



COLLIN COUNTY

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COLLIN COUNTY, TEXAS

ADDENDUM No. SEVEN (7)

IFB No. 2021-239

INVITATION FOR BID

FOR

CONSTRUCTION, COLLIN COUNTY ADULT DETENTION FACILITY, PHASE 1 ADDITION

DATE: SEPTEMBER 1, 2021

NOTICE TO ALL PROSPECTIVE BIDDERS:

PLEASE MAKE THE FOLLOWING CHANGES TO THE INVITATION FOR BID:

ADD DOCUMENT: ARCHITECT'S ADDENDUM 5

DELETE DOCUMENT: SECTION 28 05 10
REPLACE WITH: SECTION 28 05 10 ADDENDUM 5

DELETE DOCUMENT: D702 ADDENDUM 2
REPLACE WITH: D702 ADDENDUM 5

ADD DOCUMENT: ARCHITECT'S ADDENDUM 6

DELETE DOCUMENT: TABLE OF CONTENTS ADDENDUMS 1, 2, 3, 4
REPLACE WITH: TABLE OF CONTENTS ADDENDUMS 1, 2, 3, 4, 5, 6

DELETE DOCUMENT: SECTION 09 95 00
REPLACE WITH: SECTION 09 95 00 ADDENDUM 6

DELETE DOCUMENT: SECTION 23 07 00
REPLACE WITH: SECTION 23 07 00 ADDENDUM 6

DELETE DOCUMENT: CVR ADDENDUMS 1, 2, 3, 4
REPLACE WITH: CVR ADDENDUMS 1, 2, 3, 4, 5, 6

DELETE DOCUMENT: A303
REPLACE WITH: A303 ADDENDUM 5

DELETE DOCUMENT: E301
REPLACE WITH: E301 ADDENDUM 6

DELETE DOCUMENT: E302 ADDENDUM 2
REPLACE WITH: E302 ADDENDUM 6

DELETE DOCUMENT: M201 ADDENDUM 2
REPLACE WITH: M201 ADDENDUM 6

DELETE DOCUMENT: M202 ADDENDUM 2
REPLACE WITH: M202 ADDENDUM 6

DELETE DOCUMENT: BID QUESTIONS AND ANSWERS
REPLACE WITH: BID QUESTIONS AND ANSWERS ADDENDUM 7

ADD ATTRIBUTE: #26-ADDENDUM No. 7 ACKNOWLEDGEMENT

DELETE DOCUMENT: SECTION 004100-BID FORM ADDENDUM 6
REPLACE WITH: SECTION 004100-BID FORM ADDENDUM 7

ALL OTHER TERMS AND CONDITIONS OF THE BID AND SPECIFICATIONS REMAIN THE SAME.

SINCERELY,
MICHELLE CHARNOSKI, NIGP-CPP, CPPB
PURCHASING AGENT

JDG

ADDENDUM NO. 5

TO

Collin Count Adult Detention Facility, Phase 1

McKinney, Texas

August 27, 2021

Project: 21913.00
From: Brinkley Sargent Wiginton Architects, Inc.
To: Bidders of Record

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents.

PROJECT MANUAL MODIFICATIONS

Item No. 1. Section 28 05 10 Common Work Results for Electronic Security System

A. Modified section 1.3.E.

DRAWINGS MODIFICATIONS

Note to bidders on drawing modifications: Any revision made to a sheet as part of this Addendum, regardless of the scale of the modification, results in the reissuance of that full sheet. The description for the revisions follows below, but the full sheet is reissued to allow revised sheets to simply be substituted for the sheets originally issued.

Item No. 2. Sheet – D702

A. Added note to drawings.

ADDENDUM 5 ATTACHMENTS:

Specification Sections as listed above

Drawing Sheets as listed above.

END OF ADDENDUM

SECTION 280510 - COMMON WORK RESULTS FOR ELECTRONIC SECURITY SYSTEM*AD 5

PART 1 - GENERAL

1.1 DESCRIPTION

A. General:

1. Furnish all labor, materials, tools, equipment, and services for all electronic systems work as indicated, in accord with provisions of Contract Documents.
2. Completely coordinate with work of all other trades.
 - a. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.
3. See Division 01 for General Requirements.

B. Drawings use and interpretation:

1. Drawings are diagrammatic and indicate general arrangement of systems and equipment, except when specifically dimensioned or detailed.
2. Field measurements take precedence over dimensioned drawings.
3. Intention is to show size, capacity, approximate location, direction and general relationship of one work phase to another, but not exact detail or arrangement.
4. Field verify locations and arrangement of all existing systems and equipment.
5. Where ambiguity may exist between specifications and drawings, the most stringent shall apply.

C. Installation of all systems and equipment is subject to clarification as indicated in reviewed shop drawings and field coordination drawings.

D. Dimensions indicated anywhere are limiting dimensions.

E. Do not use equipment exceeding dimensions indicated or equipment or arrangements that reduce required clearances or exceed specified maximum dimensions.

F. Description of systems: Furnish and install all materials to provide functioning systems in compliance with performance requirements specified and any modifications resulting from reviewed shop drawings and field coordinated drawings. Electronic security systems work as specified in this section includes:

1. Providing all equipment to provide a functional integrated system indicated in the contract documents.
2. Providing special back boxes for field devices.
3. Providing equipment cabinets and enclosures.
4. Providing wiring for electronic systems.
5. Providing raceway systems for electronic systems.

G. Electronic Security Systems:

- | | |
|--|-----------------|
| 1. Cabinets and Enclosures: | Section 28 0555 |
| 2. Access Control System: | Section 28 1300 |
| 3. Video Management and Recording System | Section 28 2300 |
| 4. Electronic Control System: | Section 28 4619 |
| 5. Touch Screen Control and Management System: | Section 28 4623 |
| 6. Digital Intercom and Paging System: | Section 28 5123 |
| 7. Uninterruptible Power System: | Section 28 5045 |

H. Furnished and installed by Division 26:

1. All 120 volt AC wiring and connections for power panels and/or terminal strips in electronic panels, cabinets, enclosures or consoles.
 2. All 120 volt AC wiring, devices and connections for devices and equipment as indicated on drawings.
- I. Description of systems: Furnish and install all materials to provide functioning systems in compliance with performance requirements specified and any modifications resulting from reviewed shop drawings and field coordinated drawings.
- J. Furnished by Electronic Systems Integrator for installation by Division 26:
1. Non standard electrical boxes.
- K. Furnished and installed by Division 26:
1. Complete raceway system from the main head end equipment to the end device, including any necessary standard size back boxes, wire ways and pull boxes. Install pull string in all conduits.
 2. All 120 volt AC wiring and connections for power panels and/or terminal strips in electronic panels, cabinets, enclosures or consoles.
 3. All 120 volt AC wiring, devices and connections for devices and equipment as indicated on drawings.
 4. The Electronic Systems Integrator shall furnish conduit requirements and special back boxes to the Division 26 installer in a timely manner so as not to impede the progress of the work. Conduit sizing shall allow for a maximum conductor fill of 40 percent of conduit cross sectional area.
 5. The Electronic Systems Integrator shall be responsible for any additional conduits required (not shown on drawings) or increase in size of conduit to effect the installation of the security system contained herein.
- L. Related work:
1. Division 8
 - a. Commercial Door Hardware: Section 087100
 2. Division 11
 - a. Detention Door Hardware:
 3. Division 26
 - a. Raceway systems: Section 260533
 - b. Building Wire/Cable: Section 260519
- M. Furnished and installed by Division 28:
1. Data interface using standard industry protocol for data communication (e.g. BACfnet) between electronic security system and control systems provided by Div 26 contractor such as detention area lighting control and power control etc.
 2. Electronic security integrator shall coordinate data interface communication with other trades.

1.2 BASIS OF DESIGN

- A. The electronic security system described within the specifications and drawings shall function as an integrated system. Although the system is made up of several sub systems, they shall be integrated in both physical and electronic manner to achieve a single system presentation and functionality to the operator. The control stations shall function as a single control point, appearing to function as a single system.
- B. The integrated system is made up of several subsystems that communicate with each other via a fault-tolerant, self-healing network. The network is Ethernet based with primary controlling systems connected to the managed network switches. The network switches will direct all communications to and from all devices connected to the systems.

- C. Control of door locks, detention area duress buttons, lights, receptacles, etc. will be managed via distributed programmable logic controllers (PLC). Programmable logic controllers shall be located in each electronic security equipment room. Each PLC shall be connected to the Ethernet network and shall be capable of stand-alone operation in the event of network connection failure.
- D. The intercom switching system will be a digital intercom system with software based configuration, fault tolerant design, and rugged construction. The system is integrated to control stations via the electronic security network, allowing intercom functions to occur between each control station and their assigned remote intercom stations and speakers. Cat6 cable shall be used for wiring between intercom stations and closest network switches. If the Cat6 cable length exceeds 300' fiber optic cable and converter(s) shall be provided.
- E. The Collin County ADF uses Stentofon system for paging and communication between control stations. This system shall be expanded to allow paging into the new building expansion. The existing Stentofon server (AlphaCom E7 exchange) is currently installed in the electronic security equipment room #129. New Stentofone desk master stations shall be provided at each new control room/location (Cluster Control 2011; Housing Controls 2102, 2202, 2302; Booking Coordinator 1103; Pre-Booking 1023 and Transfer Coordinator 1321. New desk master stations shall match the existing stations. The electronic security system integrator shall provide all necessary updates to existing software and hardware when needed to achieve a single system presentation to the operator. The electronic security integrator shall inform the Owner in the timely manner (21 days in advance) when the Stentofon system is ready for network connection and integration with the existing system. The Owner will witness and assist the final system integration (network connection and all programming changes). The Stentofon communication and paging system installed at the Collin County ADF shall meet or exceed functionality and serviceability of the Owner's existing Stentofon system.
- F. Touch screen control and management system shall provide the means to control and monitor all security devices in the expansion part of facility via the electronic control system. Additionally it shall provide archiving of events to a database with ability to generate reports from that database. The touch screen control system shall be configured to allow control transfer between all stations so that any touch screen station in the expanded part of the facility can control and monitor entire facility (expanded part of the facility). New touch screen control station shall be added to the existing Central Control Room. This station shall be used to control/monitor movement between the existing and new building and to control /monitor all exterior doors at the new building. The new station in the existing Central Control Room shall be responsible for all emergency function related to the new building.
- G. Control of devices such as detention area lights, and power receptacles, etc. shall be control via electronic security control system using data interface between the security system and other trades.
- H. The access control system will be an expansion of the county wide used platform manufactured by Open Options. New access control panels shall be provided to terminate all new access control system filed devices and to communicate over new security network to the exiting access control server(s). Access control panels (controllers) shall use fully distributed database architecture with real-time processing performed at each panel (controller). The fully distributed processing shall provide that all information (time, date, valid codes, access levels, etc) is downloaded to the controllers so that each controller makes its own access control decisions. There shall be no hierarchical or intermediate processors to make decisions for the controllers. Also access control system server/workstation shall not be required to make any decisions for the controllers including any global functions, providing instant response to card reads regardless of system size and provide for no degradation of system performance in the event of communication loss to the host (or actual loss of host). All time zones, access levels, linking events, holiday schedules, and global functions shall remain operational. Upon communication loss to the host all controllers shall automatically buffer event transactions until the host communications is restored, at which time the buffered events shall be automatically uploaded to the host.
- I. The video management system shall be an IP network-based, fully distributed digital video system that will be provided by the electronic security system integrator/contractor. The security video system will utilize

local area networks (LAN) as a transmission medium for video, configuration, as well as storage of all data. The security video system shall provide full video control at the Collin County Jail Expansion, with additional full selection capability at any point within the network from any workstation or a video console display. The security video system shall provide unlimited expansion capability for the addition or modification of video inputs. The purpose of the video surveillance system is to provide visual confirmation of movement through security barriers and general surveillance of movement. The digital, high resolution IP video cameras will be used throughout the building and around the building perimeter. High resolution cameras will be mounted outside each perimeter access control door to provide the necessary verification of all activity at the entrance. Video IP cameras will be in all areas of the building that require monitoring for reasons of security. All cameras shall be recorded and video storage shall be sized to retain recording for 90 days. All cameras shall be continuously recorded at native resolution, 15 images per second. Quite time recording (no motion) shall be native resolution, 2 images per second for all cameras. The motion should be estimated at 70%. The county is currently using Milestone VMS (video management system) platform and Axis cameras as their standard on all new buildings so these products will be used in the new jail expansion.

- J. Miscellaneous devices (i.e. motion detectors, call buttons, duress buttons, etc.) shall be configured as inputs to the local PLC with status displayed on the control stations.
- K. Touch screen control and management system shall provide the means to control and monitor all security devices in the inmate holding area via the electronic control system. Additionally it shall provide archiving of events to a database with ability to generate reports from that database. The officers (with authorized password and ID) shall be able to transfer control of certain areas between the touch screen stations to adjust their work load. The system consists of seven (7) new touch screen control stations, an administration station, and a file server.
- L. All security systems shall be powered from the emergency power systems with additional backup from uninterruptible power systems for all components other than electrically control door locks, sliding doors, overhead doors, and similar motor or solenoid loads. UPS backup shall be provided for a minimum of 20 minutes at full connected load.

1.3 QUALITY ASSURANCE

- A. Perform all work in accord with following codes and standards:
 - 1. Codes Compliance: Comply with the following current adopted codes:
 - a. Federal, state and local codes, regulations and ordinances.
 - b. National Electrical Code (NEC), latest edition
 - c. National Fire Code (NFC)
 - d. Occupational Safety and Health Act (OSHA)
 - e. International Building Code (IBC)
 - f. Factory Mutual System (FM) requirements
 - g. All authorities having jurisdiction.
 - 2. Standards Compliance: Comply with the following standards as applicable:
 - a. Americans with Disabilities Act (ADA)
 - b. American National Standards Institute (ANSI)
 - c. American Society for Testing and Materials (ASTM)
 - d. Electronics Industry Association (EIA)
 - e. Electrical Testing Laboratories (ETL)
 - f. Factory Mutual (FM)
 - g. Institute of Electrical and Electronics Engineers (IEEE)
 - h. Insulated Cable Engineers Association (ICEA)
 - i. National Electrical Contractors Association (NECA)
 - j. National Electrical Manufacturers Association (NEMA)
 - k. National Fire Protection Association (NFPA)
 - l. Underwriter's Laboratories (UL)

- B. Equipment Manufacturer:
 - 1. Regularly engaged in the manufacture of products specified.
 - 2. Manufacturer of products specified for a period of no less than five years with satisfactory performance in similar applications.

- C. System Integrator Personnel: (Project Manager, Project Engineer, On-site Supervising Technician)
 - 1. Regularly engaged in installation of products specified.
 - 2. Installer of products specified for a period of no less than five years with satisfactory performance.

- D. Systems specified in this Division shall be engineered, assembled and installed under the direction of a pre-qualified electronic systems integrator. Electronic systems integrator shall meet the following minimum requirements.
 - 1. Qualifications.
 - a. Successful completion of at least three similar detention facilities which have been in successful operation for at least one year.
 - b. Technical staff experienced and factory trained in systems specified.
 - c. The electronic systems integrator shall be bondable for an amount equal to 100% of his bid.
 - 2. Pre-qualified electronic systems integrators.
 - a. Accurate Controls, Ripon, WI
 - b. Cornerstone Electronics, Madison, Alabama
 - c. CML Security, Broomfield, CO
 - d. Esitech, Richmond, VA
 - e. Johnson Controls, Alabama
 - f. South West Communication, Decatur, AL
 - g. Stanley Convergent Security Solutions, Noblesville, IN
 - 3. Electronic systems integrators must be pre-qualified to bid the project. Integrators not indicated but desiring approval shall submit information supporting compliance with the following minimum requirements.
 - a. Minimum five (5) continuous years in the business of installing electronic security systems in justice/detention and or correctional facilities incorporating systems and equipment including but not limited to intercom/paging, programmable logic controllers, touch screen control, access control, and video management systems.
 - b. Successful completion of at least five (5) justice/detention facilities of similar size and complexity that have been in operation for at least one year.
 - 1) Successful completion shall be determined by information from references confirming project was not delayed by the completion of electronic security systems, electronic security systems were fully operational within 90 days of substantial completion and electronic security systems remained fully operational at conclusion of warranty period or two years whichever is greater.
 - 2) Projects of similar size are represented by electronic security integration scope of construction cost value in excess of one and half million dollars (\$1,500,000.00).
 - 3) Projects of similar complexity are represented by integrated systems including but not limited to intercom/paging, programmable logic controllers, touch screen control, operating in a network environment with a minimum five (5) equipment locations (nodes)
 - c. References: The Collin County and/or its representative(s) may at their own discretion contact references for projects in addition to those submitted by the applicant.
 - d. Definitions:
 - 1) Similar Size: Detention Facility of...
 - a) Similar dollar value of installed electronic security systems
 - b) Similar duration (22 months)
 - c) Similar systems technology
 - 2) Similar Complexity: Detention Facility ...
 - a) Using integration of multiple systems including video, communications, and control.

- E. ^{*AD 5} **All electronic security system programming and software integration between door control, intercom and paging system, access control system, video management system and any other systems listed in the construction documents shall be done by CML Security (per Collin County Commissioners Court Order). The county will contract separately with CML Security for the programming and integration scope of work. The bidder(s) shall not include the cost of this work in their bid amount.**
- F. Termination, testing and start-up of electronic systems shall be done under the direct supervision of the system integrator. Prior to termination at system equipment, all field wiring shall be tested against faults, grounds and other conditions that may impede the proper operation of the system. System integrator shall verify and accept the field wiring prior to termination at system equipment. Beginning of termination constitutes acceptance of conditions as satisfactory.

1.4 SUBMITTALS (SEE SECTION 013300)

- A. Review of shop drawings or schedules by Engineer shall not relieve the Contractor from responsibility for deviations from drawings or specifications, unless there is a formal letter which called attention to such deviations at the time of submission and secured written approval; nor shall it relieve him from responsibility for errors in shop drawings, schedules or coordination of the work with other trades.
- B. Submittals for individual systems and equipment assemblies which consist of more than one item or component shall be made for the system or assembly as a whole. Partial submittals will not be considered. Partial submittals will not be returned except at the request and expense of the contractor.
- C. The contractor shall develop and submit complete submittals and do so in a timely manner. By failing to do so, the System Integrator agrees to be fully responsible for any and all damages which might be occasioned by the contractor's failure to do so.
- D. Where Engineer furnished electronic files of the Contract Documents are used as part of the shop drawings, the Electronic Systems Integrator shall review such files and confirm completeness and accuracy. Submission of such documentation as a part of the shop drawings shall be indication that such review and confirmation has been performed and completed. Submission and subsequent approval shall not relieve the Electronic Systems Integrator from the requirements of the Contract Documents.
- E. All shop drawings shall be created using AutoCAD v2017 or later. Schedules shall be created in spreadsheet format using Microsoft Excel. Incorporate all revisions upon completion of work. Submit with record drawings in both hard copy and electronic files.
- F. Electronic submittal reviews:
1. PDF submissions of narratives, data sheets, cut sheets and all other documents shall be created in their original size at a high quality resolution.
 2. Each PDF submission file shall have a page designated for a review stamp and general comments by the Engineer.
 3. Drawings being submitted in PDF form shall have minimum font sizes, preferably .125" but in no case smaller than 0.1"
 4. Drawings being submitted in PDF form shall have minimum font sizes 10.
 5. Drawings shall be in a high resolution vector format so as to not degrade when an area is enlarged while viewing.
 6. The original drawings should be converted to PDF's at full scale.
 7. PDF files should each be created by each general specification number/system and then all files & drawings as a group submitted as one complete submittal.
 8. Do not create a single PDF file for the complete submittal.

