USB connector loaded with a digital copy of all system documentation including shop drawings and product data.

2.13 OFF SITE MONITORING

A. Furnish all material and labor to accomplish and coordinate with local company or fire department as necessary for off site monitoring of the Fire Alarm System. Transmission method(s) shall be as required by applicable codes and Authority Having Jurisdiction (AHJ). Off site monitoring shall be in operation prior to final acceptance. Exact type of off site monitoring (basic reporting or advanced reporting as described below) shall be provided by the contractor per the owner's direction.

2.14 FIRE ALARM CABLING

1. All fire alarm cabling shall:
   a. Have red outer insulation/jacket with ripcord.

b. Be listed and labeled for the intended use in Fire Alarm systems.
c. Where Level 2 or Level 3 pathway survivability is required by NFPA 72, cabling shall be 2-hour fire rated circuit integrity (CI) type.
d. Be manufactured by West Penn, Allied, Belden or Superior Essex.
e. Be installed in conduit (3/4 inch minimum).

2.15 FIRE ALARM SYSTEM MANUFACTURER

A. All equipment shall be listed by UL. All panels and peripheral devices shall be the standard equipment of a single manufacturer and shall display the manufacturer's name on each component.

B. Equipment shall be as manufactured by Notifier or approved equal.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Provide and install the system in accordance with the plans and specifications, all applicable codes and the manufacturer's recommendations.

B. The contractor shall provide 120VAC power to all remote booster power supplies, control panels, transponder cabinets or other similar items as required. Where the project is provided with emergency power from an emergency generator, all power supplies shall be connected to an emergency source. Dedicated branch circuit(s) shall be provided to supply primary power to the fire alarm system. The associated branch circuit breakers shall be furnished with lock-on hardware and shall be identified with red marking as a fire alarm circuit. The location of the circuit disconnecting means shall be permanently identified at the fire alarm control unit.

C. All wiring shall be installed in strict compliance with all the provisions of NEC - Article 760 Parts I and III, Power-Limited Fire Protective Signaling Circuits or if required may be reclassified as non-power limited and wired in accordance with NEC-Article 760 Parts I and II.

D. All wiring shall be installed in strict compliance with pathway survivability requirements of applicable codes including NFPA 72.

E. Upon completion, the contractor shall so certify in writing to the owner and general contractor.

F. Front surface of all junction box covers in concealed areas (such as above lay-in ceilings) or within mechanical/electrical rooms (and other similar areas where appearance of boxes is not an issue) shall be sprayed red and labeled "Fire Alarm" or “F/A”. Covers in exposed areas shall be labeled “F/A” on interior of front cover. Wiring color code shall be maintained throughout the installation.

G. All fire alarm wiring shall be installed in conduit. Conduit shall be sized per manufacturer’s recommendations, but in no case shall conduit be smaller than 3/4”.

H. Installation of equipment and devices that pertain to other work in the contract shall be

closely coordinated with the appropriate subcontractors.

I. All raceways shall be concealed unless specifically shown or approved otherwise.

J. The contractor shall clean all dirt and debris from the inside and the outside of the fire alarm equipment after completion of the installation.

K. Install System Record Document cabinet adjacent to control panel unless alternate location is approved.

L. The manufacturer's authorized representative shall provide on-site supervision of installation and shall provide all system setup and programming services.

M. The manufacturer's authorized representative shall have as a minimum, a NICET LEVEL III certification. The fire alarm contractor shall have a technician with a minimum Nicet Level III certification working in a position of responsibility. All technicians working for the certified contractor shall have a minimum Nicet Level II certification. Any fire alarm contractor wishing to bid on the fire alarm work shall show evidence of certifications at the pre-bid conference.

N. The fire alarm contractor shall be licensed as a certified fire alarm contractor by the state in which the work is to be performed in compliance with all requirements of state fire marshall or other AHJ's as applicable.

O. The drawing/specifications included herein are to indicate contract intent only. The Fire Alarm contractor shall provide final design documents to include plans specifying exact device types/locations, circuitry, battery calculations, circuit/voltage drop calculations, etc. in accordance with all applicable code requirements. These final design documents shall be prepared under the supervision of an engineer licensed in the state where the work is to be performed, engaged/employed by the Fire Alarm contractor, and must bear the engineer's licensure seal with signature and date.

3.2 TESTING

A. The completed fire alarm system shall be fully tested in accordance with NFPA-72H by the contractor in the presence of the owner's representative and the Local Fire Marshal. Upon completion of a successful test, the contractor shall so certify in writing to the owner and general contractor, and shall submit final testing results with O&M documentation..

B. The contractor shall test and demonstrate proper operation of all smoke detection equipment and associated HVAC controls to the satisfaction of the authority-having-jurisdiction and fire marshal.

3.3 WARRANTY

A. The contractor shall warrant the completed fire alarm system wiring and equipment to be free from inherent mechanical and electrical defects for a period of one (1) year from the date of the completed and certified test or from the date of first beneficial use.

B. The equipment manufacturer shall make available to the owner a maintenance contract proposal to provide a minimum of two (2) inspections and tests per year in compliance with NFPA-72H guidelines.

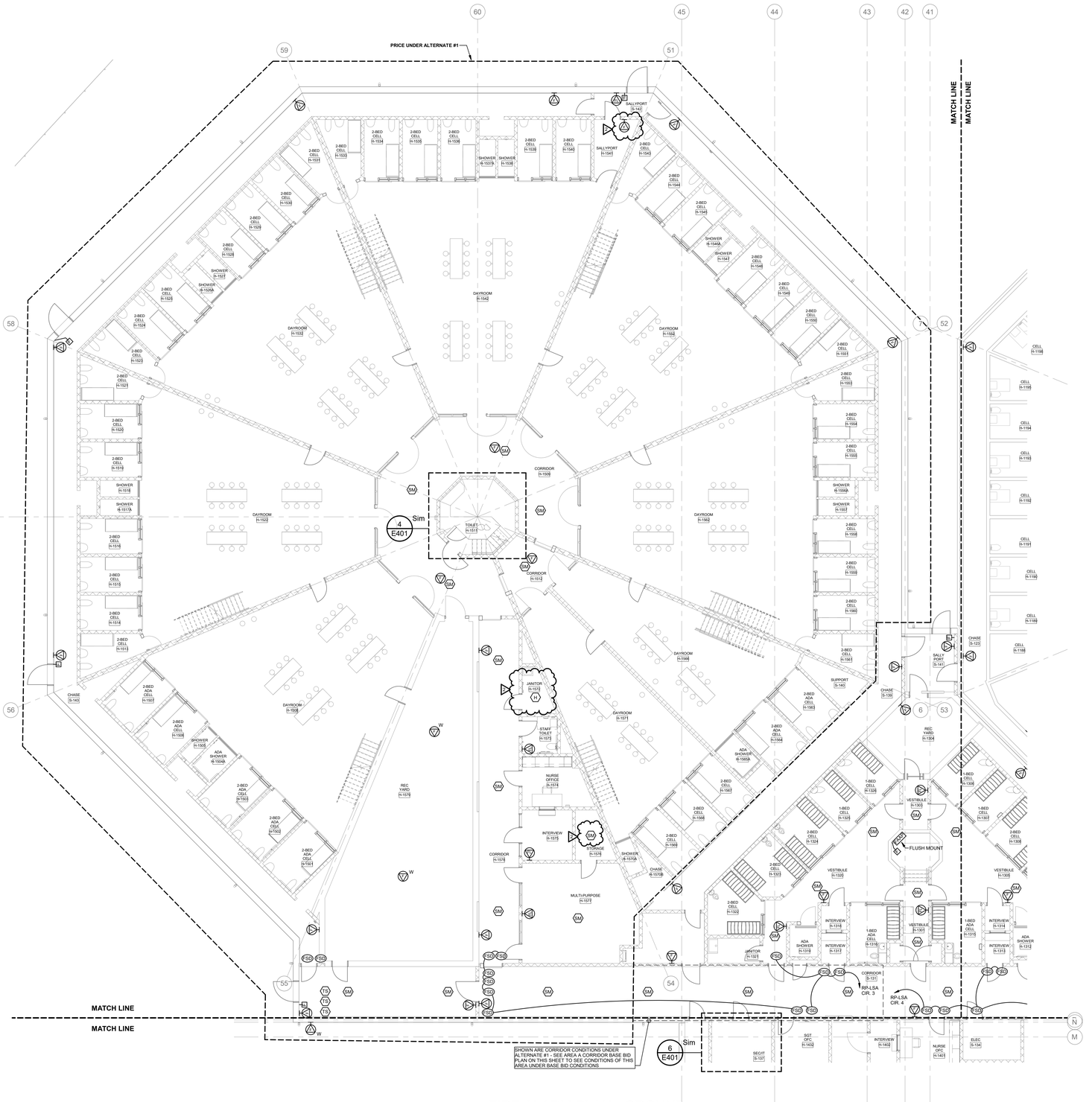
3.4 CERTIFICATION & ACCEPTANCE

A. A factory trained representative of the manufacturer shall supervise final testing of the system in accordance with N.F.P.A. Standard 72H-1984 in the presence of a representative of the authority having jurisdiction. Manufacturer's representative shall be NICET trained and shall have a level III NICET certificate. It shall be subject to the approval and acceptance of the responsible engineer. On completion of the acceptance tests, the Owner or his representative shall be instructed in the operation and testing of the system.

B. The fire alarm system shall be free from defects in workmanship and materials, under normal use and service, for a period of one year from the date of acceptance or beneficial occupancy whichever is earlier. Any equipment shown to be defective in workmanship or material shall be repaired, replaced, or adjusted free of charge.

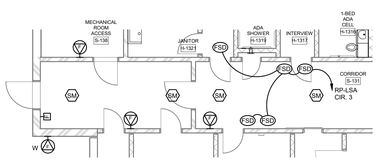
C. The equipment manufacturer shall be represented by a local service organization, and the name of this organization shall be furnished to the Architect and Owner. The service organization shall be located within 50 miles of the job site. The service organization shall furnish, gratis to the Owner, a one-year maintenance warranty contract, effective from the date of final acceptance.

END OF SECTION 268100



FIRE ALARM PLAN - GROUND LEVEL - AREA A - BASE BID & ALTERNATE #1

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



FIRE ALARM PLAN - GROUND LEVEL - AREA A CORRIDOR - BASE BID

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

NOTES THIS SHEET ONLY

1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

Project
SHELBY COUNTY JAIL EXPANSION
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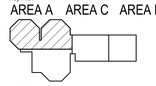
Key Plan



Professional Seals

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title

FIRE ALARM PLAN - GROUND LEVEL - AREA A

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number

E301A

JACKSON, RENFRO & ASSOCIATES, INC
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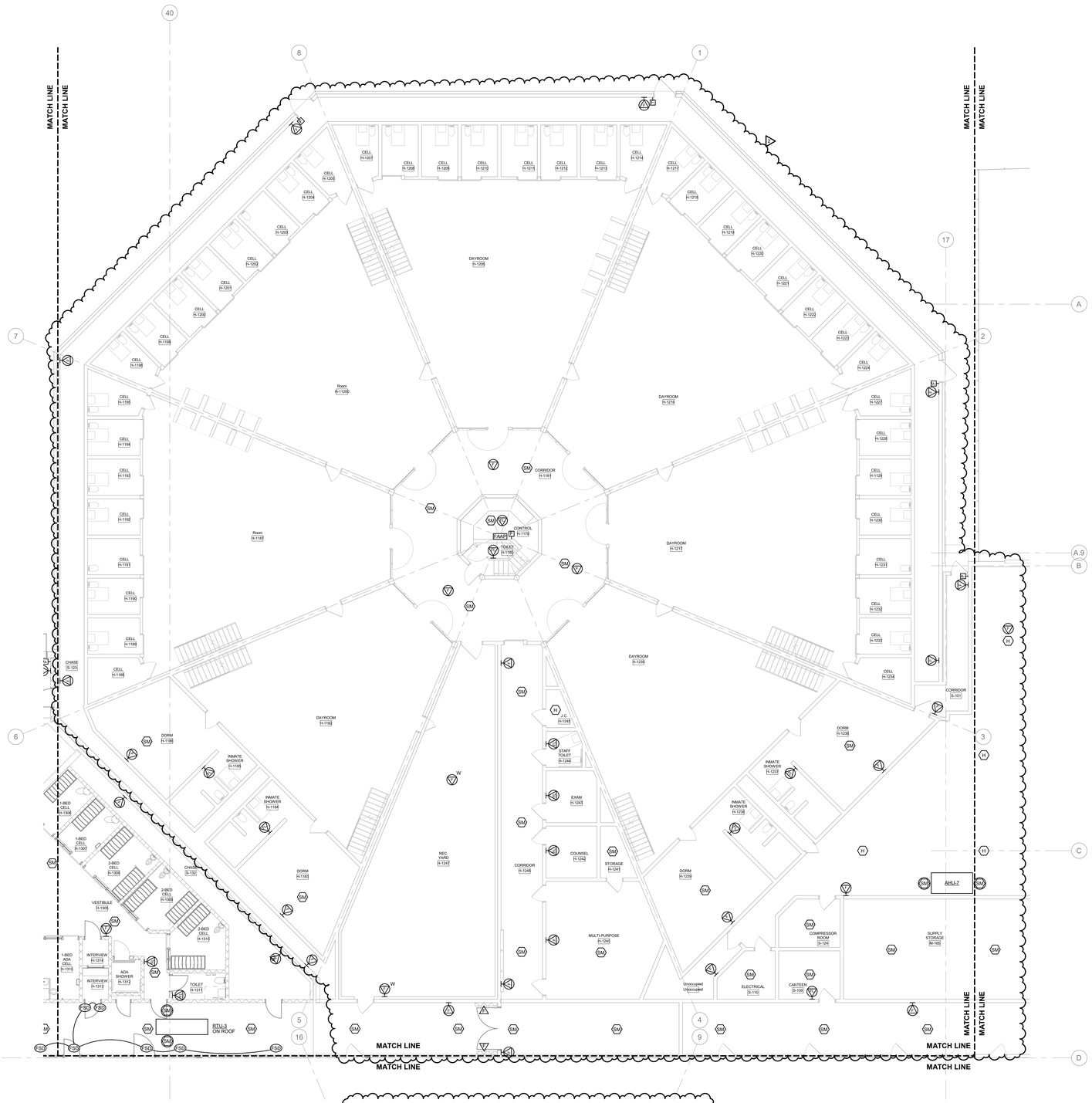
JRA JOB NO. 222047



FIRE ALARM PLAN - GROUND LEVEL - AREA A - EXISTNG PORTION

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

NOTES THIS SHEET ONLY
1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

NEW SHEET

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For
SHELBY COUNTY, AL
200 WEST COLLEGE STREET
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Key Plan

Professional Seals

ALABAMA LICENSED PROFESSIONAL ENGINEER ROBERT C. RENFRO No. 24365
7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title
FIRE ALARM PLAN - GROUND LEVEL - AREA A - EXISTING PORTION

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number
E301A.1

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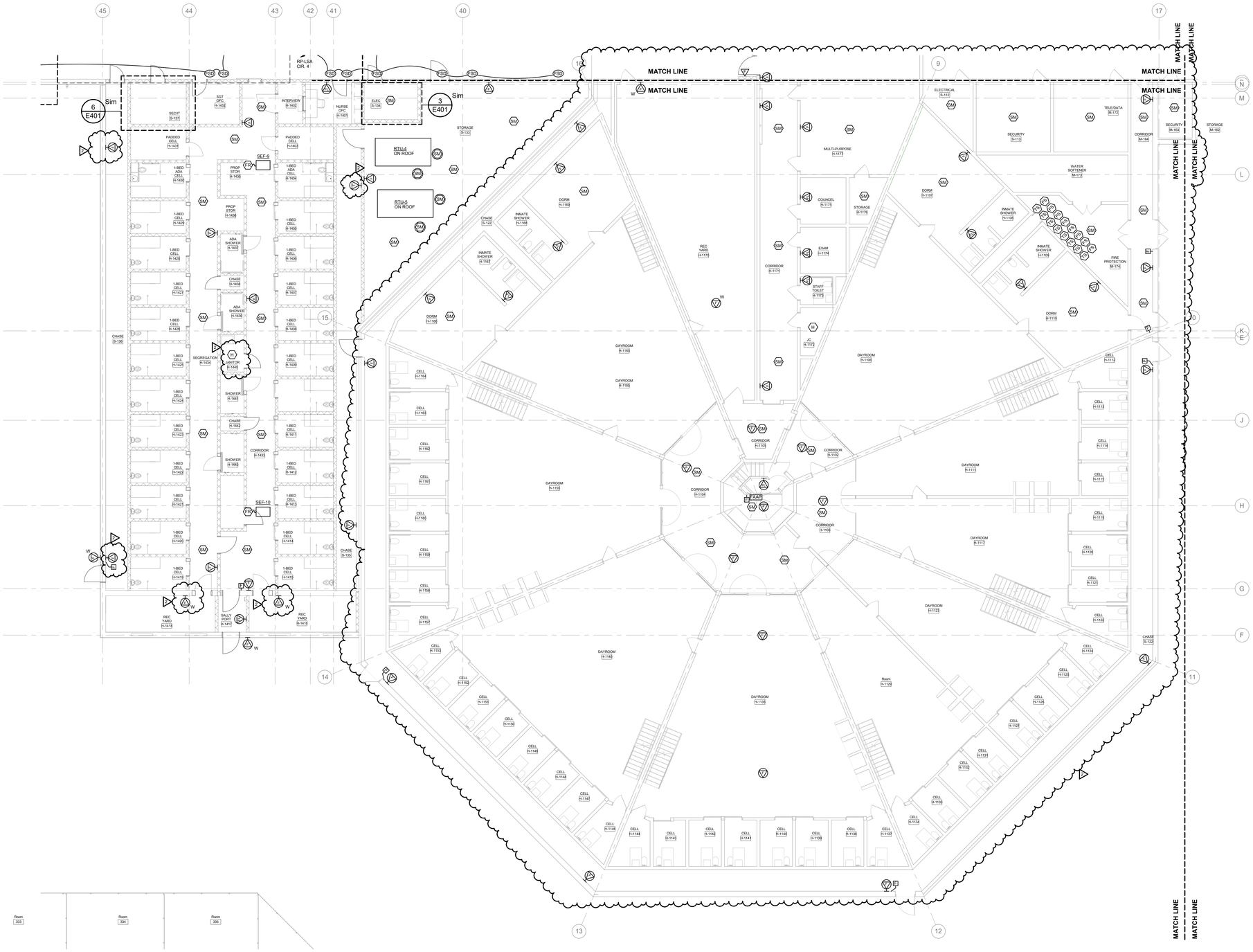

FIRE ALARM PLAN - GROUND LEVEL - AREA B

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

NOTES THIS SHEET ONLY
1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For
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Key Plan

AREA A AREA C AREA D

AREA B

N

Professional Seals

ALABAMA LICENSED PROFESSIONAL ENGINEER No. 24985 ROBERT C. RENFRO 7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title

FIRE ALARM PLAN - GROUND LEVEL - AREA B

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number

E301B

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FIRE ALARM PLAN - GROUND LEVEL - AREA C

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

NOTES THIS SHEET ONLY
1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

SHELBY COUNTY ALABAMA

Project
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Key Plan
AREA A AREA C AREA D
AREA B
N

Professional Seals
ALABAMA LICENSED PROFESSIONAL ENGINEER
No. 24465
ROBERT C. RENFRO
7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title
FIRE ALARM PLAN - GROUND LEVEL - AREA C

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number
E301C

JACKSON, RENFRO & ASSOCIATES, INC.
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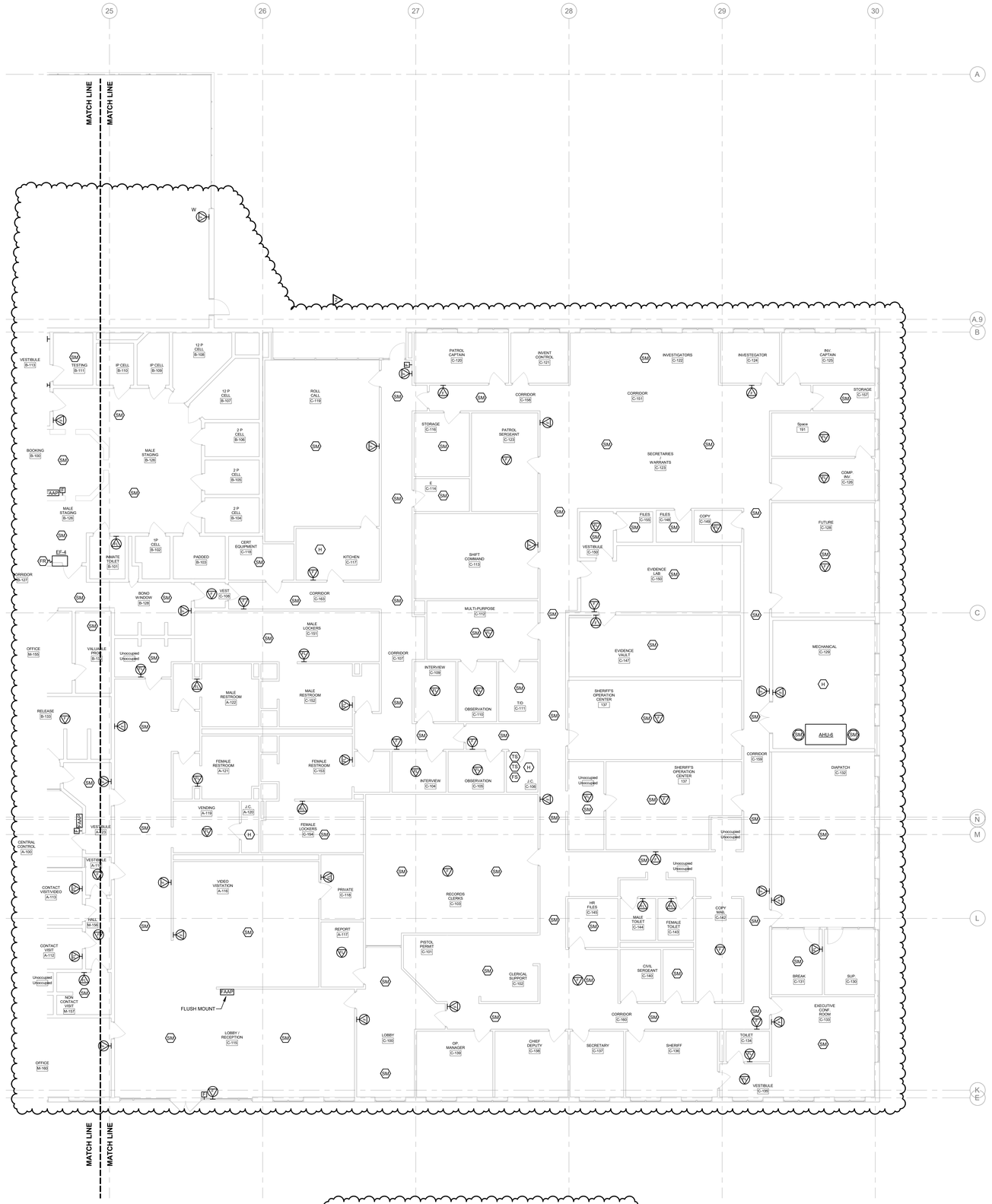
JRA JOB NO. 222047



FIRE ALARM PLAN - GROUND LEVEL - AREA D

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

NOTES THIS SHEET ONLY
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NEW SHEET

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Key Plan

AREA A AREA C AREA D

AREA B

N

Professional Seals

ALABAMA LICENSED PROFESSIONAL ENGINEER No. 24485 ROBERT C. RENFRO 7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title

FIRE ALARM PLAN - GROUND LEVEL - AREA D

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number

E301D

SHELBY COUNTY ALABAMA

Project

SHELBY COUNTY JAIL EXPANSION

380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For

SHELBY COUNTY, AL

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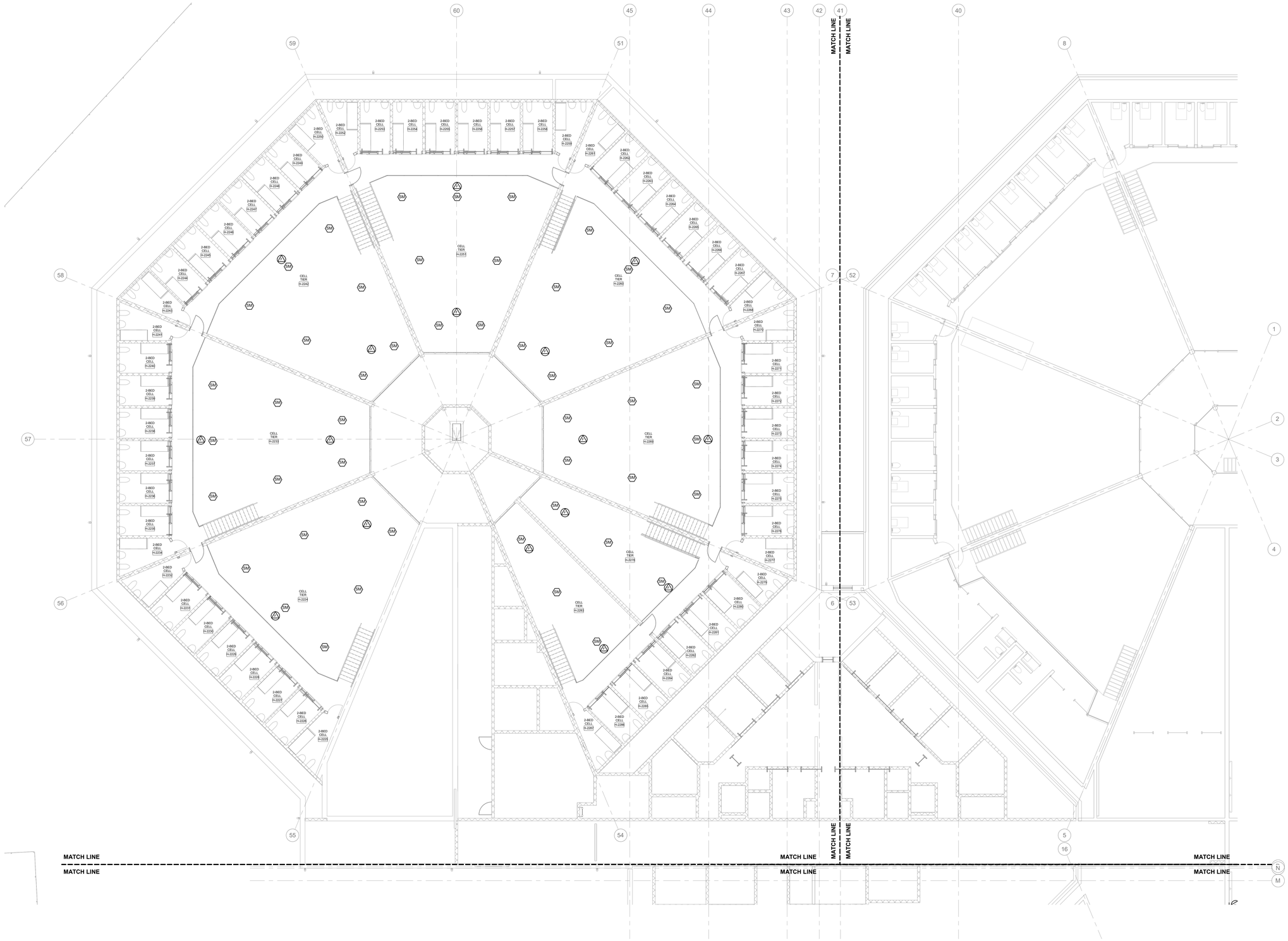

FIRE ALARM PLAN - CELL TIER - AREA A - ALTERNATE #1

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

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SHELBY COUNTY ALABAMA

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

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Key Plan

AREA A AREA C AREA D

AREA B

N

Professional Seals

ALABAMA LICENSED PROFESSIONAL ENGINEER No. 24685 ROBERT C. REED
7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title