- G. Resubmittal of items that have been previously accepted or approved will not be reviewed unless specific attention is called to changes in previously approved items. Resubmission that does not specifically call attention to previously accepted or approved submittals shall not be considered as subsequent approval of a change to the initially accepted or approved item.
- H. Submit drawings, data sheets, schedules, and others, in compliance with Article "Submittal Requirements" of this Section to permit adequate time for review by the Engineer, but in not less than 21 calendar days. This 21 day review period is exclusive of time associated with travel, mail, delivery, copy, and handling. Due to the integrated system, most submittals are interrelated and thus are expected in one group.
- I. Provide information required for complete review of each item in one submittal. When individual sections of specifications require more than one item for review, such as shop drawings, product data, samples, and related items, submissions shall include all specified information delivered at one time.
1. Incomplete or partial submittals will not be reviewed by the Engineer.
 2. Extra copies of submittals will not be marked or returned, except at the expense of the Contractor.
 3. Duplicate copies of incomplete or partial submittals, or extra copies of submittals, will be discarded after 15 calendar days unless Contractor makes arrangement for return, at Contractor's expense.
 4. Submittals not requested specifically may be returned to Contractor without review.
- J. Review of submittals shall be limited to two submissions. The Engineer shall be compensated for additional reviews. In such an event, the Engineer will determine a cost for the additional review(s) based on previous review cost and provide to the Contractor. Upon receipt of payment, the Engineer will conduct the requested additional review(s).
- K. Project Data: Electronic Systems General Requirements: Section 280510.
1. System Integrator personnel qualifications: (Project Manager, Project Engineer, On-site Supervising Technician).
 2. List of all manufacturers and equipment suppliers.
 3. Submittal schedule: Schedule shall be submitted within 30 days of Notice to Proceed and shall include time and duration for product data by group, shop drawings by group, touch screen demonstration station, and testing procedures.
 4. Where modifications are required to existing control systems, the schedule shall include phasing with identification of the time and duration of modifications to each portion of the work. Time and durations shall be reviewed with the Owner/User in order to allow continuous operation of the facility and maximal uptime of systems.
 5. Functional block / riser diagram of complete integrated system with references to all related sub-system drawings. Diagrams must show all major communications interfaces within and between systems and interfaces to external systems.
 6. Floor plans indicating device locations and cable assignments/groupings. Submission of these plans indicates that the contractor has coordinated the placement of all devices with architectural plans, and coordinated raceway requirements with all related trades.
 7. Drawing plans and risers indicating complete conduit and raceway systems.
 8. Spare parts inventory with quantity, description and source listed.
 9. Testing: Provide complete testing procedure for electronic security systems. The procedure shall identify testing of each function of each device under each condition. Manufacturer recommended test procedures shall be incorporated into the testing procedure. All testing shall be project specific.
 10. Construction schedule: A schedule of electronic security system construction phase work shall be submitted within 60 days of Notice to Proceed and shall include time and duration of each of the items listed at a minimum. The schedule shall be updated periodically as needed throughout the duration of the project with resubmission required at each update or modification, but no less than quarterly.
 - a. Submittals (by group number where applicable)
 - b. Conduit and Raceway installation
 - c. Procurement
 - d. Assembly (by equipment room location)
 - e. Programming

- f. Factory Testing of completed system
 - g. Shipping (by equipment room location)
 - h. Terminations (by equipment room location)
 - i. Field device installation (by building area)
 - j. Contractor preliminary testing (by building area)
 - k. Validation Testing
 - l. Test Upon Completion of Work
 - m. Operation and Training Manuals
 - n. Shakedown Period
 - o. Owner Training
 - p. Final Testing
 - q. Pre-Warranty Expiration Testing
11. Schedule of Values: A schedule of values for the electronic security systems shall be submitted within 60 days of Notice to Proceed and shall include material and labor costs for each part of the work. Values for the following shall be provided at a minimum.
- a. General Conditions: Section 280510
 - b. Submittals: Section 280510
 - c. Testing: Section 280510
 - 1) Factory Testing
 - 2) System Validation Testing
 - 3) Demonstration Upon Completion of Work:
 - d. Programming: All Sections
 - e. Cable and Wire: All Sections
 - f. Conduit and Raceways: All Sections
 - g. Access Control System (cables only): Section 281300
 - h. Video Management and Recording System (ALT#4): Section 282300
 - i. Electronic Control System: Section 284619
 - j. Touch Screen Control and Management System: Section 284623
 - k. Digital Intercom and Paging System: Section 285123
- L. Transient Surge Protection: Section 280510
- 1. Project Data: Submit material specifications and installation data for products specified herein.
 - a. Include electrical characteristics, and ratings for each type of TSP equipment.
 - b. Indicate wiring diagrams indicating internal connections of TSP components within each enclosure.
 - c. Drawings shall be provided indicating unit dimensions, weights, mounting provisions, and connection details.
 - d. Submittals of each system shall indicate location of TSP devices.

1.5 WEATHERPROOF EQUIPMENT AND LOCATIONS

- A. Weatherproof equipment and locations are where weatherproof (WP) is indicated or where equipment is not located inside a building.
- B. Enclosures and boxes to be NEMA 3R hot dipped galvanized steel, weatherproof cast iron or malleable iron boxes and covers, or NEMA 4X stainless steel.
- C. Mounting and support hardware to be hot dipped galvanized steel or stainless steel.

1.6 PROTECTION

- A. Provide covering and shielding for all equipment provided to protect from damage.

- B. Protect nameplates on equipment, to prevent defacing.
- C. Repair, restore or replace damaged, corroded and rejected items.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Protect all materials and equipment from damage during storage at the site and throughout the construction period. Protect equipment and materials during shipment and storage against physical damage, dirt, dust, moisture, heat, cold, rain, and any foreign substances that may damage the equipment.
- B. Prevent damage from rain, dirt, sun and ground water by storing the equipment on elevated supports and covering them on all sides with securely fastened protective rigid or flexible waterproof coverings.
- C. Protect conduit by storing it on elevated supports and capping the ends with suitable closure material to prevent dirt accumulation.
- D. Protect all fabricated and/or installed materials and equipment against dust, dirt, moisture, physical damage, metal debris and any foreign substances that may damage the equipment.
- E. Protect painted surfaces with removable heavy Kraft paper, sheet vinyl or equal, installed at the factory and removed prior to final inspection.
- F. Replace damaged equipment as determined by the Engineer. Repaint and finish damaged paint on equipment and materials with the same quality of paint and workmanship used by manufacturer so that repaired areas are not obvious.

1.8 OPERATING AND MAINTENANCE DATA (SEE SECTION 01 78 23)

- A. Provide the following specific instructional material for this project for each electronic system. Product data shall be original data sheets. Copies are not acceptable. Product data, instructions and manuals from original packaging is preferred.
 - 1. Operations manual for all installed components and system as a whole.
 - 2. Maintenance manual for all installed components and system as a whole.
 - 3. As-Built point-to-point diagrams, wiring diagrams and construction details.
 - 4. All As-Built device termination schedules, IP address schedules, Network IP Scheme, and I/O schedules.
 - 5. List of spare parts, materials and suppliers of all installed components. Provide name, address and telephone number and website for each supplier.
 - 6. Emergency instructions for operational and maintenance requirements.
 - 7. Startup and shutdown procedures for all major systems (IP Video servers, Intercom, PLC, Touch Screens).
 - 8. Copies of all MFR warranties.
 - 9. Approximate delivery lead time frame for replacement of component parts from suppliers.
 - 10. Recommend inspection schedule and procedures for all components and system as a whole.
 - 11. Complete approved As-Built shop drawings and product data for all components and system as a whole.
 - 12. Provide all software administrative logins and passwords for each system. All software is Collin County owned with all rights and access to all administrative functions.

1.9 JOB CONDITIONS

- A. Cause as little interference or interruption of existing utilities and services as possible.

1. Schedule work which will cause interference or interruption in advance with Owner, Architect or Engineer, authorities having jurisdiction and all affected trades.
- B. Examine Contract Documents to determine how other work will affect the execution of electronic systems.
- C. Determine and verify locations of all existing utilities on or near site.
- D. Make arrangements for and pay for necessary permits, licenses, and inspections required by Division 01.

1.10 EQUIPMENT AND SYSTEM IDENTIFICATION

- A. All electronic security systems and equipment shall be labeled for identification.
 1. Install a nameplate on each individual equipment rack, enclosure, boxes, cabinet, and significant equipment item with text to coordinate with approved submittal documents.
 2. Use identifiers and abbreviations defined in the Drawings whenever possible. Use plan designation for labeling, unless indicated otherwise.
 3. Nameplates shall be laminated black phenolic resin with a white core and engraved lettering, a minimum of 1/4" high. Use fasteners to install nameplates. Do not fasten with adhesives.
 4. Engrave using upper case letters of uniform height; centered on device, cover plate, or enclosure; with all characters made clearly and distinctly. Allow room for fastener attachment.
 5. All equipment shall have the manufacturer's name, address, model number and rating on a nameplate securely affixed in a conspicuous place. All equipment shall bear labels attesting to Underwriters Laboratories approval where subject to Underwriters Laboratories label service.
 6. Identify all field terminals and relays with device identification. Lettering shall be 3/16" high, minimum.
- B. New raceway systems shall be labeled at all pull points and on each side of wall penetration, but in no case less than 20 feet between labels. Identify raceways with name of security system
 1. Apply preprinted labels with pressure sensitive, self-adhesive backing. If additional adhesion is required to hold label in place, use appropriate taping material wrapped completely around raceway.
 2. Position identification so that it is readily visible from eye level.
 3. Color scheme for labels:
 - a. Communications: Orange
 - b. Security Control: Green
 - c. Video Surveillance: Blue
 - d. Network: Yellow
- C. All wire and cables shall have clearly marked wire markers at each and every termination point within 2 inches of termination. Each wire shall be identified by unique code.
- D. Labeling system suppliers:
 1. Thomas & Betts
 2. Brady
 3. Westline
 4. Seton

1.11 RECORD DRAWINGS (SEE SECTION 01 7839)

- A. The Electronic systems contractor shall keep a complete set of all electronic systems contract drawings and the electronic systems shop drawings in the job site office.
 1. Use these sets of drawings for showing as constructed installation of electronic security systems and equipment.

2. Where any material, equipment, wiring or system components are installed differently from that shown, show such differences clearly and neatly using ink or indelible pencil.
3. At project completion, submit the record set of contract drawings to Architect (see Division 01) in hard copy and electronic files in both PDF and AutoCAD format.
4. At project completion, make corrections to the shop drawings on the original media and submit the corrected reproducible drawings to the Architect (See Division 01). Where the shop drawings were created on a computer aided drafting system, furnish AutoCAD compatible electronic drawing files of all corrected shop drawings.

B. Software Records:

1. Submit final software programs on electronic media compatible with the installed system.
 - a. Transfer all software licenses to the Owner/User representative at the completion of the project. Transfer shall include customer support rights.
 - b. Fully comply with all license agreements for the installed software. Install sufficient quantities of each software program so that the Owner fully meets the intent of the publisher's site license agreement. When in doubt, contact the publisher for an interpretation and comply with that interpretation.
 - c. Provide the Owner with all original installation media and PDF manuals for every software program installed on the system.
 - d. Any proprietary key on any software are not allowed. All software will be owned and controlled solely by Collin County Government
2. Standard and Custom Application Software:
 - a. Prepare and submit the licenses to all software installed for the system. Compile a list with each program name, its installed version number, the number of copies installed, location and serial number of each copy, the publisher's name and address, and the publisher's customer support telephone number.
 - b. Prepare and submit complete documentation of the final installed version of the application program, including a diagram of its component modules, subroutines, databases, libraries, drivers, and other parts. Narrative descriptions shall accompany the diagram, giving basic descriptions of each component and describing the interaction between components. Provide a complete, annotated listing of all application settings, or export file for settings on disc.
3. User Data and User Programmable Software:
 - a. Provide complete documentation of all user data and user programmable software, including but not limited to properties, preferences, settings, configurations, component modules, plug-in modules, user subroutines, databases, libraries, drivers, macros, templates, objects, slides, maps, images, sounds, icons, screen savers, and any other software files for each site.
 - b. Provide narrative descriptions and diagrams that give basic descriptions of each software component and the interaction between software components. Provide a complete, annotated software component listing.
 - c. Provide a USB media of the final operating version of the user data and user programmable software in accordance with Division 1 requirements. Provide three (3) copies of the media, properly labels and dated in hard cases.
 - d. Provide record of all new IP addresses assigned to the electronic security system devices and equipment.
4. Operators Guide
 - a. Operators Guide shall outline the operation of each system. A guide is to be kept at each workstation for reference on the operation of the equipment.
 - b. Include written description in outline form how to operate the basics of the system. This shall include but not be limited to: access and control of individual devices, group control functions, emergency control functions, system acknowledgement and reset of alarms.
 - c. Include 8.5 x 11 inch graphics as needed to identify device locations and facilitate understanding of the written description.
 - d. Provide one copy for each work station and one master copy that may be reproduced by the County.
 - e. Laminate each guide for each workstation, or other approved method.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Acceptable manufacturers:
 - 1. See individual specification section.
- B. The product numbers contained herein are for reference only and may not be the most current available nor a complete listing of all features or options required. Where a manufacturer is listed without a product number, an equivalent item of the specified manufacturer is acceptable. Determination of equivalent is at the sole discretion of the Engineer. Where a conflict or ambiguity exists between the written description and the product number, the written description shall govern.
- C. Equipment installed in exterior applications shall be fitted with fasteners and exposed surfaces of stainless steel or other corrosion resistant material.
- D. Use only prime quality, new materials, apparatus and equipment.
- E. Use electrical materials approved by UL and bearing UL label where listing has been established for materials or devices in question.
 - 1. Manufactured items and fabricated assemblies of electrically operating equipment: UL approval or UL re-examination listing.
- F. Structural steel for supports: ASTM A36.
 - 1. Galvanize members installed in areas of high humidity or condensation and exterior locations.
 - 2. Furnish other members with shop coat of red lead primer.
 - 3. Shop fabricate for field assembly using bolts.
 - 4. Minimize field welding.
 - 5. Retouch primer after field welding.

2.2 COMPUTING EQUIPMENT

- A. All computing equipment shall be provide with, and software applications compatible with Windows 10 and Microsoft Server 2019 operating systems. In such a case compatibility is not available at the time of installation, it must be stated in writing during the submittal process, and the contractor shall upgrade the installed systems to Windows 10 and Microsoft Server 2019 operating systems prior to expiration of warranty and subsequently extend the warranty related to the system upgrade for an additional one year.

2.3 GROUNDING

- A. All equipment shall be grounded in accordance with the NEC, these specifications and drawings, and the equipment supplier's recommendations.

2.4 TRANSIENT SURGE PROTECTION

- A. Industry Reference Standards: The following specification and standards are incorporated into and become a part of this specification by reference.
 - 1. Underwriters Laboratories, Inc. (UL)
 - a. No. 1449 2nd Edition Standard for Safety
 - b. No. 497 A, B and C.
 - 2. Institute Of Electrical And Electronics Engineers (IEEE)

- a. Std. 142 - Recommended Practice For Grounding
 - b. Std. 518 - Recommended Guide On Electrical Noise
 - 3. American National Standards Institute (ANSI)/IEEE
 - a. C62.41.1-2002 - IEEE Guide on the Surge Environment in Low Voltage (1000V and less) AC Power Circuits.
 - b. C.62.41.2-2002 - IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000V and Less) AC Power Circuits.
 - c. C62.36-2000 – IEEE Standard Test Method for Surge Protectors Used in Low-Voltage Data, Communications, and Signaling Circuits.
 - 4. National Electrical Manufacturers Association (NEMA)
 - a. NEMA LS-1-1992 – Low Voltage Surge Protection Devices
 - 5. International Electrotechnical Commission (IEC).
 - a. IEC 529:1989 – Type of protection through housing.
 - b. IEC 1024-1:1990 – Protection of structures against lightning – Part 1: general principles.
 - c. IEC 61643-21 – Low Voltage Surge Protective Device: SPD Connected to Telecommunication and signaling networks – Performance requirements and testing methods.
 - 6. Deutsch Industrial Norm (DIN)
 - a. DIN EN 50022: 1977/DIN EN 50022: 1978-05 Mounting rails 35mm wide for snap-on mounting of equipment
 - 7. Federal Information Processing Standards
 - a. Publication 94 (FIPS PUB 94)
- B. Acceptable manufactures: All device(s) shall be by the same manufacture.
- 1. TSP Devices:
 - a. Base: Emerson/NTI, Ditek, Phoenix Contact, Transtector Systems, Inc.
 - 2. Other manufacturers desiring approval comply with Division 1
- C. All TSP devices installed shall utilize Silicon Avalanche Diodes (SAD) as the primary means of protection. Secondary protection shall be SASDs or Metal Oxide Varistors (MOVs). Each protection circuit shall be independent of each other and neither circuit shall short to ground on clamping transient surges.
- D. Each 120 VAC circuit or feeder required for the electronic control and monitoring system shall be provided with a TSP device.
- E. Each electronic security system circuit containing metallic conductor (s) shall be provided with a TSP device when leaving the confines of a building. Each electronic security system circuit containing metallic conductor(s) shall be provided with a TSP device when entering a building. Circuits serving building mounted devices or equipment that are located below the roof that originate or terminate in the building it is attached to, do not require TSP devices.
- F. Locate TSP device at first termination point within the building. Locate all TSP devices in cabinets or enclosures.
- G. All TSP devices shall be provided with a ground connection. The ground circuit shall be sized in conformance with the manufacturer's written requirements for proper grounding for the associated device. The ground conductor shall be routed and connected to the nearest electrical system ground point.
- H. Alarm contacts on TSP devices shall be connected to the electronic control system and annunciated as a system trouble alarm.

2.5 WIRING AND CABLE (AS IN MEANS AND METHODS OF SINGLE AND MULTIPLE CONDUCTOR CABLE INSTALLATION)

- A. Power wiring: Single conductor cable, soft drawn, copper wire with type THWN 600 volt insulation, UL listed.
- B. All cable shall be per manufacturer's written recommendation for the application and environment anticipated for this project, but in no case less than what is required by these specifications. All cable shall be of standard type available from multiple manufacturers. Replace cable determined to be inadequate for specified performance.
- C. All Class 1 wiring shall be building wire of type specified in Division 16 work. Provide overcurrent protection for conductors in accordance with NEC. Minimum sizes as follows:
 - a. Indication: 18 GA minimum.
 - b. Control: 14 GA minimum.
- 2. All Class 2 wiring may be single conductor or multiple conductor cables. Conductors to be stranded type tinned copper, 22 GA minimum, PVC insulated.
- D. Pulling lubricant: Do not use cable pulling lubrication compound containing petroleum or other products which may deteriorate insulation.
- E. All cable installed in exterior underground conduit must be direct bury rated cable
- F. Color coding of conductors:
 - 1. Power circuits: in accord with NEC.
 - 2. Lock wiring: per drawings, match lock device color code where possible, similar throughout project.
- G. All cable installation shall be continuous from equipment/device terminal to equipment/ device terminal. No splicing of cables will be allowed.
- H. Where connection to devices provided with factory installed wire leads is required, use "Wing nut" or "Wire nut" insulated conical spring-type connectors. Do not make connections and taps with indenter-type connectors.

2.6 RACEWAYS, WIREWAYS, BOXES AND FITTINGS

- A. Raceways, wire ways, boxes and fittings shall be provided under Division 26.
- B. Raceways, wire ways, boxes and fittings shall be provided where indicated on drawings.
- C. Conduit:
 - 1. Electrical metallic tubing (EMT) with compression connectors shall be used where concealed above ceilings and in equipment rooms.
 - 2. Rigid galvanized conduit shall be used where exposed conduit is required. Exposed conduit that is below 15 feet above finished floor shall be anchored to walls or ceilings with two hole straps on no less than 24 inch centers.
- D. All raceways shall be sized for maximum 40 percent fill. All conductors shall be included in fill calculations. Minimum conduit size shall be 3/4".
- E. Lock pockets have limited capabilities to accommodate incoming and outgoing conduits. Lock pockets shall not be used for wire termination other than that required for connector of lock in pocket. Wiring for

no more than three (3) adjacent locks may be routed through a lock pocket, provided the lock pockets will accommodate such. Coordinate with Detention Equipment Contractor for conduit entries,

2.7 SPARE PARTS

- A. Deliver spare parts in protective wrapping and packaging for proper storage.
- B. Provide spare parts as indicated in individual specification section.
- C. Spare parts shall be available to the Contractor to use as immediate replacements during the warranty period. The Contractor shall replace all spare parts used for the warranty requirements within 30 days of use.
- D. Provide the following spare parts:
 - 1. Transient Surge Protection: two (2) of each type used.

PART 3 - EXECUTION

3.1 GENERAL

- A. Use only workmen experienced in electronic security systems for installation of equipment and termination of wire/cable systems.
- B. When changes in location of any work are required, obtain approval of Engineer before making change. Engineer may move any item prior to or at time of rough-in up to 5 FT - 0 IN without extra cost.
- C. Do not change indicated sizes without written approval in accordance with Division 01 requirements.
- D. Equipment Installation:
 - 1. Install all equipment in accordance with the manufacturer's recommendations, and accepted shop drawings.
 - 2. Install all equipment in compliance with NEC requirements, NECA's "Standard of Installation", and recognized industry practices.
 - 3. Do not attach electrical materials to roof decking, removable or knockout panels, or temporary walls and partitions unless indicated otherwise. Use hangers and other supports to support the equipment and materials, intended for this purpose.
 - 4. Locate equipment as close as practical to the locations shown on the Drawings.
 - 5. Maintain minimum 3-foot working clearances on each side of equipment or equipment racks where access is required to inspect, service, or adjust.
 - 6. Check equipment against available mounting space indicated on the drawings. Coordinate location of equipment with existing devices to minimize interference. Bring all conflicts or clearance problems to the attention of the Engineer during the preparation of shop drawings.
 - 7. Where the Engineer determines that equipment installation is not conveniently accessible for operation and maintenance, remove and reinstall equipment in a conveniently accessible manner.
 - 8. Remove and protect existing equipment that is to be reinstalled. Make modifications and adjustments as required for re-mounting devices.
 - 9. Insure all equipment is adequately ventilated and installed in such a way (rack spacing, additional cooling, etc.) so ALL equipment never exceeds manufactures published maximum operating temperature.

3.2 CUTTING AND PATCHING (SEE SECTION 017329)

- A. Perform or pay for all cutting, fitting, repairing, patching and finishing of work of other sections where it is necessary to disturb such work to permit installation of work. Repair or replace existing or new work disturbed.
- B. Avoid cutting, where possible, by setting sleeves or frames, and by requesting openings in advance.
- C. Before cutting obtain approval of Architect or Engineer.
 - 1. Use only approved methods.
 - 2. Cut all holes neatly and as small as possible to admit work.
 - 3. Do not weaken walls or floors; locate holes in concrete to miss structural sections.
- D. Locate openings and sleeves to permit neat installation of equipment.
- E. Do not remove or damage fireproofing materials.
 - 1. Install hangers, inserts, supports, and anchors prior to installation of fireproofing.
 - 2. Repair or replace fireproofing removed or damaged, at no extra cost.

3.3 INSTALLATION OF EQUIPMENT

- A. Install all equipment in accord with manufacturer's recommendations.
- B. Provide all necessary anchoring devices and supports.
 - 1. Use structural supports suitable for equipment, or as indicated.
 - 2. Check weight and dimensions of equipment with shop drawings.
 - 3. Do not cut or weld to building structural members.
- C. Verify that equipment will fit support layouts indicated.
 - 1. Where substitute equipment is used, revise indicated supports to fit.
- D. Arrange for necessary openings to allow for admittance of equipment.
 - 1. Where equipment cannot be installed as structure is being erected, provide and arrange for building-in of boxes, sleeves or other devices to allow later installation.
- E. Prior to installation of electronic security equipment in control rooms and/or equipment rooms, complete all room finishes and provide a clean conditioned space for the electronic equipment installation. Maintain a secure, clean and conditioned space throughout the installation process. Where dust, dirt or moisture generating environment is anticipated or encountered after start of installation of equipment, cease work and wrap/seal all equipment in waterproof protective material. When environment is clean and conditioned, protective wrapping shall be removed, equipment cleaned, and work resumed.

3.4 ELEVATOR INTERFACE (SEE DIV 14)

- 1. Provide coordination as required for installation of security devices in elevator cabs. The new elevator will not be controlled by the electronic security system. New camera shall be installed in the new elevator cab.
- B. Provided by Elevator supplier.
 - 1. Mounting provisions for cab mounted equipment.
 - a. Mounting support for camera enclosure
 - 2. Traveling cables for cab mounted equipment, including:
 - a. (1) Coax cables for IP device PoE-Over-Coax conversion (Camera)

- C. Provided by Electronic Security Systems contractor. Coordinate openings and mounting provisions with elevator installer.
 - 1. Cameras and Enclosures.
- D. Provided by Electronic Systems Integrator.
 - 1. All wiring from electronic security systems equipment to elevator machine room including termination on elevator equipment interface.
 - 2. Labeled terminal strip input for elevator status reporting.

3.5 FIELD QUALITY CONTROL (SEE DIVISION 1)

- A. Perform indicated tests to demonstrate workmanship, operation, and performance.
 - 1. Conduct tests in presence of inspectors of agencies having jurisdiction if required.
 - 2. Arrange date of tests in advance with, manufacturer and installer.
 - 3. Give all inspectors minimum of 24 hours notice.
 - 4. Furnish all labor and materials required for period of test.
- B. Repair or replace equipment and systems found inoperative or defective and re-test.
 - 1. If equipment or system fails re-test, replace it with products which conform to Contract Documents.
 - 2. Continue remedial measures and re-tests until satisfactory results are obtained.
- C. Test equipment and systems as indicated for each item, unless otherwise recommended by manufacturer.
- D. Coordinate work of this section with work of other sections to insure timely delivery and installation of work.
- E. Design all systems for continuous 24 hour operation.

3.6 TEST AND VERIFICATION

- A. General: The Contractor shall verify that all requirements of this specification are met. Verification shall be through a combination of analyses, inspections, demonstrations and tests, as described below.
- B. Verification by Inspection: Verification by inspection includes examination of an item and the comparison of pertinent characteristics against the qualitative or quantitative standard set forth in the cited paragraph. Inspection may require moving or partially disassembling the item to accomplish the verification. Inspection shall be made of all equipment installations, proper functioning of all locking hardware and lock controls, mounting and wiring of electrical and signal distribution cabinets and components, and mounting and placement of sensors, cameras, etc. to ensure requirements of the specifications are complied with and that the overall installation is accomplished in a professional and workmanlike manner and in accordance with manufacturer's written recommendations. The Owner's quality control representative(s) shall have full opportunity to witness the required inspections or to conduct his own inspections of the installation.
- C. Verification by Test and Demonstration: The Contractor shall verify by formal demonstrations or tests that the requirements of this Specification have been met. All tests shall be documented and report of results submitted to the Engineer.
- D. Test Verification Requirements: Paragraphs 1-3 below list specific requirements which shall be verified by formal demonstration/test. **THE ENGINEER SHALL BE NOTIFIED IN WRITING THIRTY (30) DAYS IN ADVANCE OF ALL SYSTEM TESTS.**
 - 1. Factory Tests: Following factory engineering and assembly, the Contractor shall individually test each sensor and other components and verify the proper functioning of each component within a particular subsystem. Each subsystem shall be similarly tested until all detection zones, alarm

assessment components, alarm reporting and display, and access control functions have been verified. Any deficiency pertaining to these requirements shall be corrected by the Contractor prior to shipment of the equipment to the project site.

- a. After fabrication, assembly and programming of the security electronics systems, perform tests of the integrated security electronics system, including duress alarm, access control, intercommunication, intercom, video surveillance, operator interface, and miscellaneous controls, with all functioning as a single, integrated system. Factory testing is a major milestone that shall commence only after all shop assembly, system integration, and software development is complete. Completion of the Factory testing is required prior to shipment of any system equipment to the site for installation.
 - b. Each input and output point, operational sequence, touch screen display, operation of touch screen and control panel will be tested. Provide sample field devices, approved mock up devices and jumpers to simulate actual field operating conditions. In addition, simulated system failures, response time, boot up time and other tests will be conducted as directed.
 - c. Conduct tests in strict accordance with an approved test procedure. Demonstrate full compliance with the required operating modes and sequences of operation. Record test results on a report that shall include a list of all personnel witnessing the tests, test methods used, and a record of each specific test made.
 - d. The factory testing shall include all equipment and programming for the entire facility.
 - e. Provide air transportation, car rental and lodging for Three Owner Representatives (3) and Engineer (1) to witness factory testing.
2. Preliminary Tests: Following installation, the Contractor shall individually test each sensor and other components and verify the proper functioning of each component within a particular subsystem. Each subsystem shall be similarly tested until all detection zones, alarm assessment components, alarm reporting and display, and access control functions have been verified. Any deficiency pertaining to these requirements shall be corrected by the Contractor prior to final functional and operational tests of the system. When subsystem verification is complete, the entire system shall be tested to assure that all elements are compatible and function properly as a complete system.
 3. Demonstration Upon Completion of Work: Upon successful completion of the System Validation Test, the Contractor shall schedule and request final completion demonstration and the Engineer notified. The request and notification shall include certification that the installation is complete and operable and has satisfactorily performed the final tests specified herein. The acceptance testing shall be accomplished in the company of the Engineer and the Owner's representative(s). The demonstration shall be structured so that all sensors and controls are stimulated directly in their installed and finally adjusted positions and all audible and visual displays, signals, alarms and other responses are demonstrated. A log of all demonstration activities and results shall be maintained by the Contractor. Original copies of this log shall be submitted to the Engineer within seven days of the demonstration.
- E. Upon successful completion of the Demonstration Upon Completion of Work, the electronic security systems will be considered as substantially complete.
- F. The Contractor shall carefully plan and coordinate the demonstrations so that all activities can be satisfactorily completed within twenty four (24) cumulative hours. The Contractor shall provide all necessary instruments, labor and materials required for demonstrations, the equipment manufacturer's technical representative, and qualified technicians in sufficient numbers to perform the demonstration within the time limits imposed by this Specification.
- G. In the event that the Engineer are required to witness a retest at a later date because the Contractor is not adequately prepared to conduct the acceptance tests or because the systems being tested have failed such tests, which shall be solely determined by the Architect, the costs of witnessing additional tests (based on time and expenses at the established rates of the Engineer) shall be borne exclusively by the Contractor. In such an event, a change order to the General Construction Contract will be executed for compensation of the Engineer witnessing the tests.

3.7 SHAKEDOWN PERIOD

- A. The Electronic Systems Integrator shall coordinate with the Contractor to establish a shakedown period for the electronic security systems. Shakedown period shall be a minimum of 7 days per completed area.
- B. Initiation of Shakedown Period: Prior to initiation of shakedown period, all work related to and supporting the electronic security systems shall be substantially complete. Such work related shall include, but not be limited to the following:
 - 1. All electrical power circuits and interface points.
 - 2. All lighting in control locations.
 - 3. All environmental conditioning and control in control locations.
 - 4. All clean-up in control locations.
 - 5. All locking devices and sliding door devices operational.
- C. During the shake down period the Electronic System Integrator shall provide all labor and materials to support operation of the facility by the Owner's staff.
- D. The Electronic Systems Integrator shall maintain a log of all anomalies, malfunctions and repairs encountered during the shakedown period. The log shall be submitted to the Architect for assessment at the conclusion of the shakedown period.
- E. Owner Training may be conducted during the Shakedown Period.

3.8 ADJUST AND CLEAN (SEE DIVISION 01)

- A. Inspect all equipment and put in good working order.
- B. Clean all exposed and concealed items.
- C. Touch up paint where finish is damaged to original color and texture.
- D. Clear debris from and vacuum clean the interior of all turrets, consoles, equipment cabinets and enclosures.

3.9 WIRING

- A. All wiring within equipment: Point to point with appropriate terminal block connections for each wire and component termination.
 - 1. All connections mechanically secure.
 - 2. All terminations on terminal blocks.
 - 3. All terminal strips labeled to match submittal documents.
- B. All cable and wire: As recommended by manufacturer of system, minimum as indicated in individual sections.
 - 1. Standard type available from multiple manufacturers.
 - 2. Replace cable determined to be inadequate for specified performance.
 - 3. All cable and wire shall be professionally labeled and tagged at each point of termination to match submittal documents.
- C. Provide all wire and cable and perform all terminations. Check each cable system for opens, shorts, faults, or other discontinuities.
- D. All wiring shall be color coded throughout.

- E. Install all cable in conduit in accordance with other sections of these specifications. Minimum conduit size shall be 3/4 inch trade size. Size all conduit such that cable, wire and/or tubes do not to exceed 40 percent fill.
- F. All wire and cables shall be installed continuous from field device to terminal point in equipment cabinet, enclosure or console. No splices or intermediate terminations will be allowed
- G. All cables specified herein are based on indoor “dry” applications unless noted otherwise. Where actual construction conditions require cable other than indoor “dry” applications, provide suitable cable to meet performance requirements of the systems for which they the cable is to be provided.
- H. All Ethernet cabling shall be terminated on a patch panel in equipment room locations and RJ-45 wall/surface jacks in field locations. Factory patch cords shall be used to connect the Ethernet backbone to individual devices. No hand crimped RJ-45 connections allowed on the end of home-run Ethernet cables.

3.10 OWNER PERSONNEL TRAINING (SEE DIVISION 01)

- A. Provide training of operations and maintenance staff.
 - 1. Training shall be structured and developed to ensure proper understanding of systems to allow effective operation and maintenance of all systems in this Division of work.
 - 2. All training shall be conducted by professionals that are certified by the system manufacturer for the applicable equipment, software and integration.
- B. Training shall be divided into multiple groups. Participants may attend multiple sessions.
 - 1. Control station operations
 - 2. System administration
 - 3. Maintenance
- C. Conduct three (3) sessions for operational staff of duration of no less than 8 hours each.
- D. Conduct training sessions for maintenance staff, consisting of not less than three (3) sessions of eight (8) hours. Maintenance staff shall participate in operational staff training prior to maintenance training.
- E. Training shall be provided in a classroom environment at the facility and utilize installed equipment and systems to demonstrate operations and maintenance techniques.
- F. Provide digital video recording of all training on flash drives (FD). Furnish four (4) copies of each FD to owner with four (4) spare training manuals of each type. Provide electronic copies of training manuals in .pdf format. Provide four (4) FD copies of training manuals. FD media shall not be copy protected.
 - 1. Selected training shall be pre-recorded on FD in a classroom environment at the office of the integrator.
 - 2. Upon completion of the training at the project site, the Integrator shall update the training presentation based on feedback from the on-site training sessions and prepare final training /FD for the facility.
- G. No later than 120 days prior to anticipated initiation of training, the Integrator shall develop an outline of all training to be presented. The facility security administration will subsequently identify staff to participate in the training program. Based on this information the integrator shall prepare sufficient copies of training material to accommodate each participant.
- H. See individual sections for specific training requirements.
- I. Submittal of Training Documents:

1. List of Trainers including copy of certification by the system manufacturers. (minimum 120 days prior to scheduled training session)
 - a. Video Management and Recording System (ALT#4) Section 282300
 - b. Electronic Control System: Section 284619
 - c. Touch Screen Control and Management System: Section 284623
 - d. Digital Intercom and Paging System: Section 285123
2. Training outline and attendee sign up lists (minimum 120 days prior to scheduled training session).
3. Training manual(s); one for each training group.(minimum 30 days prior to scheduled training session).
4. Prerecorded training demonstration FD: one for each training group (minimum 30 days prior to scheduled training session).

END OF SECTION 280510

#	DHM DOOR SCHEDULE														REMARKS
	DOOR							FRAME							
	DOOR TYPE	HEIGHT	WIDTH	DOOR MATERIAL	GLAZING TYPE	FRAME TYPE	HEIGHT	WIDTH	FRAME MATERIAL	CONSTRUCTION	GLAZING TYPE	FIRE RATING	HW SET NO.		
D1001C AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			45	D-06		
D1001D AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			45	D-06		
D1001E AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			45	D-06		
D1003A HK-P	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M			90	D-09		
D1003B HK	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M				D-09		
D1006 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-06		
D1007 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1008 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1009 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1011 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1022 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			20	D-03		
D1024 HK	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1101A BHCK	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			90	D-05		
D1101B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-06		
D1116 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1119 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1121 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1122 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1123 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1124 CX-X	7'-0"	3'-0"	DHM	M	F3004	7'-4"	10'-2"	DHM	M				D-01		
D1125 CX-X	7'-0"	3'-0"	DHM	M	F3004	7'-4"	10'-2"	DHM	M				D-01		
D1126 CX-X	7'-0"	3'-0"	DHM	M	F3004	7'-4"	10'-2"	DHM	M				D-01		
D1129A HK	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-05		
D1129B CX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1130A AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1130B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			90	D-05		
D1141A HK	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M				D-09		
D1141B HK	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M			20	D-09		
D1200A AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1204A AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 & 11/D/722		
D1204B AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 & 11/D/722		
D1208A HK	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M			20	D-09		
D1208B HK	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M			90	D-09		
D1209 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1210 AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 & 11/D/722		
D1211 AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 & 11/D/722		
D1302 BX-S	7'-0"	3'-0"	DHM	M	F1000	7'-4"	3'-4"	DHM	M				D-07		
D1303 BX-S	7'-0"	3'-0"	DHM	M	F1000	7'-4"	3'-4"	DHM	M				D-07		
D1304 AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 & 11/D/722		
D1305 AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 & 11/D/722		
D1313A BHCK	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1313B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			90	D-05		
D1314 BX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			90	D-05		
D1316A AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1316B BHCK	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1317A BHCK	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1317B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			45	D-06		
D1319A HK	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M				D-09	SLIDING DOOR	

#	DHM DOOR SCHEDULE														REMARKS
	DOOR							FRAME							
	DOOR TYPE	HEIGHT	WIDTH	DOOR MATERIAL	GLAZING TYPE	FRAME TYPE	HEIGHT	WIDTH	FRAME MATERIAL	CONSTRUCTION	GLAZING TYPE	FIRE RATING	HW SET NO.		
D1322 CX-X	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D1323 CX-X	7'-0"	3'-0"	DHM	M	F3004	7'-4"	10'-2"	DHM	M				D-01		
D1324A HK-P	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M			90	D-09		
D1324B HK	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M				D-09		
D1325 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1326 CX-X	7'-0"	3'-0"	DHM	M	F3004	7'-4"	10'-2"	DHM	M				D-01		
D1327 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1328 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1329 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1330 CX-X	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M				D-01		
D1331B AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 & 11/D/722		
D1333B AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 & 11/D/722		
D2003 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D2005A HK	7'-0"	3'-0"	DHM	M	F8000	7'-4"	3'-10"	DHM	M				D-09		
D2005B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			90	D-05		
D2007A HK	7'-0"	4'-0"	DHM	M	F8000	7'-4"	4'-11"	DHM	M				D-09		
D2007B AX	7'-0"	3'-0"	DHM	M	F8003	7'-4"	7'-11"	DHM	M				D-09		
D2008 HK	7'-0"	3'-0"	DHM	M1	F3005	7'-4"	13'-4"	DHM	M1				D-04		
D2010 CX	7'-0"	3'-0"	DHM	M	F1000	7'-4"	3'-4"	DHM	M				D-08		
D2011 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D2013 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			20	D-05		
D2015 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D2016A AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		
D2018 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			90	D-05		
D2019 CX	7'-0"	3'-0"	DHM	M	F1000	7'-4"	3'-4"	DHM	M				D-08		
D2095 AX	7'-0"	3'-0"	DHM	M	F1000	7'-4"	3'-4"	DHM	M				D-08		
D2101 HK-P	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M			20	D-01	REF: 10/D/722 SIM & 12/D/722	
D2102B AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 SIM & 12/D/722		
D2108A CX	7'-0"	3'-0"	DHM	M	F3000	8'-0"	3'-10"	DHM	M			45	D-06		
D2108B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			45	D-06		
D2201 HK-P	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M			20	D-01	REF: 10/D/722 SIM & 12/D/722	
D2202B AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 SIM & 12/D/722		
D2208A HK	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M			20	D-05		
D2208A CX	7'-0"	3'-0"	DHM	M	F3000	8'-0"	3'-10"	DHM	M			45	D-06		
D2208B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			45	D-06		
D2209 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2211 BX-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2212 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2213 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2214 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2215 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2216 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-01		
D2221 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2222 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2223 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2224 AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M				D-05		

#	DHM DOOR SCHEDULE														REMARKS
	DOOR							FRAME							
	DOOR TYPE	HEIGHT	WIDTH	DOOR MATERIAL	GLAZING TYPE	FRAME TYPE	HEIGHT	WIDTH	FRAME MATERIAL	CONSTRUCTION	GLAZING TYPE	FIRE RATING	HW SET NO.		
D2226 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2227 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2228 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2231 AX	7'-0"	3'-0"	DHM	M	F1000	7'-4"	3'-4"	DHM	M				D-13		
D2232 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2233 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2234 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2235 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M				D-01		
D2301 HK-P	7'-0"	3'-0"	DHM	M	F3003	7'-4"	3'-10"	DHM	M			20	D-01		
D2302B AX	3'-8 1/2"	2'-2"	DHM	M	DPT	4'-0"	2'-6"	DHM	STL MESH			D-14	REF: 10/D/722 SIM & 12/D/722		
D2304B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			20	D-05		
D2308A AX	7'-8"	3'-0"	DHM	M	F3000	8'-0"	3'-10"	DHM	M			45	D-06		
D2308B AX	7'-0"	3'-0"	DHM	M	F3000	7'-4"	3'-10"	DHM	M			45	D-06		
D2309 BX-X-S	7'-0"	2'-6"	DHM	M	F3000	7'-4"	3'-4"	DHM	M						

ADDENDUM NO. 6

TO

**Collin Count Adult Detention Facility, Phase 1
McKinney, Texas**

August 31, 2021

Project: 21913.00
From: Brinkley Sargent Wiginton Architects, Inc.
To: Bidders of Record

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents.