FIRE ALARM PLAN - CELL TIER - AREA A

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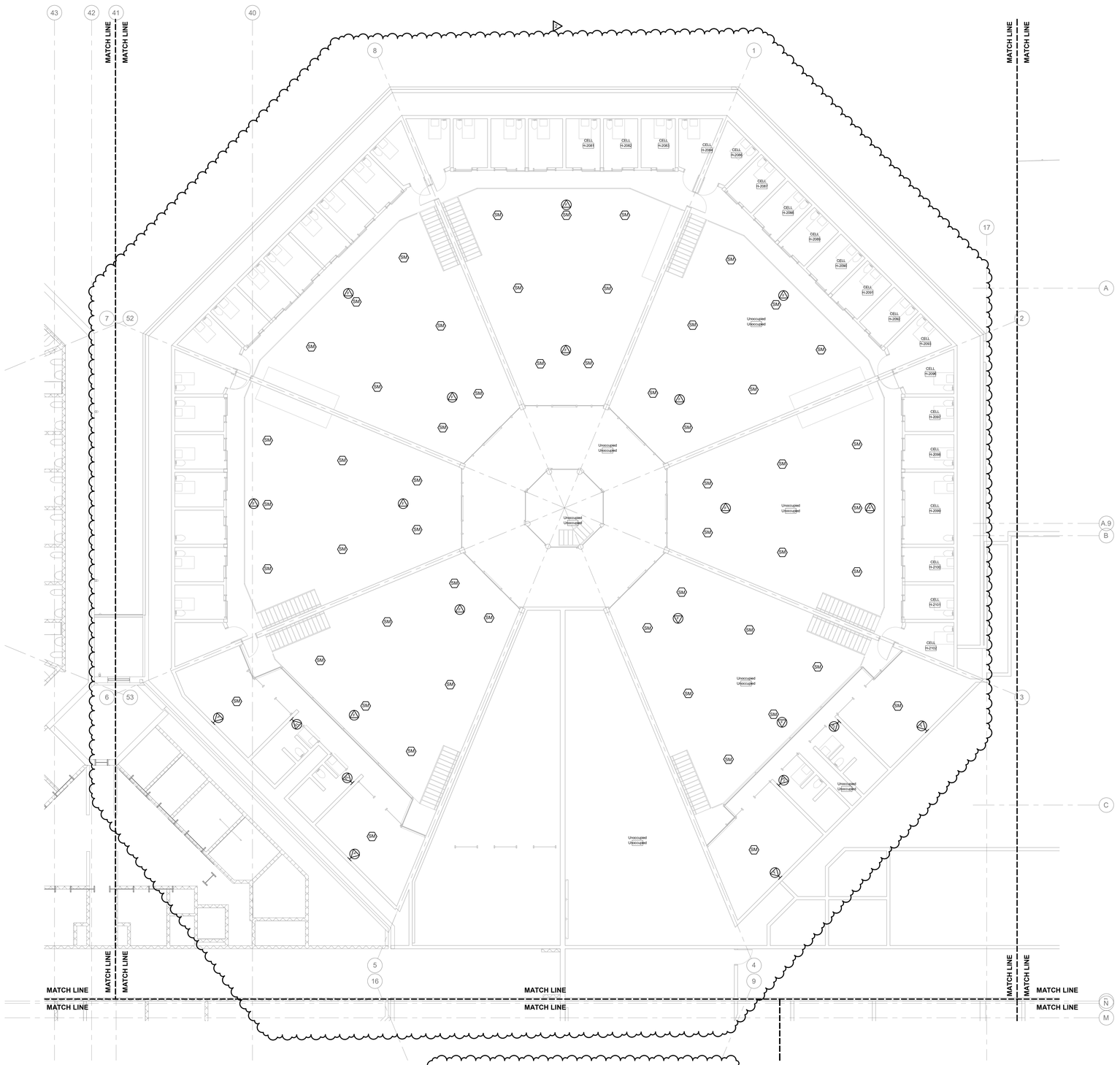
141 VILLAGE STREET ♦ SUITE 1 ♦ BIRMINGHAM, ALABAMA ♦ 35242

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number

E302A



FIRE ALARM PLAN - CELL TIER - AREA A - EXISTING PORTION

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

NOTES THIS SHEET ONLY
1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

NEW SHEET

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For
SHELBY COUNTY, AL
200 WEST COLLEGE STREET
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Key Plan
AREA A AREA C AREA D
AREA B

Professional Seals
ALABAMA LICENSED PROFESSIONAL ENGINEER ROBERT C. RENFRO
No. 24463
7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title
FIRE ALARM PLAN - CELL TIER - AREA A - EXISTING PORTION

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number
E302A.1

JACKSON, RENFRO & ASSOCIATES, INC
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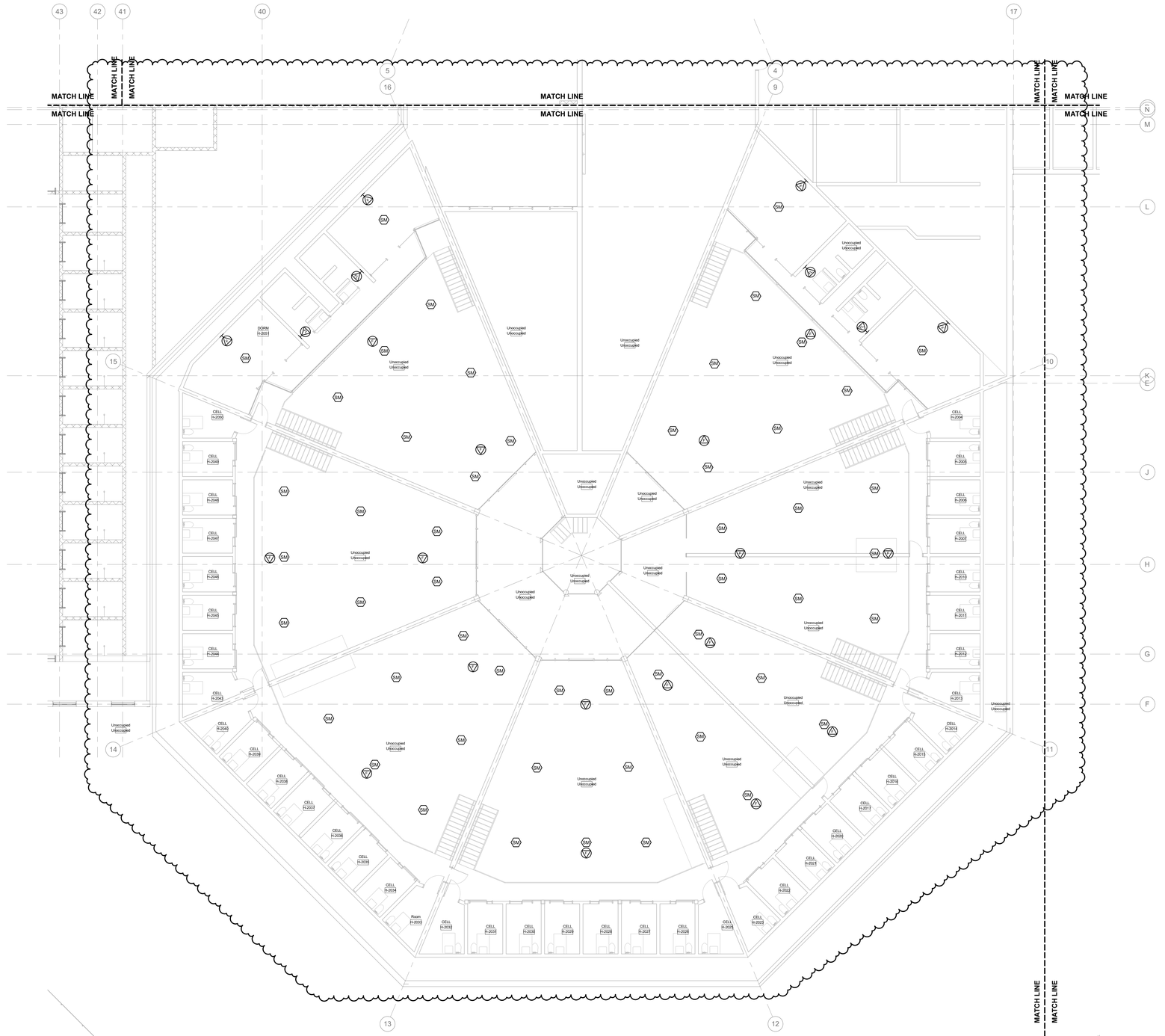
JRA JOB NO. 220347



FIRE ALARM PLAN - CELL TIER - AREA B

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

NOTES THIS SHEET ONLY

1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

NEW SHEET

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For
SHELBY COUNTY, AL
200 WEST COLLEGE STREET
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Key Plan
AREA A AREA C AREA D
AREA B

Professional Seals

ALABAMA LICENSED PROFESSIONAL ENGINEER No. 24485 ROBERT C. RENFRO
7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title
FIRE ALARM PLAN - CELL TIER - AREA B

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number
E302B

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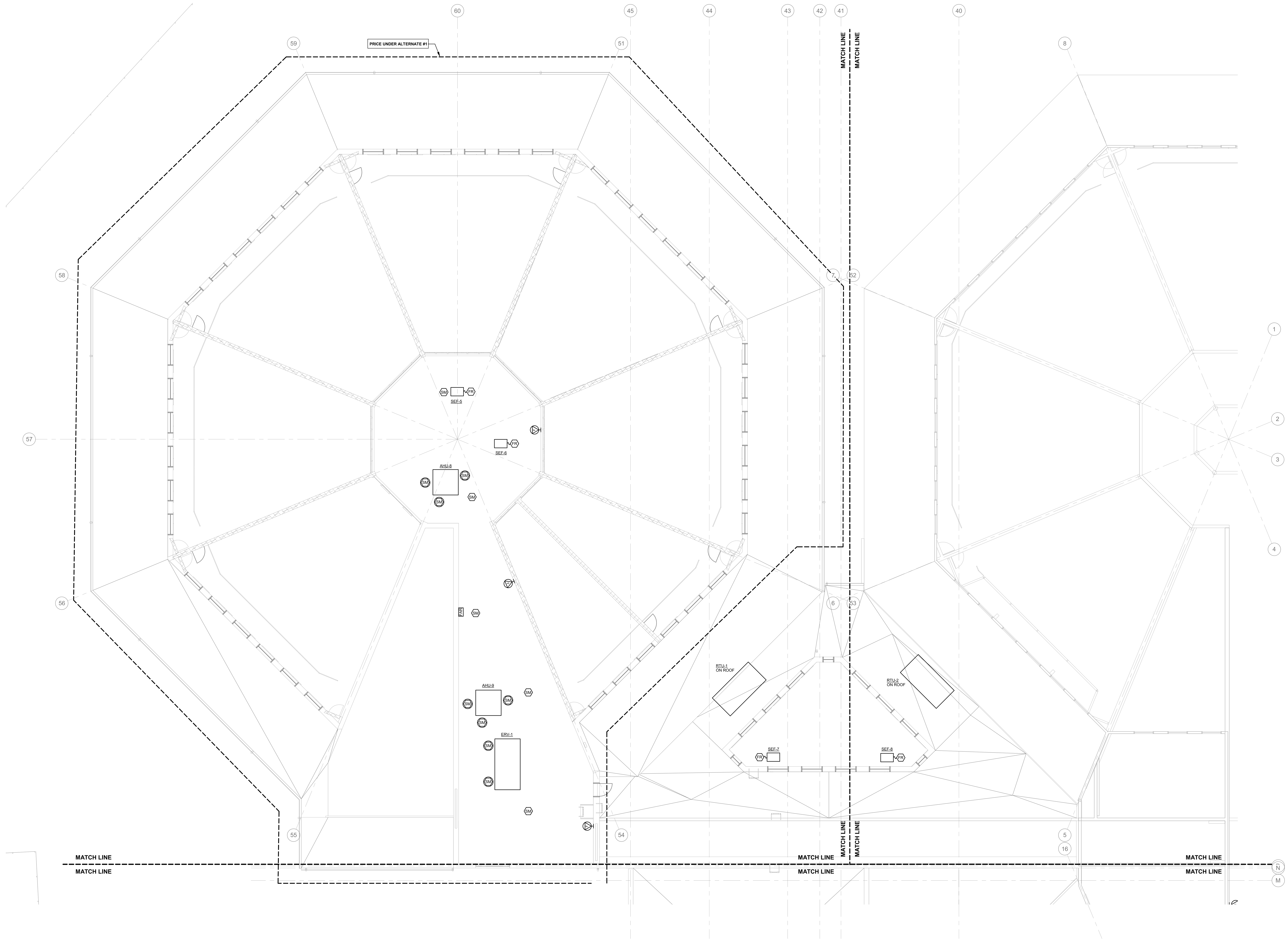

FIRE ALARM PLAN - MECHANICAL LEVEL - AREA A - BASE BID & ALTERNATE #1

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

NOTES THIS SHEET ONLY
1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For
SHELBY COUNTY, AL
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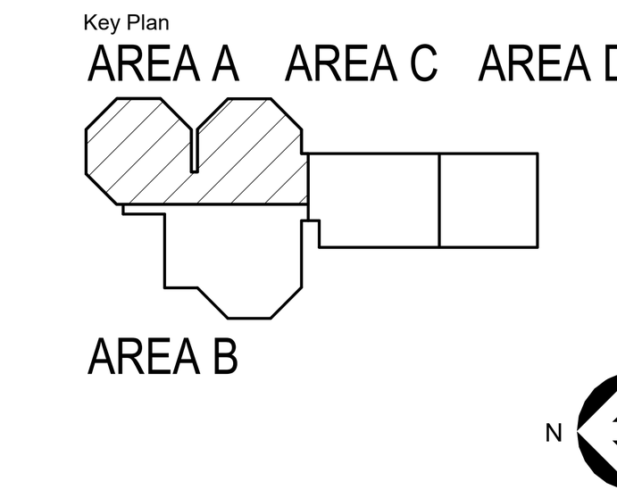
Key Plan



Professional Seals

ALABAMA LICENSED No. 24463 PROFESSIONAL ENGINEER ROBERT C. RENFRO
7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

JACKSON, RENFRO & ASSOCIATES, INC.
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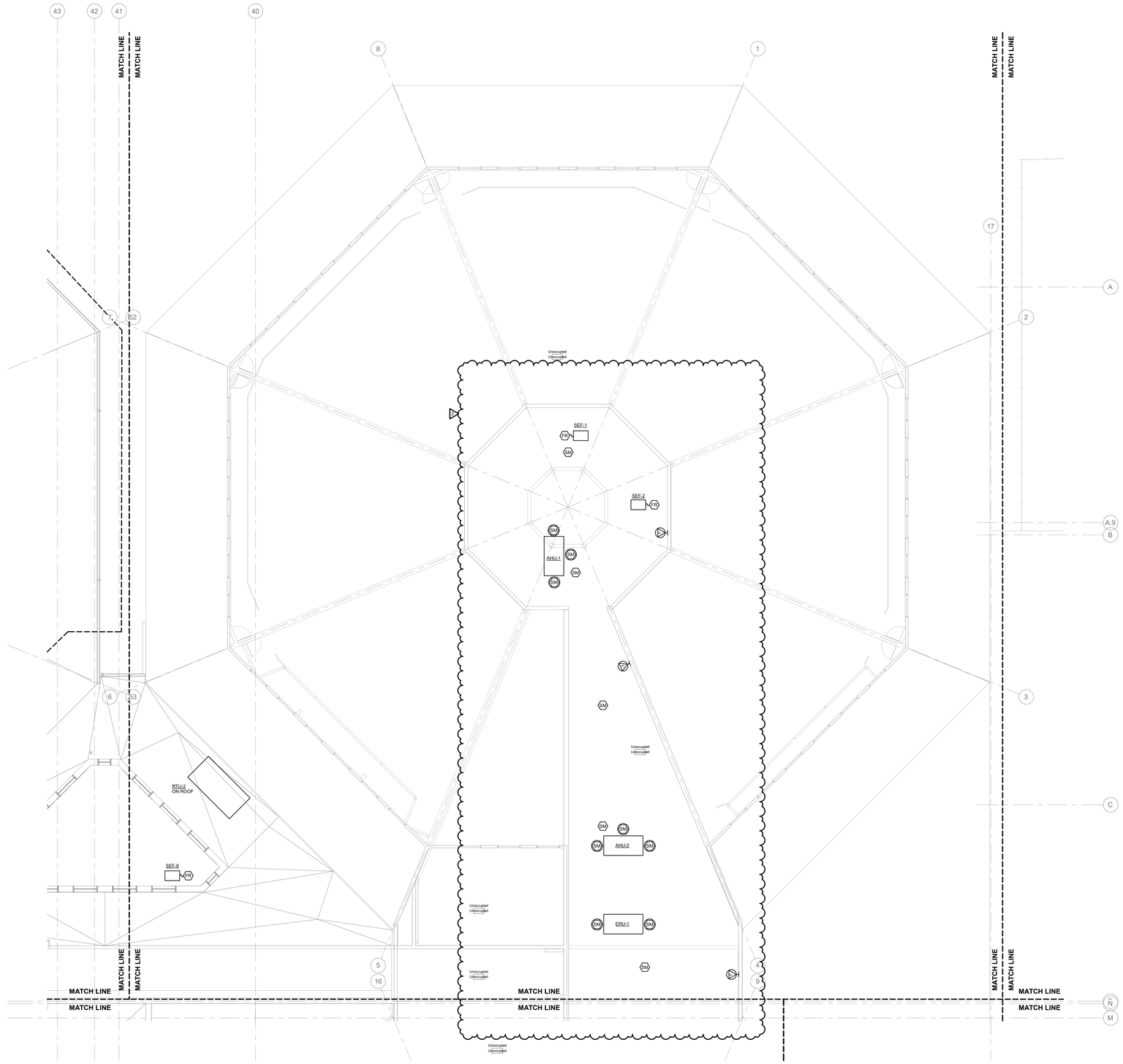
JRA JOB NO. 222047

Project No: 21.01020.00

Sheet Title
FIRE ALARM PLAN - MECHANICAL LEVEL - AREA A

Sheet Number
E303A



FIRE ALARM PLAN - MECHANICAL LEVEL - AREA A - EXISTING PORTION

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

NOTES THIS SHEET ONLY
1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

NEW SHEET

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For
SHELBY COUNTY, AL
200 WEST COLLEGE STREET
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Key Plan

AREA A AREA C AREA D

AREA B

N

Professional Seals

ALABAMA LICENSED PROFESSIONAL ENGINEER No. 24463 ROBERT C. RENFRO JR. 7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title

FIRE ALARM PLAN - MECHANICAL LEVEL - AREA A - EXISTING PORTION

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number

E303A.1

JACKSON, RENFRO & ASSOCIATES, INC.
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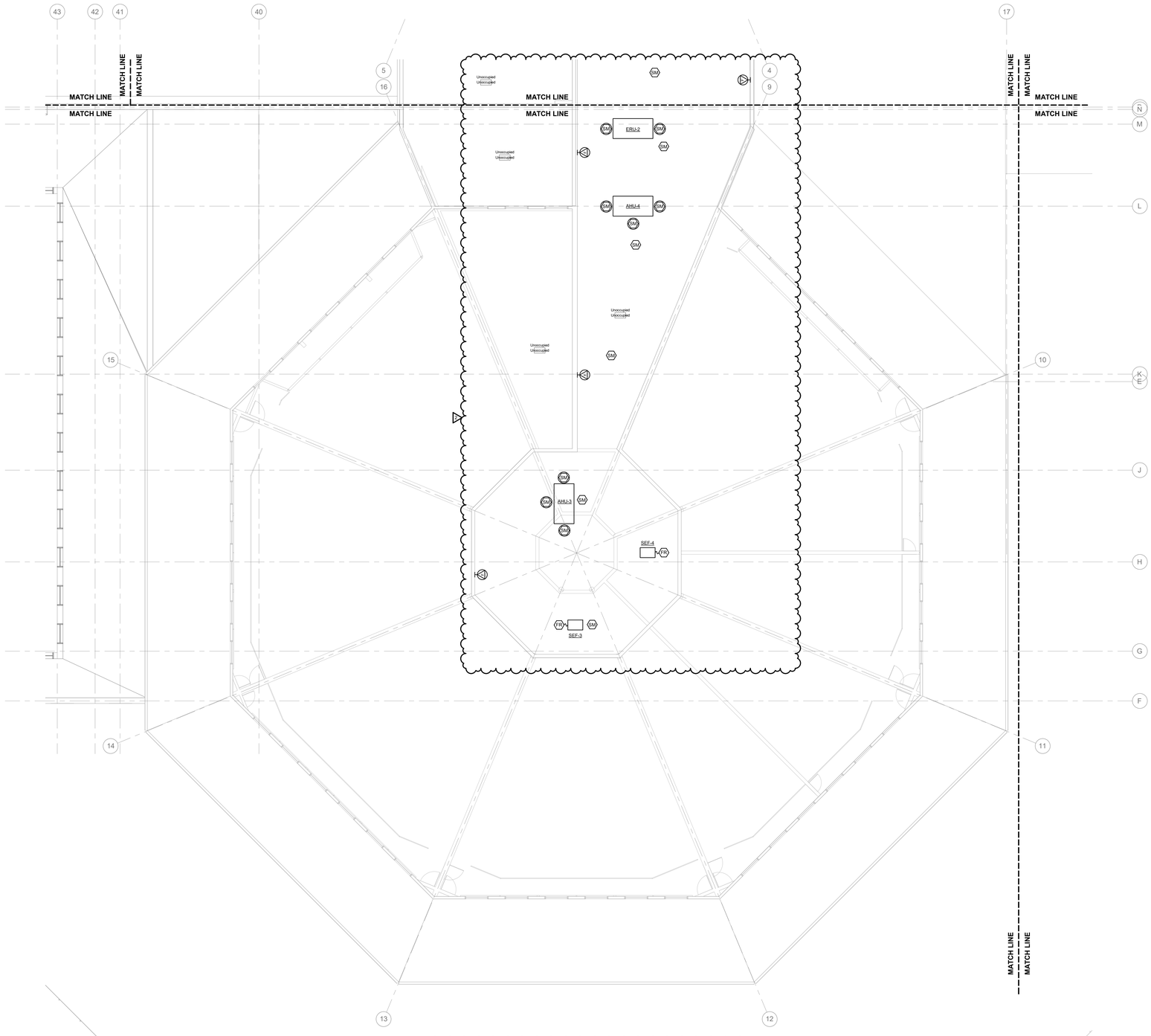

FIRE ALARM PLAN - MECHANICAL LEVEL - AREA B

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

NOTES THIS SHEET ONLY
1. REPLACE EXISTING FIRE ALARM SYSTEM. REMOVE ALL EXISTING DEVICES/WIRING AND INSTALL BLANK COVERPLATE OVER LOCATION WITH TAMPER-RESISTANT SCREWS. EXISTING LOCATIONS MAY BE REUSED WHERE APPLICABLE.

NEW SHEET

SHELBY COUNTY ALABAMA

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
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Prepared For
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Electrical
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Key Plan

AREA A AREA C AREA D

AREA B

N

Professional Seals

ALABAMA LICENSED PROFESSIONAL ENGINEER No. 24463 ROBERT C. RENFRO 7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title

FIRE ALARM PLAN - MECHANICAL LEVEL - AREA B

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number

E303B

JACKSON, RENFRO & ASSOCIATES, INC
ELECTRICAL ENGINEERING & DESIGN
141 VILLAGE STREET ■ SUITE 1 ■ BIRMINGHAM, ALABAMA ■ 35242

ROBERT RENFRO, PE
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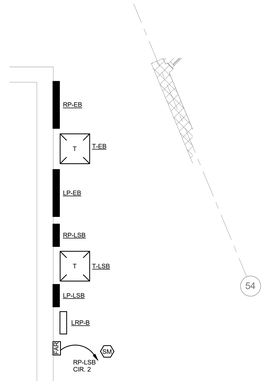
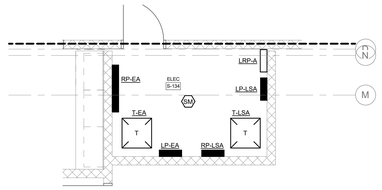
JRA JOB NO. 222047



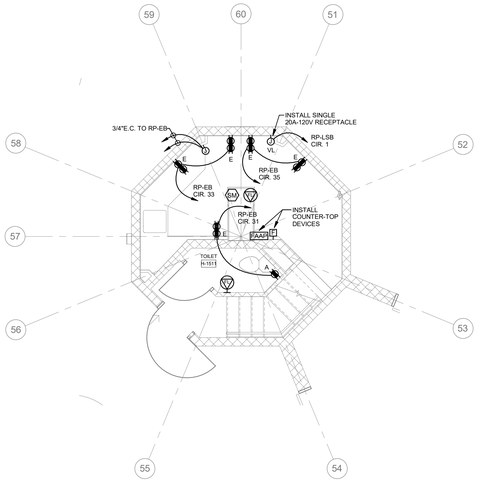
LARGE SCALE MECHANICAL LEVEL ELECTRICAL ROOM - ALTERNATE #1

1 / E401 SCALE: 1/4" = 1'-0"



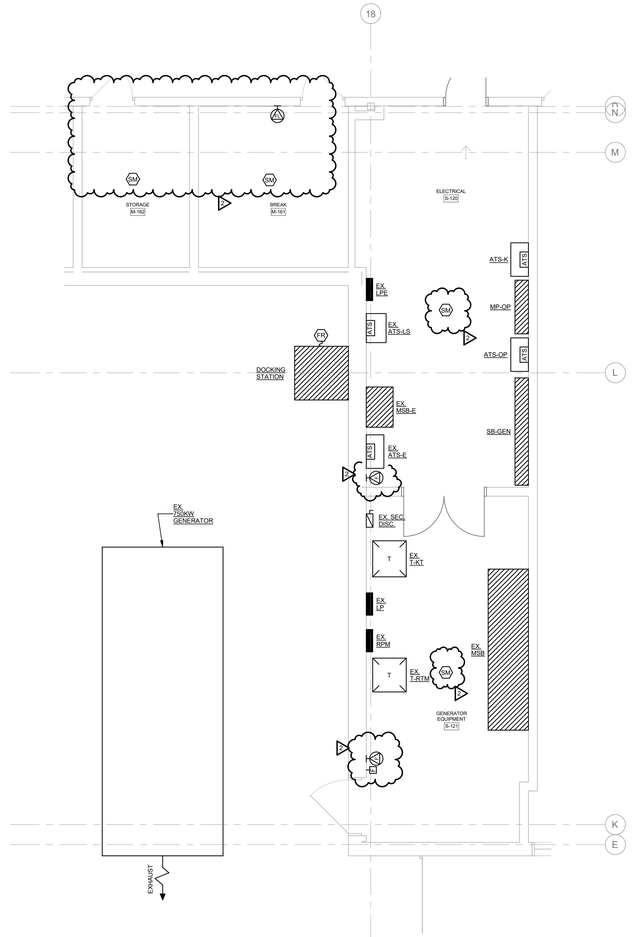
LARGE SCALE ELEC S-134

3 / E401 SCALE: 1/4" = 1'-0"



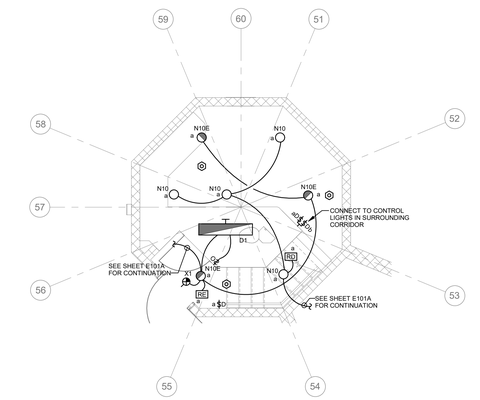
LARGE SCALE CONTROL H-1220 POWER & AUXILIARY PLAN - ALTERNATE #1

4 / E401 SCALE: 1/4" = 1'-0"