PROJECT MANUAL MODIFICATIONS

- Item No. 1. Section 00 00 00 Table of Contents**
 - A. Section updated.
- Item No. 2. Section 09 95 00 Wallcovering**
 - A. Section added.
- Item No. 3. Section 23 07 00 HVAC Insulation**
 - A. Modified insulation specification.

DRAWINGS MODIFICATIONS

Note to bidders on drawing modifications: Any revision made to a sheet as part of this Addendum, regardless of the scale of the modification, results in the reissuance of that full sheet. The description for the revisions follows below, but the full sheet is reissued to allow revised sheets to simply be substituted for the sheets originally issued.

- Item No. 4. Sheet – CVR**
 - A. Updated sheet index.
- Item No. 5. Sheet – A303**
 - A. Updated reflected ceiling plan.
- Item No. 6. Sheet – M201**
 - A. Updated note.
- Item No. 7. Sheet – M202**
 - A. Updated note.
- Item No. 8. Sheet – E301**
 - A. Added note.
- Item No. 9. Sheet – E302**
 - A. Added note.

ADDENDUM 6 ATTACHMENTS:

Specification Sections as listed above

Drawing Sheets as listed above.

END OF ADDENDUM

COLLIN COUNTY ADULT DETENTION FACILITY PHASE 1 ADDITION

* Addendums 1, 2, 3, 4, 5, 6

TABLE OF CONTENTS

	<u>NO. OF PAGES</u>
Title Page	1

OWNER PROVIDED INFORMATION, VOLUME 1

00 22 00	-	Geotechnical Data	52
00 11 16	-	Advertisement for Bids	
00 21 13	-	Instructions to Bidders	
00 41 00	-	Bid Form	
00 43 13	-	Bid Bond	
00 43 25	-	Product Substitution Request Form	
00 45 47	-	Conflict of Interest	
00 52 13	-	Construction Agreement	
00 54 25	-	W-9 Form	
00 61 11	-	Performance Bond	
00 61 13	-	Payment Bond	
00 61 19	-	Maintenance Bond	

TABLE OF CONTENTS, VOLUME 2

DIVISION 1 - GENERAL REQUIREMENTS

01 01 00	-	Summary Of Work.....	2
01 02 50	-	Measurement & Payment	4
01 03 00	-*AD 3	Alternates	2
01 04 00	-	Coordination.....	2
01 04 50	-	Cutting & Patching.....	4
01 05 00	-	Field Engineering	2
01 06 00	-	Regulatory Requirements.....	2
01 20 00	-	Project Meetings.....	4
01 22 00	-*AD 1	Unit Prices.....	1
01 31 00	-	Project Management & Coordination.....	4
01 32 00	-	Construction Progress Documentation.....	6
01 33 00	-	Submittal Procedures	10
01 40 00	-	Quality Requirements	6
01 42 00	-	References.....	6
01 45 23	-	Code Required Special Inspections and Procedures.....	6
01 50 00	-	Construction Facilities & Temporary Controls	6
01 58 00	-	Project Identification & Signs	2
01 60 00	-	Materials & Equipment.....	4
01 70 00	-	Contract Closeout.....	4
01 71 00	-	Cleaning	2

01 72 00	-	Project Record Documents.....	2
01 73 00	-	Operation & Maintenance Data.....	4
01 74 00	-	Warranties & Bonds.....	2
01 82 00	-	Demonstration & Training.....	4

DIVISION 2 - EXISTING CONDITIONS

NOT USED

DIVISION 3 - CONCRETE

03 30 00	-*AD3	Cast-in-place Concrete.....	22
03 36 60	-	Concrete Floor Sealer.....	4
03 38 10	-	Unbonded Post-Tensioned Concrete.....	10
03 45 00	-*AD3	Precast Architectural Concrete.....	8

DIVISION 4 - MASONRY

04 05 13	-	Masonry Mortar.....	4
04 21 00	-	Brick Veneer Masonry.....	4
04 22 00	-	Concrete Unit Masonry.....	8

DIVISION 5 - METALS

05 01 00	-	Miscellaneous Metals.....	4
05 12 00	-	Structural Steel.....	9
05 21 00	-	Steel Joists.....	5
05 31 00	-	Steel Deck.....	4
05 40 00	-	Cold-Formed Metal Framing.....	10
05 51 13	-	Metal Stairs and Railings.....	8

DIVISION 6 - WOOD

06 10 00	-	Rough Carpentry.....	4
06 16 53	-	Sheathing.....	2
06 20 00	-	Finish Carpentry.....	2
06 40 00	-*AD3	Architectural Woodwork.....	6

DIVISION 7 - THERMAL & MOISTURE PROTECTION

07 13 26	-	Blindside Waterproofing.....	6
07 19 50	-	Vapor Barrier.....	4
07 20 00	-*AD1	Insulation.....	4
07 27 20	-	Fluid Applied Membrane Weather Barriers, Vapor Permeable.....	8
07 54 23	-*AD1	Thermoplastic Roof System (TPO).....	6
07 60 00	-*AD2	Flashing & Sheet Metal.....	4
07 72 00	-	Roof Hatches.....	2
07 81 00	-	Applied Fireproofing.....	4
07 81 23	-	Intumescent Fireproofing.....	6
07 84 00	-	Firestopping.....	6
07 92 00	-	Sealants & Caulking.....	6
07 95 12	-	Expansion Joint Covers.....	4

DIVISION 8 - DOORS & WINDOWS

08 11 13	-	Hollow Metal Doors & Frames.....	6
08 29 00	-	Access Doors.....	2

08 34 95	-*AD2	Fire & Smoke Curtains.....	4
08 35 01	-	Four Fold Doors	6
08 63 00	-	Unit Skylights	6
08 71 00	-*AD2	Door Hardware.....	26
08 80 00	-	Glazing.....	6

DIVISION 9 - FINISHES

09 24 23	-	Plaster.....	16
09 29 00	-	Gypsum Board Systems	7
09 30 10	-*AD2	Tile.....	8
09 40 20	-	Epoxy Terrazzo	6
09 51 23	-	Acoustical Ceiling Systems.....	4
09 51 53	-	Cementitious Wood Fiber Ceilings	5
09 52 00	-	Acoustical Panels	2
09 54 50	-	Security Plank Metal Ceilings	4
09 65 00	-	Resilient Flooring	4
09 67 23	-*AD3	Resinous Flooring	6
09 68 00	-	Carpeting.....	2
09 90 00	-	Painting	16
09 95 00	-*AD6	Wallcovering.....	3

DIVISION 10 - SPECIALTIES

10 00 00	-*AD2,3	Miscellaneous Specialties.....	5
10 15 50	-	Toilet Compartments.....	2
10 22 13	-*AD4	Wire Mesh Partitions.....	4
10 43 00	-	Exterior Signage.....	4
10 44 00	-	Interior Signage.....	4
10 50 00	-*AD2	Lockers.....	4
10 80 00	-*AD3	Toilet & Bath Accessories	6

DIVISION 11 - EQUIPMENT

11 19 00	-*AD1,3	Detention	28
11 19 10	-	Security Screws and Fasteners	2
11 19 80	-	Woven Wire Barrier Panels.....	4
11 79 05	-	Cell Padding.....	3

DIVISION 12 - FURNISHINGS

NOT USED

DIVISION 13 - SPECIAL CONSTRUCTION

NOT USED

DIVISION 14 - CONVEYING EQUIPMENT

14 24 47	-*AD2	Hydraulic Elevators.....	10
----------	-------	--------------------------	----

DIVISIONS 15 – 20

NOT USED

DIVISION 21 - FIRE SUPPRESSION

21 00 10	-	Fire Suppression Submittal Process	2
21 05 00	-	Common Work Results For Fire Suppression.....	16
21 13 00	-	Wet-Pipe Sprinkler Systems.....	8
21 31 16	-	Centrifugal Fire Pumps	4

DIVISION 22 - PLUMBING

22 00 10	-	Plumbing Submittal Process.....	2
22 05 00	-	Common Work Results For Plumbing	16
22 05 13	-	Common Motor Requirements For Plumbing Equipment	4
22 05 16	-	Expansion Fittings And Loops For Plumbing Piping.....	6
22 05 19	-	Meters And Gages For Plumbing Piping	6
22 05 23	-	General Duty Valves For Plumbing Piping.....	4
22 05 29	-	Hangers And Supports For Plumbing Piping And Equipment.....	8
22 05 48	-	Vibration And Seismic Controls For Plumbing Piping And Equipment.....	4
22 05 53	-	Identification For Plumbing Piping And Equipment.....	4
22 07 00	-	Plumbing Insulation	6
22 08 00	-	Commissioning of Plumbing Systems	6
22 11 00	-	Facility Water Distribution.....	4
22 11 23	-	Domestic Water Pumps.....	2
22 13 00	-	Facility Sanitary Sewerage.....	4
22 14 00	-	Facility Storm Drainage	2
22 14 49	-	Sump Pumps	2
22 31 11	-	Water Softeners.....	2
22 34 36	-	Commercial Gas Domestic Water Heater	4
22 42 00	-*AD3	Commercial Plumbing Fixtures	4
22 46 00	-	Security Plumbing Fixtures.....	2

DIVISION 23 - HEATING, VENTILATION & AIR CONDITIONING [HVAC]

23 00 10	-	Mechanical Submittal Process	2
23 05 00	-	Common Work Results For HVAC	17
23 05 13	-	Common Motor Requirements For HVAC Equipment.....	5
23 05 29	-	Pipe Hangers And Supports For HVAC Piping And Equipment.....	4
23 05 48	-	Vibration and Seismic Controls for HVAC Piping and Equipment.....	4
23 05 53	-	Identification For HVAC Piping And Equipment.....	3
23 05 93	-	Testing, Adjusting, And Balancing For HVAC	8
23 07 00	-*AD6	HVAC Insulation	7
23 08 00	-	Commissioning Of HVAC.....	5
23 09 00	-	Instrumentation And Control For HVAC.....	15
23 09 93	-	Sequence Of Operations For HVAC Controls	13
23 11 23	-	Facility Natural-Gas Piping.....	6
23 21 13	-	Hydronic Piping	12
23 21 23	-*AD4	Hydronic Pumps.....	10
23 23 00	-	Refrigerant Piping	6
23 25 00	-	HVAC Water Treatment	4
23 29 23	-	Variable Frequency Motor Controllers	16
23 31 13	-	Air Distribution	9
23 31 50	-	Hangers And Supports For Duct Work	4
23 34 23	-	HVAC Power Ventilators.....	8
23 37 13	-*AD3	Diffusers, Registers And Grilles	4
23 52 00	-	Heating Boiler	4
23 73 00	-	Indoor Central-Station Air-Handling Units.....	8
23 81 49	-	Variable Refrigerant Air Conditioning Systems	12
23 82 39	-	Unit Heaters	4

**DIVISIONS 24 – 25
NOT USED**

DIVISION 26 - ELECTRICAL

26 00 10	-	Electrical Submittal Process.....	4
26 05 00	-	Common Work Results For Electrical	12
26 05 02	-	Electrical Work In Existing Facilities	4
26 05 03	-	Fire Stopping.....	7
26 05 05	-	Site Electrical	3
26 05 13	-	Medium Voltage Cables.....	6
26 05 19	-	Low Voltage Electrical Power Conductors And Cables	4
26 05 26	-	Grounding & Bonding For Electrical Systems.....	4
26 05 29	-	Hangers And Supports For Electrical Systems	4
26 05 33.13	-	Conduit For Electrical Systems.....	4
26 05 33.16	-	Boxes For Electrical Systems.....	3
26 05 36	-	Cable Trays For Electrical Systems	2
26 05 53	-	Identification For Electrical Systems	5
26 05 93	-	Electrical Testing	10
26 06 20	-	Disconnect Switches	2
26 09 55	-	Occupancy Sensors	4
26 12 00	-	Medium Voltage Transformers	6
26 21 16	-	Low Voltage Underground Electric Service Entrance	2
26 22 00	-	Low Voltage Transformers	4
26 22 50	-	Generator and Load Bank Docking Station.....	4
26 24 13	-	Switchboards.....	6
26 24 16	-	Panelboards.....	5
26 24 22	-	Motor Starters	3
26 27 16	-	Electrical Cabinets & Enclosures	2
26 27 26	-	Wiring Devices.....	2
26 28 16	-	Enclosed Switches.....	2
26 32 13	-	Packaged Engine Generators – Diesel.....	14
26 36 23	-	Automatic Transfer Switch	2
26 36 33	-	Quick Connect Switch.....	4
26 41 00	-	Facility Lightning Protection	4
26 43 00	-	Surge Protective Devices	7
26 55 00	-	Led Lighting.....	6
26 55 63	-	Detention Lighting	6
26 60 00	-	Provisions For Elevators	3

DIVISION 27 - COMMUNICATIONS

27 05 26	-	Grounding And Bonding For Communications Systems.....	9
27 05 28	- *AD4	Telecom Hangers And Supports	5
27 05 29	-	Cable Trays For Communications Systems	8
27 11 16	-	Communications Cabinets Racks And Enclosures.....	5
27 11 19	-	Communications Termination Blocks And Patch Panels.....	6
27 11 23	-	Communications Cable Management And Cable Runway	5
27 13 00	-	Communications Backbone Cabling.....	7
27 15 13	-	Communications Copper Horizontal Cabling	10
27 15 43	-	Communications Faceplates And Connectors.....	11

DIVISION 28 - ELECTRONIC SAFETY & SECURITY

28 05 10	- *AD 5	Common Work for Electronic Security System.....	20
28 05 55	-	Cabinets And Enclosures	5
28 13 00	-	Access Control	7
28 23 00	-	Digital Video Management And Recording System	4
28 31 10	-	Fire Detection And Alarm Systems.....	12

28 31 46	-	Aspirating Smoke Detection System.....	14
28 46 19	-	Electronic Control System	12
28 46 23	-	Touch Screen Control And Management System	23
28 50 45	-	Uninterruptible Power Systems.....	4
28 51 23	-	Digital Intercom And Paging System.....	12

DIVISIONS 29 – 30

NOT USED

DIVISION 31 - EARTHWORK

31 31 16	-	Termite Control.....	8
31 63 29	-	Drilled Piers	6

DIVISION 32 EXTERIOR IMPROVEMENTS

32 31 14	-	Site Perimeter Security Fence System.....	7
32 31 15	- *AD2	Site Perimeter Security Fence System- Vertical.....	4
32 31 16	-	Chain Link Fencing.....	2

DIVISION 33 UTILITIES

NOT USED

PART 1 – GENERAL

1.01 WORK INCLUDED

- A. Furnish all labor, materials, services and equipment required in conjunction with or properly incidental to the installation of wallcovering as described herein and/or as scheduled on the drawings.

1.02 RELATED SECTIONS

- A. Section 09 29 00: Gypsum Board Systems

1.03 QUALITY ASSURANCE

- A. Regulatory Requirements
 - 1. Fire hazard classifications for wallcovering materials shall be equal to or lower than the following.
 - a. Flame Spread: 15
 - b. Fuel Contributed: 0
 - c. Smoke Developed: 25
 - d. Determine fire hazard classification in accordance with ASTM E84

1.04 REFERENCES

- A. American Society for Testing and Materials
 - 1. ASTM E 84-84, Surface Burning Characteristics of Building Materials.
- B. Federal Specifications
 - 1. FS CCC-W-408A (1), Wallcovering, Vinyl Coated.

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's descriptive data and maintenance instructions; include recommended cleaning materials, application methods and precautions in use of cleaning materials which may be detrimental to surface if improperly applied.
- B. Samples: Furnish minimum 8" square samples of selected wallcoverings for approval of color and texture prior to purchase.
- C. Maintenance Stock: One unopened roll of each type, color and pattern of wallcovering installed.

1.05 PRODUCT HANDLING

- A. Take care to prevent damage during delivery and handling.
- B. Deliver wallcovering to job in sealed packages with testing laboratory certification of fire hazard classification on each package.
- C. Store wallcovering in undamaged condition as packaged by manufacturer, with seals and labels intact.
- D. Store materials in clean, dry storage area. Do not store wall- covering in upright position.
- E. Maintain storage area temperature above 40 degrees F. with normal humidity.

1.06 ENVIRONMENTAL CONDITIONS

- A. Install when normal temperature and humidity conditions approximate same conditions that will exist when building is occupied.

- B. Area to receive wallcovering shall have minimum temperature of 60 degrees F.
- C. Maintain temperature for 72 hours before, during and 48 hours after application.
- D. Remove wallcovering from packaging and allow to acclimatize to area of installation 24 hours before application.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Vinyl Wallcovering: Refer to the Room Finish Legend.
- B. Primer-Sealer: As recommended by wallcovering manufacturer.
- C. Adhesive: Heavy bodied water soluble paste manufactured expressly for use with wallcovering furnished and containing mildew inhibitor. Follow wallcovering manufacturer's recommendations.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Examine substrate surfaces and correct defects before beginning work.
- B. Verify other trade work that penetrates substrate has been completed before beginning wallcovering installation.

3.02 PREPARATION

- A. Thoroughly seal surface and allow to completely dry before applying adhesive.
- B. Remove vinyl wallcovering materials from their packaging and allow to acclimatize to the area of installation twenty-four hours before application.

3.03 INSTALLATION

- A. Use wallcovering rolls in consecutive numerical sequence of manufacture. Place wallcovering panels consecutively in exact order they are cut from roll including filling spaces above or below doors or similar penetrations.
- B. Trim additional salvage where required to achieve color match at seams.
- C. Follow manufacturer's printed instructions for mixing adhesive. Apply adhesive to wallcovering back using roller or paste brush.
- D. Wrap wallcovering 6" beyond inside and outside corners. No cutting at corners permitted. No horizontal seams permitted. Overlay seams and double-cut to assure tight closure.
- E. Remove and replace hardware, accessories, plates and similar items to allow wallcovering to be installed.
- F. Place vinyl wallcovering before installation of plumbing fixtures, casings, bases and cabinets.
- G. Use stiff bristled brush or flexible broad knife to eliminate air pockets and to secure wallcovering to substrate surface.

- H. Install wallcovering secure, smooth and clean without wrinkles, gaps or overlaps.
- I. Remove excess adhesive with damp sponge from each seam as it is made; follow manufacturer's instructions.

3.04 SCHEDULE

- A. Reference Room Finish Schedule.

END OF SECTION

SECTION 23 07 00

HVAC INSULATION*^{AD 6}

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to the Work in this Section.

1.2 SUMMARY

- A. Provide all equipment, materials, labor, supervision, and services necessary for or incidental to the insulation of the mechanical systems as indicated on the drawings and as specified herein.
- B. Factory insulated equipment is excluded from this section of the specifications except that the insulating material characteristics shall equal or exceed those of specified materials for similar service.
- C. Work Included:
 - 1. Piping:
 - a. Cooling coil condensate drain lines.
 - b. *^{AD 6}Chilled water and Heating Hot Water piping
 - c. All refrigerant lines.
 - 2. Ductwork:
 - a. Supply air:
 - 1) Insulate externally with thermal duct wrap.
 - b. Return air:
 - 1) Insulate externally with thermal duct wrap.
 - c. Make-up air duct:
 - 1) Insulated externally.
 - d. All round ductwork exposed to view shall be double wall factory internally insulated with 1" thick glass fiber duct and fittings.
- D. **Submittals: Provide submittals as required in Section 23 00 10, "Submittal Process".**

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Without additional cost to the Owner, provide such other labor and materials as are required to complete the work of this Section in accordance with the requirements of governmental agencies having jurisdiction, regardless of whether such materials and associated labor are called for elsewhere in these Contract Documents.
- C. When requested, provide the Architect with manufacturer's certificate that materials meet or exceed minimum requirements as specified.
- D. Pipe joints or cuts, shall be sealed with manufacturers glue. Any type of duct tape, foil tape, electrical tape or any other product that what the manufacturer supplies will be rejected and all insulation will be removed and replaced at the contractors cost.
- E. Splits or exposed piping will not be acceptable. All incorrectly installed insulation will be repaired at contractors cost.
- F. Acceptable Manufacturers:
 - 1. Fiberglass Insulation:
 - a. Knauf Insulation
 - b. Manson Insulation
 - c. Owens-Corning Fiberglas
 - d. Manville
 - e. Certain Teed
 - 2. Urethane Insulation:
 - a. Armstrong (Armalok)
 - b. Thermacor
 - 3. Mastics:
 - a. Benjamin Foster

- b. Insul-Coustic
- c. Chicago Mastic
- d. Childers Products
- 4. High Temperature Bonding Cements: Ryder Thermocote
- 5. PVC Fittings: Zeston, Inc.

1.4 GENERAL

- A. All materials shall be applied by workmen skilled in this trade. Mechanical fasteners shall be used whenever possible to assure permanent construction. Unsightly work shall be cause for rejection.
- B. Materials will be applied only after all surfaces have been tested and cleaned.
- C. All material, jacket, coverings, sealers, mastics and adhesives shall not exceed flame spread rating of 25 and smoke developed of 50 in accordance with ASTM Method E84, UL Standard 723 and NFPA Bulletins 255 and 90A.
- D. Insulation shall be vermin resistant.
- E. Fiberglass insulation shall not contain formaldehyde, asbestos, lead, mercury, mercury compounds, or poly-brominated diphenyl ether fire retardants.
- F. Fiberglass insulation products shall be UL GREENGUARD Gold certified.
- G. Fiberglass insulation products shall have a minimum of 50 percent recycled glass content certified and UL Validated.
- H. Fiberglass insulation products shall be constructed with 100% formaldehyde-free thermosetting resin binder and bio-soluble glass.
- I. Non-compressible insulation material shall be installed at hangers of cold piping to eliminate through metal conductance.
- J. Sizing, paint, pipe shield or saddle, and internal duct insulation shall be provided under other sections of Division 23.
- K. Insulation of cold surfaces shall be vapor sealed.
- L. Minimum thickness of insulation shall be as listed or energy code as adopted by authority having jurisdiction. However, sufficient insulation shall be provided to eliminate condensation on the cold surfaces and to maintain a maximum exterior insulation surface of 125°F. (OSHA Standard) on the hot surfaces.

PART 2 - PRODUCTS

2.1 PIPING SYSTEMS

- A. ^{*AD 6}Pipe Insulation:
 - 1. Above Ground-Use Fiberglass, Preformed, One-piece, Pipe Insulation: Fiberglass bonded with a 100% formaldehyde-free, thermosetting resin binder. Type I, 850 deg. F or Type IV 1000 deg. F. UL/ULC Classified per UL 723. Comply with ASTM C 585, ASTM C 411, ASTM C 795, and ASTM C 547, Type I, and Type IV, equipped with factory-applied ASJ+SSL+ or ASJ-SSL vapor retarder.
 - a. Basis-of-Design: Knauf Earthwool® 1000° Fiberglass Pipe Insulation with ASJ+SSL+ vapor retarder.
 - b. Manson Insulation Alley-K® Fiberglass Pipe Insulation with ASJ-SSL vapor retarder.
 - c. Johns Manville AP-T preformed one-piece fiberglass with reinforced craft paper and aluminum foil jacket.
 - d. Include vapor barrier where required.
 - e. ASJ+ SSL+ Vapor Retarder – factory-applied and composed of an aluminum foil layer, reinforced with glass scrim, bonded to a layer of White Kraft paper, interleaving with an outer film leaving no paper exposed; complying with ASTM C 1136 Type I, II, III, IV, VII, VIII, and X. Includes Self-Sealing Lap closure system with butt strips.
 - f. ASJ-SSL Vapor Retarder – factory-applied and composed of an aluminum foil layer, reinforced with glass scrim, bonded to a layer of White Kraft paper, complying with ASTM C 1136, Type I. Includes Self-Sealing Lap closure system with butt strips.

- g. Use pre-formed PVC fitting covers with fiberglass inserts. Fiberglass inserts shall be same density as pipe insulation.
 - h. Where insulation is exposed to weather use 0.016" smooth or corrugated aluminum outer jacket, positioned to shed water to make a waterproof assembly. pre-approved equal, Metal-Jacketed Fiberglass pipe insulation. Securement shall be made by 1/2" 0.020 aluminum bands with approved closure system.
2. Insulate roof drain or overflow drain body with 1" thick fiberglass (Johns Manville Micro-Lok HP or approved equal). Insulate all horizontal sections and first 5'-0" of vertical sections of roof drain and overflow roof drain piping. Seal jacket vaporproof.
 3. **1" Armstrong SOLID CORE** Armaflex or equal **for all refrigerant lines**. Split Armaflex is not approved in refrigeration applications. **Both the liquid and gas refrigerant lines must be insulated**
 4. Condensate drain lines shall be insulated from AC unit to indirect waste termination points and first 10'-0" of horizontal drain line at floor drains receiving condensate. Material shall be closed cell type with 3/4" thick molded pipe covering with a density of 7 lbs. thermal conductivity at 0.28 at 75°F. Do not split the insulation. All joints shall be glued with manufacturer's adhesive.
 5. Chilled Water/Heating Water Piping:
 - a. Johns Manville Micro-Lok HP, or approved equal, pre-formed fiber glass pipe insulation, complying with ASTM C547, Class 3 (to 850°F), rigid, molded, noncombustible (plain) or limited combustibility (jacketed) pipe insulation
 - (1) Thermal Conductivity ("k"): 0.23 Btu • in/ (hr • ft² • °F) at 75°F mean temperature (0.033 W/m•°C at 24°C) per ASTM C518.
 - (2) Maximum Service Temperature: 850°F (454°C)
 - (3) Rated to a maximum 25/50 FS/SD per ASTM E84, CAN ULC S102.
 - (4) When being used over austenitic stainless steel, product must comply with the requirements ASTM C795.
 - (5) All-Service Vapor-Retarder Jacket (ASJ): A white, kraft paper or poly exterior, reinforced with a glass fiber yarn and bonded to an aluminum foil with self-sealing longitudinal closure laps (SSL) and butt strips.
 - (6) Install insulation at the thickness required to prevent condensation as indicated in project manual and as calculated by the NAIMA 3E Plus® program for most severe pipe operating conditions.
 - (7) Material shall be limited-combustible as defined in NFPA 90A with a potential heat value not exceeding 3,500 btu/lb when tested in accordance with NFPA 259.
 - b. Use pre-formed PVC fitting covers with fiberglass inserts. Fiberglass shall have same density as pipe insulation.
 - c. Field-Applied Protective Jackets and Fittings:
 - (1) PVC Plastic: Zeston 2000 Series. One piece, molded type fitting covers and jacketing material, gloss white.
 - (a) Securement: Pressure sensitive adhesive, PVC weld cement, or matching vinyl tape. Tacks may be used to hold PVC jacketing and fittings in place on above ambient systems only. For chilled systems, tacks are not recommended.
 - (b) Fittings, valves, tees, etc., shall be insulated with Hi-Lo Temp fiber glass insulation, and needs to be covered with Zeston 2000 insulated fitting covers.
 - (c) 20 mil/30 mil/40 mil stock thickness.
 - (d) UV Resistant.
 - (e) For below ambient systems, seal joints with Perma-weld adhesive or Z-Tape.
 - (f) Refer to Zeston PVC CI-35 for installation guidelines.
 - (g) Jacketing shall have an ASTM E84 flame spread/smoke development rating of maximum 25/50.
 - d. Where piping is exposed in mechanical rooms, cover all sections, valves, strainers, etc., with a minimum thickness 20 mil PVC jacket.

6.

2.2 *AD⁶ DUCTWORK SYSTEMS

- A. External insulation for metal ductwork (flexible blanket): Use Knauf Insulation Atmosphere™ Duct Wrap with FSK facing, Manson Insulation Alley Wrap B™ with FSK facing, or Johns Manville Microlite fiberglass duct wrap with FSK reinforced craft paper and aluminum foil facing, conforming to the requirements of NFPA 90A and 90B.
- B. High and Medium velocity ductwork with external insulation shall be insulated with blanket wrap fiberglass insulation, 3 inches thick, one (1) pound density or minimum thermal resistance of 11.0, complete with scrim kraft jacket. Facing overlapping joints shall be at least two (2) inches and held in place with outward clinching staples on approximately four (4) inch centers. Underside of ducts exceeding 24 inches in diameter shall be spot cemented and finally secured with sheet metal screws and washers.
- C. High velocity flexible ductwork shall be UL 181, Class I, with rating to meet or exceed NFPA 90A-90B and reinforced with a perforated sheet metal inner jacket.
- D. High velocity ductwork located in non-conditioned spaces shall be insulated with 2” thick, 3.0 pound minimum PCF density, fiberglass board with FSK vapor retarder facing. Basis-of-Design: Knauf Insulation Earthwool® Board with FSK facing
- E. Other fiberglass board manufacturers are Manson Insulation AK board, Certainteed, and Owens Corning or pre-approved equal.
- F. Fibrous-Glass Duct Liner: Duct liner shall be rotary-fiber bonded with 100% formaldehyde free, bio-based binder, having a bonded black mat-faced airstream surface, factory-applied edge coating, meeting requirements of NFPA 90A and 90B, ASTM C1071, and NAIMA AH124, “Fibrous Glass Duct Liner Standard”. Duct liner shall comply with the fiberglass requirements set forth in Part 1.4 of this specification.
 - 1. Acceptable Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. CertainTeed Corporation; Insulation Group.
 - b. Johns Manville.
 - c. Knauf Insulation.
 - d. Owens Corning.
 - 2. Maximum Thermal Conductivity: .24 Btu/(ft² x hr. x °F) @ 75°F mean temperature.
 - 3. Maximum Service Temperature: ASTM C411 – 250°F (121°C)
 - 4. Noise Reduction Coefficient (NRC) : ASTM C423 – 1”=.70, 1-1/2”=.80, 2”=.95
 - 5. Maximum Rated Air Velocity: ASTM C1071 – 6,000 ft. /min. (30.5 m/sec.)
 - 6. Mold & Mildew Growth / Fungi Resistance: ASTM C1338, ASTM G21/G22 – Pass
 - 7. Water Vapor Sorption: ASTM C1104 – Less than 3%
 - 8. Corrosiveness/Corrosion: ASTM C665/C1617 - Does Not Accelerate / Pass
 - 9. Duct liner adhesive shall be applied to the sheet metal with a minimum coverage of 90%. Adhesive shall meet the requirements of ASTM C916.
 - 10. All duct liner products shall avoid air erosion up to velocities of 6,000 feet per minute.
- G. Solvent-Based Liner Adhesive: Comply with NFPA 90A or NFPA 90B and with ASTM C 916.

2.3 ADHESIVES

- A. Water based, polymeric, UL classified lagging adhesive for applying canvas and glass cloth; Foster 30-36 or Childers CP-50.
- B. A fast setting, rubber based, UL classified, vapor barrier lap and attachment adhesive; Foster 85-15 or Childers CP-85.
- C. Same adhesive, except non-flammable when wet; Foster 85-20 or Childers CP-82.
- D. A rubber based, UL classified, fast setting contact adhesive for adhering flexible cellular insulation; Foster 82-40 or Armstrong 520.

2.4 INSULATION THICKNESS

- A. Piping insulation thickness based on a maximum k value of 0.23 Btu in/hr ft² °F at a mean temperature of 75°F.

System	Pipe Sizes				
	Runouts To 8 ft. Max.	1" and Less	1-1/4" to 1-1/2"	2" & 4	6" and Up
Domestic hot water	1"	1"	1"	1-1/2"	1-1/2"
Domestic cold water.	1"	1"	1"	1"	1"
Horizontal storm piping and drain bodies. EWC traps and tailpieces. Condensate drain piping.	1"	1"	1"	1"	1"
Refrigerant Piping	1"	1"	1"	2"	-
Heating hot water	1 1/2"	1 1/2"	2"	2"	2"
Steam and steam condensate (250 F and less)	2 1/2"	2 1/2"	2 1/2"	3"	3"
Chilled Water	1"	1"	1"	1-1/2"	1-1/2"

- B. Exterior Duct Insulation: All supply, return and outside air ductwork, shall be minimum insulation 2" thick, with a minimum installed R value of 8.0.
- C. *AD⁶ Equipment Insulation:
1. Cylindrical shaped vessels and tanks: 2" thick, 1½ pcf density.
 2. Chilled water pumps: 1½" thick, 3 pcf density.
 3. Equipment exposed to outdoor weather shall have an additional covering of weatherproof mastic, reinforced with open mesh glass fabric applied two coats of sufficient thickness to give a 1/8" dry coat.

2.5 DUCT SEALANTS

- A. A fast setting, rubber based, UL classified, high velocity duct sealer; Foster 32-14 or 3M EC-800.
- B. Same sealer, except non-flammable when wet; Foster 30-02.

2.6 EXPANSION AND BALL JOINT INSULATION COVERS

- A. Furnish and install removable and reusable insulation covers.
- B. Insulation and jacketing material shall be as required for service temperatures.
- C. Covers shall have hook and loop fasteners and draw cords

PART 3 - EXECUTION

3.1 GENERAL

- A. The installation of all insulation shall be made by experienced craftsmen in a neat, workmanlike manner and shall be in accordance with the manufacturer's published recommendations for service intended, as interpreted by the Architect.

- B. All adhesives used in conjunction with insulation shall be compatible with the insulation and vapor barrier used and be vermin-proof and mildew resistant.

3.2 APPLICATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Ductwork:
 - 1. External Duct Insulation: All external duct shall be installed without sagging or loose fitting sections. Outer jacket shall be sealed with mastic to form a continuous vapor barrier. Install as recommended by the insulation manufacturer.
 - 2. Flexible fiberglass insulation shall be wrapped around ducts and secured with outward clinching staples. Ducts 24" wide and larger shall have the insulation additionally secured with stick clips on 18" centers or with 4" wide bands of adhesive applied on 18" centers. Insulation shall be lapped a minimum of 4" and all seams and penetrations shall be sealed with an approved mastic reinforced with 3" glass mesh reinforcement. Where insulation terminates, all raw glass shall be sealed to duct.
- C. Insulation shall be the full specified thickness, continuous through walls, floors, ceilings, etc. Reducing thickness or cutting back of insulation to pass obstructions or through sleeves will not be permitted.
- D. Valve and fitting insulation shall be built up to the thickness of the adjacent pipe insulation or may be factory prefabricated units at the Contractor's option.
- E. Any painting of pipe insulation shall be accomplished under the Painting Section. After finish painting, any insulation showing splits or other signs of poor workmanship shall be replaced.
- F. No part of any system shall be insulated until all required tests have been completed.
- G. All insulation shall be installed so that it does not interfere with the functions of thermometer wells, gage connections and/or cocks, unions, access panels, hand holes, manholes, sight glasses, etc., or obscure serial numbers or other nameplate data.
- H. Insulation shall be extended to include stiff leg supports as required to prevent sweating.
- I. Complete vapor barriers to prevent sweating shall be installed on all cold systems and equipment. If a single tape adhesive system or staples are used for closure of the longitudinal lap, a vapor barrier mastic must be used to ensure a vaporproof closure. All edges and abutments shall be sealed, waterproof and vaporproof. Supplier of jacket materials shall certify that the material proposed is approved for use in return air plenums, where applicable.
- J. Where necessary, the application of insulation shall be arranged to accommodate movement of piping due to thermal expansion and/or contraction.
- K. Refrigeration Piping in AV/IT & Electrical Rooms: All exposed piping and condensate piping shall be installed into a wall escutcheon or gutter so that no piping shall be visible.
- L. Exterior Piping: All pipe and fittings specified herein to be insulated when installed exposed to weather, and wrapped with an 0.016" smooth or corrugated aluminum jacket with proper closure system positioned to shed water to make a waterproof assembly. Fittings shall be insulated with molded insulation fittings or pipe insulation carved and mitered to fit properly. Insulation shall be butted together and adhered in place with contact cement. Where possible tubing shall be slipped on without slitting. Where insulation terminates, it shall be neatly beveled and finished. No portion of this insulation shall be concealed prior to approval by the Architect.
- M. Below Grade Piping: All pipe and fittings specified herein to be insulated, when installed below grade shall be insulated and spirally wrapped with open mesh glass tape embedded in asphaltic mastic and then completely covered with waterproof asphaltic mastic so as to make a waterproof assembly. Fittings shall be insulated with molded insulation fittings or pipe insulation carved and mitered to fit properly. Insulation shall be butted together and adhered in place with contact cement. Where possible tubing shall be slipped on without slitting. Where insulation terminates, it shall be neatly beveled and finished. No portion of this insulation shall be concealed before the Architect has checked and approved same.

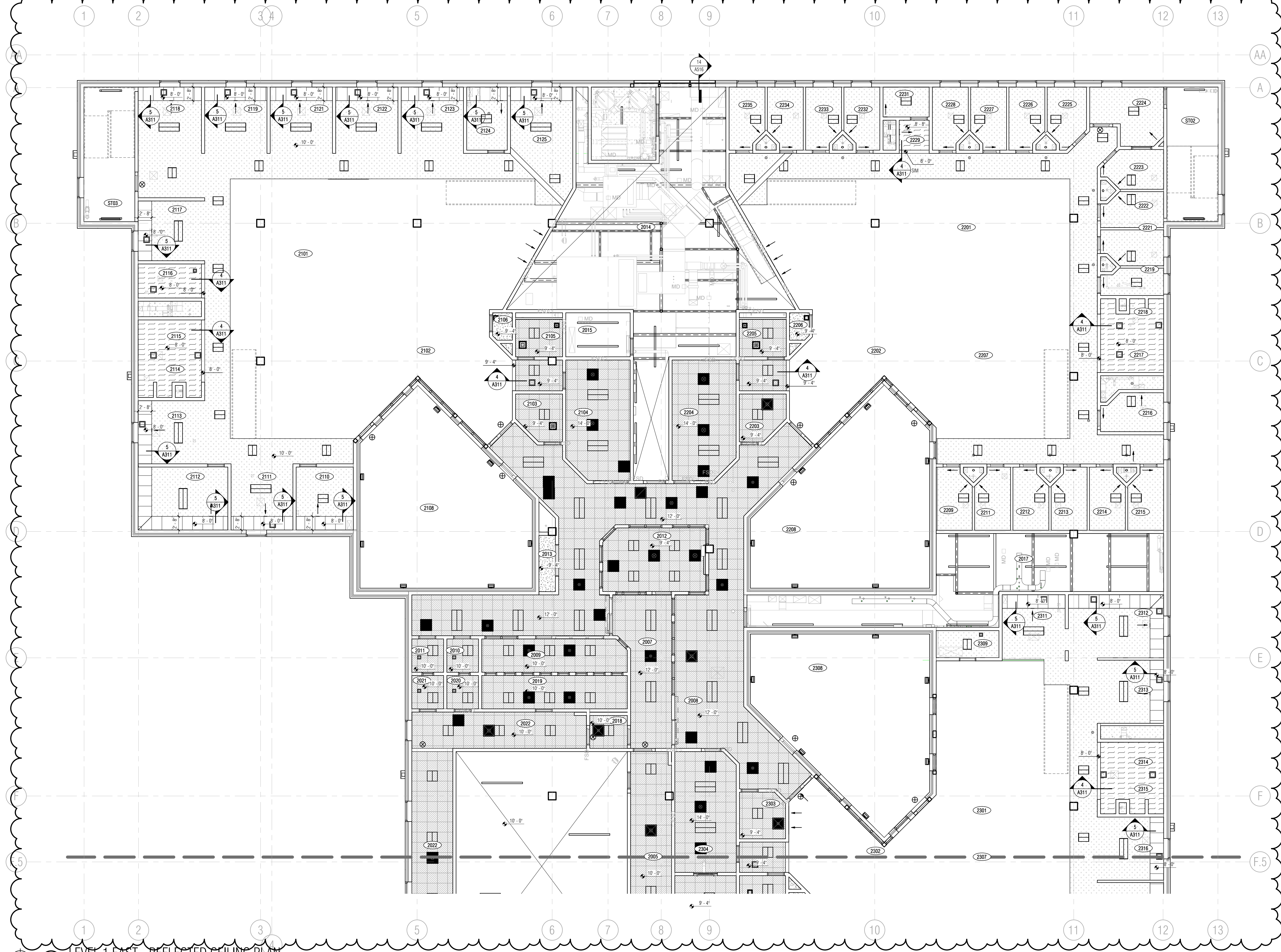
- N. Piping supports shall pass completely around the exterior of the finished insulation. Rigid blocks of insulation material shall be provided at all support points. In addition, sheet metal saddles shall be provided at support points in accordance with the following table:

Pipe Size	Gauge Metal	Saddle Length
Up to 2-1/2"	18	6"
3" - 5"	16	10"
6" - 8"	16	14"
10" and Over	16	18"

- O. Saddles shall cover the bottom of the insulation, and saddle edges shall be hemmed or suitably covered to prevent damage to the insulation material.
- P. The vapor barrier and finish shall be continuous at all support points.
- Q. Shop Application of Duct Liner: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-19, "Flexible Duct Liner Installation."
1. Adhere a single layer of indicated thickness of duct liner with at least 90 percent adhesive coverage at liner contact surface area. Attaining indicated thickness with multiple layers of duct liner is prohibited.
 2. Apply adhesive to transverse edges of liner facing upstream that do not receive metal nosing.
 3. Butt transverse joints without gaps, and coat joint with adhesive.
 4. Fold and compress liner in corners of rectangular ducts or cut and fit to ensure butted-edge overlapping.
 5. Do not apply liner in rectangular ducts with longitudinal joints, except at corners of ducts, unless duct size and dimensions of standard liner make longitudinal joints necessary.
 6. Apply adhesive coating on longitudinal seams in ducts.
 7. Secure liner with mechanical fasteners 4 inches from corners and at intervals not exceeding 12 inches transversely; at 3 inches from transverse joints and at intervals not exceeding 18 inches longitudinally.
 8. Secure transversely oriented liner edges facing the airstream with metal nosings that have either channel or "Z" profiles or are integrally formed from duct wall. Fabricate edge facings at the following locations:
 - a. Fan discharges.
 - b. Intervals of lined duct preceding unlined duct.
 - c. Upstream edges of transverse joints in ducts where air velocities are higher than 2000 fpm or where indicated.
 9. Secure insulation between perforated sheet metal inner duct of same thickness as specified for outer shell. Use mechanical fasteners that maintain inner duct at uniform distance from outer shell without compressing insulation.
 - a. Sheet Metal Inner Duct Perforations: 3/32-inch diameter, with an overall open area of 23 percent.
- R. Lined exterior ductwork shall be treated with an acid etch bath and two coats of UV resistant paint. Color shall be approved by Architect.
- S. Terminate inner ducts with buildouts attached to fire-damper sleeves, dampers, turning vane assemblies, or other devices. Fabricated buildouts (metal hat sections) or other buildout means are optional; when used, secure buildouts to duct walls with bolts, screws, rivets, or welds.
- T. *AD⁶ Equipment Insulation:
10. Insulation shall be cut to fit the contour of the equipment and secured by means of bands, stick clips, weld pins and lugs or adhesives as required for each individual piece of equipment. Install removable/reusable covers on all strainers and pump applications.
 11. Apply insulation as close as possible to equipment by grooving, scoring, and beveling insulation, if necessary. As required, secure insulation to equipment with studs, pins, clips, adhesive, wires, or bands.
 12. Fill joints, cracks, seams, and depressions with bedding compound to form smooth surface. On cold equipment, use vapor retardant cement.