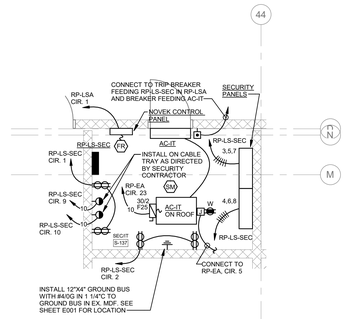
LARGE SCALE MAIN ELECTRICAL ROOM

2 / E401 SCALE: 1/4" = 1'-0"



LARGE SCALE CONTROL ROOM H-1220 LIGHTING PLAN - ALTERNATE #1

5 / E401 SCALE: 1/4" = 1'-0"



LARGE SCALE SEC/IT S-137

6 / E401 SCALE: 1/4" = 1'-0"

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For
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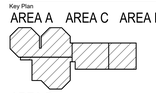
Key Plan



Professional Seals

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

Project No: 21.01020.00

Sheet Title

LARGE SCALE ELECTRICAL PLANS

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number

E401

JACKSON, RENFRO & ASSOCIATES, INC
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LIGHTING RELAY PANEL SCHEDULE - LRP-A

MARK	DESCRIPTION	PANEL	CIRCUIT	AUTOMATIC CONTROL ON	AUTOMATIC CONTROL OFF	OVERRIDE ON STATION	OVERRIDE ON BUTTON	OVERRIDE OFF STATION	OVERRIDE OFF BUTTON	REMARKS
R1	EXTERIOR POLE LIGHTING	LP-LSA	1	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		EMERGENCY
R2	EXTERIOR POLE LIGHTING	LP-LSA	2	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		EMERGENCY
R3	EXTERIOR LIGHTING	LP-LSA	3	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		EMERGENCY
R4	CORRIDOR S-131/ SALLY PORT S-145 LIGHTING	LP-EA	1	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R5	CELL LIGHTING (RIGHT SIDE)	LP-EA	3	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R6	CELL LIGHTING (LEFT SIDE)	LP-EA	3	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R7	CORRIDOR H-1163 LIGHTING	LP-EA	4	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R8	REC YARD H-1179 LIGHTING	LP-EA	4	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R9	REC YARD H-1177 LIGHTING	LP-EA	4	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R10	CORRIDOR H-1163 OUTLETS (LEFT)	RP-EA	9	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R11	REC YARD H-1179 OUTLETS	RP-EA	9	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R12	CORRIDOR H-1163 OUTLETS (RIGHT)	RP-EA	10	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R13	REC YARD H-1177 OUTLETS	RP-EA	10	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R14	CORRIDOR S-131 OUTLETS	RP-EA	11	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R15	MENTAL HEALTH VESTIBULE OUTLETS	RP-EA	3	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R16	MENTAL HEALTH REC YARD OUTLETS	RP-EA	12	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R17	MENTAL HEALTH CELL LIGHTS (LEFT)	LP-EA	5	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R18	MENTAL HEALTH CELL LIGHTS (RIGHT)	LP-EA	5	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R19	MENTAL HEALTH VESTIBULE LIGHTS	LP-EA	6	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R20	MENTAL HEALTH REC YARD LIGHTS	LP-EA	6	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R21	ISOLATION CELL LIGHTS	LP-EA	38	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R22	ISOLATION CORRIDOR	LP-EA	38	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R23	EXTERIOR LIGHTING	LP-LSB	2	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R24	SPARE									
R25	SPARE									
R26	SPARE									
R27	SPARE									
R28	SPARE									
R29	SPARE									
R30	SPARE									

PRICE UNDER ALTERNATE #1

LIGHTING RELAY PANEL SCHEDULE - LRP-B

MARK	DESCRIPTION	PANEL	CIRCUIT	AUTOMATIC CONTROL ON	AUTOMATIC CONTROL OFF	OVERRIDE ON STATION	OVERRIDE ON BUTTON	OVERRIDE OFF STATION	OVERRIDE OFF BUTTON	REMARKS
R1	EXTERIOR LIGHTING	LP-LSB	1	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		EMERGENCY
R2	EXTERIOR LIGHTING	LP-LSB	2	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R3	REC YARD H-1298	LP-EB	4	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R4	CELL LIGHTING (UPPER LEVEL)	LP-EB	8	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R5	CELL LIGHTING (LOWER LEVEL)	LP-EB	8	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R6	CELL LIGHTING (UPPER LEVEL)	LP-EB	9	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R7	CELL LIGHTING (LOWER LEVEL)	LP-EB	9	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R8	CELL LIGHTING (UPPER LEVEL)	LP-EB	10	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R9	CELL LIGHTING (LOWER LEVEL)	LP-EB	10	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R10	CELL LIGHTING (UPPER LEVEL)	LP-EB	11	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R11	CELL LIGHTING (LOWER LEVEL)	LP-EB	11	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R12	CELL LIGHTING (UPPER LEVEL)	LP-EB	12	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R13	CELL LIGHTING (LOWER LEVEL)	LP-EB	12	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R14	CELL LIGHTING (UPPER LEVEL)	LP-EB	13	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R15	CELL LIGHTING (LOWER LEVEL)	LP-EB	13	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R16	CELL LIGHTING (UPPER LEVEL)	LP-EB	14	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R17	CELL LIGHTING (LOWER LEVEL)	LP-EB	14	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R18	CELL LIGHTING (UPPER LEVEL)	LP-EB	15	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R19	CELL LIGHTING (LOWER LEVEL)	LP-EB	15	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R20	DAYROOM LIGHTING (H-1224)	LP-EB	16	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R21	DAYROOM LIGHTING (H-1232)	LP-EB	17	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R22	DAYROOM LIGHTING (H-1242)	LP-EB	18	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R23	DAYROOM LIGHTING (H-1252)	LP-EB	19	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R24	DAYROOM LIGHTING (H-1262)	LP-EB	20	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R25	DAYROOM LIGHTING (H-1272)	LP-EB	21	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R26	DAYROOM LIGHTING (H-1282)	LP-EB	22	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R27	DAYROOM LIGHTING (H-1286)	LP-EB	23	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R28	CORRIDOR/REC YARD H-1298 OUTLETS	RP-EB	18	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R29	DAYROOM H-1224 TV OUTLET	RP-EB	19	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R30	DAYROOM H-1224 CONVENIENCE OUTLETS	RP-EB	20	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R31	DAYROOM H-1232 CONVENIENCE OUTLETS	RP-EB	20	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R32	DAYROOM H-1232 TV OUTLET	RP-EB	21	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R33	DAYROOM H-1242 TV OUTLET	RP-EB	23	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R34	DAYROOM H-1242 CONVENIENCE OUTLETS	RP-EB	22	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R35	DAYROOM H-1252 CONVENIENCE OUTLETS	RP-EB	22	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R36	DAYROOM H-1252 TV OUTLET	RP-EB	24	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R37	DAYROOM H-1262 TV OUTLET	RP-EB	25	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R38	DAYROOM H-1262 CONVENIENCE OUTLETS	RP-EB	26	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R39	DAYROOM H-1272 CONVENIENCE OUTLETS	RP-EB	26	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R40	DAYROOM H-1272 TV OUTLET	RP-EB	27	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R41	DAYROOM H-1282 TV OUTLET	RP-EB	28	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R42	DAYROOM H-1286 TV OUTLET	RP-EB	29	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R43	DAYROOM H-1282 CONVENIENCE OUTLETS	RP-EB	30	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R44	DAYROOM H-1286 CONVENIENCE OUTLETS	RP-EB	30	OWNER	OWNER	BY SECURITY CONTRACTOR		BY SECURITY CONTRACTOR		
R45										
R46										
R47										
R48										
R49										
R50										

NOTES:

1. PROVIDE BARRIER TO SEPARATE "EMERGENCY" CIRCUITS FROM "STANDBY" CIRCUITS.
2. LIGHTING RELAY PANELS ARE FURNISHED BY SECURITY CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR. ALL CONTROL CABLING IS INSTALLED BY SECURITY CONTRACTOR.
3. ALL RELAYS THAT SERVE EMERGENCY CIRCUITS SHALL CLOSE UPON LOSS OF NORMAL POWER.

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	CATALOG NUMBER	VOLTAGE	LAMPS WATTS	LAMPS LUMENS	LAMPS TYPE	MOUNTING HEIGHT	MOUNTING TYPE	REMARKS
A2	LITHONIA COLUMBIA DAY-BRITE	2VRTL-G-L24-3000LM-ICW-AP250FL-MVOLT	120/277	26	2,906	LED 3500K	CEILING	RECESSED LAY-IN	
A7	KENALL	WCH-4-0/0-45L35K-DCC-DV-2/B-2	120/277	57	2,860	LED 3500K	8'-0" A.F.F.	OUTLET BOX	
A7E	KENALL	WCH-4-0/0-45L35K-DCC-DV-2/B-2-EL	120/277	57	2,860	LED 3500K	8'-0" A.F.F.	OUTLET BOX	EM
A10	LITHONIA COLUMBIA DAY-BRITE	2VRTL-G-L48-3000LM-ICW-AP250FL-MVOLT	120/277	22	2,451	LED 3500K	CEILING	RECESSED LAY-IN	
A10E	LITHONIA COLUMBIA DAY-BRITE	2VRTL-G-L48-3000LM-ICW-AP250FL-MVOLT-PS1050	120/277	22	2,451	LED 3500K	CEILING	RECESSED LAY-IN	EM
A12	LITHONIA COLUMBIA DAY-BRITE	2VRTL-G-L48-5000LM-ICW-AP250FL-MVOLT	120/277	39	4,321	LED 3500K	CEILING	RECESSED LAY-IN	
A12E	LITHONIA COLUMBIA DAY-BRITE	2VRTL-G-L48-5000LM-ICW-AP250FL-MVOLT-PS1050	120/77	39	4,321	LED 3500K	CEILING	RECESSED LAY-IN	EM
A14	LITHONIA COLUMBIA DAY-BRITE	2VRTL-G-L48-7000LM-ICW-AP250FL-MVOLT	120/277	59	6,350	LED 3500K	CEILING	RECESSED LAY-IN	
A14E	LITHONIA COLUMBIA DAY-BRITE	2VRTL-G-L48-7000LM-ICW-AP250FL-MVOLT-PS1050	120/277	59	6,350	LED 3500K	CEILING	RECESSED LAY-IN	EM
C3	SHAT-R-SHIELD LIGHTING INC. (CELL)	042-VR-35-CL-Y-VH-P2-PC-00-TB-00 WITH NIGHT LIGHT SWITCHED SEPARATELY	120/277	42	4,400	LED 3500K	CEILING	OUTLET BOX	
C9	SHAT-R-SHIELD LIGHTING INC. (SHOWER)	32-H20-40-CL-VH-P2-PC-TB-00-00	120/277	32	2650	LED 4000K	CEILING	OUTLET BOX	
D1	LITHONIA COLUMBIA DAY-BRITE	CLX-L48-4000LM-SEF-RDL-MVOLT-THCLX	120/277	40	4,000	LED 3500K	13-0" A.F.F. OR AS REQUIRED TO AVOID MECHANICAL	OUTLET BOX	
D2	LITHONIA COLUMBIA DAY-BRITE	CLX-L24-2000LM-SEF-RDL-MVOLT-THCLX	120/277	18	2,000	LED 3500K	ABOVE DOOR	OUTLET BOX	
G1	LITHONIA COLUMBIA DAY-BRITE	CSXWG-LED-30C-1000-40K T4M	120/277	104	10,000	LED 4000K	16'-0" A.F.F.	OUTLET BOX	FSA
H8	MARK ARCHITECTURAL LIGHTING	S4LID-LCB-8FT-MSL8-80CRI-35K-600LMF-I90CRI-I35K-I600LMF-BW-MIN1-SCT-MVOLT-WHT-ZT	120/277	U-5 W/FT D-6 W/FT	U-600L/FT D-600L/FT	LED 3500K	10'-0" A.F.F.	PENDANT	FSA
H8E	MARK ARCHITECTURAL LIGHTING	S4LID-LCB-8FT-MSL8-80CRI-35K-600LMF-I90CRI-I35K-I600LMF-BW-MIN1-SCT-MVOLT-WHT-E10WLCP-ZT	120/277	U-5 W/FT D-6 W/FT	U-600L/FT D-600L/FT	LED 3500K	10'-0" A.F.F.	PENDANT	EM, FSA
J1	LITHONIA	2VRTL-G-L24-7000LM-ICW-AP250FL-MVOLT-EZ1-35K	120/277	59	6,350	LED 3500K	CEILING	RECESSED LAY-IN	
J1E	LITHONIA	2VRTL-G-L24-7000LM-ICW-AP250FL-MVOLT-EZ1-35K-PS1050	120/277	59	6,350	LED 3500K	CEILING	RECESSED LAY-IN	EM14
J2	KENALL	RMCD-2-FL/TR-4-67L35-DV-2/9-1	120/277	67	6,200	LED 3500K	CEILING	RECESSED GYP-BOARD	
N10	GOTHAM PRESCOLITE ALPHABET	EVO6-35/10-AR-WD-LSS-MVOLT-EZ1	120/277	10	1,000	LED 3500K	CEILING	RECESSED	
N10E	GOTHAM PRESCOLITE ALPHABET	EVO6-35/10-AR-WD-LSS-MVOLT-EZ1-EL	120/277	10	1,000	LED 3500K	CEILING	RECESSED	EM
R4	KENALL	CC-4-0-N/A-67L35K-1-DV-SYM/B-2-WL WET LOCATION	120/277	74	6,854	LED 3500K	12'-0" A.F.F.	OUTLET BOX	EM WET LOCATION
R4E	KENALL	CC-4-0-N/A-67L35K-1-DV-SYM/B-2-EL-WL WET LOCATION	120/277	74	6,854	LED 3500K	12'-0" A.F.F.	OUTLET BOX	EM WET LOCATION
S1	KENALL	SSD-4-1/1-NA-67L35K-DCC-NA-DV-2/9-2	120/277	74	8,927	LED 3500K	CEILING	SURFACE	
S1E	KENALL	SSD-4-1/1-NA-67L35K-DCC-NA-DV-2/9-2-EL	120/277	74	8,927	LED 3500K	CEILING	SURFACE	EM
S2	KENALL	SSD-2-1/1-NA-45L35K-DCC-NA-DV-2/9-2	120/277	46	5,096	LED 3500K	CEILING	SURFACE	
S2E	KENALL	SSD-2-1/1-NA-45L35K-DCC-NA-DV-2/9-2-EL	120/277	46	5,096	LED 3500K	CEILING	SURFACE	EM
S4	KENALL	SSD-4-1/1-NA-45L35K-DCC-NA-DV-2/9-2	120/277	46	5,590	LED 3500K	CEILING	SURFACE	
Y4	LITHONIA COLUMBIA DAY-BRITE	RSX3 LED-P2-40K-R4-MVOLT-SPA FURNISH WITH PHOTOCELL	120/277	222W	30,579	LED 4000K	MOUNT ON 30'-0" SQUARE POLE SEE DETAIL "E-LP1"		FSA
X1	KENALL	MMEX-1-0-*-DT-2-EL GREEN LETTERS	120/277	FURNISHED BY MANUFACTURER			CEILING OR ABOVE DOOR	OUTLET BOX	EMX,FSA
X3	LITHONIA	LHQM-LED-G-M6-EL GREEN LETTERS SINGLE-SIDED	120/277	FURNISHED BY MANUFACTURER			CEILING OR ABOVE DOOR	OUTLET BOX	EMX, FSA
X4	LITHONIA	LHQM-LED-G-M6-EL GREEN LETTERS DOUBLE-SIDED	120/277	FURNISHED BY MANUFACTURER			CEILING OR ABOVE DOOR	OUTLET BOX	EMX, FSA

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE ALL FIXTURE MOUNTING PROVISIONS WITH THE ASSOCIATED CEILING TYPE(S) PRIOR TO ORDERING FIXTURES.
2. ALL FIXTURES AND BALLASTS/DRIVERS SHALL BE RATED FOR OPERATION IN AMBIENT TEMPERATURES UP TO 55 DEGREES CELSIUS.
3. TO ENSURE PROPER COORDINATION AND LONG TERM SUPPORT FOR THE OWNER, ALL LIGHTING FIXTURES SHALL BE PURCHASED THROUGH MANUFACTURER'S REPRESENTATIVES AND DISTRIBUTORS LOCATED WITHIN SIXTY (60) MILES OF THE PROJECT SITE. SUBMITTALS RECEIVED THAT DO NOT COMPLY WITH THIS REQUIREMENT WILL BE REJECTED WITHOUT REVIEW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DELAYS CAUSED BY NON-COMPLIANCE WITH THIS REQUIREMENT.

LIGHTING FIXTURE SCHEDULE KEYED NOTES:

EM — EMERGENCY FIXTURE. PROVIDE EMERGENCY BATTERY PACK RATED FOR AT LEAST 700 LUMENS.
EM14 — EMERGENCY FIXTURE. PROVIDE EMERGENCY BATTERY PACK RATED FOR AT LEAST 1400 LUMENS.
EMX — EMERGENCY FIXTURE. PROVIDE EMERGENCY BATTERY PACK RATED FOR AT LEAST 90 MINUTES OF OPERATION.
FSA — PROVIDE FINISH AS SELECTED BY ARCHITECT.

GENERAL ELECTRICAL LEGEND

FAAP — FIRE ALARM – ANNUNCIATOR PANEL – FLUSH MOUNTED UNLESS INDICATED OTHERWISE – VERIFY EXACT LOCATION WITH LOCAL FIRE MARSHAL PRIOR TO ROUGH–IN.

FACP — FIRE ALARM – CONTROL PANEL – NEW TO REPLACE EXISTING.

FAR — FIRE ALARM – REMOTE PANEL (NAC, TRANSPONDER, BOOSTER POWER, ETC.).

F — FIRE ALARM – PULL STATION – WITH LOCKING SECURITY COVER – SEE FIRE ALARM RISER NOTE 10.

SM — FIRE ALARM – SMOKE DETECTOR – SEE FIRE ALARM RISER NOTES 8 AND 10.

H — FIRE ALARM – HEAT DETECTOR – SEE FIRE ALARM RISER NOTES 8 AND 10.

SM — FIRE ALARM – SMOKE DETECTOR – DUCT MOUNTED – LOCATE AS DIRECTED BY MECHANICAL – FURNISH CONTROL RELAY COMPATIBLE WITH FIRE ALARM SYSTEM FOR FAN SHUT DOWN – FURNISH TEST/ALARM INDICATOR STATION(S) LOCATED IN ACCESSIBLE, INCONSPICUOUS LOCATION AS APPROVED BY AUTHORITY HAVING JURISDICTION – SEE FIRE ALARM RISER NOTE 8.

FSD — FIRE ALARM – FIRE/SMOKE DAMPER (BY MECHANICAL) WITH DUCT–MOUNTED SMOKE DETECTOR (BY FIRE ALARM SUPPLIER) LOCATED AS DIRECTED BY MECHANICAL – FURNISH RELAY COMPATIBLE WITH FIRE ALARM SYSTEM AS DIRECTED BY MECHANICAL FOR CONTROL OF DAMPER – PROVIDE 120V POWER AS REQUIRED – SEE FIRE ALARM RISER NOTE 8.

FS — FIRE ALARM – FLOW SWITCH – VERIFY EXACT QUANTITIES AND LOCATIONS PRIOR TO ROUGH–IN.

TS — FIRE ALARM – TAMPER SWITCH – VERIFY EXACT QUANTITIES AND LOCATIONS PRIOR TO ROUGH–IN.

F OR F — FIRE ALARM – COMBINATION HORN AND VISUAL INDICATOR – CEILING OR WALL MOUNTED AS INDICATED – PROVIDE ZONED NOTIFICATION PER FIRE ALARM RISER NOTES 9 AND 10.

FL OR FL — FIRE ALARM – VISUAL INDICATOR ONLY – CEILING OR WALL MOUNTED AS INDICATED – PROVIDE ZONED NOTIFICATION PER FIRE ALARM RISER NOTES 9 AND 10.

F W OR F W — FIRE ALARM – COMBINATION HORN AND VISUAL INDICATOR – WEATHER–PROOF – CEILING OR WALL MOUNTED AS INDICATED – CANDELA RATING AS DIRECTED BY LOCAL FIRE MARSHAL – PROVIDE ZONED NOTIFICATION PER FIRE ALARM RISER NOTES 9 AND 10.

F — FIRE ALARM – MAGNETIC DOOR HOLDER.

FR — FIRE ALARM – ADDRESSABLE CONTROL RELAY(S) FOR ELEVATOR, SMOKE CONTROL FUNCTIONS OR OTHER CONTROL FUNCTIONS.

A / E-1 — DETAIL DESIGNATOR – "A" INDICATED DETAIL MARK – "E–1" INDICATED SHEET NUMBER WHERE DETAIL IS LOCATED (TYPICAL).

GENERAL ABBREVIATIONS:

- EX — EXISTING TO REMAIN.
- EX–R — EXISTING TO BE REMOVED – REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT, DEVICES, CONDUIT AND WIRING CONNECTIONS TO OTHER ELECTRICAL ITEMS UNLESS SHOWN OTHERWISE.
- EX–RL — EXISTING TO BE RELOCATED – REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT, DEVICES, CONDUIT AND WIRING AT EXISTING LOCATION. RELOCATE ITEM TO NEW LOCATION SHOWN ON ELECTRICAL PLANS. EXTEND AND RECONNECT EXISTING CONDUIT, WIRING, ETC. TO NEW LOCATION AS REQUIRED UNLESS SHOWN OTHERWISE.
- EX–RP — EXISTING TO BE REPLACED – EXTEND AND RECONNECT EXISTING CONDUIT AND WIRING TO REPLACED ITEM.

TYPICAL CIRCUITRY DESIGNATIONS:

2 SETS OF 4#3/0 & 1#3G – 2 1/2"C

- CONDUIT SIZE.
- GROUND CONDUCTOR WIRE GAUGE.
- QUANTITY OF GROUND CONDUCTORS (PER SET)
- PHASE/NEUTRAL CONDUCTOR WIRE GAUGE.
- QUANTITY OF PHASE/NEUTRAL CONDUCTORS (PER SET).
- QUANTITY OF PARALLEL SETS OF THE PHASE/NEUTRAL CONDUCTORS, GROUND CONDUCTOR AND CONDUIT SPECIFIED.

NORMAL / EMERGENCY

- FIXTURE OUTLET – SURFACE OR PENDANT MOUNTED LIGHT FIXTURE.
- FIXTURE OUTLET – RECESSED LIGHT FIXTURE.
- FIXTURE OUTLET – LINEAR – SURFACE OR PENDANT MOUNTED LIGHT FIXTURE.
- FIXTURE OUTLET – LINEAR – RECESSED LIGHT FIXTURE.
- FIXTURE OUTLET – WALL MOUNTED LIGHT FIXTURE.
- FIXTURE OUTLET – POLE LIGHT FIXTURE – QUANTITY AND ORIENTATION(S) OF LUMINAIRES AS INDICATED ON PLANS.
- OR — FIXTURE OUTLET – EXIT SIGN – CEILING OR WALL MOUNTED AS INDICATED – QUANTITY AND ORIENTATION OF FACES AND DIRECTIONAL ARROWS AS INDICATED.

FIXTURE OUTLET DESIGNATIONS:

- A — FIXTURE TYPE "A" – MAY BE USED WITH OTHER TYPES.
- b — SWITCH LEG TO WHICH FIXTURE IS CONNECTED – MAY BE USED WITH OTHER LOWER–CASE LETTERS.
- 2 — CIRCUIT NUMBER – MAY BE USED WITH OTHER NUMBERS.
- DL — INDICATES FIXTURE CONTROLLED BY DAYLIGHTING SENSOR.
- EM — EMERGENCY FIXTURE.
- NL — NIGHT LIGHT – DO NOT SWITCH.
- PC — INDICATES FIXTURE CONTROLLED BY PHOTO–CELL.
- SL — SECURITY LIGHT – DUSK–TO–DAWN OPERATION.

$ — SWITCH OUTLET – S.P.S.T. – 20A – 120–277VAC.

$3 — SWITCH OUTLET – 3 WAY – 20A – 120–277VAC.

$L — LIGHTING CONTROL SYSTEM – SWITCH OUTLET – LOW VOLTAGE – DIGITAL – BUTTONS AS REQUIRED FOR INDEPENDENT ON/OFF CONTROL OF EACH ZONE IN SPACE – CONNECT TO ASSOCIATED ROOM CONTROLLER PER DIAGRAM "E–RC".

$D — LIGHTING CONTROL SYSTEM – SWITCH OUTLET – LOW VOLTAGE – DIGITAL – BUTTONS AS REQUIRED FOR INDEPENDENT DIMMING AND ON/OFF CONTROL OF EACH ZONE IN SPACE – CONNECT TO ASSOCIATED ROOM CONTROLLER PER DIAGRAM "E–RC".

$O — SWITCH OUTLET – OCCUPANCY SENSOR WITH MANUAL OVERRIDE – S.P.S.T. – 120–277VAC – P.I.R. SENSOR – ACUITY N–LIGHT – RATED 800W AT 120VAC AND 1200W AT 277VAC – COLOR AS DIRECTED BY ARCHITECT.

LIGHTING CONTROL PANEL.

OR — LIGHTING CONTROL SYSTEM – OCCUPANCY SENSOR – CEILING OR WALL MOUNTED AS INDICATED – EXACT MOUNTING PROVISIONS, SENSOR TYPE AND LOCATION SHALL BE AS DIRECTED BY SUPPLIER FOR PROPER COVERAGE – LOW VOLTAGE – DUAL TECHNOLOGY (P.I.R. AND ULTRASONIC) – PROVIDE WITH POWER PACK(S) (LOCATED ABOVE CEILING IN ACCESSIBLE LOCATION) AS REQUIRED TO CONTROL ALL LOCAL LIGHTING – MAKE ALL CONNECTIONS (LOW VOLTAGE AND LINE VOLTAGE) TO CONTROL LOCAL LIGHTING AS DIRECTED BY SUPPLIER – SEE DETAIL "E–OS" – ACUITY N–LIGHT.

R — LIGHTING CONTROL SYSTEM – ON/OFF ROOM CONTROLLER(S) – LOW VOLTAGE – ACUITY N–LIGHT – MOUNT AS DIRECTED BY SUPPLIER ABOVE ACCESSIBLE CEILING – PROVIDE ALL INTERCONNECTIONS (LOW VOLTAGE AND LINE VOLTAGE) TO SENSORS, CONTROL SWITCHES, LIGHT FIXTURES, ETC. TO CONTROL LOCAL LIGHTING AS DIRECTED BY SUPPLIER – SEE DETAIL "E–RC".

RD — LIGHTING CONTROL SYSTEM – DIMMING ROOM CONTROLLER(S) – LOW VOLTAGE – ACUITY N–LIGHT – MOUNT AS DIRECTED BY SUPPLIER ABOVE ACCESSIBLE CEILING – PROVIDE ALL INTERCONNECTIONS (LOW VOLTAGE AND LINE VOLTAGE) TO SENSORS, CONTROL SWITCHES, LIGHT FIXTURES, ETC. TO CONTROL LOCAL LIGHTING AS DIRECTED BY SUPPLIER – SEE DETAIL "E–RC".

RE — RELAY – EMERGENCY LIGHTING INTERCONNECT – 10A – 120/277VAC – FURNISH WITH NEMA 1 ENCLOSURE AND MOUNT ABOVE ACCESSIBLE CEILING – ACUITY N–LIGHT – SEE DETAIL "E–ELC".