13. Provide insulated cold equipment containing fluids below ambient temperature with vapor retardant jackets.
14. Cover insulation with aluminum jacket.
15. Do not insulate over nameplate or ASME stamps.
16. When equipment with insulation requires periodic opening for maintenance, repair, or cleaning, install insulation in such a manner that it can be easily removed and replaced without damage.

END OF SECTION



REFLECTED CEILING PLAN LEGEND

SHEET NOTES:

- MECHANICAL AND ELECTRICAL DATA SHOWN FOR REFERENCE ONLY. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS. ANY CONFLICTS SHOULD BE ADDRESSED WITH ARCHITECT AS SOON AS POSSIBLE.
- ALL CEILINGS ARE 9'-0" AFF UNLESS NOTED OTHERWISE.
- CEILING HEIGHT REFERENCES ON RCP ARE SPECIFIC TO THE PLANS' FINISH FLOOR LEVEL AND NOT GLOBAL ELEVATION REFERENCES.
- WHERE CEILING IS OPEN - EXPOSED TO STRUCTURE - UNDERSIDE OF DECK, PIPING AND OTHER EXPOSED ELEMENTS TO BE PAINTED P2.

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
 Civil: Pacheco Koch (214) 451-2765
 Structural: JQ Engineering (214) 752-9098
 MEP / IT: MD Engineering (469) 467-0200
 Security: Latiatech (972) 633-5850

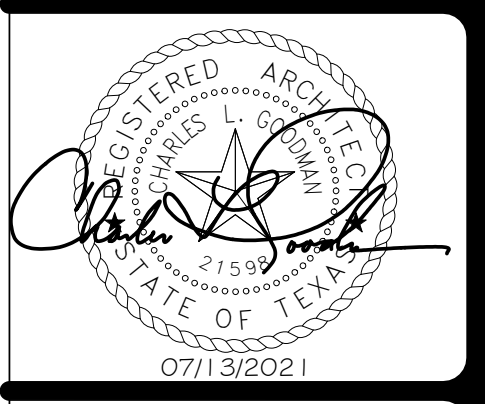
BRINKLEY SARGENT WIGINTON ARCHITECTS

LEVEL 1 EAST - REFLECTED CEILING PLAN
 SCALE: 1/8" = 1'-0"

ROOM SCHEDULE (LEVEL 1)		ROOM SCHEDULE (LEVEL 1)		ROOM SCHEDULE (LEVEL 1)		ROOM SCHEDULE (LEVEL 1)		ROOM SCHEDULE (LEVEL 1)		ROOM SCHEDULE (LEVEL 1)	
NUMBER	ROOM NAME	NUMBER	ROOM NAME	NUMBER	ROOM NAME	NUMBER	ROOM NAME	NUMBER	ROOM NAME	NUMBER	ROOM NAME
2001	CORR.	2017	CORR.	2111	DORMITORY	2205	STAFF RESTROOM	2225	DBL OCC CELL	2309	STORAGE
2002	STORAGE ROOM	2018	SAFETY VEST.	2112	STORAGE	2206	ELECT. STU./RECHARGE	2226	DBL OCC CELL	2311	DORMITORY
2003	BREAK ROOM	2019	VISIT	2113	DORMITORY	2207	MULTIFUNCTIONAL KIOSK	2227	DBL OCC CELL	2312	DORMITORY
2004	STAFF TOILET	2020	VISIT	2114	SHOWER	2208	OUTDOOR EXERCISE YARD	2228	DBL OCC CELL	2313	DORMITORY
2005	CORR.	2021	VISIT	2115	INMATE RESTROOM	2209	DBL OCC CELL	2229	INMATE TOILET	2314	INMATE TOILET
2006	MEDICAL	2022	CORR.	2116	INMATE RESTROOM	2211	DBL OCC CELL	2231	STORAGE	2315	INMATE SHOWER
2007	INMATE STAGING	2023	CORR.	2117	HC DORMITORY	2212	DBL OCC CELL	2232	DBL OCC CELL	2316	HC DORMITORY
2007	CORR.	2024	CORRIDOR	2118	DORMITORY	2213	DBL OCC CELL	2233	DBL OCC CELL	2317	DORMITORY
2008	CORR.	2024	INMATE TRANSFER/CIRCULATION	2119	DORMITORY	2214	DBL OCC CELL	2234	DBL OCC CELL	2318	JC
2009	VISIT	2101	DAYROOM/ DINING/ TV	2121	DORMITORY	2215	DBL OCC CELL	2235	DBL OCC CELL	2319	STORAGE
2010	VISIT	2102	HOUSING OFFICER WK.STATION	2122	DORMITORY	2216	HC DBL OCC CELL	2236	DAYROOM/ DINING/ TV	2365	STAR
2011	VISIT	2103	MED. DISTR.	2123	DORMITORY	2217	INMATE TOILET	2237	HOUSING OFFICER WK.STATION		
2012	CLUSTER CONTROL STATION	2104	MULTIPURPOSE	2124	JAN.	2218	SHOWER	2238	MED. DISTR.		
2013	MATTRESS STORAGE	2105	STAFF RESTROOM	2125	DORMITORY	2219	JAN.	2239	MULTIPURPOSE ROOM		
2014	MECH.	2106	ELECT. STU./RECHARGE	2201	DAYROOM/ DINING/ TV	2221	DBL OCC CELL	2240	STAFF RESTROOM		
2015	IT	2107	MULTIFUNCTIONAL KIOSK	2202	HOUSING OFFICER WK.STATION	2222	DBL OCC CELL	2241	ELECT. STU./RECHARGE		
2016	BOLER	2108	OUTDOOR EXERCISE YARD	2203	MED. DISTR.	2223	DBL OCC CELL	2242	DBL OCC CELL		
2017	IT	2110	STORAGE	2204	MULTIPURPOSE	2224	SAFETY VESTIBULE	2243	OUTDOOR EXERCISE YARD		

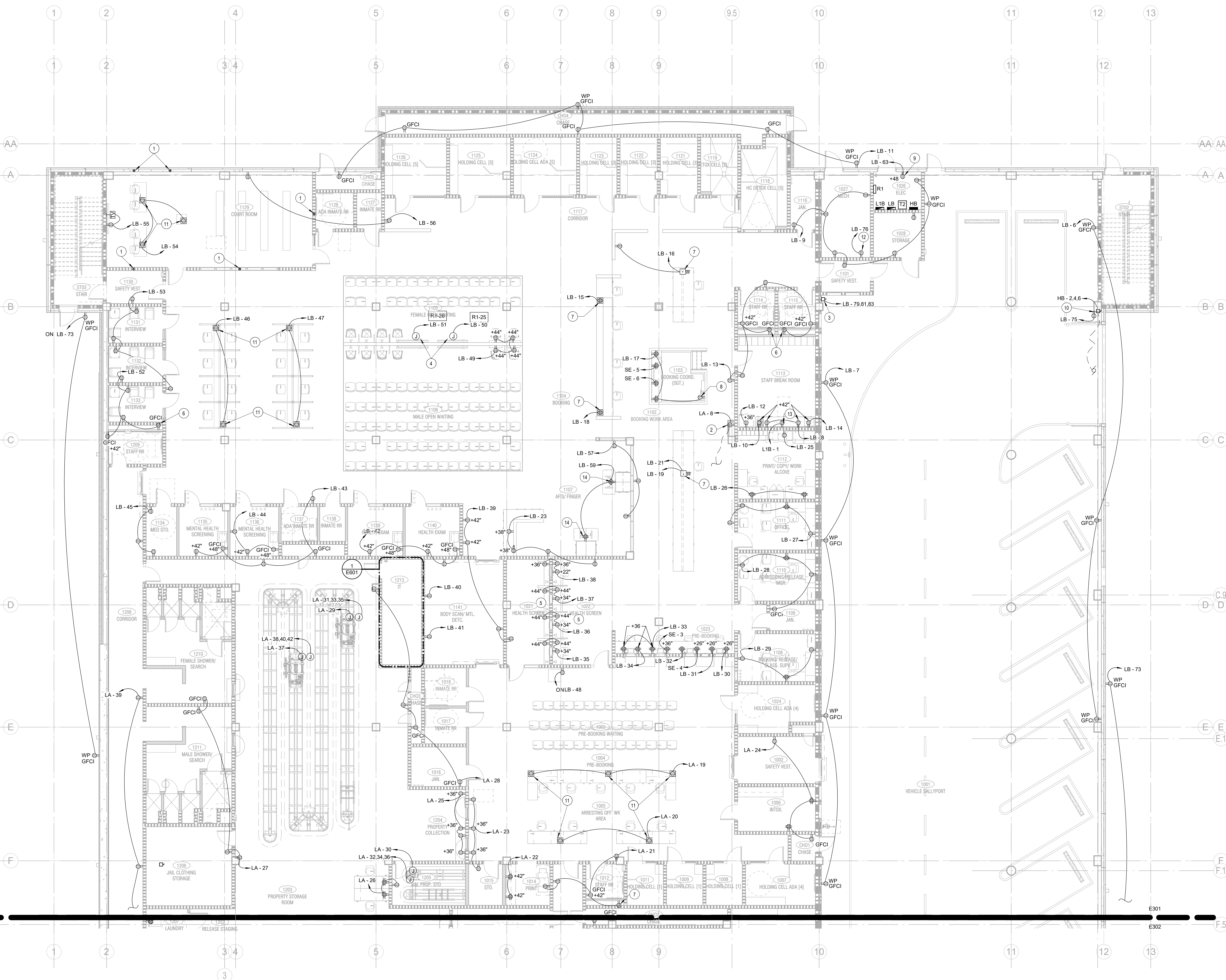
HISTORY

#	DATE	DESCRIPTION
1	08/31/2021	ADDENDUM #5



LEVEL 1 EAST - REFLECTED CEILING PLAN

FOR BID



GENERAL NOTES:

- NUMBER ASSOCIATED WITH CERTAIN RECEPTACLES (I.E. R2-17) REFERS TO CONTROL RELAY NUMBER. REFER TO RELAY SCHEDULE.
- RECEPTACLES IN ALL DETENTION AREAS:
 - HAVE DETENTION GRADE STAINLESS STEEL COVER PLATES.
 - COVER PLATES SHALL HAVE TORX PLATES FASTNER.
 - BE TAMPER PROOF.
 - BE ON GFCI BREAKER.
- REFER TO SECURITY ELECTRONIC DRAWINGS FOR ALL CIRCUITS LOCATED IN PANEL SE.
- REFER AND COORDINATE WITH I.T. DRAWINGS AND NOTES FOR LOCATIONS OF DATA, INMATE PHONE, KIOSK AND VIDEO VISITATION RELATED BACK BOXES, FLOOR BOXES AND CONDUIT. ALL CONDUIT AND BOXES BY DIV.26.
- REFER AND COORDINATE WITH SECURITY ELECTRONICS DRAWINGS AND NOTES AND PROVIDE ALL CONDUIT FOR THIS SYSTEM. COORDINATE WITH SECURITY ELECTRONICS CONTRACTOR.
- CONDUIT SHALL BE 7" MINIMUM ABOVE FLOOR. CONDUIT ON WALK AREA IS NOT ALLOWED.

NOTES BY SYMBOL "O":

- FUTURE RECEPTACLE. PROVIDE 3/4" CONDUIT TO ACCESSIBLE CEILING. PROVIDE RECESSED BACK BOX AND BLANK COVER PLATE.
- POWER FOR PNEUMATIC TUBE SYSTEM. REFER TO ARCHITECTURAL EQUIPMENT PLANS AND SCHEDULE FOR ADDITIONAL PNEUMATIC TUBE SYSTEM INFORMATION.
- POWER FOR OWNER PROVIDED COMPRESSOR. BASIS OF DESIGN: 208V, 3-PHASE, 5HP MOTOR.
- J-BOX IN CEILING FOR POWER TO TV. SWITCH VIA RELAY AS INDICATED.
- RECEPTACLES ON BOTH SIDES OF COUNTER SHALL BE GFCI. TYPICAL OF 12 RECEPTACLES.
- POWER FOR AUTO FLUSH VALVE.
- POWER WHIP TO FEED OUTLETS ON MILLWORK COUNTER. COORDINATE WITH IT CONTRACTOR FOR DATA AT SAME LOCATION. COORDINATE WITH MILLWORK CONTRACTOR.
- POWER FOR KEY TRACER FROM RECEPTACLE.
- POWER FOR IRRIGATION CONTROLLER.
- POWER FOR BIFOLD DOOR AND CONTROLLER. COORDINATE WITH VENDOR DOOR. OPERATE BASIS OF DESIGN: 480V, 3-PHASE, 3/4 HP MOTOR.
- COORDINATE EXACT LOCATIONS OF FLOOR BOXES AND STUB UPS WITH ARCHITECT AND FURNITURE PLACEMENT.
- POWER FOR EMS CONTROL CABINETS. REFER TO MECHANICAL DRAWINGS.
- RECEPTACLE UNDER COUNTER FOR GARBAGE DISPOSAL. PROVIDE SWITCH ABOVE COUNTER.
- RECEPTACLE ON SIDE OF MILLWORK CABINET.

COLLIN COUNTY ADP - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

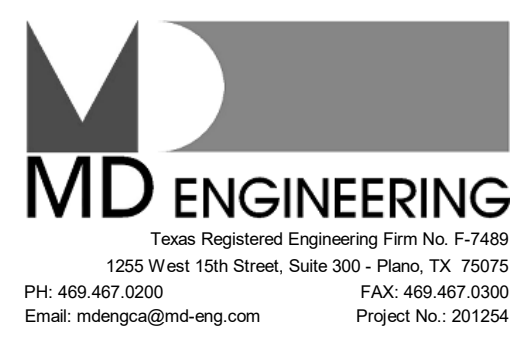
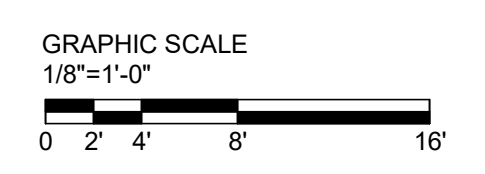
Architect: Brinkley Sargent Wighton Architects (972) 960-9970
 Civil: Pacheco Koch (214) 451-2765
 Structural: JQ Engineering (214) 752-9098
 MEP / IT: MD Engineers (469) 467-0200
 Security: Latitech (972) 633-8650

BRINKLEY SARGENT WIGHTON ARCHITECTS

HISTORY		
#	DATE	DESCRIPTION
2	08/31/2021	ADDENDUM #6

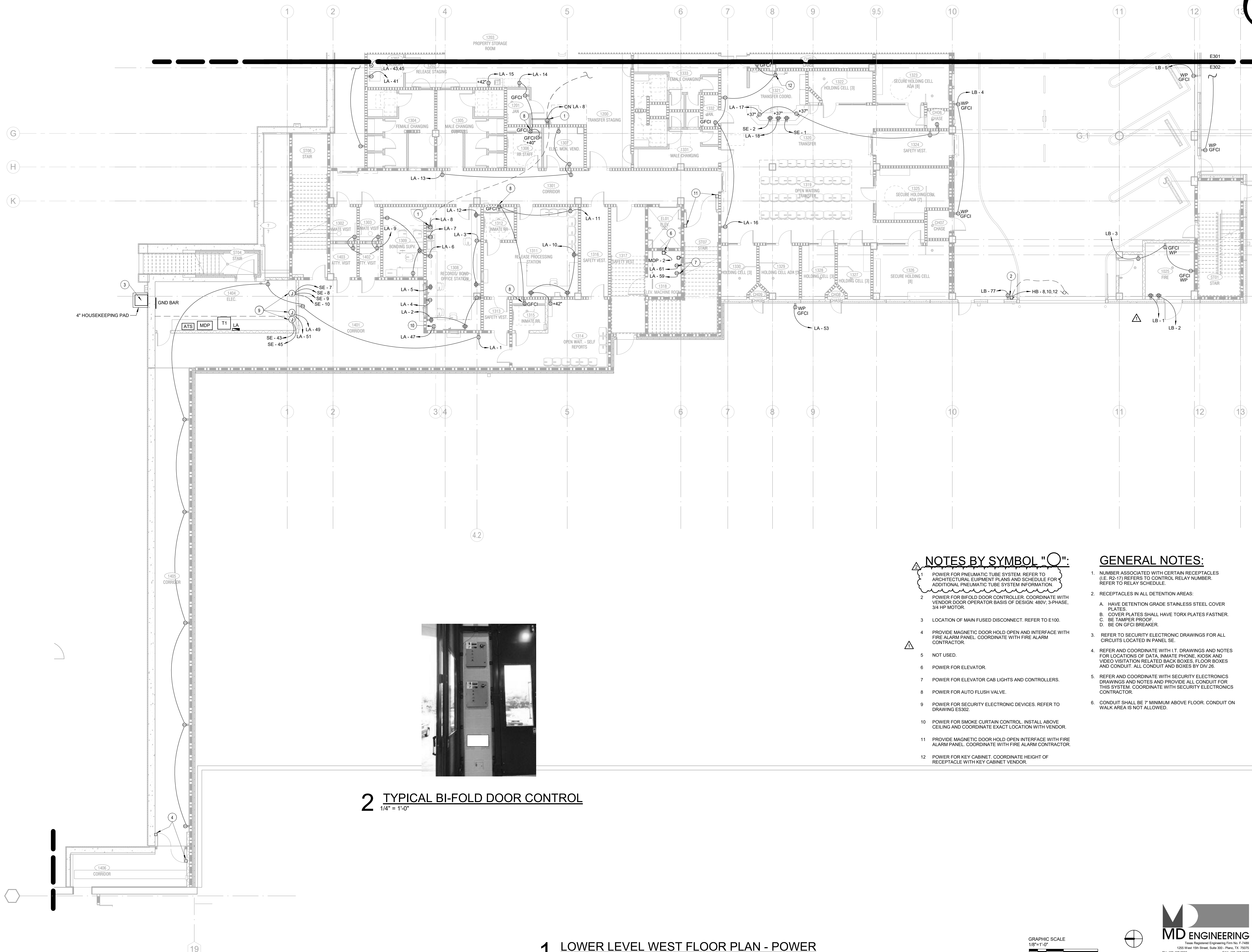


LOWER LEVEL EAST FLOOR PLAN - POWER



1 LOWER LEVEL EAST FLOOR PLAN - POWER
1/8" = 1'-0"

FOR BID



COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

Architect: Brinkley Sargent Wighton Architects (972) 960-9970
 Civil: Pacheco Koch (214) 451-2765
 Structural: JQ Engineering (214) 752-9098
 MEP / IT: MD Engineers (469) 467-0200
 Security: Lofitech (972) 633-8650

BRINKLEY SARGENT WIGHTON ARCHITECTS

NOTES BY SYMBOL "Q":

- 1 POWER FOR PNEUMATIC TUBE SYSTEM. REFER TO ARCHITECTURAL EQUIPMENT PLANS AND SCHEDULE FOR ADDITIONAL PNEUMATIC TUBE SYSTEM INFORMATION.
- 2 POWER FOR BI-FOLD DOOR CONTROLLER. COORDINATE WITH VENDOR DOOR OPERATOR BASIS OF DESIGN: 480V, 3-PHASE, 3/4 HP MOTOR.
- 3 LOCATION OF MAIN FUSED DISCONNECT. REFER TO E100.
- 4 PROVIDE MAGNETIC DOOR HOLD OPEN AND INTERFACE WITH FIRE ALARM PANEL. COORDINATE WITH FIRE ALARM CONTRACTOR.
- 5 NOT USED.
- 6 POWER FOR ELEVATOR.
- 7 POWER FOR ELEVATOR CAB LIGHTS AND CONTROLLERS.
- 8 POWER FOR AUTO FLUSH VALVE.
- 9 POWER FOR SECURITY ELECTRONIC DEVICES. REFER TO DRAWING ES302.
- 10 POWER FOR SMOKE CURTAIN CONTROL. INSTALL ABOVE CEILING AND COORDINATE EXACT LOCATION WITH VENDOR.
- 11 PROVIDE MAGNETIC DOOR HOLD OPEN INTERFACE WITH FIRE ALARM PANEL. COORDINATE WITH FIRE ALARM CONTRACTOR.
- 12 POWER FOR KEY CABINET. COORDINATE HEIGHT OF RECEPTACLE WITH KEY CABINET VENDOR.