RN — LIGHTING CONTROL SYSTEM – NETWORKED ON/OFF ROOM CONTROLLER(S) – LOW VOLTAGE – ACUITY N–LIGHT – MOUNT AS DIRECTED BY SUPPLIER ABOVE ACCESSIBLE CEILING – PROVIDE ALL INTERCONNECTIONS (LOW VOLTAGE AND LINE VOLTAGE) TO SENSORS, CONTROL SWITCHES, LIGHT FIXTURES, ETC. TO CONTROL LOCAL LIGHTING AND TO NETWORK TO CENTRAL LIGHTING CONTROL SYSTEM AS DIRECTED BY SUPPLIER – SEE DETAIL "E–RC".

DUPLEX / DOUBLE DUPLEX

- WALL OUTLET – RECEPTACLE – 20A – 125V – 2P – 3W – GROUNDING – NEMA 5–20R – SINGLE PLATE.
- WALL OUTLET – RECEPTACLE – 20A – 125V – 2P – 3W – GROUNDING – "GFI" TYPE – WEATHER RESISTANT – NEMA 5–20R – SINGLE PLATE.
- WALL OUTLET – RECEPTACLE – 20A – 125V – 2P – 3W – GROUNDING – TAMPER RESISTANT – NEMA 5–20R – WITH KENALL "MIGHTY–MAC" SECURITY TAMPER–RESISTANT COVERPLATE.
- WALL OUTLET – RECEPTACLE – 20A – 125V – 2P – 3W – GROUNDING – "GFI" TYPE – TAMPER RESISTANT – WEATHER RESISTANT – NEMA 5–20R – WITH KENALL "MIGHTY–MAC" SECURITY TAMPER–RESISTANT COVERPLATE.
- WALL OUTLET – 20A – 125V – 2P – 3W – GROUND – NEMA L5–20R – SINGLE PLATE – INSTALL IN RECESSED LOCKING BOX FURNISHED BY DETENTION CONTRACTOR.
- WALL OUTLET – RECEPTACLE – 30A – 250V – 2P – 3W GROUNDING – TWIST–LOCK.

OUTLET INSTALLATION DESIGNATIONS (APPLY TO ALL OUTLETS, DEVICES & EQUIPMENT):

- A — ABOVE COUNTER – OUTLET SHALL BE MOUNTED 6 INCHES ABOVE DESK/COUNTERTOP, OR 4 INCHES ABOVE COUNTERTOP BACKSPLASH AS REQUIRED BY CONDITION, OR 48" A.F.F. OR AS NOTED.
- C — OUTLET MOUNTED FLUSH WITHIN CEILING – VERIFY EXACT LOCATIONS PRIOR TO ROUGH–IN.
- CPR — OUTLET MOUNTED TO INDUSTRIAL CORD REEL – HUBBELL HBL45123R20 INDUSTRIAL CORD REEL (AT STRUCTURE ABOVE) WITH 12/3 SJEO PENDANT CABLE (45' MINIMIMUM) TO OUTLET BOX (AT END OF CABLE) WITH RECEPTACLE TYPE (GFCI, ETC.) AS INDICATED ON PLANS.
- CW — INSTALL OUTLET WITHIN CASEWORK AND ROUTE CIRCUITRY (IN CONDUIT) WITHIN CASEWORK AS DIRECTED BY CASEWORK PROVIDER.
- E — EMERGENCY CIRCUIT – PROVIDE RED DEVICE – MAINTAIN SEPARATION BETWEEN NORMAL AND EMERGENCY CIRCUITRY (WITH SEPARATE CONDUITS AND METAL BARRIERS AS REQUIRED) PER NEC ARTICLE 700.10(B).
- GFR — CONNECT ASSOCIATED OUTLET DOWNSTREAM OF REMOTE, RECESSED FACELESS GFI DEVICE – DEVICE AND FACEPLATE FINISH SHALL MATCH ASSOCIATED OUTLET – LOCATE GFI DEVICE AS INCONSPICUOUSLY AS POSSIBLE IN READILY ACCESSIBLE LOCATION ADJACENT TO ASSOCIATED EQUIPMENT.
- VL — VERIFY EXACT OUTLET LOCATION WITH OWNER PRIOR TO ROUGH–IN.
- W — WEATHER PROOF – OUTLET SHALL BE INSTALLED WITH WEATHERPROOF, IN–USE, CAST COVER.
- WG — WIREGUARD – EQUIPMENT AND DEVICES SHALL BE PROVIDED WITH FACTORY FURNISHED WIREGUARD.

J — WALL OUTLET – JUNCTION BOX – FLUSH MOUNTED.

BRANCH/FEEDER CIRCUIT – CONCEALED IN WALLS OR CEILING.

BRANCH/FEEDER CIRCUIT – EXPOSED ON WALLS OR CEILING.

BRANCH/FEEDER CIRCUIT – CONCEALED IN FLOOR SLAB OR DIRT FILL.

BRANCH/FEEDER CIRCUIT – HOMERUN – CAN BE USED WITH OTHER BRANCH/FEEDER TYPES.

BRANCH/FEEDER CIRCUIT MODIFIERS:

- : 2#12 & 1#12G UNLESS NOTED OTHERWISE.
- : 3#12 & 1#12G, ETC. UNLESS NOTED OTHERWISE (TICK MARKS INDICATE CONDUCTOR QUANTITY NOT INCLUDING GROUND WIRE).
- 10 : 2#10 & 1#10G UNLESS NOTED OTHERWISE (NUMBER INDICATES WIRE AWG).

SIZE CONDUIT PER N.E.C. UNLESS INDICATED OTHERWISE.

FLEXIBLE CONNECTION TO EQUIPMENT.

BRANCH CIRCUIT – RISER DOWN OR GENERAL CONDUIT STUB–OUT.

POWER DISTRIBUTION EQUIPMENT.

LIGHTING PANEL – SURFACE MOUNTED.

LIGHTING/RECEPTACLE RELAY PANEL – FURNISHED BY SECURITY CONTRACTOR.

T — TRANSFORMER – POWER.

ATS — AUTOMATIC TRANSFER SWITCH.

GAP — NEW GENERATOR ANNUNCIATOR PANEL WITH GROUND–FAULT ALARM – FLUSH–MOUNTED – SEE SHEET E001.

DISCONNECT SWITCH – NONFUSED.

DISCONNECT SWITCH – FUSED.

MOTOR STARTER.

GROUND CONNECTION.

M — MOTOR OUTLET – SIZE AS SHOWN.

SV — SOLENOID VALVE – 120V – 1ø.

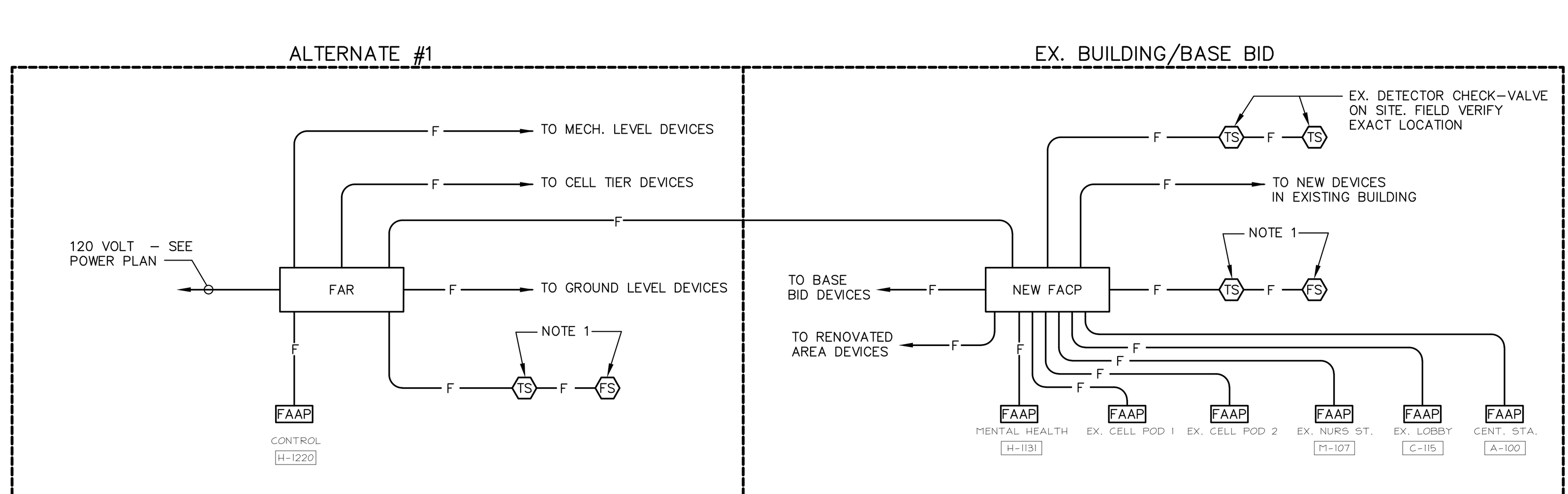
T — LOW VOLTAGE PLUMBING SYSTEM TRANSFORMER – 120V – 1ø.

SHUNT–TRIP OPERATOR WITH PLEXI–GLASS COVER.

GENERAL ELECTRICAL NOTES

1. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND WIRING MADE OBSOLETE BY THIS RENOVATION. COORDINATE WITH OWNER TO KEEP AND/OR REUSE ANY REUSABLE COMPONENTS. DISPOSE OF ALL OTHER EQUIPMENT MADE OBSOLETE BY THIS RENOVATION.
2. EXISTING PANEL DIRECTORY CARDS MODIFIED BY THIS RENOVATION SHALL BE RETYPED TO INDICATE CONNECTED CIRCUITS.
3. THIS CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR NECESSARY TO EXTEND CIRCUITS AND MAKE RECONNECTIONS TO ANY ACTIVE ELECTRICAL DEVICES ON WHICH THE BRANCH CIRCUIT IS INTERRUPTED BY THIS ALTERATION. CARE SHALL BE TAKEN TO INSURE THAT EXISTING PANEL AND FEEDER RATINGS ARE NOT EXCEEDED.
4. CONTRACTOR SHALL VISIT THE SITE OF THE WORK PRIOR TO SUBMITTING BID TO EXAMINE CAREFULLY LOCAL CONDITIONS AND DIFFICULTIES TO BE ENCOUNTERED. ANY DISCREPANCY BETWEEN PLANS AND EXISTING CONDITIONS SHALL IMMEDIATELY BE CALLED TO THE ATTENTION OF THE ARCHITECT.
5. THIS CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT FROM MANUFACTURER'S RECOMMENDATIONS PRIOR TO ROUGHING IN CONDUIT OR ORDERING CIRCUIT PROTECTION DEVICES. CONTRACTOR SHALL ADJUST CONDUIT SIZE, WIRE SIZE AND CIRCUIT PROTECTION SIZE ACCORDINGLY. IF REQUIREMENTS ARE LARGER THAN CALLED FOR ON ELECTRICAL PLANS NOTIFY ARCHITECT IMMEDIATELY.

2



FIRE ALARM SYSTEM RISER DIAGRAM

SCALE : NONE

FIRE ALARM SYSTEM NOTES

1. THIS CONTRACTOR SHALL VERIFY EXACT QUANTITY AND LOCATION OF ALL SPRINKLER SYSTEM FLOW SWITCHES AND TAMPER SWITCHES FROM FIRE PROTECTION SYSTEM PLANS AND SPECIFICATIONS PRIOR TO BID AND FURNISH ALL MATERIAL AND LABOR REQUIRED TO CONNECT EACH AS A SEPARATELY ZONED DEVICE. COORDINATE ALL WORK REQUIRED WITH FIRE PROTECTION SYSTEM SUB–CONTRACTOR.
2. FIRE ALARM EQUIPMENT SUPPLIER SHALL PROVIDE A COMPLETE SET OF FIRE ALARM EQUIPMENT SHOP DRAWINGS TO LOCAL FIRE MARSHALL FOR HIS APPROVAL.
3. ALL FIRE ALARM WIRING SHALL BE RUN IN CONDUIT (3/4" MINIMUM). NO EXCEPTIONS. EXACT CONDUIT SIZE AS DIRECTED BY EQUIPMENT SUPPLIER.
4. PROVIDE SURGE PROTECTION DEVICES ON EACH END OF ALL COPPER FIRE ALARM CIRCUITS WITH ANY PORTION LOCATED OUTSIDE OF BUILDINGS.
5. INSTALL DUCT MOUNTED SMOKE DETECTOR(S) AND CONTROL RELAY AT EACH MECHANICAL UNIT AND AT FIRE/SMOKE DAMPERS WHERE REQUIRED FOR UNIT SHUTDOWN. COORDINATE ALL WORK REQUIRED WITH MECHANICAL. CONTRACTOR SHALL REVIEW MECHANICAL PLANS TO CONFIRM UNIT LOCATIONS AND THAT QUANTITY OF REQUIRED DUCT DETECTORS AND CONTROL RELAYS MATCH THOSE SHOWN ON ELECTRICAL PLANS.
6. PROVIDE ALL NECESSARY RELAYS AS REQUIRED TO FOR SMOKE EXHAUST SYSTEM PER MECHANICAL SEQUENCE OF OPERATIONS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST INVOLVED WITH OBTAINING A SEPARATE PERMIT AS REQUIRED BY LOCAL AUTHORITIES FOR INSTALLATION OF THE FIRE ALARM SYSTEM.
8. FIRE ALARM HEAD AND SMOKE DETECTORS SHALL BE CONNECTED AS SUPERVISED DEVICES. ACTIVATION OF HEAT OR SMOKE DETECTOR SHALL ANNUNICATE AT FIRE ALARM CONTROL PANEL AND FIRE ALARM ANNUNCIATORS PANELS. SMOKE OR HEAT DETECTORS SHALL NOT ACTIVATE GENERAL ALARM.
9. PRIOR TO START OF WORK, FIRE ALARM CONTRACTOR SHALL SCHEDULE A MEETING WITH THE OWNER TO REVIEW ZONING OF FIRE ALARM NOTIFICATION DEVICES. AT A MINIMUM, FIRE ALARM NOTIFICATION DEVICES SHALL BE ZONED AS FOLLOWS:
   - 9.1. EXISTING CELL POD 1
   - 9.2. EXISTING CELL POD 2
   - 9.3. NEW CELL POD (ALTERNATE)
   - 9.4. MENTAL HEALTH
   - 9.5. SEGRETATION/ISOLATION
   - 9.6. ADMIN./COMMON AREAS/KITCHEN, ETC.
10. ALL SMOKE DETECTORS AND HEAT DETECTORS INSTALLED IN SECURED AREAS WHERE INMATES ARE PRESENT SHALL BE TAMPER RESISTANT DEVICES WITH WIRE GUARDS. ALL FIRE ALARM NOTIFICATION DEVICES SHALL BE TAMPER RESISTANT DEVICES WITH WIRE GUARDS. ALL FIRE ALARM PULL STATIONS SHALL BE LOCKING TYPE.
11. PROVIDE CELLULAR MONITORING FOR FIRE ALARM SYSTEM AS DIRECTED BY LOCAL A.H.J.
12. COORDINATE ALL FIRE ALARM SYSTEM DOWN TIME WITH OWNER. ALL WORK SHALL BE SCHEDULE TO ENSURE THAT EXISTING FACILITY OPERATIONS CAN REMAIN ACTIVE DURING FIRE ALARM REPLACEMENT.

2

SHELBY COUNTY ALABAMA

Project
SHELBY COUNTY JAIL EXPANSION
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COLUMBIANA, ALABAMA 35051

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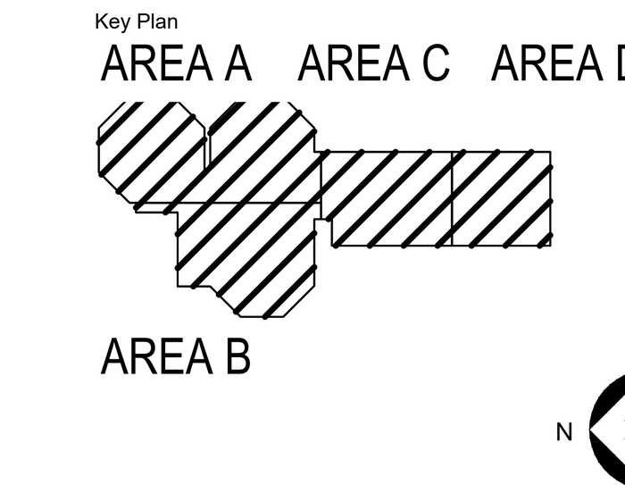
Key Plan



Professional Seals

STATE OF ALABAMA LICENSED No. 24463 PROFESSIONAL ENGINEER ROBERT C. RENFRO 7.13.23

No.	Description	Date
1	100% CONSTRUCTION DOCUMENTS	2023-06-26
2	ADDENDUM #2	2023-07-13

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Project No: 21.01020.00

Sheet Title

ELECTRICAL LEGEND, NOTES & LIGHTING SCHEDULE

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number

E602

GAS TANKLESS WATER HEATERS

TAG	SERVING	TYPE GAS	EWT °F	LVT °F	GPM / TEMP RISE	MBH INPUT	MODEL	NOTE
WH-1	DOMESTIC HW	INSTANT / NG	60	140	71.9 / 80	3,001,000	INTELLIHOT IQ3001	1 2 3
WH-2	DOMESTIC HW	INSTANT / NG	60	140	71.9 / 80	3,001,000	INTELLIHOT IQ3001	1 2 3
WH-3	KIT. & LAUNDRY	INSTANT / NG	60	180	48.7 / 120	3,001,000	INTELLIHOT IQ3001	1 2 3
WH-4	KIT. & LAUNDRY	INSTANT / NG	60	180	48.7 / 120	3,001,000	INTELLIHOT IQ3001	1 2 3

1. BURNER SHALL SHUT OFF UPON HIGH FLUE TEMPERATURE.
2. INCLUDE BACKDRAFT DAMPER
3. PROVIDE ALL AVAILABLE POINTS TO BAS IN BACNET PROTOCOL. PROVIDE TRANSLATOR AS REQUIRED.

NOTE THAT WATER HEATER SHALL BE CAPABLE OF 180° F DISCHARGE.

CIRCULATORS

TAG	SERVES	TYPE	ELECTRICAL	CAPACITY	MODEL	NOTE
CP-1	EX. BUILDING	IN LINE BRONZE	120/1	20 GPM @ 50 FT.	ARMSTRONG S&H	1
CP-2	ADDITION HW RECIRC.	IN LINE BRONZE	120/1	7 GPM @ 20 FT.	ARMSTRONG COMPASS R	1
CP-3	KITCHEN	IN LINE BRONZE	120/1	3 GPM @ 20 FT.	ARMSTRONG COMPASS R	1
CP-4	LAUNDRY	IN LINE BRONZE	120/1	3 GPM @ 20 FT.	ARMSTRONG COMPASS R	2

NOTE:

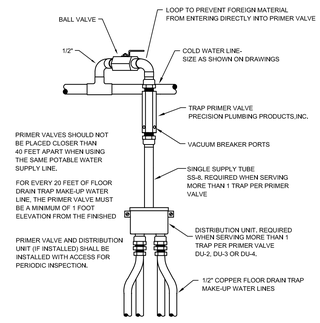
1. ECM HOT WATER CIRCULATOR, CONSTANT HEAD CONTROL.
2. ECM HOT WATER CIRCULATOR, SET SPEED MANUALLY.

GENERAL NOTES

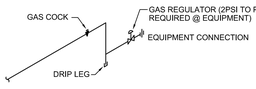
1. LOCATIONS OF UTILITIES SHOWN ON PLANS ARE APPROXIMATE. VERIFY PRIOR TO BIDDING.
2. ALL OUTSIDE CLEANOUTS SHALL BE BROUGHT TO GRADE AND EMBEDDED IN 18"X18"X6" THICK CONCRETE PAD.
3. WHEREVER DISSIMILAR METALS ARE CONNECTED A DIELECTRIC CONNECTOR SHALL BE USED.
4. ALL HORIZONTAL WATER, GAS, AND VENT PIPING IS RUN ABOVE CEILING ON PLAN WHICH SHOWN UNLESS OTHERWISE NOTED.
5. ALL HORIZONTAL SANITARY AND STORM PIPING IS RUN BELOW FLOOR ON PLAN WHICH SHOWN UNLESS OTHERWISE NOTED.
6. ALL WATER PIPING BELOW SLAB ON GRADE SHALL BE BENT UP AT ENDS SO THAT NO JOINTS OCCUR BELOW FLOOR.
7. COORDINATE ALL PIPE ROUTING TO AVOID CONFLICTS WITH STRUCTURAL, MECHANICAL, AND ELECTRICAL FEATURES OF BUILDING.
8. PAVEMENT CUTS, BACKFILLING AND PATCHES SHALL MEET LOCAL REQUIREMENTS.
9. WALL HYDRANTS AND ROOF HYDRANTS SHALL BE FREEZE RESISTANT.
10. AS A RESULT OF DEMOLITION, PLUMBING PIPING MAY BE DISCOVERED IN WALLS TO BE REMOVED. REMOVE PIPING THAT BECOMES INACTIVE, OFFSET PIPES TO REMAIN ACTIVE IN NEW WALLS OR CHASES.
11. PATCH EXPOSED WALLS THAT ARE PENETRATED AS NEEDED. PROVIDE ESCUTCHEON FOR ALL PIPE PASSING THROUGH EXPOSED WALL.
12. NO PLUMBING LINES SHALL ROUTE THROUGH ELECTRICAL ROOMS OR OVER ELECTRICAL EQUIPMENT.
13. CONTROLLER TO BALANCE ALL NEW BALANCING VALVES IN DOMESTIC HOT WATER SYSTEM SERVING CELL POD. SEE SPEC SECTION 22 2000 - 1.28/J.3. PROVIDE REPORT PER SPEC 22 2000-1.30.A.6.

PLUMBING LEGEND

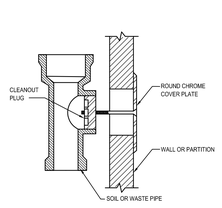
	SOIL OR WASTE LINE
	VENT LINE
D	DRAIN PIPE
G	GAS
S	STORM LINE
C	COLD WATER LINE
H	HOT WATER LINE
HWR	HOT WATER RETURN LINE
	BALL VALVE
	PIPE TURNING UP
	PIPE TURNING DOWN
	P-TRAP
	RUNNING TRAP
	PRESSURE REDUCING STATION
BFP	BACKFLOW PREVENTER, RZBP
WH	WATER HAMMER ARRESTER, SIZE SHOW
	TRAP PRIMER LINE UNDER SLAB
WH	WALL HYDRANT
FD	FLOOR DRAIN
MFD	MECHANICAL ROOM
FS	FLOOR SINK
P-#	PLUMBING FIXTURE NO.
	RISER DIAGRAM NO.
	NEW CONNECTION TO EXISTING
AFF	ABOVE FINISHED FLOOR
CO	CLEANOUT
SS	SOIL STACK
WS	WASTE STACK
VS	VENT STACK
CW	COLD WATER
VTR	VENT STACK THRU ROOF
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RETURN
CONN.	CONNECTION
DN.	DOWN
EX. or EXIST.	EXISTING
W/	WITH
LAV.	LAVATORY
S.S.	STAINLESS STEEL



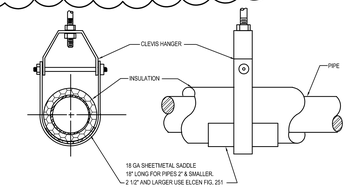
DETAIL-TRAP PRIMER INSTALLATION
NO SCALE



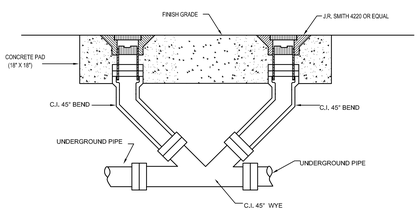
TYPICAL GAS CONNECTION
NO SCALE



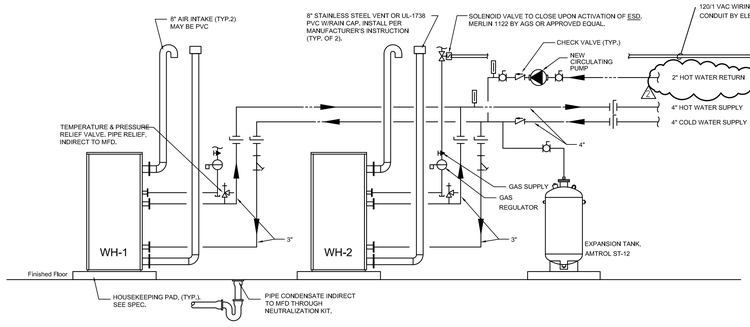
WALL CLEANOUT
NO SCALE



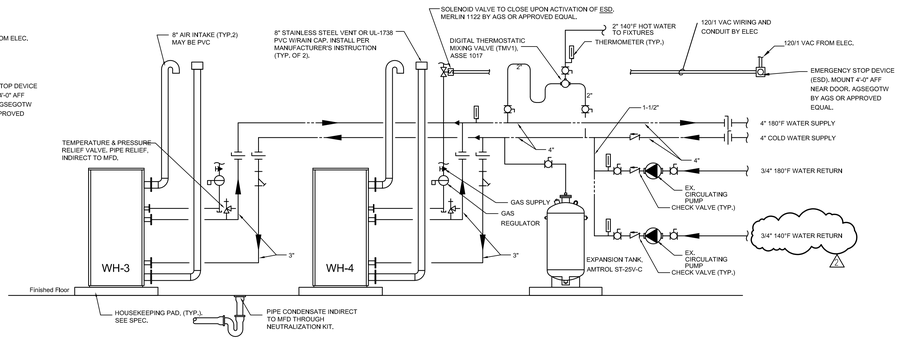
SUSPENDED PIPE SUPPORT
NO SCALE



DETAIL of EXTERIOR CLEANOUT to GRADE
(SANITARY) NO SCALE



DETAIL of PIPING at WATER HEATERS TYPICAL FOR WH-1 & 2
NOT TO SCALE



DETAIL of PIPING at WATER HEATERS TYPICAL FOR WH-3 & 4
NOT TO SCALE

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
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Key Plan

AREA A AREA C AREA D

AREA B

N

Professional Seals

STATE OF ALABAMA — James M. Davis — No. 14178 — PROFESSIONAL ENGINEER — JAMES M. DAVIS — 6/26/23

222010

No.	Description	Date
1	Issued For Construction	6/26/23
2	Addendum #2	7/13/23

Project No: 21.01020.00

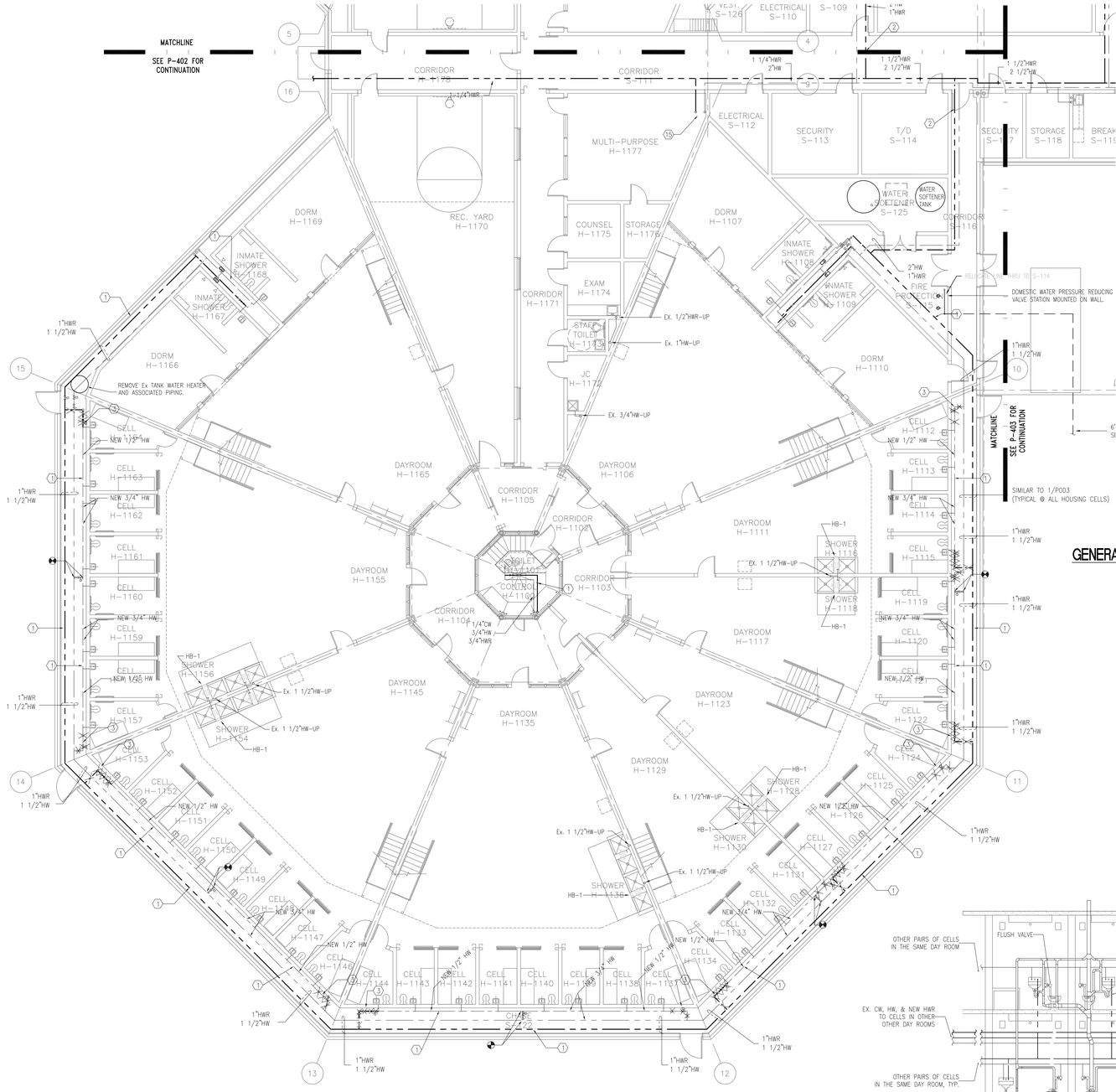
Sheet Title

LEGENDS,SCHEDULES DETAILS AND NOTES

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number

P 001



GROUND LEVEL - HOT WATER RETURN PIPING PLAN - AREA B

1 / P401 SCALE: 1/8" = 1'-0"

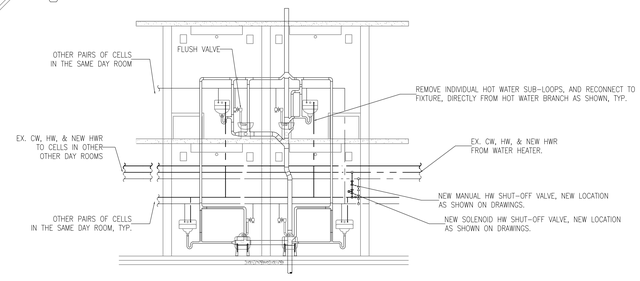
GENERAL NOTES - HOT WATER RETURN REPLACEMENT

SHEETS P401 THROUGH P404 – REPLACEMENT OF EXISTING DOMESTIC HOT WATER RETURN SYSTEM.

1. REMOVE (3) SYSTEMS OF DOMESTIC HOT WATER RETURN AS SHOWN ON DRAWINGS:
   - 1.1. BUILDING HOT WATER LOOP AND SUB-LOOPS (PODS, SUPPORT, AND ADMIN AREAS.
   - 1.2. KITCHEN HOT WATER LOOP AND SUB LOOPS
   - 1.3. LAUNDRY HOT WATER LOOP AND SUB LOOPS
2. PROVIDE NEW CIRCULATION PUMPS AS SCHEDULED FOR ALL THREE LOOPS. CP-1, CP-3, AND CP-4
3. PROVIDE NEW BOOSTER CIRCULATION PUMP FOR NEW POD ADDITION AS SCHEDULED. CP-2
4. PROVIDE ALL NEW HOT WATER RETURN PIPING AS SHOWN ON DRAWINGS. INCLUDE THERMO ACTIVATED BALANCING VALVES AND SHUTOFF VALVES AS SHOWN.
   - 4.1. NOTE THAT SUB-LOOPS WITHIN EXISTING PODS ARE BEING DELETED, FIXTURES IN THESE PODS WILL NOW BE FED DIRECTLY FROM THE MAIN HOT WATER LOOP IN THE PODS.
5. NOTE THAT ALL HOT WATER RETURN PIPE SIZES SHALL BE OBTAINED FROM SHEETS P401–P406. ALL OTHER PIPE SIZES, ROUTING, ETC SHALL BE OBTAINED FROM OTHER DRAWINGS WITHIN THIS PLUMBING SET..

KEYED NOTES:

1. REPLACE Ex. HOT WATER PIPE W/SIZE SHOWN.
2. PROVIDE NEW HWR SELF-SETTING BALANCING VALVE. EQUAL TO CALEFFI THERMO SETTER. INCLUDE NEW CHECK VALVE AND BALL VALVE INLINE.
3. REMOVE Ex. PIPING AND CAP.



NOTE:
PIPING INDICATED OCCURES AT CELLS H-1112 AND H-1113. PIPING TO OTHER CELLS AND DAY ROOMS WILL BE SIMILAR.

PLUMBING HOUSING CHASE SECTION - HOT WATER RETURN

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

SHELBY COUNTY ALABAMA

Project
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Key Plan
AREA A AREA C AREA D
AREA B

N

Professional Seals

LARRY S. DAVIS No. 14178 PROFESSIONAL ENGINEER STATE OF ALABAMA
6/26/23

222010

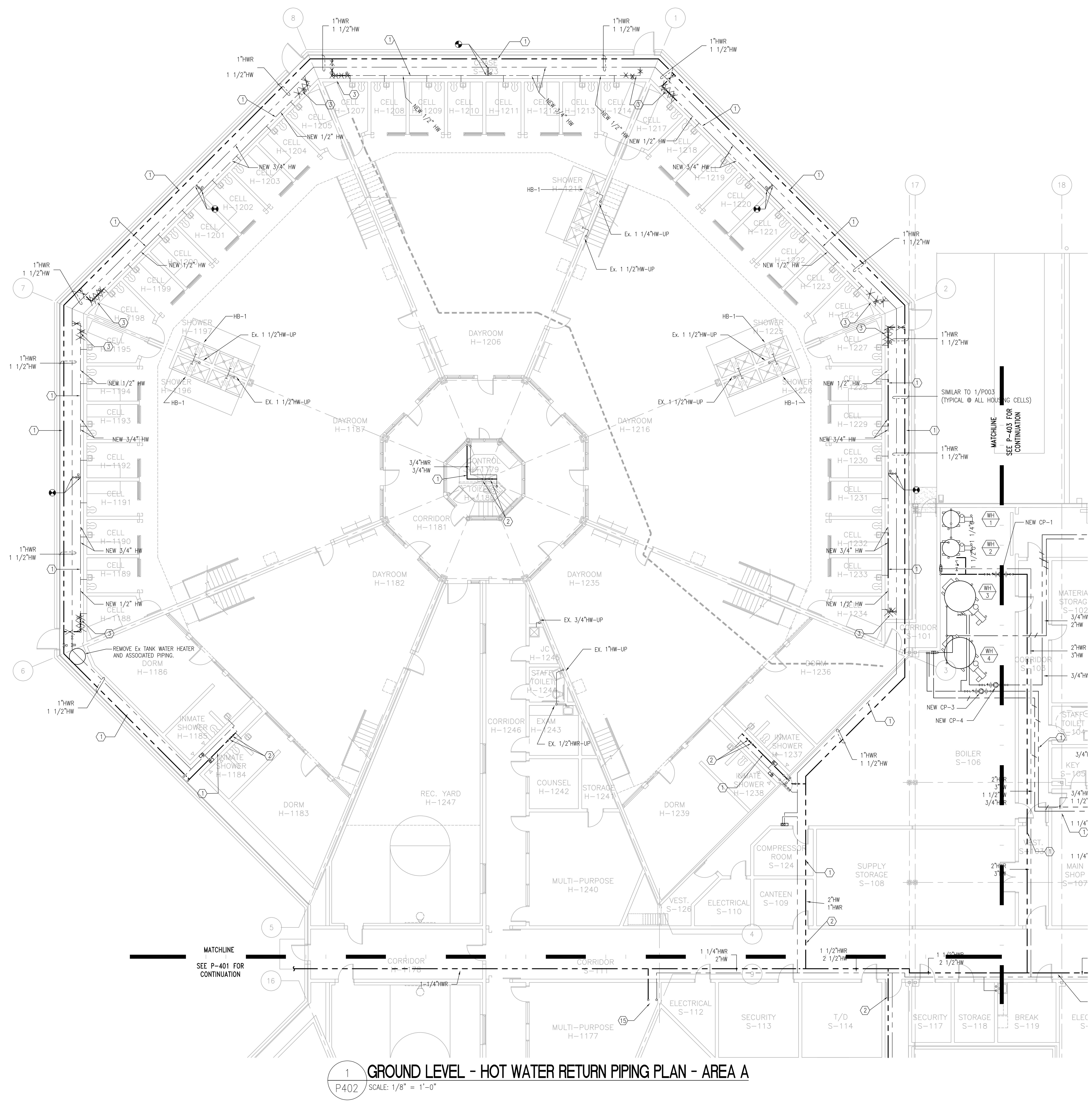
No.	Description	Date
1	Issued For Construction	6/2023
2	Addendum #2	11/23

Project No. 21.01020.00

Sheet Title
GROUND LEVEL HOT WATER RETURN REPLACEMENT PLAN AREA B

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number
P 401



1 P402 GROUND LEVEL - HOT WATER RETURN PIPING PLAN - AREA A

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

KEYED NOTES:

1. REPLACE Ex. HOT WATER PIPE W/SIZE SHOWN.
2. PROVIDE NEW HWR SELF-SETTING BALANCING VALVE. EQUAL TO CALEFFI THERMO SETTER. INCLUDE NEW CHECK VALVE AND BALL VALVE INLINE.
3. REMOVE Ex. PIPING AND CAP.

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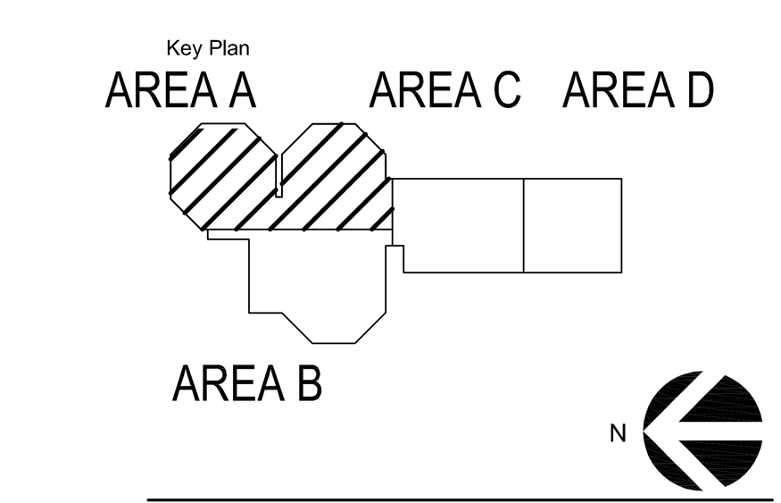
Key Plan



Professional Seals

No. 14178 PROFESSIONAL ENGINEER JAMES S. DAVIS, JR.
6/26/23 222010

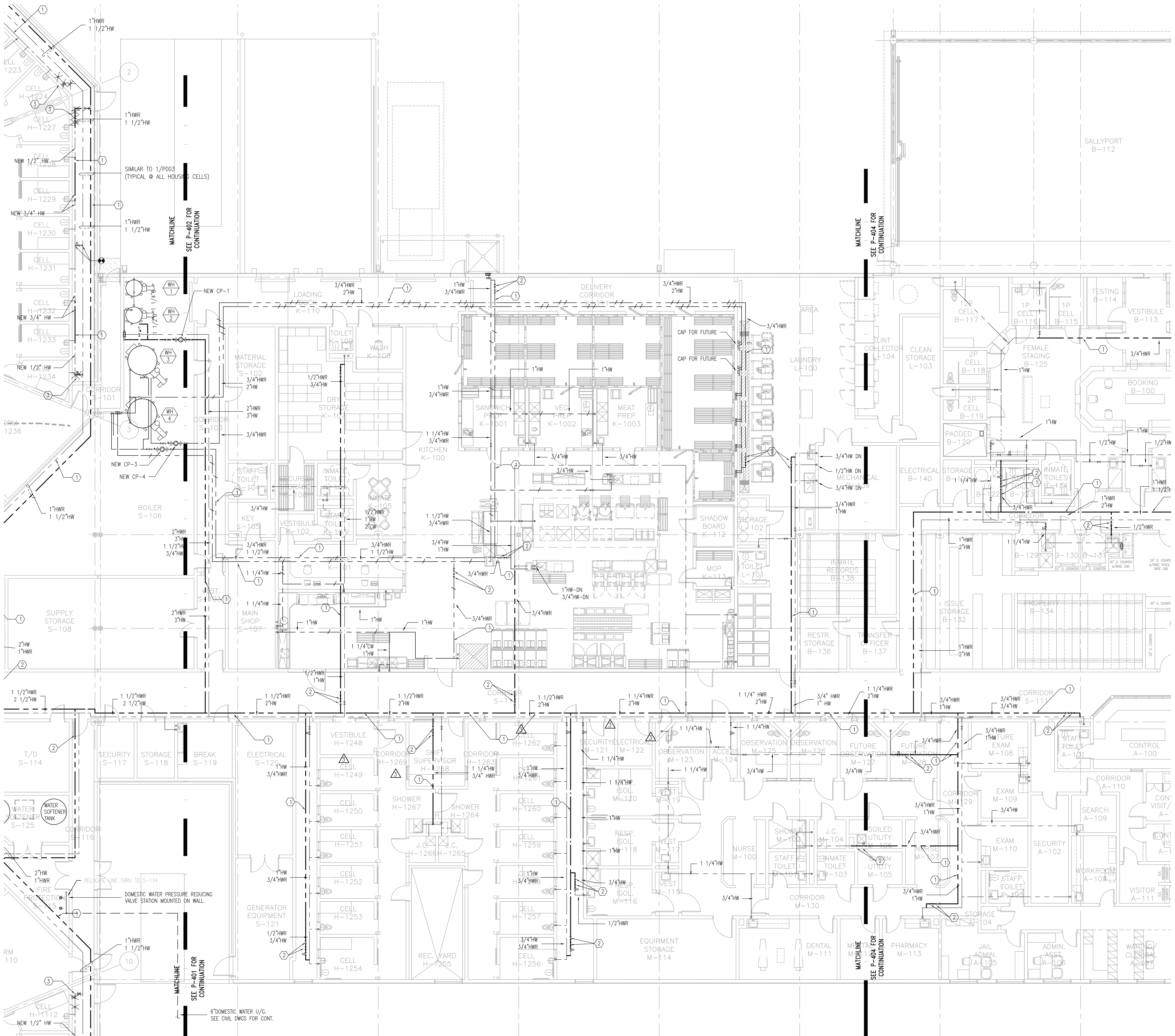
No.	Description	Date
1	Issued For Construction	6/26/23
2	Addendum #2	7/13/23

Project No: 21.01020.00

Sheet Title
GROUND LEVEL
HOT WATER RETURN
REPLACEMENT PLAN
AREA A

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number
P402



GROUND LEVEL - HOT WATER RETURN PIPING PLAN - AREA C

1 / P403 SCALE: 1/8" = 1'-0"

KEYED NOTES:

1. REPLACE Ex. HOT WATER PIPE W/SIZE SHOWN.
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3. REMOVE Ex. PIPING AND CAP.

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Key Plan
AREA C AREA D
AREA B
N

Professional Seals
No. 14178 PROFESSIONAL ENGINEER JAMES S. DAVIS, JR.
6/26/23 222010

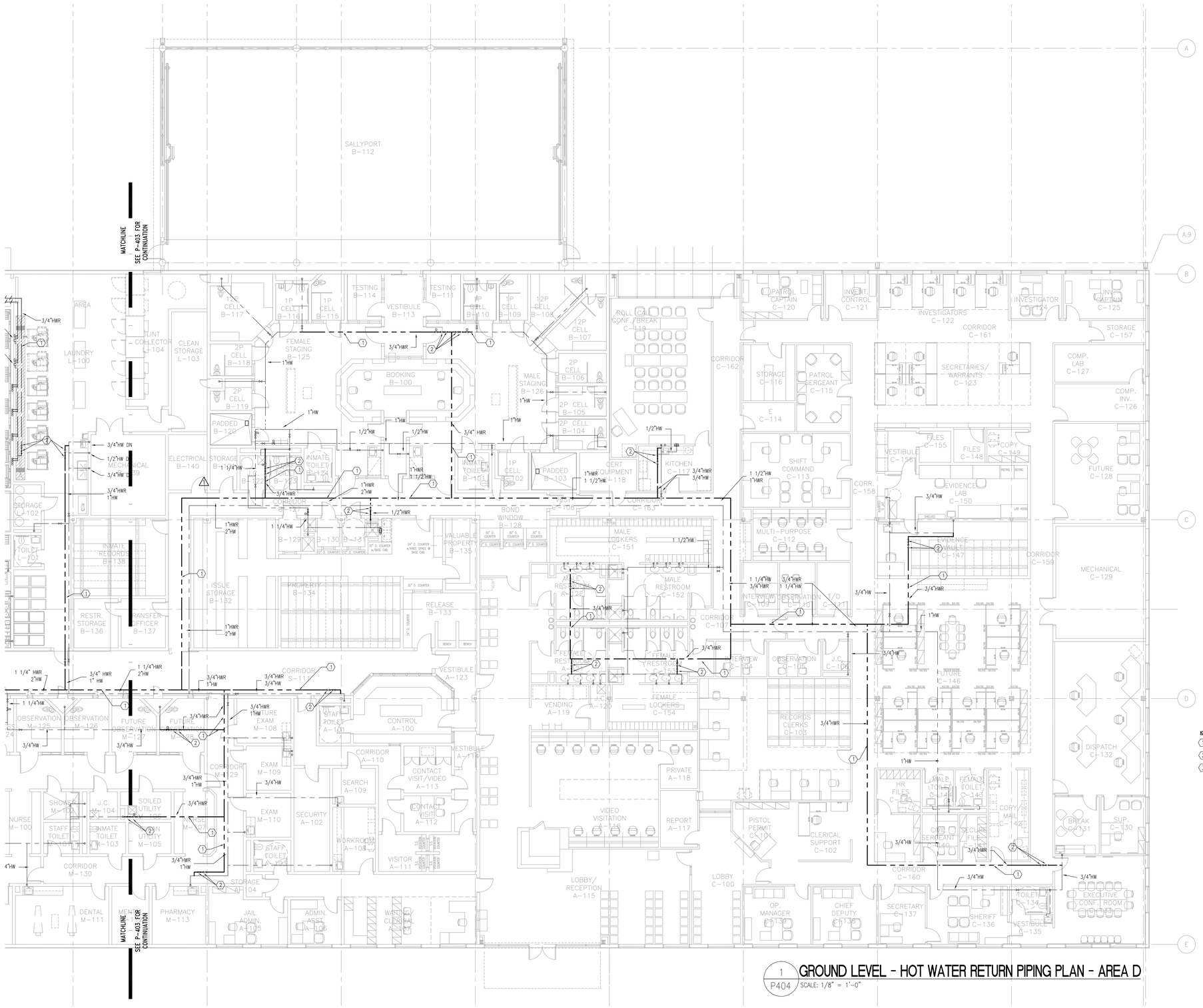
No.	Description	Date
1	Issued For Construction	6/26/23
2	Addendum #2	7/13/23

Project No: 21.01020.00

Sheet Title
GROUND LEVEL
HOT WATER RETURN
REPLACEMENT PLAN
AREA C

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number
P403



KEYED NOTES:

1. REPLACE Ex. HOT WATER PIPE W/SIZE SHOWN.
2. PROVIDE NEW HWR SELF-SETTING BALANCING VALVE, EQUAL TO CALEFFI THERMO SETTER. INCLUDE NEW CHECK VALVE AND BALL VALVE INLINE.
3. REMOVE Ex. PIPING AND CAP.

1 / P404 GROUND LEVEL - HOT WATER RETURN PIPING PLAN - AREA D

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

SHELBY COUNTY ALABAMA

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380 MCDOW ROAD,
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Key Plan
AREA A AREA C AREA D
AREA B

Professional Seals

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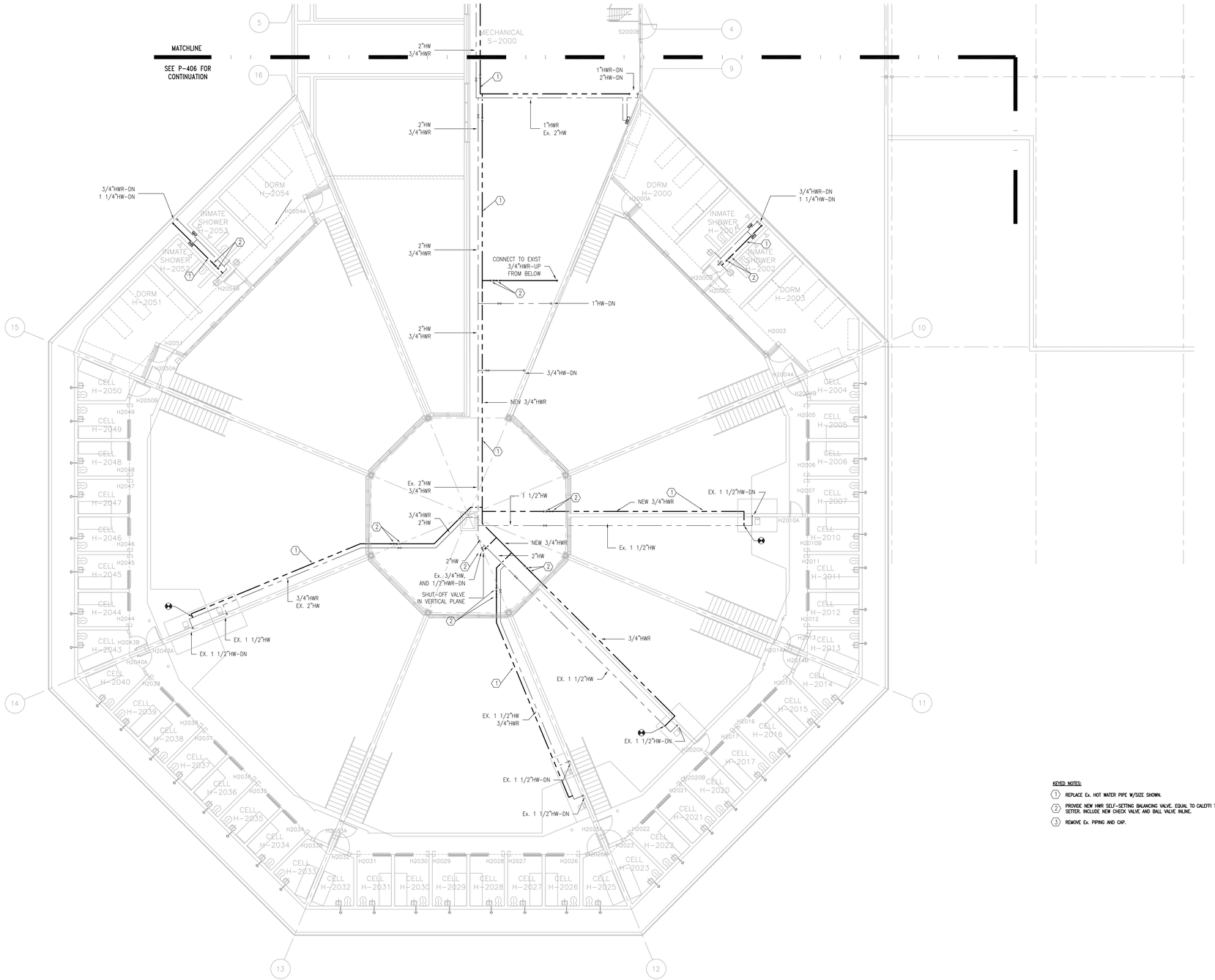
6/26/23

222010

No.	Description	Date
1	Issued For Construction	6/26/23
2	Addendum #2	7/13/23

Project No. 21.01020.00
Sheet Title
GROUND LEVEL HOT WATER RETURN REPLACEMENT PLAN AREA D
Original drawing is 48 x 36. Do not scale contents of this drawing.
Sheet Number
P404



1 / P405 MEZZANINE LEVEL - HOT WATER RETURN PIPING PLAN - AREA B

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

KEYED NOTES:

1. REPLACE Ex. HOT WATER PIPE W/SIZE SHOWN.
2. PROVIDE NEW HWR SELF-SETTING BALANCING VALVE, EQUAL TO CALEFFI THERMO SETTER. INCLUDE NEW CHECK VALVE AND BALL VALVE INLINE.
3. REMOVE Ex. PIPING AND CAP.

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Key Plan
AREA A AREA C AREA D
AREA B

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JAMES W. DAVIS No.14178 PROFESSIONAL ENGINEER
6/26/23

222010

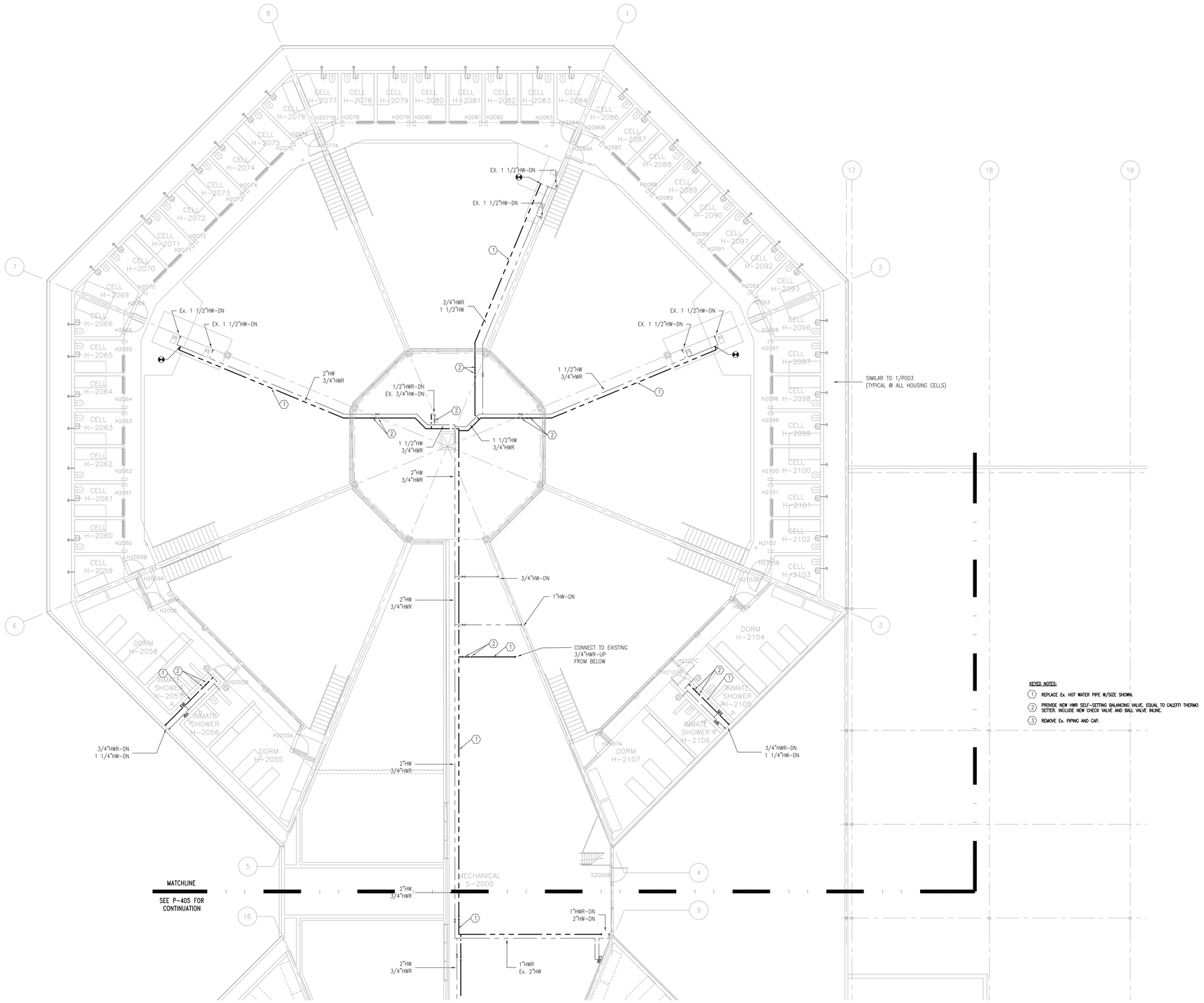
No.	Description	Date
1	Issued For Construction	6/26/23
2	Addendum #2	7/13/23

Project No: 21.01020.00

Sheet Title
CELL TIER
HOT WATER RETURN
REPLACEMENT PLAN
AREA B

Original drawing is 48 x 36 Do not scale contents of this drawing

Sheet Number
P405



KEYED NOTES:

1. REPLACE Ex. HOT WATER PIPE W/SIZE SHOWN.
2. PROVIDE NEW HWR SELF-SETTING BALANCING VALVE, EQUAL TO CALEFFI THERMO SETTER. INCLUDE NEW CHECK VALVE AND BALL VALVE INLINE.
3. REMOVE Ex. PIPING AND CAP.