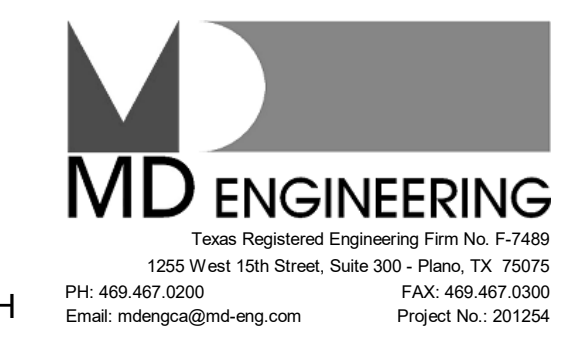
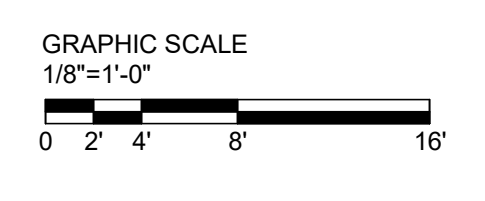
GENERAL NOTES:

- 1 NUMBER ASSOCIATED WITH CERTAIN RECEPTACLES (IE: R2-17) REFERS TO CONTROL RELAY NUMBER. REFER TO RELAY SCHEDULE.
- 2 RECEPTACLES IN ALL DETENTION AREAS:
 - A. HAVE DETENTION GRADE STAINLESS STEEL COVER PLATES.
 - B. COVER PLATES SHALL HAVE TORX PLATES FASTNER.
 - C. BE TAMPER PROOF.
 - D. BE ON GFCI BREAKER.
- 3 REFER TO SECURITY ELECTRONIC DRAWINGS FOR ALL CIRCUITS LOCATED IN PANEL SE.
- 4 REFER AND COORDINATE WITH I.T. DRAWINGS AND NOTES FOR LOCATIONS OF DATA, INMATE PHONE, KIOSK AND VIDEO VISITATION RELATED BACK BOXES, FLOOR BOXES AND CONDUIT. ALL CONDUIT AND BOXES BY DIV.26.
- 5 REFER AND COORDINATE WITH SECURITY ELECTRONICS DRAWINGS AND NOTES AND PROVIDE ALL CONDUIT FOR THIS SYSTEM. COORDINATE WITH SECURITY ELECTRONICS CONTRACTOR.
- 6 CONDUIT SHALL BE 7" MINIMUM ABOVE FLOOR. CONDUIT ON WALK AREA IS NOT ALLOWED.



2 TYPICAL BI-FOLD DOOR CONTROL
1/4" = 1'-0"

1 LOWER LEVEL WEST FLOOR PLAN - POWER
1/8" = 1'-0"



LOWER LEVEL WEST
FLOOR PLAN -
POWER

21913
7/13/2021
E302

FOR BID

GENERAL NOTES:

- REFER TO MP000 FOR GENERAL HVAC NOTES, ABBREVIATIONS, AND SYMBOLS.
- FURNISH AND INSTALL SECURITY BARRIER AS DETAILED IN ALL WALL, FLOOR, OR ROOF PENETRATION GREATER THAN 6"X8" IN SECURITY AREA.
- PROVIDE SMOKE DETECTORS IN ALL SECURITY RETURN AIR AND EXHAUST AIR GRILLES WHERE ACCESSIBLE.
- ALL RADIUS TURNS SHALL BE SMOOTH WALL WITH A RADIUS OF R=1.5D.
- ALL SUPPLY AND RETURN DIFFUSERS ARE TYPE S1/S1R1 SECURITY DIFFUSERS IN CELLS/HOLDING AREAS, AND S2/SR2 IN DETENTION DAYROOMS UNLESS SPECIFIED OTHERWISE.
- SECURITY GRILLES LOCATED IN TECTUM LAY-IN CEILINGS SHALL BE SIZE SO FLANGE WILL ATTACH TO TECTUM TRACK. TECTUM TRACK TO NEVER BE CUT.
- COORDINATE WITH ALL TRADES BEFORE INSTALLING ANY EQUIPMENT OR DUCTWORK.
- ALL DUCTWORK SHALL BE CONSTRUCTED TO PREVENT DEFLECTION OR GREATER THAN 0.125" AT 4" WC OF POSITIVE OR NEGATIVE PRESSURE.
- ALL SHEET METAL DUCTWORK PENETRATING FIRE RATED WALLS SHALL BE MINIMUM OF 26 GAUGE. ALL OTHER DUCT SHALL BE CONSTRUCTED AS SPECIFIED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARD".
- DOUBLE NUT LOCK DOWN FOR MULTI-WAVE DAMPERS INSTALLED IN HIGH VELOCITY DUCTWORK/SMOKE REMOVAL DUCTWORK.
- PROVIDE RADIUS FITTINGS FOR ALL DUCTWORK, WHERE NOT POSSIBLE SINGLE WALL TURNING VANES IN 30-45 DEG. TURNS IN DUCTWORK. TURNS GREATER THAN 45 DEG. SHALL BE DOUBLE WALL.
- SECURITY GRILLES LOCATED IN CELL CHASE WALLS SHALL BE MOUNTED AT 7'-0" A.F.F. BOTTOM OF GRILLE.
- ALL AIR DEVICES SHALL HAVE MANUAL BALANCING DAMPERS AS INDICATED IN SPECIFICATIONS FOR BALANCING.
- PROVIDE SECURITY HOLD DOWN CLIPS AND TAMPER PROOF SCREWS (TYPICAL) AT SECURED CEILINGS.
- HVAC SYSTEM SHALL BE VALANCED IN SMOKE PURGE MODE WITH FLOW DATA VALUES REPORTED IN NORMAL OPERATION.
- CONTRACT DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS AND MATERIAL PER SMACNA STANDARDS.
- INSTALL RETURN AIR SENSORS IN RETURN AIR DUCTS FOR CONTROLLING AHU'S SERVING DETENTION AREAS. CONTROLS SHALL BE LOCATED IN CLUSTER CONTROL STATION 201. COORDINATE EXACT LOCATION WITH ARCHITECTS AND OWNER.
- ALL GRILLES INSTALLED IN PLANK CEILINGS SHALL BE INSTALLED CENTERED BETWEEN PLANKS.
- IF CABLE DAMPERS ARE USED, LOCATE IN NEAREST PLUMBING CHASE OR CLOSET. ALL CABLE DAMPERS SHALL HAVE AN IDENTIFICATION TAG INDICATING CELL, SUPPLY/RETURN, AND LOCATION OF DAMPER.
- INSTALL CARBON MONOXIDE AND NITROGEN DIOXIDE SENSORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN LOCATIONS APPROVED BY THE ARCHITECT.
- NO PVC IN RETURN AIR PLENUM. ALL MATERIAL MUST BE PLENUM RATED FOR SMOKE AND FIRE SPREAD.

NOTES BY SYMBOL "O":

- ALL DUCTWORK, PIPING, WIRING, AND CONDUIT SHALL BE ROUTED TIGHT AGAINST WALL. ROUTES CROSSING VEHICLE SALLYPORT (1001) SHALL BE TIGHT TO STRUCTURE AND 15'-0" ABOVE FINISHED FLOOR.
- PROVIDE FSD AT FLOOR PENETRATION.
- REFER TO M202 FOR CONTINUATION.
- PROVIDE INSULATED BACKPLATE FOR THERMOSTAT ON PARTITION OF EXTERIOR WALL WHERE ADJOINING ROOM IS NOT CONTROLLED WITH VRF/AHU SYSTEM. TYPICAL FOR ALL APPLICABLE INSTANCES.
- INTERLOCK MOTORIZED DAMPER TO OPEN WHEN VRF-0301 IS ENERGIZED.
- 4" PNEUMATIC TUBE SYSTEM (PTS). COORDINATE ROUTING WITH ALL OTHER TRADES. REFER TO MANUFACTURER'S ROUTING PREFERENCES TO BE ALL ABOVE CEILING. REFER TO ARCHITECTURAL EQUIPMENT PLANS AND SCHEDULE FOR ADDITIONAL PNEUMATIC TUBE SYSTEM INFORMATION.
- TERMINATE RETURN/TRANSFER DUCT ABOVE CEILING.
- APPROXIMATE LOCATION FOR THERMOSTAT (SET TO 85F), TIMER, CONTROLS, AND CO2 SENSOR FOR SALLY PORT EXHAUST SYSTEM. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REFER TO SEQUENCE OF OPERATIONS FOR ADDITIONAL CONTROL COMPONENTS TO BE MOUNTED HERE.
- INTERLOCK MOTORIZED LOUVERS (L-01, L-01, L-01, and L-03) AND SALLY PORT EXHAUST FAN, SPEF-01, WITH CO2 SENSOR AND THERMOSTAT SHOWN IN SPACE. SYSTEM SHALL BE INTERLOCKED WITH TOUCH SCREEN SYSTEM FOR MANUAL OPERATION. REFER TO E401. REFER TO SEQUENCE OF OPERATIONS FOR ADDITIONAL CONTROL COMPONENTS TO BE MOUNTED HERE.
- INSTALL LOUVER 24" ABOVE FINISHED GRADE.
- PROVIDE 4" DUCT WORK (CONFIRM EXACT SIZE WITH DRYER MANUFACTURER) FOR DRYER VENT. ROUTE TO OUTSIDE AND PROVIDE DRYER VENT CAP. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- TERMINATE 14X10 ABOVE CEILING.
- BALANCE DAMPER TO 1,300 CFM.
- LOCATION OF MOTOR STARTER FOR SPEF-01. INSTALL TO ALL ADA REQUIREMENTS.
- PROVIDE INSULATED PLENUM. DEPTH SHALL BE A MINIMUM OF 36".
- LOUVER SHALL BE INSTALLED A MINIMUM OF 10'-0" ABOVE GRADE.
- RECESSED MOUNTED UNIT HEATER 14" A.F.F.
- BALANCE DAMPER TO 610 CFM.
- PROVIDE 72"X6" HINGED SECURITY ACCESS DOOR WITH KEYPAD ACCESS. CONTRACTOR SHALL ALIGN ACCESS DOOR UNDER FILER ACCESS OF ASSOCIATED UNIT ABOVE. MATCH FRAME AND ACCESS DOOR WITH CEILING. REFERENCE ARCHITECTURAL REFLECTIVE CEILING PLANS AND ROOM FINISH SCHEDULE. TYPICAL ALL VRF UNITS INSTALLED ABOVE SECURITY CEILING.
- PROVIDE THERMISTOR IN SUPPLY DUCT OF VRF DUCTED UNIT. THERMISTOR SHALL BE MAPPED BACK TO BAS. TYPICAL ALL DUCTED VRF UNITS.
- BOTTOM OF UNIT HEATER 8'-0" A.F.F.

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNIT AV. MCKENNY, TX 75071

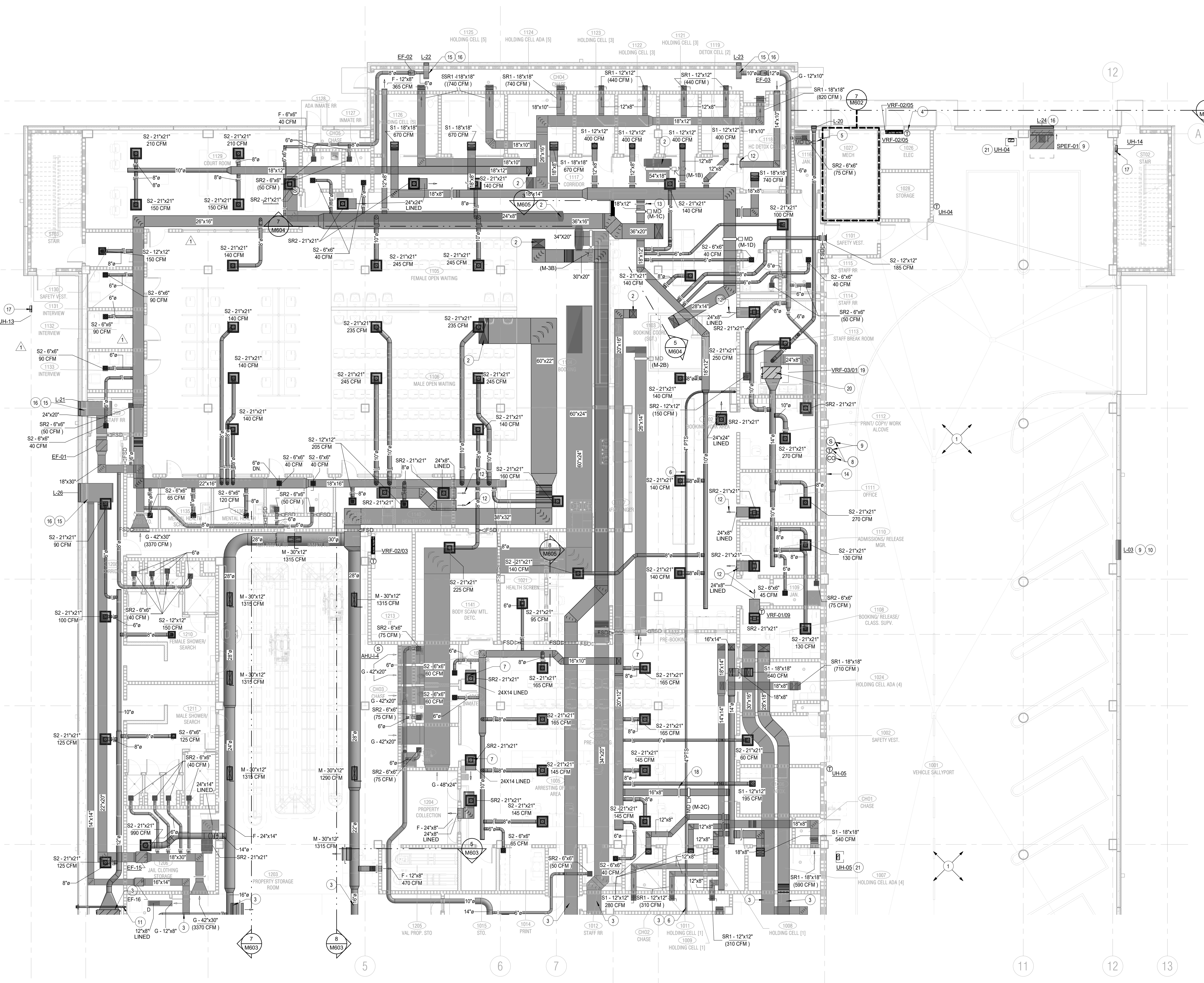
HISTORY		
#	DATE	DESCRIPTION
1	08.18.2021	ADDENDUM #2
2	08.31.2021	ADDENDUM #6



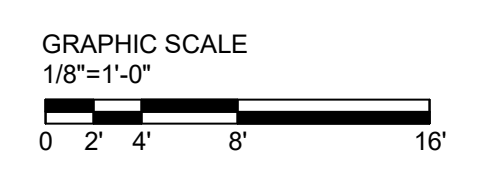
LOWER LEVEL EAST FLOOR PLAN - DUCTWORK

21913 07/13/2021 M201

FOR BID



1 LOWER LEVEL EAST FLOOR PLAN - DUCTWORK
1/8" = 1'-0"

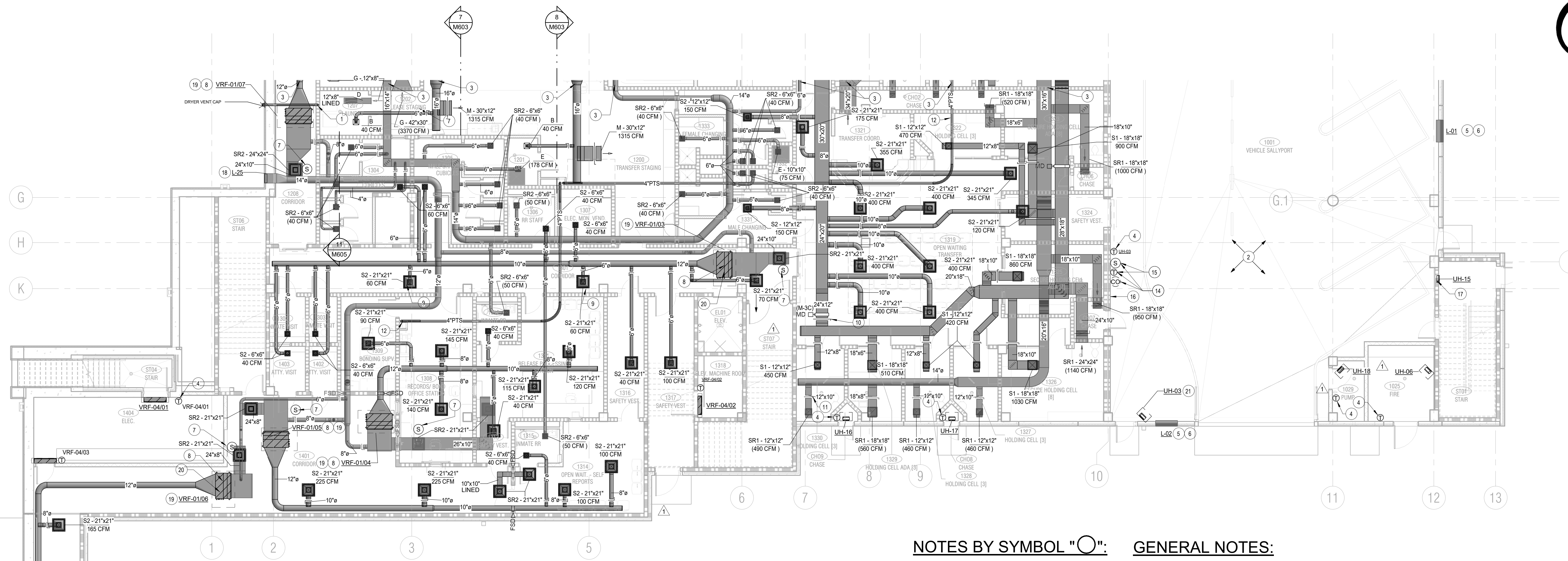


MD ENGINEERING
Texas Registered Engineering Firm No. F-7489
355 West 15th Street, Suite 300 • Fort Worth, TX 76102
PH: 469.467.0200 FAX: 469.467.0200
Email: mdeng@md-eng.com Project No: 201254