1 P406 MEZZANINE LEVEL - HOT WATER RETURN PIPING PLAN - AREA B

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

SHELBY COUNTY ALABAMA

Project

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Key Plan

AREA A AREA C AREA D

AREA B

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Professional Seals

No. 14178 PROFESSIONAL ENGINEER STATE OF ALABAMA

6/26/23

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No.	Description	Date
1	Issued For Construction	6/26/23
2	Addendum #2	7/13/23

Project No: 21.01020.00

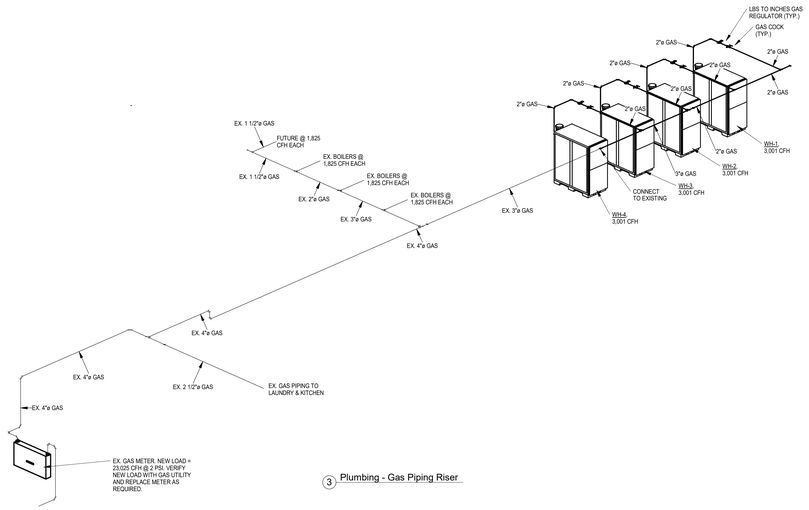
Sheet Title

CELL TIER
HOT WATER RETURN
REPLACEMENT PLAN
AREA A

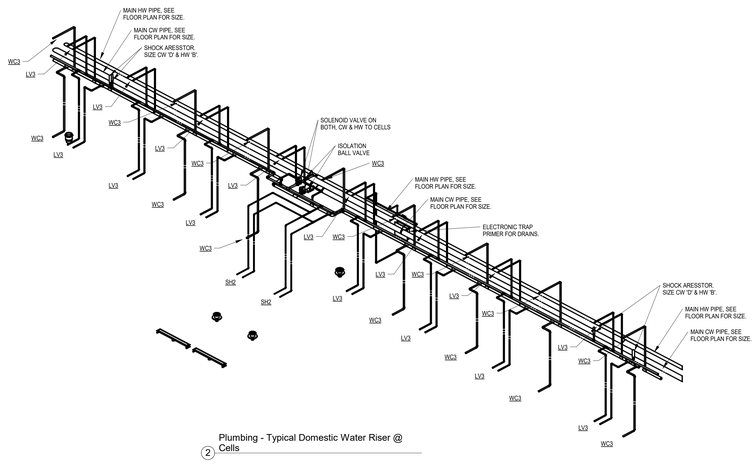
Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number

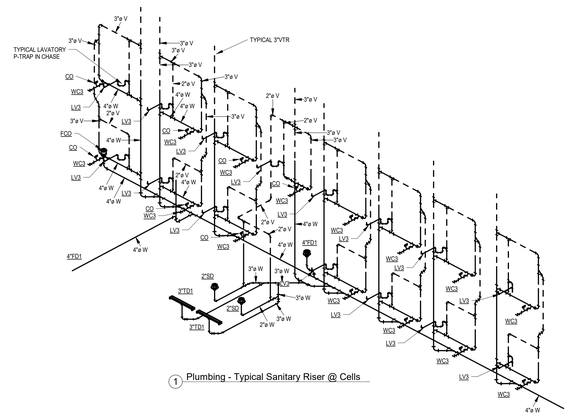
P406



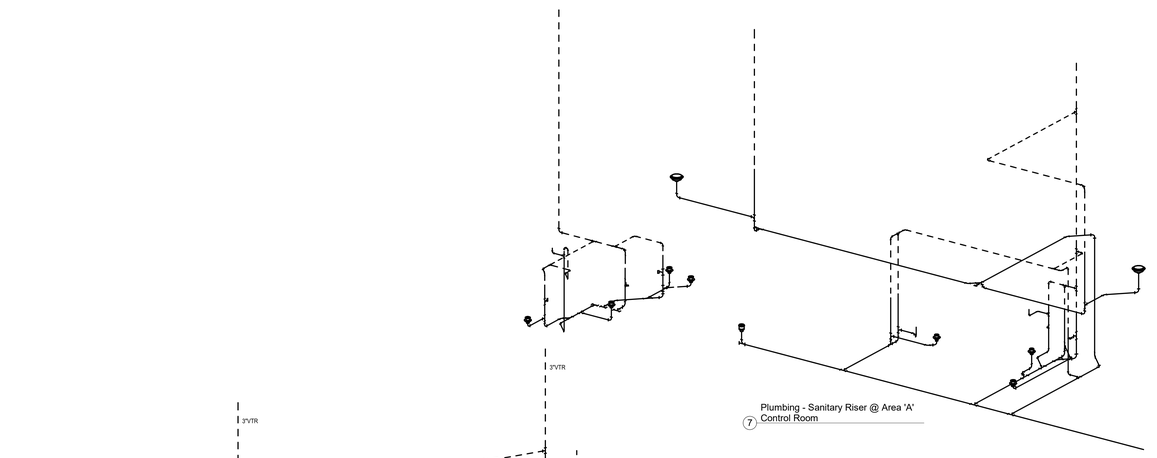
3 Plumbing - Gas Piping Riser



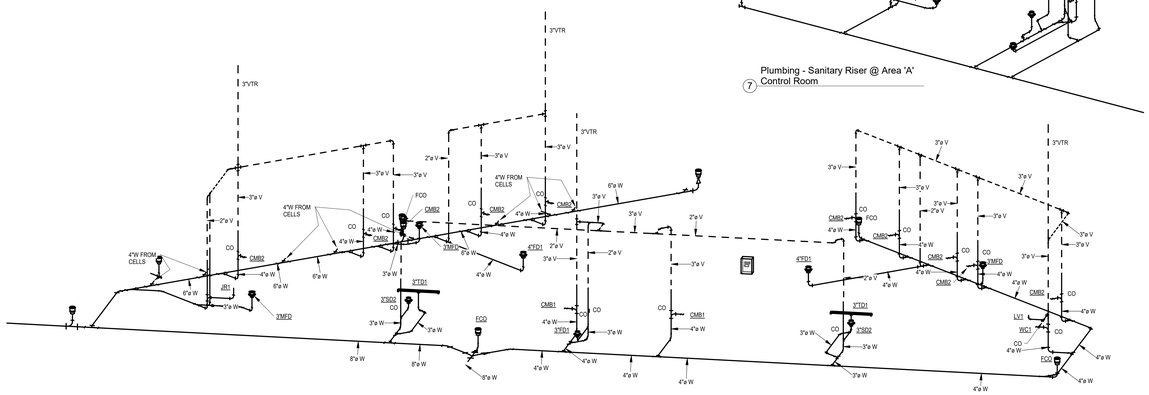
2 Plumbing - Typical Domestic Water Riser @ Cells



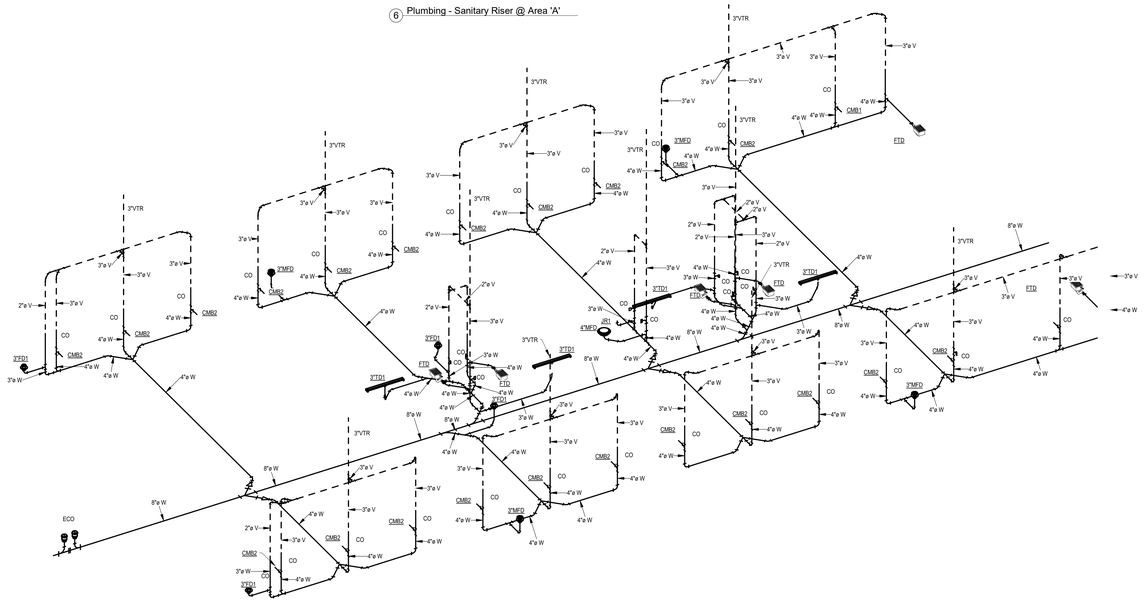
1 Plumbing - Typical Sanitary Riser @ Cells



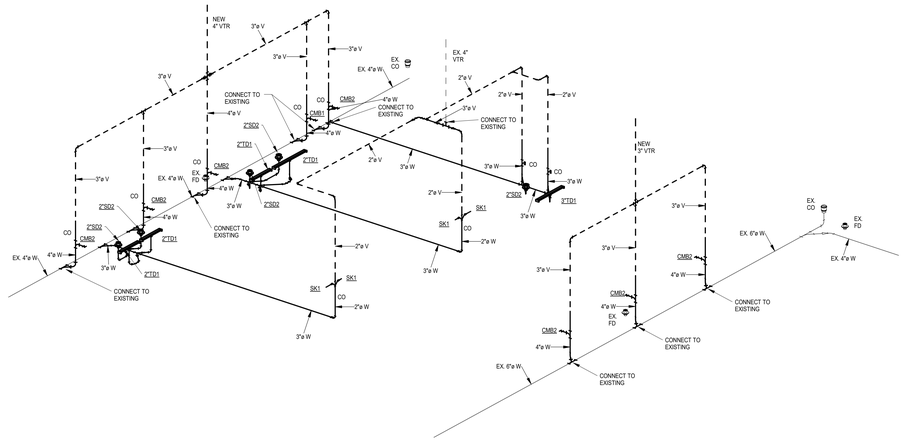
7 Plumbing - Sanitary Riser @ Area 'A' Control Room



6 Plumbing - Sanitary Riser @ Area 'A'



5 Plumbing - Sanitary Riser @ Area 'B'



4 Plumbing - Sanitary Riser @ Area 'C'

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Key Plan:
AREA A AREA C AREA D

AREA B

Professional Seals

ALABAMA No. 14178 PROFESSIONAL ENGINEER JAMES S. DAVIS, JR.
6/26/23

222010

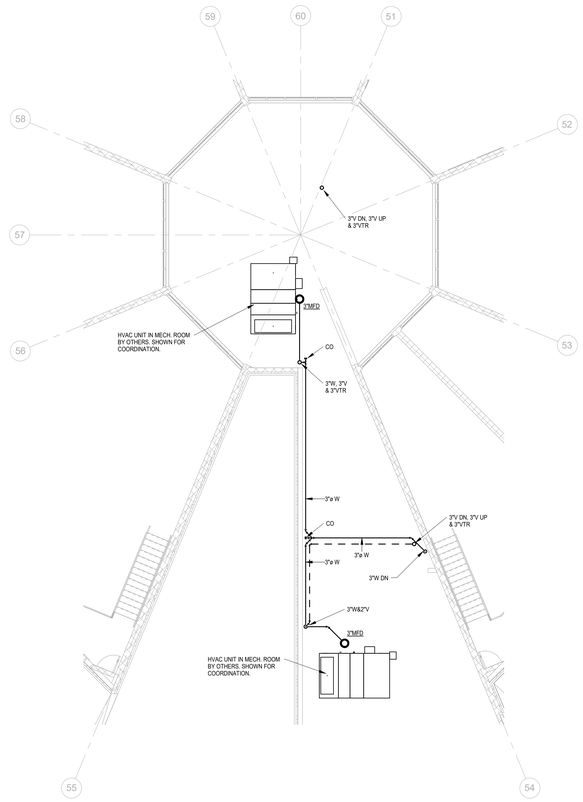
No.	Description	Date
1	Issued For Construction	6/26/23
2	ADDENDUM #2	7/13/23

Project No: 21.01020.00

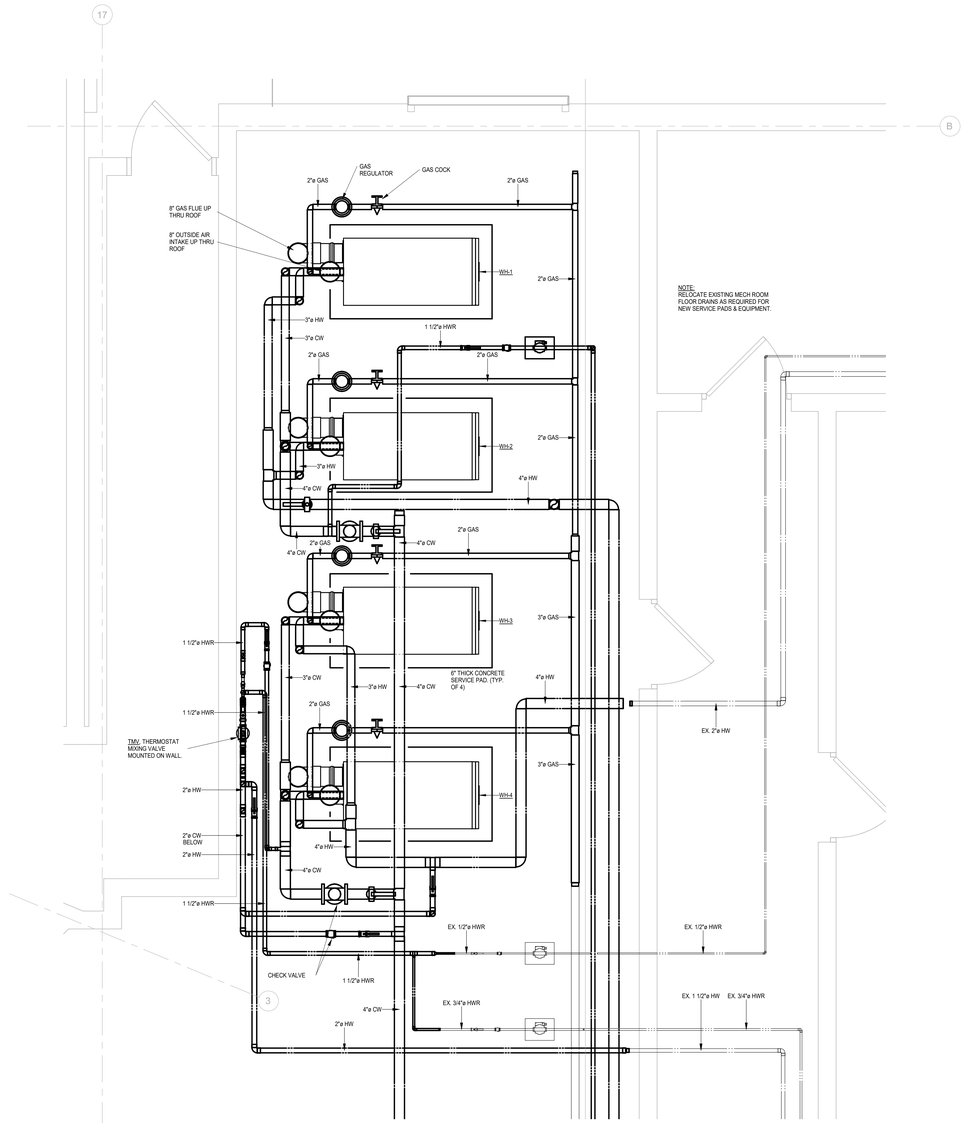
Sheet Title
PLUMBING - RISER DIAGRAMS

Original drawing is 24x36. Do not scale contents of this drawing.

Sheet Number
P500



ALTERNATE #1 MECH. ROOM - AREA 'A'
NON-PRESSURE PIPING PLAN
1/8" = 1'-0"



GROUND LEVEL - AREA 'C' - PLUMBING
BOILER ROOM
1/2" = 1'-0"

NOTE:
RELOCATE EXISTING MECH ROOM
FLOOR DRAINS AS REQUIRED FOR
NEW SERVICE PADS & EQUIPMENT.

SHELBY COUNTY ALABAMA

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

Prepared For
SHELBY COUNTY, AL
200 WEST COLLEGE STREET
COLUMBIANA, ALABAMA 35051

HOK
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Telephone: 205-252-0246

JACKSON RENFRO & ASSOCIATES
Electrical
141 Village Street Suite 1, Birmingham, Alabama 35242
Telephone: 205-995-1078

Key Plan
AREA A AREA C AREA D
AREA B

Professional Seals
ALABAMA
No. 14178
PROFESSIONAL
JAMES S. DAVIS JR.
ENGINEER
6/26/23
222010

No.	Description	Date
1	Issued For Construction	6/26/23
2	ADDENDUM #2	7/13/23

Project No: 21.01020.00

Sheet Title
PLUMBING - MECH. ROOMS

Original drawing size is 36 . Do not scale contents of this drawing.

Sheet Number
P501

Pre-Bid Meeting
MEETING NOTES

Client:	Shelby County Alabama	**Meeting Date:**	07.11.2023
Project:	Shelby County Jail	**Meeting Location:**	In Person – Administration Building – 200 West College Street, Columbiana, AL 35051 – Commission Chambers Room 104
Project #:	21.01020.00	**Notes By:**	Rebecca Brandl (HOK)

Participants: See attendance sheet attached.

Copies To:

The following meeting notes were prepared by HOK. The notes reflect the author's understanding of discussions and provide a record of the agreements reached at the meeting. Should any of those present have different recollections or find errors or omissions in the notes, please advise the author in writing within five calendar days of receipt of the meeting notes. The failure to notify HOK of errors or omissions within a reasonable time following receipt of the meeting notes is deemed acceptance of the discussions and record of agreements stated herein.

*Action items identified in **bold**. Decisions/client direction identified with underline notes and by whom.*

Notes:

1. Welcoming remarks. Reminder to sign-in on sheet at front of room or being circulated.
    a. Trey Gauntt kicked the meeting of shortly after 9am. Rebecca Brandl introduced herself and handed it off to Matt Nicholson to walk through the agenda.
    b. Clements Dean
        i. Justin Dean
        ii. Jacob Pennington
    c. DDB
        i. Rafe Stewart
    d. MJ Harris
        i. Patrick Morton
        ii. Lincoln Corplon
2. Introductions and names and relationship to job of personnel.
    a. Design team, county and sheriffs' office members present were introduced.
3. Brief Presentation of scope by each Disciplines
    a. No architectural questions
    b. Structural – Clements Dean requested and update on RFI regarding the split of new housing pod and mental health, requesting structurally to see, details and or sections. **Matt Nicholson noted the team will respond.**
    c. Mechanical – no questions
        i. Engineer noted that full blown test and balancing at completion of project is expected and outlined in the specs.
    d. Plumbing
        i. Clements Dean asked if plumbing work can be done simultaneously. Trey responded that yes that is possible but noted the segregation portion needs to be complete before any work in the demo of the existing segregation.
        ii. Trey requests to be efficient and minimize time in side the existing facility when possible.
    e. Fire Protection
        i. Engineer made note that specifications call for American made products.
        ii. And noted that piping must be capped when not in use on site. Leaving open pipes to weathering and animals, can lead to rusting and blockages. Noting this is a code requirement.
    f. Electrical – no questions
    g. Civil – no questions
    h. Security Electronics
        i. Clements Dean asked if the security electronics sub-contractor needs to be the same as the detention security sub-contractor. Scott Anderson noted that typically these are two separate companies as they are both two very different scopes.
    i. Trey noted lead times – check with suppliers on lead time and accurate pricing, specifically on MEP.
4. Bid Documents are available for review at Architect's office.
    a. Available in Montgomery
5. Every General Contractor and every Subcontractor should read and be familiar with all of the front-end documents and all of Division 1 of the Project Manual, in addition to the work they are bidding and other work they have to coordinate with.
6. Bidding: 2:00 PM, Thursday, August 3, 2023 at the Shelby County Manager's Office; 200 West College Street, Room 123; Columbiana, Alabama 35051. – open live

a. Note that Advertisement and Instructions to Bidders should be read by each bidder.
b. Note that Bids are to be held open for at least 60 days.
c. Proposal Form included in Project Manual, and copies furnished to each bidder with Bid Documents.
d. Trey Gauntt asked the room if anyone felt bidders had enough time to deliver their bids. No one in the room spoke up requesting additional time.

7. One (1) Addenda has been issued to date.
8. Insurance requirements should be read by each bidder, and should be provided to each General Contractor's and Subcontractor's insurance carrier for review.
    a. Insurance requirements are indicated in General and Supplementary Conditions; AND
    b. Additional requirements are indicated in Section 01015 - Special Conditions and should also be carefully reviewed and also sent to insurance carriers for review.
9. Schedule –
    a. Matt Nicholson noted 14 months for base bid 16 months for inclusion of the alternate.
    b. **Trey Gauntt asked if any of the contractors felt this was not achievable to note that in their bids**.
10. Security
    a. Captain Bedsole and Major Fondren noted the sheriffs office wants to make sure the awarded team has the staff needed to complete the job and can work through cases where employees may have been convicted. They asked that all should have warrants cleared. Those that have misdemeanors wont initially be prohibited to work on the job but will need to be reviewed.
    b. Tool checks will occur, and the sheriff's staff will work to make sure this is an efficient process. Tools you come in with must go out with the crew.
    c. Overall communication is key.
    d. Badging will be required.
    e. **Discussed during the site visit, shirt color coordination will need to be discussed so to not conflict with the attire of the inmates.**
11. Logistics Plan Review
    a. Clements Dean asked about temporary fence construction needs. Trey confirmed typical is acceptable.
    b. **Bedsole noted that egress plans and communication of when exits will be unavailable be priorities. Trey Gauntt requested that the bidders submit a communication plan of the phasing with notations on egress.**
    c. **Logistics plan as an exhibit will be released.**
    d. Scott Anderson Noted for bidders to budget restoration of laydown area. While Trey Gauntt also confirmed that clearing property is acceptable for additional space as needed.
12. Section 01015 -Special Conditions - General Review:
    a. Construction schedule requirements:
        i. Verify existing conditions at the site.
        ii. Completion dates as per Proposal Form.
    b. Liquidated damages amount - as indicated in Paragraph 1.1A.
    c. Site restrictions - as indicated in Sections 01010 and 01015, and other locations on the Drawings and in the Project Manual.
    d. Pre-Construction Conferences - required for entire project and prior to beginning each major portion of the Work.
    e. Contractor's schedule must coordinate the overall construction schedule of the project.
        i. Provide the required time for the base bid
            1. Clarify the proposed sequence of New Construction versus Renovation scope within the overall project schedule.
        ii. Provide separate added time for Alternate #1 scope
    f. Contractor's job meetings - coordination of the Work with all subcontractors and suppliers is required.
    g. Requirements for stored materials - as indicated.
    h. Safety and Protection – Contractor's responsibility.
        i. Explanation of required security/background checks
    i. Work limits protection - the public, Owner's staff, workers, etc.
    j. Testing: Paid by the Owner for Divisions 2-16 (except utility testing). Other provisions and requirements as indicated in the Specifications.
    k. Project Sign: Contractor to provide one sign as per Special Conditions 1.12 and details in Project Manual.
        i. No Subcontractor signs.
        ii. Note other requirements in this paragraph.
    l. Superintendents and construction personnel experience requirements - as indicated.
    m. Submittal requirements indicated.
        i. Contractor is required to check, mark, stamp, and approve and/or reject submittals, prior to submittal to Architect. Refer to General Conditions for additional information and related requirements.
    n. Substitutions
        i. Ten-day minimum cut-off prior to original bid date for requests for substitutions, additional manufacturers, and were listed in individual spec sections - for pre-approved subcontractors and suppliers. Longer for some products - as indicated.
        ii. Substitutions and additional manufacturers, suppliers, etc., will not be allowed after that date except in extraordinary circumstances.

iii. **Trey Gauntt noted that Fire alarm systems and HVAC systems the county will be particular about due to maintenance staff training and replacement ease. will be specific on per trey due to training.**
iv. **Trey also noted that the pneumatic lock system is to remain.**

o. Site maintenance requirements indicated. Daily attention required.
p. Insurance and special provisions - in addition to other insurance requirements.
q. Accessibility requirements - as indicated, and as otherwise required.
r. Contractor Programs and Conduct of Personnel.
s. Work by Others - as indicated.

13. Section 01030 - Alternates - as indicated on the Drawings, Proposal Form, and Section 01030 - Alternates. Specific materials and other requirements occur throughout the Project Manual, as applicable to the work involved in Base Bid Work and the work of each Alternate.
    a. Forthcoming Alternate scopes: **Correction these are to be included in the base bid but will pricing needs to be broken out for these scopes.**
        i. Hot water return replacement throughout the existing buildings
        ii. Fire Alarm replacement throughout the existing buildings
14. Section 01045 Cutting and Patching as indicated in this section.
15. Section 01500 - Temporary Facilities should be reviewed by each bidder.
    a. Owner will allow Contractor to connect to existing power and water, for reasonable use, to the extent it is available on site. Refer to this Section 01500 for additional information, restrictions, and requirements.
16. Section 01700 - Project Close-Out and Section 01720 Project Record Documents should be reviewed by each bidder.
    a. Final payment will not be made until the requirements of these sections and General Conditions are completed.
    b. Project Record Documents have to be kept up-to-date on the project and will be checked periodically during the Work of the project.
17. Requirements for quality control, testing, and inspections are located throughout the project manual, and should be reviewed so that they are understood prior to bidding the project and prior to the low bidder entering a contract for the project.
18. Section 01732 - Selective Demolition: Note requirements for scheduling and coordination with other Work of the project, as well as schedule for completing the Work of the Project, which are generally indicated in this Section 02070 and in detail on the Drawings and other parts of the Project Manual.
19. Sales tax is not included in this project and the use of the sales tax exemption certificate process thru the Alabama Department of Revenue will be utilized for this project
20. Site tour - availability - contact persons - etc.
    a. Trey Gauntt noted that additional follow up site visits are optional. All communication to Matt Nicholson for coordination.
    b. Photographs are acceptable just no inmates and ask staff prior to taking the photo. Use only allowed for project purposes.
    c. Tour was commenced following this meeting. All bidders attended the site tour a 10:15am ending around 11:30am.
        i. Bidders were shown the exterior yard where the new construction would be located.
            1. **It was noted that the existing fence entrance may need to be widened by Brad Davis.**
        ii. Followed by Pod A with the control room.
        iii. Loading dock area with the chillers
        iv. Maintenance and mechanical rooms throughout the facility.
        v. Segregation
        vi. Medical Unit and storage
        vii. Generator and electrical room
        viii. IT and security rooms along the main corridor
        ix. Chase for Segregation along the main corridor
        x. Central Control room
        xi. Property Storage
        xii. Offices to be renovated.
        xiii. All bidders had the opportunity to request to see other areas of the facility but none were requested.
21. Closing remarks.
    a. **Bidders were reminded to submit RFI's to Matt Nicholson**
22. Questions?
    a. Bidders asked if the alternate would be due at 2pm as well. Trey Gauntt confirmed that all bids are due at 2pm, August 3rd.
    b. Trey noted that Terracon will be conducting special inspections.

PRE-BID CONFERENCE ATTENDEES

MANDATORY PRE-BID CONFERENCE
SHELBY COUNTY JAIL ADDITION

9:00 AM, July 11, 2023

#	NAME:	COMPANY:	PHONE NUMBER:	EMAIL:
1	Matthew Nicholson	Goodwyn Mills & Cawood	678-234-1729	matthew.nicholson@gmcnetwork.com
2	Mike Ingram	Goodwyn Mills & Cawood	205-529-7771	mike.ingram@gmcnetwork.com
3	Rebecca Brandl	HOK	785.766.4146	Rebecca.brandl@hok.com
4	Scott Anderson	HOK	314-421-2000	Scott.anderson@hok.com
5	Trey Gauntt	Shelby County	205-475-7145	TGAUNTT@shelbyal.com
6	Brad Davis	Shelby County	205-729-3702	bwdavis@shelbyal.com
7	Gary Davis	Shelby County	205-381-5260	gdavis@shelbyal.com
8	Patrick Morton	MJ Harris	205-807-5174	Patrickm@mjharris.com
9	Lincoln Corplan	MJ Harris	205-532-7578	Lincolnc@mjharris.com

#	NAME:	COMPANY:	PHONE NUMBER:	EMAIL:
10	Jim Mayfield	Cornerstone	256-501-0648	jmayfield@cornerstoneinc.com
11	Rafe Stewart	Dominguez Design-Build.Inc	850-390-4740	rafe@ddbconstruct.com
12	Jacob Pennington	CDBC	205-914-9271	jpennington@clementsdean.com
13	Justin Dean	CDBC	205-356-3503	jdean@clementsdean.com
14	Bob Hommerson	MW/DDA	205-252-0246	bhommerson@mwdda.com
15	Buster Inman	MW/DDA	205-252-0246	binman@mwdda.com
16	Dean Belk	MW/DDA	205-252-0246	dbelk@mwdda.com
17	Bobby Renfro	Jackson Renfro & Associates	205-536-7114	bobby@jrdee.com
18	Jason Daniels	Tucker-Jones Engineers Associates		jdaniels@tuckerjones.com
19	Corey Shoop	GMC	205-949-3950	Corey.shoop@gmcnetwork.com
20	Phil Burns	Shelby County		PBURNS@shelbyal.com
21	Major Jay Fondren	Shelby County Jail		JFONDREN@shelbyso.com

#	NAME:	COMPANY:	PHONE NUMBER:	EMAIL:
22	Captain Russel Bedsole	Shelby County Jail		RBEDSOLE@shelbyso.com
23	Tyrus Kidd	Shelby County		TKIDD@shelbyal.com
24	Bret Tucker	Shelby County		btucker@shelbyal.com
25				
26				
27				
28				
29				
30				

EXHIBIT PB-01

Request for Information

Summary Log with Answers

Shelby County AL Jail Exp (21.01020.00)

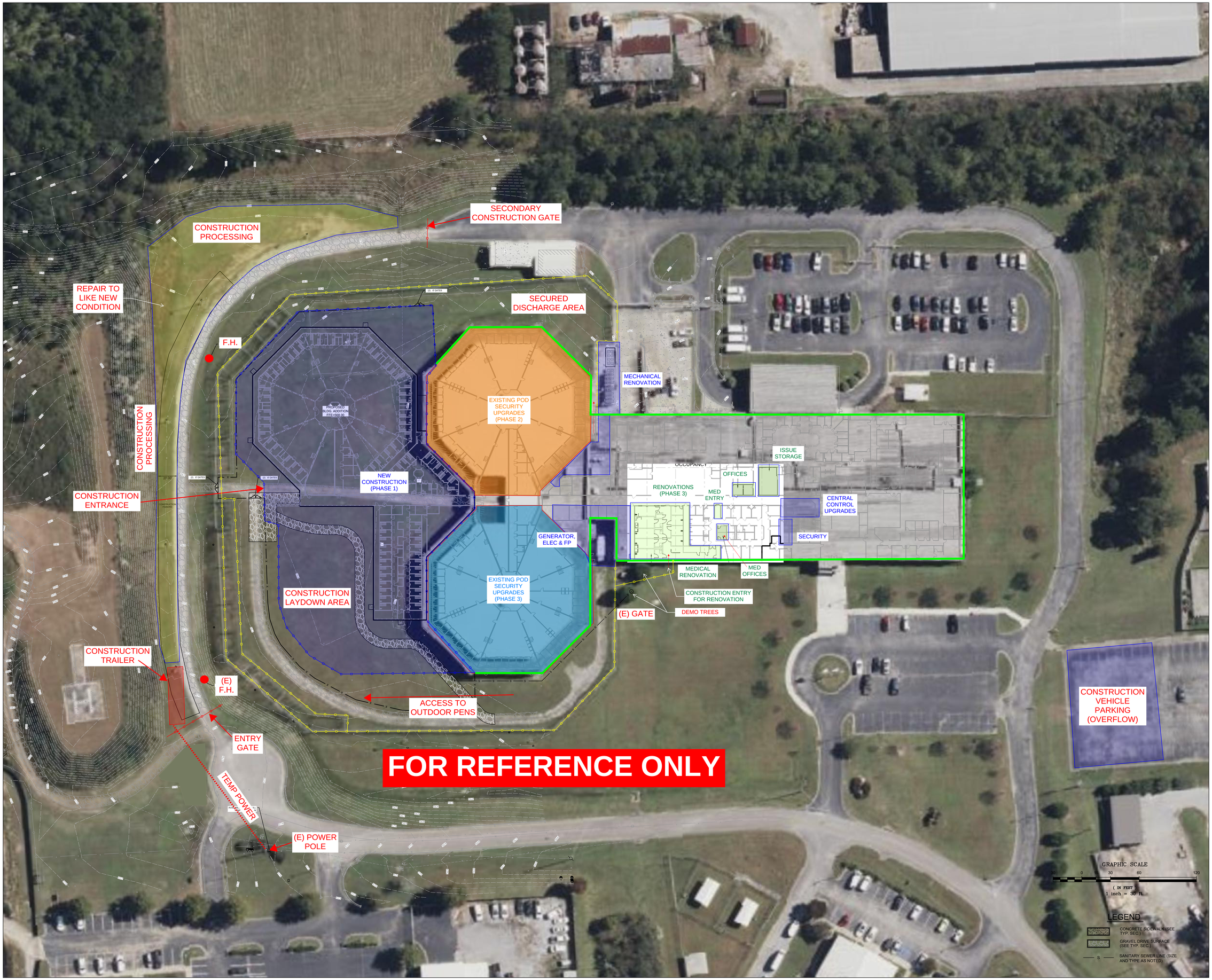
Request for Information Summary Log with Answers

Number	Status	Subject	Received On	Question	Date Resolved	Answer
P-001	Returned	Construction Phasing	7/7/2023	Please confirm that the phasing will be all new construction (mental health, segregation, and possibly Pod C) must be completed and operational before any renovation work inside the existing buildings can occur.	7/12/2023	The new segregation wing will need to be operational prior to the commencement of the medical renovation scope. The other renovation scopes within the existing facility and jail pods could be completed during the new construction process. This could be based on the most efficient timing with other construction activities and coordination with the facility and its security staff. Please provide additional RFI questions about specific renovation areas if required.
P-002	Returned	MEP Phasing	7/7/2023	Obviously, any MEP work that needs to occur in the existing building in order for the new construction areas to be completed would have to occur during the 1st phase, correct?	7/12/2023	That would be correct.
P-003	Returned	Alternate #1 Structural Plan	7/7/2023	Please provide structural plans for the base bid only that does not include the attached alternate building.	7/14/2023	We do not see the need for a separate set of plans without the alternate. We can provide additional sections or clarification as needed.
P-004	Returned	Civil Site Wall Details	7/7/2023	C201 indicates some type of wall near the HVAC units to the SE. However, I couldn't find any description of the wall or details on the civil, structural or architectural plans. Please provide details.	7/14/2023	Top and bottom elevations of the wall are specified on the sheet. Wall design criteria is covered in spec section 02 8320 MSE Specifications.
P-005	Returned	Asbestos Abatement Requirements	7/7/2023	Is there an asbestos report for the areas to be selectively demolished? If not, will the Owner handle that as well as any required abatement by a change order?	7/13/2023	Based on the date the original building was constructed, we do not anticipate any abatement requirements for this project.
P-006	Returned	Mechanically Stabilized Wall	7/7/2023	Please clarify where the mechanically stabilized wall is to be located (spec 02 83 20).	7/14/2023	Proposed wall is located on sheet C201. Wall is to support the new mechanical equipment.

Shelby County AL Jail Exp (21.01020.00)

Request for Information Summary Log with Answers

Number	Status	Subject	Received On	Question	Date Resolved	Answer
P-007	Returned	Concrete Supplier	7/7/2023	Confirm that Ready Mix USA is to be the concrete supplier per S001 note 7.9 and the concrete specs 03 3010.	7/14/2023	Specification section 033010 provides criteria for product requirements beyond the basis of design in section 2.5 A & B. All proposed equals should be submitted per Specification section 012500 substitution procedures using section 012501 request for substitution form.
P-008	Returned	Spec section 03360	7/7/2023	Spec 03 3010 references spec 03360 for “Protection of Concrete Slab”. However, we don’t see spec 03360. Please clarify.	7/14/2023	Protection of concrete slab is found in section 3.4 of spec 03 3010. Spec 03360 deals with dye stained concrete. We do not have dyed concrete on this project so that section does not apply.



SHELBY COUNTY ALABAMA

Project
SHELBY COUNTY JAIL EXPANSION
380 MCDOW ROAD,
COLUMBIANA, ALABAMA 35051

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200 WEST COLLEGE STREET
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Electrical
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Telephone: 205-995-1078

Key Plan
AREA A AREA C AREA D
AREA B
N

Professional Seals

NOT FOR CONSTRUCTION

No.	Description	Date
1	50% SCHEMATIC DESIGN	2022-05-13
2	95% SCHEMATIC DESIGN	2022-06-03
3	SCHEMATIC DESIGN	2022-06-15
4	50% DESIGN DEVELOPMENT	2022-07-25
5	95% DESIGN DEVELOPMENT	2022-08-15
6	DESIGN DEVELOPMENT	2022-08-19
7	50% CONSTRUCTION DOCUMENTS	2022-09-30

Project No: 21.01020.00

Sheet Title
SITE LOGISTICS PLAN

Original drawing is 48 x 36. Do not scale contents of this drawing.

Sheet Number
EX-01

Geotechnical Engineering Report

Proposed Shelby County Jail Expansion
Columbiana, Alabama
July 11, 2022
Terracon Project No. E1225078

Prepared for:
Shelby County Development Services
Pelham, Shelby County, Alabama

Prepared by:
Terracon Consultants, Inc.
Birmingham, AL

July 11, 2022

Shelby County Development Services
1123 County Services Drive
County Services Building
Pelham, AL 35124

Attn: Trey Gauntt
Manager, Facilities and General Services
E: tgauntt@shelbyal.com

Re: Geotechnical Engineering Report
Shelby County Jail Expansion
Columbiana, Shelby County, Alabama
Terracon Project No. E1225078

Dear Mr. Gauntt:

Terracon has completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PE1225078 dated May 9, 2022. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs, and other site development elements.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Bryan C. Ritenour, P.E.
Senior Engineer
Alabama PE 17908

Jerome A. Smith, P.E.
Senior Engineer, Principal
Alabama PE 20478

REPORT TOPICS

Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the ***GeoReport*** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

Note: Refer to each individual Attachment for a listing of contents.

Geotechnical Engineering Report

Proposed Shelby County Jail Expansion

Columbiana, Alabama

Terracon Project No. E1225078

July 11, 2022

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed additions to the Shelby County Jail in Columbiana, Alabama. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Pavements
- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per IBC

The geotechnical engineering Scope of Services for this project included the advancement of thirteen test pits to depths ranging from approximately 5 to 9 feet below existing site grades. In 2001, Terracon performed a Geotechnical Exploration for the site of the existing Shelby County Jail. The 2001 services consisted of twenty-nine (29) borings. Three of those borings were drilled in, or near, the proposed expansion area. The boring logs for the pertinent 2001 borings are included in this report.

Maps showing the site and test pit locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the test pit logs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Site Location	The project site is located at the existing Shelby County Jail in Columbiana, Alabama (See Exhibit D). Approximate GPS coordinates are 33.1859N, 86.6261W

Item	Description
Existing Improvements	Existing Shelby County Jail complex
Current Ground Cover	Mostly grass or gravel access drives
Existing Topography	The site is relatively level with elevations ranging from about 567 to 568 in the proposed building area.

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. Our final understanding of the project conditions is as follows:

Item	Description
Information Provided	Site layout plan and information provided via email by HOK and Shelby County Development Services
Project Description	New Inmate Housing Additions (Approximately 45,000 SF)
Building Construction	Two-story masonry construction with a concrete slab-on-grade
Finished Floor Elevation	Assumed to match the adjacent structure
Maximum Loads	Estimated 75 kips for columns (Mr. Greg Tucker) Estimated 7 klf for walls (Mr. Greg Tucker) Assumed 100 psf for floor slab
Grading (Assumed)	Based on the preliminary grading and drainage plan prepared by HOK in association with GMC, it appears that less than 2 feet of cut and fill will be required to grade the site.
Free-Standing Retaining Walls (Assumed)	None

GEOTECHNICAL CHARACTERIZATION

Site Geology

Published maps from the Geological Survey of Alabama indicate that the site is underlain by the Parkwood Formation and Floyd Shale undifferentiated. The Parkwood Formation consists of medium to dark-gray shale and light to medium-gray sandstone. The Floyd Shale consists of dark-gray shale, with thin beds of sandstone, limestone and chert locally present.

Subsurface Conditions

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each test pit location, refer to the individual test pit logs.

Model Layer	Layer Name	General Description
1	**Surface Material**	Topsoil (6 to 14 inches at test pits)
2	**Existing Fill**	Clayey Sand or Sandy Lean Clay with shale fragments, generally brown, gray, orange brown, appears well compacted
3	**Native, Sandy Lean Clay (CL) or Clayey Sand (SC)**	Orange tan or orange brown, sometimes with weathered sandstone seams, stiff to hard (Clays and Silts) or medium dense to very dense (Sands)
4	**Native Weathered Shale**	Generally brown with light to dark gray, some black, moderately hard to hard

Please refer to the **Exploration Results** for further information.

Groundwater

Groundwater was not observed in any of the test pits during excavation or for the short duration the test pits remained open. Due to the low permeability of the soils encountered, a relatively long period may be necessary for a groundwater level to develop and stabilize. Long term observations in piezometers or observation wells sealed from the influence of surface water are often required to define groundwater levels in materials of this type. Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the test pits.

GEOTECHNICAL OVERVIEW

Based on the information obtained from our subsurface exploration, the following geotechnical considerations were identified:

Beneath the surface layer of topsoil, nine of the test pits encountered existing fill consisting of clayey sand or sandy lean clay with shale fragments. The fill extended to depths ranging from about 2 to 3 feet below the ground surface. The existing fill appeared to be well compacted.

Beneath the surface material or existing fill, the test pits encountered a layer of native soils consisting of Clayey Sand (SC) or Sandy Lean Clay (CL). The consistency of clays was estimated to stiff to hard and the relative density of the sands was estimated to be medium dense to dense.

Beneath the native soils, the test pits encountered highly weathered shale to the termination or practical refusal depth. The shale became less weathered and harder with depth at each test pit location.

Following proper site preparation measures, approved existing fill, new engineered fill, very stiff to hard or medium dense to dense native soils, and weathered to hard bedrock will provide adequate support for shallow spread footing foundations and floor slabs. The **Shallow Foundations** section addresses foundations bearing on medium stiff/medium dense or better native soils, weathered bedrock, approved existing fill, or new engineered fill. The **Floor Slabs** section addresses slab-on-grade support on medium stiff/medium dense or better native soils, approved existing fill, or new engineered fill.

It is our opinion that the soils and weathered rock penetrated by the test pits can be removed using a large track-mounted excavator equipped with rock teeth on the bucket. These operations may need to be supplemented by the use of a heavy jackhammer or pneumatic spade where the rock becomes less weathered (i.e., auger refusal depths and below), especially in confined excavations such as foundation or utility excavations.

The **General Comments** section provides an understanding of the report limitations.

EARTHWORK

Earthwork is anticipated to include clearing and grubbing, excavations, and fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations, floor slabs, and pavements.

Site Preparation

The first phase of construction should consist of removing of all topsoil, vegetation, and any other deleterious materials from the site. Often, poorly compacted backfill is found in the trenches made to install the existing buried utilities.

Due to the site being previously graded, we caution that foundations, burial pits, organic debris, construction debris or other deleterious materials could exist across the site, between or away from our test pits. Debris fill may not become evident until construction.

After the required demolition, clearing and grubbing but prior to placing any new fill, the subgrade should be compacted/densified with a heavy self-propelled vibratory sheepsfoot roller. Following compaction/densification, the subgrade should be proof-rolled with an adequately loaded vehicle such as a fully-loaded tandem-axle dump truck. The proof-rolling should be performed under the observation of the Geotechnical Engineer. Areas excessively deflecting under the proof-roll should be delineated and subsequently addressed by the Geotechnical Engineer. Such unstable areas will require undercutting and replacement in building areas. Undercutting of unstable subgrade should extend 10 feet beyond the building lines.

Following the Engineer's evaluation and any necessary undercut or stabilization efforts, new engineered fill may be placed to establish the planned finish grade.

Fill Material Types

Earthen materials used for structural and general fill should meet the following material property requirements:

Soil Type [1]	USCS Classification	Acceptable Parameters (for Structural Fill)
Lean clay	CL (LL<50 and PI<25)	All locations and elevations
Silt	ML (LL<50 and PI<25)	All locations and elevations
Sand	SW, SC, SM, SP	All locations and elevations
On-Site Soils	Varies	The existing fill material and native soils which are free of organics appear suitable for reuse as fill; however, moisture conditioning (wetting or drying) should be anticipated if on-site soils are used as fill.

1. Structural and general fill should consist of approved materials free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site.

Fill Compaction Requirements

Structural fill should meet the following compaction requirements.

Item	Structural Fill
Maximum Lift Thickness	9 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used

Item	Structural Fill
Minimum Compaction Requirements [1]	98% of maximum standard Proctor density at all locations and elevations
Water Content Range [1]	Low plasticity cohesive: -2% to +2% of optimum Granular: -3% to +4% of optimum

1. Maximum density and optimum water content as determined by the standard Proctor test (ASTM D 698).

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roof should have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the building.

Exposed ground should be sloped and maintained at a minimum 5% away from the building for at least 10 feet beyond the perimeter of the building. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After building construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where paving or flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Earthwork Construction Considerations

Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of floor slabs. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over or adjacent to construction areas should be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and recompacted prior to floor slab construction.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, and/or state regulations.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for

construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

Construction Observation and Testing

The earthwork efforts should be monitored under the guidance of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proof-rolling, and mitigation of areas delineated by the proofroll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building area. One density and water content test should be performed on each lift of fill for every 50 linear feet of compacted utility trench backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated by the Geotechnical Engineer. If unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

Shallow Foundation Design Parameters – Compressive Loads

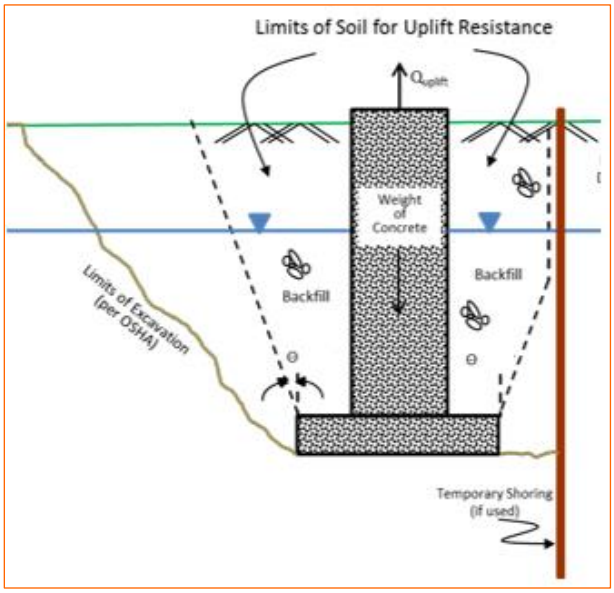
Item	Description
Maximum Net Allowable Bearing pressure [1, 2]	2,500 psf
Required Bearing Stratum [3]	Approved existing fill, very stiff to hard or medium dense to very dense native soils, weathered to hard bedrock, or new engineered fill
Minimum Foundation Dimensions	Columns: 24 inches Continuous: 18 inches
Ultimate Passive Resistance [4] **(equivalent fluid pressures)**	330 pcf (cohesive backfill) 420 pcf (granular backfill)
Ultimate Coefficient of Sliding Friction [5]	0.30

Minimum Embedment below Finished Grade [6]	Exterior: 18 inches Interior: 12 inches
Estimated Total Settlement from Structural Loads [2]	1 inch or less
Estimated Differential Settlement [2, 7]	¾ inch or less

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied. These bearing pressures can be increased by 1/3 for transient loads unless those loads have been factored to account for transient conditions. Values assume that exterior grades are no steeper than 20% within 10 feet of structure.
2. Values provided are for maximum loads noted in **Project Description**.
3. Bearing material should be observed by Terracon prior to steel reinforcement placement.
4. Use of passive earth pressures require the sides of the excavation for the spread footing foundation to be nearly vertical and the concrete placed neat against these vertical faces or that the footing forms be removed and compacted structural fill be placed against the vertical footing face. Apply a factor of safety of at least 1.5 when designing for lateral force resistance to reduce the lateral movement necessary to mobilize this force.
5. Can be used to compute sliding resistance where foundations are placed on suitable soil/materials. Should be neglected for foundations subject to net uplift conditions.
6. Embedment necessary to minimize the effects of frost and/or seasonal water content variations. For sloping ground, maintain depth below the lowest adjacent exterior grade within 5 horizontal feet of the structure.
7. Differential settlements are as measured over a span of 40 feet.

Shallow Foundation Design Parameters - Uplift Loads

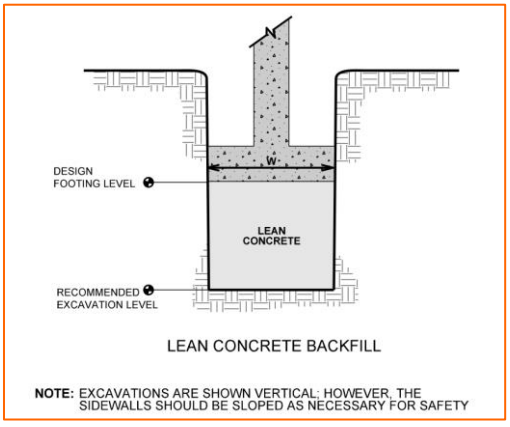
Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils. As illustrated on the subsequent figure, the effective weight of the soil prism defined by diagonal planes extending up from the top of the perimeter of the foundation to the ground surface at an angle, θ, of 30 degrees from the vertical can be included in uplift resistance. The maximum allowable uplift capacity should be taken as a sum of the effective weight of soil plus the dead weight of the foundation, divided by an appropriate factor of safety. A maximum total unit weight of 125 pcf should be used for the backfill. This unit weight should be reduced to 57 pcf for portions of the backfill or natural soils below the groundwater elevation.



Foundation Construction Considerations

As noted in **Earthwork**, the footing excavations should be evaluated under the observation of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

If unsuitable bearing soils are encountered at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. This is illustrated on the sketch below.



SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil properties encountered at the site and as described on the exploration logs and results, it is our professional opinion that the **Seismic Site Classification is C**. Subsurface explorations at this site were extended to a maximum depth of 9 feet. The site properties below the test pit depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area.

FLOOR SLABS

Design parameters for floor slabs assume the requirements for **Earthwork** have been followed. Specific attention should be given to positive drainage away from the structure and positive drainage of the aggregate base beneath the floor slab.

Floor Slab Design Parameters

Item	Description
Floor Slab Support [1]	Minimum 4 inches of free-draining (less than 5% passing the U.S. No. 200 sieve) [2, 3] Approved existing fill, very stiff to hard or medium dense to very dense native soils, weathered to hard bedrock, or new engineered fill underlying the free-draining crushed aggregate
Estimated Modulus of Subgrade Reaction [2]	110 pounds per square inch per inch (psi/in) for point loads

1. Floor slabs should be structurally independent of building footings or walls to reduce the possibility of floor slab cracking caused by differential movements between the slab and foundation.
2. Modulus of subgrade reaction is an estimated value based upon our experience with the subgrade condition, the requirements noted in **Earthwork**, and the floor slab support as noted in this table. It is provided for point loads. For large area loads the modulus of subgrade reaction would be lower.
3. Free-draining granular material should have less than 5% fines (material passing the No. 200 sieve). Other design considerations such as cold temperatures and condensation development could warrant more extensive design provisions.

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder,

the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Joints or cracks should be sealed with a water-proof, non-extruding compressible compound specifically recommended for heavy duty concrete pavement and wet environments.

Where floor slabs are tied to perimeter walls or turn-down slabs to meet structural or other construction objectives, our experience indicates differential movement between the walls and slabs will likely be observed in adjacent slab expansion joints or floor slab cracks beyond the length of the structural dowels. The Structural Engineer should account for potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

Floor Slab Construction Considerations

Finished subgrade, within and for at least 10 feet beyond the floor slab, should be protected from traffic, rutting, or other disturbance and maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become damaged or desiccated prior to construction of floor slabs, the affected material should be removed and structural fill should be added to replace the resulting excavation. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab support course.

The Geotechnical Engineer should approve the condition of the floor slab subgrades immediately prior to placement of the floor slab support course, reinforcing steel, and concrete. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

PAVEMENTS

General Pavement Comments

Pavement designs are provided for the traffic conditions and pavement life conditions as noted in **Project Description** and in the following sections of this report. A critical aspect of pavement performance is site preparation. Pavement designs noted in this section must be applied to the site which has been prepared as recommended in the **Earthwork** section.

On most project sites, the site grading is accomplished relatively early in the construction phase. Fills are placed and compacted in a uniform manner. However, as construction proceeds, excavations are made into these areas, rainfall and surface water saturates some areas, heavy traffic from concrete trucks and other delivery vehicles disturbs the subgrade and many surface irregularities are filled in with loose soils to improve trafficability temporarily. As a result, the

pavement subgrades, initially prepared early in the project, should be carefully evaluated as the time for pavement construction approaches.

After proof-rolling and repairing deep subgrade deficiencies, the entire subgrade should be scarified and developed as recommended in the **Earthwork** section to provide a uniform subgrade for pavement construction. If a significant precipitation event occurs after the evaluation or if the surface becomes disturbed, the subgrade should be reviewed by qualified personnel immediately prior to paving. The subgrade should be in its finished form at the time of the final review.

Pavement Design Parameters

Traffic patterns and anticipated loading conditions were not available at the time that this report was prepared. However, we anticipate that traffic loads will be produced primarily by passenger vehicles, trash collection trucks, and the occasional emergency vehicle. The thickness of pavements subjected to heavy truck traffic should be determined using expected traffic volumes, vehicle types, and vehicle loads and should be in accordance with local, city or county ordinances.

Pavement thickness can be determined using AASHTO, Asphalt Institute, American Concrete Institute, and/or other methods if specific wheel loads, axle configurations, frequencies, and desired pavement life are provided. Terracon can provide thickness recommendations for pavements subjected to loads other than personal vehicle, emergency vehicles and trash removal truck traffic if this information is provided.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to paved areas should slope down from the edges at a minimum 2%.
- Subgrade and pavement surfaces should have a minimum 2% slope to promote proper surface drainage.
- Install below pavement drainage systems surrounding areas anticipated for frequent wetting.
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter. Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

Pavement Section Thicknesses

We have provided pavement thickness design for the car parking areas and truck areas/drive lanes based on a properly prepared subgrade that remains dry during the life of the pavement, and our experience with similar facilities. The subgrade in fill areas should be compacted to at least 98% of the standard Proctor maximum dry density. The following table provides options for AC and PCC Sections:

Typical Pavement Section Thickness (inches)						
Traffic Area	**Alternative**	**Asphalt Concrete Surface Course[4]**	**Asphalt Concrete Binder[5]**	**Portland Cement Concrete [1]**	**Aggregate Base Course [2]**	**Total Thickness**
Light Duty (Car Parking)	Rigid	--	--	5.0	4.0	9.0
	Flexible	1.0	2.0	--	6.0	9.0
Heavy Duty (Drive Lanes)	Rigid	--	--	6.0	4.0	10.0
	Flexible	1.5	2.0	--	8.0	11.5
Trash Container Pad [3]	Rigid	--	--	6.0	4.0	10.0

1. 4,000 psi at 28 days
2. ALDOT 825B dense graded aggregate base compacted to at least 100 percent of the modified Proctor
3. The trash container pad should be large enough to support the container and the tipping axle of the collection truck.
4. ALDOT 424A Superpave Bituminous Concrete Wearing Surface Layer
5. ALDOT 424B Superpave Bituminous Concrete Binder Layer

Where practical, we recommend early-entry cutting of crack-control joints in PCC pavements. Cutting of the concrete in its “green” state typically reduces the potential for micro-cracking of the pavements prior to the crack control joints being formed, compared to cutting the joints after the concrete has fully set. Micro-cracking of pavements may lead to crack formation in locations other than the sawed joints, and/or reduction of fatigue life of the pavement.

Dishing in parking lots surfaced with ACC is usually observed in frequently-used parking stalls (such as near the front of buildings), and occurs under the wheel footprint in these stalls. The use of higher-grade asphaltic cement, or surfacing these areas with PCC, should be considered. The dishing is exacerbated by factors such as irrigated islands or planter areas, sheet surface drainage to the front of structures, and placing the ACC directly on a compacted clay subgrade.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Preventive maintenance is usually the priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur and repairs

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for

third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

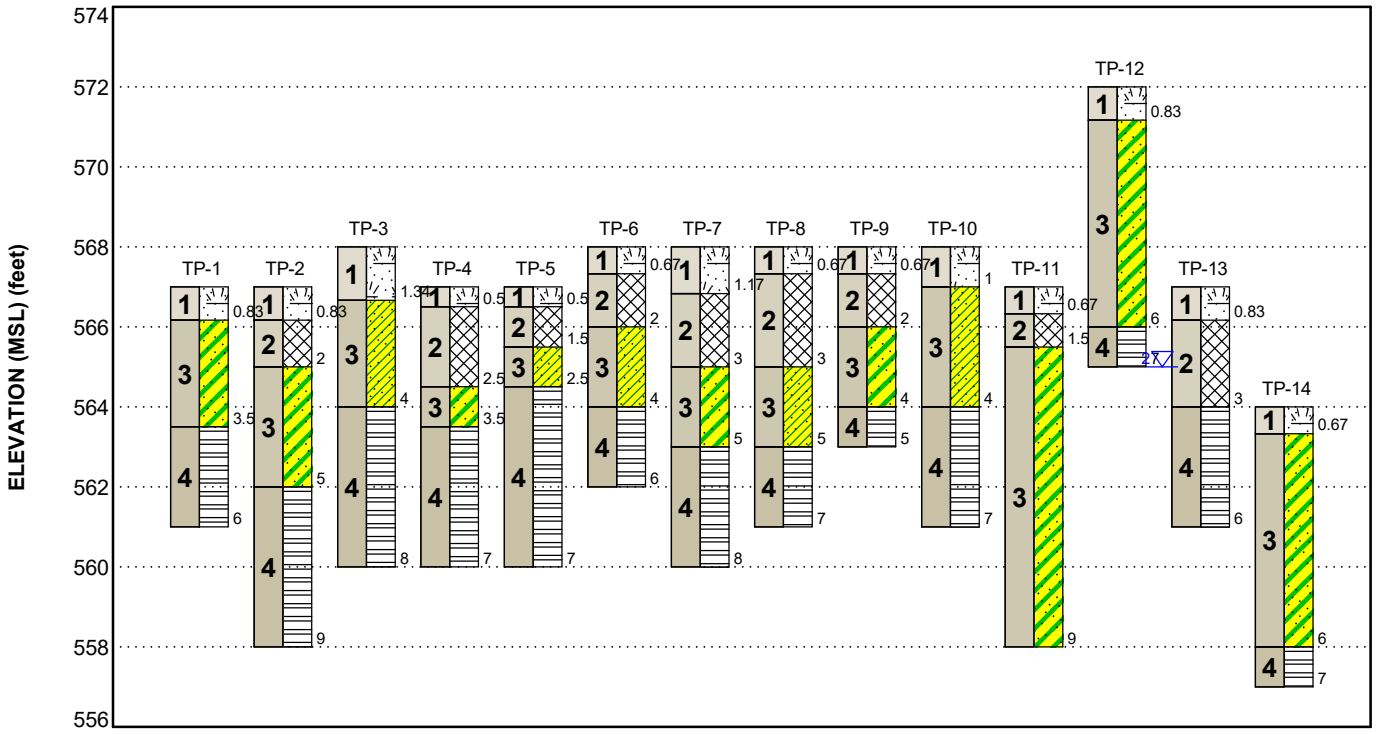
Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

FIGURES

Contents:

GEOMODEL

Shelby County Jail Expansion ■ Columbiana, AL
Terracon Project No. E1225078



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	**Surface Material**	Topsoil (6 to 14 inches at test pits)
2	**Existing Fill**	Clayey Sand or Sandy Lean Clay with shale fragments, generally brown, gray, orange brown
3	**Native, Sandy Lean Clay (CL) or Clayey Sand (SC)**	Orange tan or orange brown, sometimes with weathered sandstone seams, stiff to hard (Clays and Silts) or medium dense to very dense (Sands)
4	**Native Weathered Shale**	Generally brown with light to dark gray, some black, moderately hard to hard

LEGEND

Topsoil
Fill
Clayey Sand
Sandy Lean Clay
Shale

▽ First Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Test pits	Test pit Depth (feet) [1]	Location
14	6 to 9	Building Footprint And Ring Road

1. Below ground surface.

Test pit Layout and Elevations: Unless otherwise noted, Terracon personnel provided the test pit layout. The test pits were marked by measuring from existing structures.

Subsurface Exploration Procedures: The test pits were excavated by Shelby County forces. We observed and recorded groundwater levels during excavation and sampling. All test pits were backfilled with after their completion.

The sampling depths and other sampling information was recorded on the field test pit logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our engineer prepared field test pit logs. These field logs included visual classifications of the materials encountered during excavation and our interpretation of the subsurface conditions between samples. Final test pit logs were prepared from the field logs. The final test pit logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D1140-17 Standard Test Methods for Determining the Amount of Material Finer Than No. 200 Sieve in Soils by Washing
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

SITE LOCATION AND EXPLORATION PLANS

Contents:

Note: All attachments are one page unless noted above.

SITE LOCATION

Proposed Shelby County Jail Expansion ■ Columbiana, Alabama
July 11, 2022 ■ Terracon Project No. E1225078

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY BING

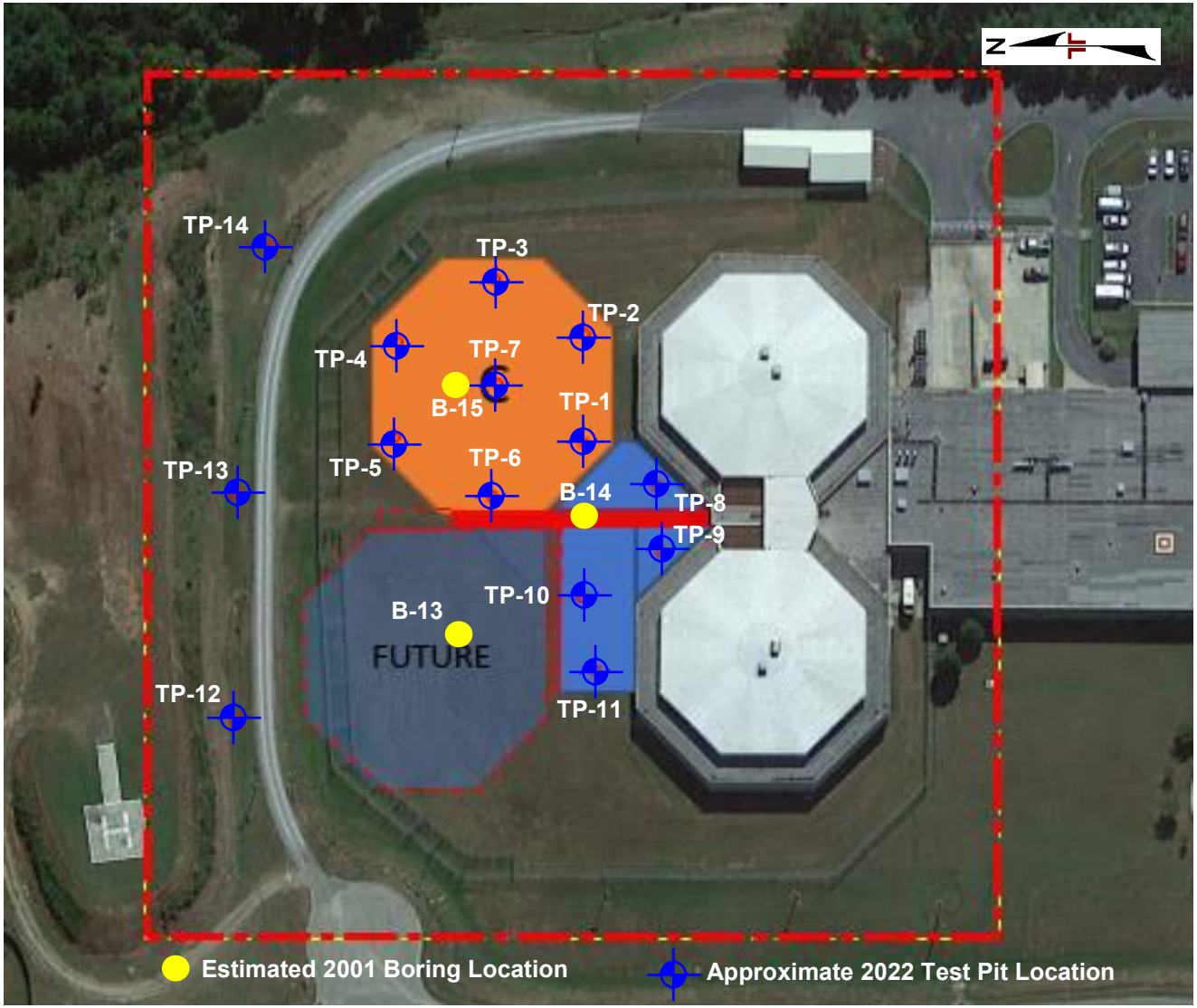


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY HOK

EXPLORATION RESULTS

Contents:

Note: All attachments are one page unless noted above.

TEST PIT LOG NO. TP-1

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (10")** 0.8 / 566.2							
3		**CLAYEY SAND (SC)**, medium gray with brown, medium dense to dense, relict shale bedding 3.5 / 563.5					7.1		
4		**HIGHLY WEATHERED SHALE**, black with gray, thinly bedded, becomes harder and less weathered with depth 6.0 / 561							
		Practical Refusal at 6 Feet							

Surface Elev.: 567 (Ft.)

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022

Excavator: John Deere 7100 | Operator: Shelby County

Project No.: E1225078

TEST PIT LOG NO. TP-2

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

LOCATION See Exploration Plan

Surface Elev.: 567 (Ft.)

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DESCRIPTION
1		0.8	566.2	**TOPSOIL (10")**
2		2.0	565	**FILL - SANDY LEAN CLAY**, brown, with shale fragments
3		5.0	562	**CLAYEY SAND (SC)**, orange brown with gray, medium dense to dense, relict shale bedding
4		9.0	558	**HIGHLY WEATHERED SHALE**, brown with light gray, thinly bedded, thin lean clay partings, becomes less weathered and harder with depth contains some black shale below 7'
				Test Pit Terminated at 9 Feet

DEPTH (Ft.): 1 2 3 4 5 6 7 8 9

WATER LEVEL OBSERVATIONS

SAMPLE TYPE

FIELD TEST RESULTS

WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
8.3		

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022

Excavator: John Deere 7100 | Operator: Shelby County

Project No.: E1225078

TEST PIT LOG NO. TP-3

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Surface Elev.: 568 (Ft.) DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL AND PREVIOUS CULTIVATED SOIL** 1.3 / 566.7	1						
3		**SANDY LEAN CLAY (CL)**, orange brown with gray, stiff to very stiff, with shale fragments contains weathered shale seams at 42" 4.0 / 564	2 3				18.2		
4		**HIGHLY WEATHERED SHALE**, brown with orange and light gray, thinly bedded, becomes less weathered and harder with depth 8.0 / 560	4 5 6 7 8						
		Test Pit Terminated at 8 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022
Test Pit Completed: 06-15-2022
Excavator: John Deere 7100
Operator: Shelby County
Project No.: E1225078

TEST PIT LOG NO. TP-4

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

LOCATION See Exploration Plan

Surface Elev.: 567 (Ft.)

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DESCRIPTION
1		0.5	566.5	**TOPSOIL (6")**
2		2.5	564.5	**FILL - CLAYEY SAND**, orange brown, with shale fragments
3		3.5	563.5	**CLAYEY SAND (SC)**, brown, medium dense to dense
4		7.0	560	**HIGHLY WEATHERED SHALE**, brown, thinly bedded with lean clay partings, becomes less weathered and harder with depth
				Test Pit Terminated at 7 Feet

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1						
2				13.4	23-14-9	45
3						
4						
5				5.7		
6						
7						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022
Test Pit Completed: 06-15-2022
Excavator: John Deere 7100
Operator: Shelby County
Project No.: E1225078

TEST PIT LOG NO. TP-5

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (6")** 0.5 / 566.5							
2		**FILL - SANDY LEAN CLAY**, brown 1.5 / 565.5	1						
3		**SANDY LEAN CLAY (CL)**, brown with gray, very stiff 2.5 / 564.5	2						
4		**HIGHLY WEATHERED SHALE**, dark gray with black, with thin clay partings, becomes less weathered and harder with depth 7.0 / 560	3 4 5 6 7						
		Test Pit Terminated at 7 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022

Excavator: John Deere 7100 | Operator: Shelby County

Project No.: E1225078

TEST PIT LOG NO. TP-6

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	Surface Elev.: 568 (Ft.) ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (8")** 0.7	567.3							
2		**FILL - SANDY LEAN CLAY**, brown with gray, with shale fragments 2.0	566	1						
3		**SANDY LEAN CLAY (CL)**, brown, very stiff to hard, relict shale bedding 4.0	564	2 3						
4		**HIGHLY WEATHERED SHALE**, brown with dark gray, thinly bedded, becomes less weathered and harder with depth 6.0	562	4 5						
		Practical Refusal at 6 Feet		6						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022
Test Pit Completed: 06-15-2022
Excavator: John Deere 7100
Operator: Shelby County
Project No.: E1225078

TEST PIT LOG NO. TP-7

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH	Surface Elev.: 568 (Ft.) ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (14")** 1.2	566.8	1						
2		**FILL - SANDY LEAN CLAY**, brown, with shale fragments 3.0	565	2						
3		**CLAYEY SAND (SC)**, brown with gray, medium dense to dense, relict shale bedding 5.0	563	3				13.9		
4		**HIGHLY WEATHERED SHALE**, brown with light gray and orange, thin sandy lean clay partings black shale at 7' 8.0	560	4 5 6 7 8						
		Practical Refusal at 8 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022

Excavator: John Deere 7100 | Operator: Shelby County

Project No.: E1225078

TEST PIT LOG NO. TP-8

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (8")** 0.7 / 567.3							
2		**FILL - SANDY LEAN CLAY**, brown, with weathered shale fragments 3.0 / 565	1 2						
3		**SANDY LEAN CLAY (CL)**, orange brown with light gray, very stiff to hard, relict shale bedding 5.0 / 563	3 4				22.0		
4		**HIGHLY WEATHERED SHALE**, brown and medium gray and orange brown 7.0 / 561	5 6 7						
		Test Pit Terminated at 7 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022
Test Pit Completed: 06-15-2022
Excavator: John Deere 7100
Operator: Shelby County
Project No.: E1225078

TEST PIT LOG NO. TP-9

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (8")** 0.7 / 567.3							
2		**FILL - SANDY LEAN CLAY**, brown, stiff, with shale fragments 2.0 / 566	1 2						
3		**CLAYEY SAND (SC)**, orange brown, medium dense to dense, relict shale bedding 4.0 / 564	3 4						
4		**HIGHLY WEATHERED SHALE**, brown with medium gray, thinly bedded 5.0 / 563	5						
		Test Pit Terminated at 5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022

Excavator: John Deere 7100 | Operator: Shelby County

Project No.: E1225078

TEST PIT LOG NO. TP-10

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (12")** 1.0 / 567	1						
3		**SANDY LEAN CLAY (CL)**, brown with light gray, stiff to very stiff, relic shale bedding 4.0 / 564	2 3				15.8		
4		**HIGHLY WEATHERED SHALE**, brown with light gray, thinly bedded, becomes less weathered and harder with depth 7.0 / 561	4 5 6 7						
		Test Pit Terminated at 7 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022
Excavator: John Deere 7100 | Operator: Shelby County
Project No.: E1225078

TEST PIT LOG NO. TP-11

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (8")** 0.7 / 566.3							
2		**FILL - SANDY LEAN CLAY**, brown with gray, with shale fragments 1.5 / 565.5	1						
3		**CLAYEY SAND (SC)**, orange brown with light gray, medium dense to dense, relic shale bedding	2						
			3				18.4	45-27-18	25
			4						
			5						
			6						
			7						
			8						
		9.0 / 558	9						
		Test Pit Terminated at 9 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022
Test Pit Completed: 06-15-2022
Excavator: John Deere 7100
Operator: Shelby County
Project No.: E1225078

TEST PIT LOG NO. TP-12

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (10")** 0.8 / 571.2	1						
3		**CLAYEY SAND (SC)**, orange brown and gray, medium dense to dense, with relic shale 6.0 / 566	2 3 4 5 6						
4		**HIGHLY WEATHERED SHALE**, orange brown and light gray 7.0 / 565	7						
		Test Pit Terminated at 7 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022

Excavator: John Deere 7100 | Operator: Shelby County

Project No.: E1225078

TEST PIT LOG NO. TP-13

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (10")** 0.8 / 566.2							
2		**FILL - SANDY LEAN CLAY**, brown and gray, with shale fragments 3.0 / 564	1 2	▽					
4		**HIGHLY WEATHERED SHALE**, brown with dark gray becomes black shale at 5' 6.0 / 561	3 4 5 6						
		Practical Refusal at 6 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Perched water at 2' during excavation*

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022

Excavator: John Deere 7100 | Operator: Shelby County

Project No.: E1225078

TEST PIT LOG NO. TP-14

PROJECT: Shelby County Jail Expansion

CLIENT: Shelby County Development Services
Pelham, Shelby County, Alabama

SITE: 380 McDow Rd
Columbiana, AL

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**TOPSOIL (8")** 0.7 / 563.3							
3		**CLAYEY SAND (SC)**, orange brown qirh gray, medium dense to dense, with shale bedding 6.0 / 558	1 2 3 4 5 6						
4		**HIGHLY WEATHERED SHALE**, brown with gray 7.0 / 557	7						
		Test Pit Terminated at 7 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Trackhoe

Abandonment Method:
Test pit backfilled with excavated material

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No water observed during excavation

Terracon
2147 Riverchase Office Rd
Hoover, AL

Test Pit Started: 06-15-2022 | Test Pit Completed: 06-15-2022
Excavator: John Deere 7100 | Operator: Shelby County
Project No.: E1225078

Gallet & ASSOCIATES

Log of Boring B-13

Shelby County Jail
City of Columbiana, Alabama
Gallet Project No. 01BHSHE5404G

Date Drilled : December 28, 2001
Engineer : Frank Whitman, Gallet & Associates
Driller : Jim Wright, Prodrill, Inc.
Drilling Method : Continuous Flight Augers
Sampling Method : Split-Spoon Sampler

Depth In Feet	Water Levels	USCS	GRAPHIC	DESCRIPTION	Samples	Blow Count	N-Value	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index
0				TOPSOIL (7 inches)							
1		CL		LEAN CLAY WITH SAND brown and gray, moist, stiff	1	4 5 3	8				
2											
3											
4		CL		SANDY LEAN CLAY layered red, yellow, and gray, damp, very stiff to hard	2	13 13 21	34				
5											
6					3	9 11 14	25	18.0			
7											
8											
9		CL		SILTY CLAY light gray, damp, very hard	4	12 24 28	50+				
10											
11											
12											
13											
14		CL		SHALEY CLAY medium gray, damp, very hard	5	50+	50/6"				
15											
16											
17											
18		GC		CLAYEY GRAVEL WITH SAND black, very moist, very hard							
19				69% coarse-grained, 31% fine-grained	6	50+	50/6"	11.5	34	24	10
20											
21											
22											
23											
24					7	50+	50/1"				
25											
26											
27	▼										
28											
29					8	27 50+	50/4"				
30				BORING TERMINATED AT 30 FEET							
31											

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Gallet & ASSOCIATES

Log of Boring B-14

Shelby County Jail
City of Columbiana, Alabama
Gallet Project No. 01BHSHE5404G

Date Drilled : December 28, 2001
Engineer : Frank Whitman, Gallet & Associates
Driller : Jim Wright, Prodrill, Inc.
Drilling Method : Continuous Flight Augers
Sampling Method : Split-Spoon Sampler

Depth In Feet	Water Levels	USCS	GRAPHIC	DESCRIPTION	Samples	Blow Count	N-Value	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index
0				TOPSOIL (8 inches)							
1		CL		SANDY LEAN CLAY brown streaked with red and gray, damp, very stiff	1	12 12 11	23				
2											
3											
4				becomes hard to very hard	2	8 21 45	50+	14.9			
5											
6					3	8 18 30	48				
7											
8											
9					4	27 50+	50/6"				
10											
11											
12		ML		CLAYEY SILT medium brown, damp, very hard							
13											
14					5	50+	50/6"				
15											
16											
17		GC		CLAYEY GRAVEL WITH SAND black, moist, very hard, with coal							
18											
19					6	50+	50/5"				
20				BORING TERMINATED AT 20 FEET							
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											

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Gallet & ASSOCIATES

Log of Boring B-15

Shelby County Jail
City of Columbiana, Alabama
Gallet Project No. 01BHSHE5404G

Date Drilled : December 28, 2001
Engineer : Frank Whitman, Gallet & Associates
Driller : Jim Wright, Prodrill, Inc.
Drilling Method : Continuous Flight Augers
Sampling Method : Split-Spoon Sampler

Depth in Feet	Water Levels	USCS	GRAPHIC	DESCRIPTION	Samples	Blow Count	N-Value	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index
0				TOPSOIL (10 inches)							
1		CL		LEAN CLAY WITH FINE GRAVEL medium brown mottled with red, very moist, stiff	1	3 5 4	9				
2											
3											
4		CL		SANDY LEAN CLAY light brown and gray, damp, very stiff	2	3 8 17	25	17.7			
5											
6					3	3 6 14	22	19.2			
7											
8											
9		CL		SANDY LEAN CLAY WITH FINE GRAVEL medium brown, red, and gray, damp, very hard	4	15 43 50+	50/6"				
10											
11											
12											
13											
14		CL		SHALY CLAY brown, red, and gray, moist, very hard	5	9 23 40	50+				
15											
16											
17											
18											
19					6	20 50+	50/4"				
20				BORING TERMINATED AT 20 FEET							
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											

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SUPPORTING INFORMATION

Contents:

Note: All attachments are one page unless noted above.

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS
Shelby County Jail Expansion ■ Columbiana, AL
Terracon Project No. E1225078

Terracon GeoReport

SAMPLING	WATER LEVEL	FIELD TESTS
Grab Sample	**Water Initially Encountered** **Water Level After a Specified Period of Time** **Water Level After a Specified Period of Time** **Cave In Encountered** Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	**N** Standard Penetration Test Resistance (Blows/Ft.) **(HP)** Hand Penetrometer **(T)** Torvane **(DCP)** Dynamic Cone Penetrometer **UC** Unconfined Compressive Strength **(PID)** Photo-Ionization Detector **(OVA)** Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

LOCATION AND ELEVATION NOTES

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (tsf)**	**Standard Penetration or N-Value Blows/Ft.**
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELEVANCE OF SOIL BORING LOG

The soil boring logs contained within this document are intended for application to the project as described in this document. Use of these soil boring logs for any other purpose may not be appropriate.

UNIFIED SOIL CLASSIFICATION SYSTEM

Terracon GeoReport

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	Cu ≥ 4 and 1 ≤ Cc ≤ 3 [E]		GW	Well-graded gravel [F]
			Cu < 4 and/or [Cc<1 or Cc>3.0] [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	Cu ≥ 6 and 1 ≤ Cc ≤ 3 [E]		SW	Well-graded sand [I]
			Cu < 6 and/or [Cc<1 or Cc>3.0] [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K, L, M, N]
			Liquid limit - not dried			Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K, L, M, P]
			Liquid limit - not dried			Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.