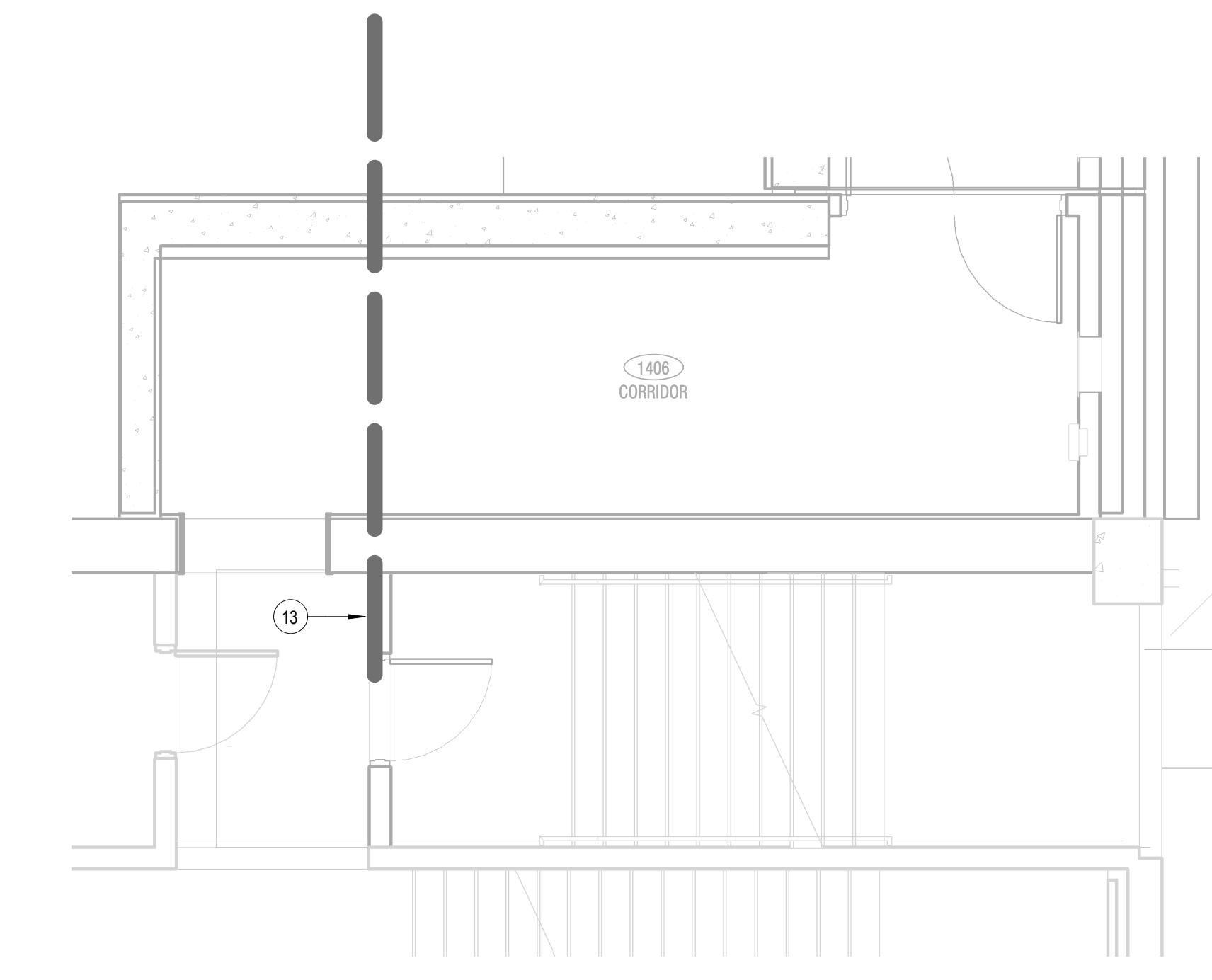
Architect: Brinkley Sargent Wiginton Architects (872) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 532-9098
MEP / IT: MD Engineering (469) 467-0200
Security: Lattitech (972) 633-8650

BRINKLEY SARGENT WIGINTON ARCHITECTS

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1 LOWER LEVEL WEST FLOOR PLAN - DUCTWORK
1/8" = 1'-0"



2 ENLARGED PLAN - CORRIDOR 1406
1/4" = 1'-0"

NOTES BY SYMBOL "O":

- 1 PROVIDE 4" DUCT WORK (CONFORM EXACT SIZE WITH DRYER MANUFACTURER) FOR DRYER VENT. ROUTE TO OUTSIDE AND PROVIDE DRYER VENT CAP. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
- 2 ALL DUCTWORK, PIPING, WIRING, AND CONDUIT SHALL BE ROUTED TIGHT AGAINST WALL. ROUTES CROSSING VEHICLE SALLYPORT (1001) SHALL BE TIGHT TO STRUCTURE AND 15'-0" ABOVE FINISHED FLOOR.
- 3 REFER TO M202 FOR CONTINUATION.
- 4 PROVIDE INSULATED BACKPLATE FOR THERMOSTAT ON PARTITION OF EXTERIOR WALL WHERE ADJOINING ROOM IS NOT CONTROLLED WITH VRF/AHU SYSTEM. TYPICAL FOR ALL APPLICABLE INSTANCES.
- 5 INSTALL LOUVER 24" ABOVE FINISHED GRADE.
- 6 INTERLOCK MOTORIZED LOUVERS (L-01, L-01, AND L-03) AND SALLY PORT EXHAUST FAN, SFEF-01, WITH CO2/S2 SENSOR AND THERMOSTAT SHOWN IN SPACE. SYSTEM SHALL BE INTERLOCKED WITH TOUCH SCREEN SYSTEM FOR MANUAL OPERATION. REFER TO E401. REFER TO SEQUENCE OF OPERATIONS FOR ADDITIONAL CONTROL COMPONENTS TO BE MOUNTED HERE.
- 7 CONTRACTOR TO INSTALL RETURN AIR SENSOR IN CEILING ADJACENT TO UNIT. UNIT TO BE CONTROLLED BY CENTRAL CONTROLLER IN CLUSTER CONTROL STATION.
- 8 UNIT'S ASSOCIATED CONTROLLER SHALL BE INSTALLED ON UNIT.
- 9 PROVIDE DAMPER IN VERTICAL. TYPICAL ALL INSTANCES.
- 10 BALANCE DAMPER TO 1.515 CFM.
- 11 PROVIDE CABLE CONTROLS FOR BALANCING DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING. DAMPER CONTROLLER SHALL BE LOCATED IN ADJACENT ACCESSIBLE SPACE AND IDENTIFIED WITH ROOM NUMBER. DAMPER CONTROLLER TO BE MOUNTED IN CEILING OF STORAGE ROOM, SAFETY VESTIBULE, OR ACCESSIBLE PLUMBING CHASE CLOSEST TO DAMPER. TYPICAL ALL INSTANCES.
- 12 *PNEUMATIC TUBE SYSTEM. COORDINATE ROUTING WITH ALL OTHER TRADES. REFER TO MANUFACTURERS ROUTING PREFERENCES TO BE ALL ABOVE CEILING. REFER TO ARCHITECTURAL EQUIPMENT PLANS AND SCHEDULE FOR ADDITIONAL PNEUMATIC TUBE SYSTEM INFORMATION.
- 13 ANY EXISTING MECHANICAL PENETRATION THROUGH NEW FIRE RATED WALL SHALL BE PROTECTED TO MAINTAIN FIRE RATINGS.
- 14 APPROXIMATE LOCATION FOR THERMOSTAT (SET TO 85F), TIMER, CONTROLS, AND CO2/S2 SENSOR FOR SALLY PORT EXHAUST SYSTEM. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION AND INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. REFER TO SEQUENCE OF OPERATIONS FOR ADDITIONAL CONTROL COMPONENTS TO BE MOUNTED HERE.
- 15 INTERLOCK MOTORIZED LOUVERS (L-01, L-02, AND L-03) AND SALLY PORT EXHAUST FAN, SFEF-01, WITH CO2/S2 SENSOR AND THERMOSTAT SHOWN IN SPACE. SYSTEM SHALL BE INTERLOCKED WITH TOUCH SCREEN SYSTEM FOR MANUAL OPERATION. REFER TO E401. REFER TO SEQUENCE OF OPERATIONS FOR ADDITIONAL CONTROL COMPONENTS TO BE MOUNTED HERE.
- 16 LOCATION OF MOTOR STARTER FOR SFEF-01. INSTALL TO ALL ADA REQUIREMENTS.
- 17 RECESSED MOUNTED UNIT HEATER 14" A.F.F.
- 18 PROVIDE INSULATED PLENUM. DEPTH SHALL BE A MINIMUM OF 36".
- 19 PROVIDE 72"x6" HINGED SECURITY ACCESS DOOR WITH KEYPAD ACCESS. CONTRACTOR SHALL ALIGN ACCESS DOOR UNDER FILER ACCESS OF ASSOCIATED UNIT ABOVE. MATCH FRAME AND ACCESS DOOR WITH CEILING. REFERENCE ARCHITECTURAL REFLECTIVE CEILING PLANS AND ROOM FINISH SCHEDULE. TYPICAL ALL VRF UNITS INSTALLED ABOVE SECURITY CEILING.
- 20 PROVIDE THERMISTOR IN SUPPLY DUCT OF VRF DUCTED UNIT. THERMISTOR SHALL BE MAPPED BACK TO BAS. TYPICAL ALL DUCTED VRF UNITS.
- 21 BOTTOM OF UNIT HEATER 8'-0" A.F.F.

GENERAL NOTES:

- 1 REFER TO M000 FOR GENERAL HVAC NOTES, ABBREVIATIONS, AND SYMBOLS.
- 2 FURNISH AND INSTALL SECURITY BARRIER AS DETAILED IN ALL WALL, FLOOR, OR ROOF PENETRATION GREATER THAN 8"x8" IN SECURE AREA.
- 3 PROVIDE SMOKE DETECTORS IN ALL SECURITY RETURN AIR AND EXHAUST AIR GRILLES WHERE ACCESSIBLE.
- 4 ALL RADIUS TURNS SHALL BE SMOOTH WALL WITH A RADIUS OF R=1.5D.
- 5 ALL SUPPLY AND RETURN DIFFUSERS ARE TYPE "S1/SR1" SECURITY DIFFUSERS IN CELL/HOLDING AREAS, AND S2/SR2 IN DETENTION DAYROOMS UNLESS SPECIFIED OTHERWISE.
- 6 SECURITY GRILLES LOCATED IN TECTUM LAY-IN CEILINGS SHALL BE SIZE SO FLANGE WILL ATTACH TO TECTUM TRACK. TECTUM TRACK TO NEVER BE CUT.
- 7 COORDINATE WITH ALL TRADES BEFORE INSTALLING ANY EQUIPMENT OR DUCTWORK.
- 8 ALL DUCTWORK SHALL BE CONSTRUCTED TO PREVENT DEFLECTION OR GREATER THAN 0.125" AT 4" WC OF POSITIVE OR NEGATIVE PRESSURE.
- 9 ALL SHEET METAL DUCTWORK PENETRATING FIRE RATED WALLS SHALL BE MINIMUM OF 26 GAUGE. ALL OTHER DUCT SHALL BE CONSTRUCTED AS SPECIFIED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARD".
- 10 DOUBLE NUT LOCK DOWN FOR MULTI-VANE DAMPERS INSTALLED IN HIGH VELOCITY DUCTWORK/SMOKE REMOVAL DUCTWORK.
- 11 PROVIDE RADIUS FITTINGS FOR ALL DUCTWORK. WHERE NOT POSSIBLE SINGLE WALL TURNING VANES IN 30-45 DEG. TURNS IN DUCTWORK. TURNS GREATER THAN 45 DEG. SHALL BE DOUBLE WALL.
- 12 SECURITY GRILLES LOCATED IN CELL CHASE WALLS SHALL BE MOUNTED AT 7'-0" A.F.F. BOTTOM OF GRILLE.
- 13 ALL AIR DEVICES SHALL HAVE MANUAL BALANCING DAMPERS AS INDICATED IN SPECIFICATIONS FOR BALANCING.
- 14 PROVIDE SECURITY HOLD DOWN CLIPS AND TAMPER PROOF SCREWS (TYPICAL) AT SECURED CEILINGS.
- 15 HVAC SYSTEM SHALL BE BALANCED IN SMOKE PURGE MODE WITH FLOW DATA VALUES REPORTED IN NORMAL OPERATION.
- 16 CONTRACT DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL INSTALL ALL MECHANICAL MATERIAL PER SMACNA STANDARDS.
- 17 INSTALL RETURN AIR SENSORS IN RETURN AIR DUCTS FOR CONTROLLING AHU'S SERVING DETENTION AREAS. CONTROLS SHALL BE LOCATED IN CLUSTER CONTROL STATION 2011. COORDINATE EXACT LOCATION WITH ARCHITECTS AND OWNER.
- 18 ALL GRILLES INSTALLED IN PLANK CEILINGS SHALL BE INSTALLED CENTERED BETWEEN PLANKS.
- 19 IF CABLE DAMPERS ARE USED, LOCATE IN NEAREST PLUMBING CHASE OR CLOSET. ALL CABLE DAMPERS SHALL HAVE AN IDENTIFICATION TAG INDICATING CELL, SUPPLY/RETURN, AND LOCATION OF DAMPER.
- 20 INSTALL CARBON MONOXIDE AND NITROGEN DIOXIDE SENSORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN LOCATIONS APPROVED BY THE ARCHITECT.
- 21 NO PVC IN RETURN AIR PLENUM. ALL MATERIAL MUST BE PLENUM RATED FOR SMOKE AND FIRE SPREAD.

COLLIN COUNTY ADF - PHASE 1 ADDITION

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
 Civil: Pacheco Koch (214) 451-2765
 Structural: JQ Engineering (214) 532-9098
 MEP / IT: MD Engineering (469) 467-0200
 Security: Lattitech (972) 633-8650

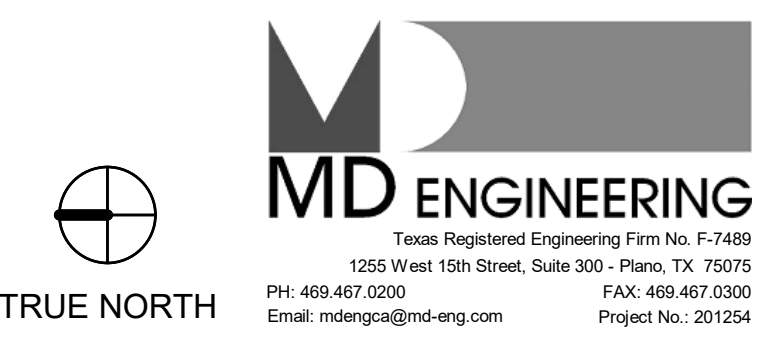
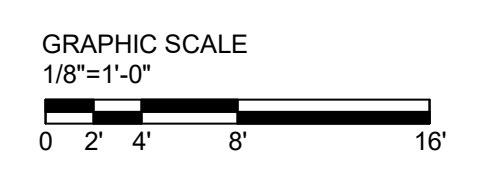
4300 COMMUNITT AVE, MCKENNY, TX 75071

HISTORY

#	DATE	DESCRIPTION
1	08.18.2021	ADDENDUM #2
2	08.31.2021	ADDENDUM #6



LOWER LEVEL WEST FLOOR PLAN - DUCTWORK



FOR BID

Bid Questions and Answers, Addendum 7

Question	Answer
What is the estimated construction budget?	The opinion of probable construction cost for this contract is \$39,268,000.
Is this an online submission only through ionwave?	Bidders are encouraged to submit bids electronically by utilizing Collin County eBid. However, you may submit a sealed hard copy paper bid to the Office of the Collin County Purchasing Agent. Refer to Section 001116 and Section 002113.
What is the estimated cost range?	The opinion of probable construction cost for this contract is \$39,268,000.
Specification section 012200 Unit Prices references a specification section 012100 Allowances, however this specification does not appear in the project manual. Please provide section 012100.	Refer to Section 01 22 00 Addendum 1, issued in Addendum 2.
Division 33 Utilities specification is not provided, please provide specification sections related to site utilities.	All information for utilities is provided in the notes on the civil plans or in the standard details. There are no other specifications for utilities.
Please clarify if Commissioning Agent is to be employed by Owner or GC.	Commissioning and Test and balance will be through the County and Consultant. Coordination by the General Contractor and subcontractors with the County consultants will be required.
Sheet A101 has note that reads "New Sliding Fire Access Gate, Sim to Existing (Alternate #2: Fence Line at Connection to Building and Gate Not Included)", please clarify if the intent is for this section of fence and vehicular gate that runs from where it connects to existing, reused fencing to the building corner is to be part of the base bid.	Yes, fence and gate at the building corner is to be part of base bid.
Please advise of anticipated Notice to Proceed date.	November 2021, depending on City of McKinney permitting
Structural foundation plans reference sheet S301 for pier details however this sheet is not included in the plans. Please issue sheet S301.	Drawing S301 has been provided in Addendum 2.
Precon RFI #1 Ref. DWGs: S301, S306. Please provide the following structural drawings which are referenced but missing from the drawing package: S301 and S306.	Drawings S301 and S306 have been provided in Addendum 2.

Bid Questions and Answers, Addendum 7

<p>Precon RFI #2 Ref. Spec: 01 21 00, 01 22 00.</p> <p>Specification Section 01 22 00 - Unit Prices references Specification Section 01 21 00 - Allowances, however, this section for allowances was not included. Please provide Specification Section 01 21 00 - Allowances if any allowances must be included in the base bid.</p>	<p>Refer to Section 01 22 00 Addendum 1, issued in Addendum 2.</p>
<p>Precon RFI #3 Ref. DWG or Spec: 01 03 00, A800.</p> <p>In regards to Alternate #4, please confirm that terrazzo is to be used at the finish floor and the wall base in at all shower and drying areas.</p>	<p>Yes, correct.</p>
<p>Precon RFI #4 Ref. Spec: 23 09 00.</p> <p>Please advise who the manufacturer is for the existing HVAC control system.</p>	<p>The county is standardized on Honeywell Controls controllers. The base communication protocol is BACnet. The controls contractor shall meet the requirements outlined in specification section 23 09 00-2, paragraph 1.3.B and 1.3.H</p>
<p>Precon RFI #5 Ref. Spec: 31 63 29.</p> <p>Please confirm, per Specification Section 31 63 29 - Drilled Piers subpart 1.03.D, that pier casings are to be included in the base bid.</p>	<p>Confirmed</p>
<p>Sheet S202 references pier details on sheet S301. S301 is not included as part of the plan set. Please confirm which details should be used.</p>	<p>Drawing S301 has been provided in Addendum 2.</p>
<p>Will line items be added to the unit pricing attributes for submittal of the requested pier casing unit cost?</p>	<p>Unit price line item 7.7 has been added to the bid line items. Refer to Section 01 22 00 Addendum 1, issued in Addendum 2.</p>
<p>Would you please post the pre-bid meeting attendees list?</p>	<p>The pre-bid meeting sign-in sheet will be issued in an upcoming addendum.</p>
<p>Drawing S301 appears to be missing from the documents and is necessary to determine pier details. Please advise.</p>	<p>Drawing S301 has been provided in Addendum 2.</p>
<p>Section 034500 PRECAST ARCHITECTURAL CONCRETE requires the appearance of the new precast panels to match the existing (in the opinion of the Architect). Please advise who provided the original precast that we are trying to match, as this should help us source aggregates that will achieve the desired appearance.</p>	<p>Precast panels to match exiting finish, see specifications and drawings</p>

Bid Questions and Answers, Addendum 7

<p>Is there a preferred HVAC Controls vendor or can you advise what system is used at the facility?</p>	<p>The county is standardized on Honeywell Controls controllers. The base communication protocol is BACnet. The controls contractor shall meet the requirements outlined in specification section 23 09 00-2, paragraph 1.3.B and 1.3.H</p>
<p>We do not find specifications for pavement markings, landscaping, or irrigation and expect there will be some scope for these trades in the project. Please advise.</p>	<p>As with the utility comment, all the specifications for the civil and landscape items are included in the notes and details on the respective sheets.</p>
<p>Bid attribute 7 requires us to submit the name and type of work for all subcontractors on the project, and appears to be required at the same time as the price proposal. Please understand that subcontractor proposals will be coming in right up until the deadline, and it's in the Owner's best interest to allow proposers to focus on pricing in lieu of such efforts until after bid time. Further, submission of this information in a text block online is going to be messy and cumbersome for everyone. Accordingly, we respectfully request that this attribute be removed and required after the bid deadline.</p>	<p>The County understands the Bidder's concerns, but will still require Attribute 7 to be completed to the best of the Bidder's ability before closing of the bid, based on already submitted subcontractor proposals. If Bidder finds the text box in attribute 7 not sufficient for answering, an attachment may be added in eBid and referenced as the answer in Attribute 7 text box (example "see attachment A: Subcontractors"). A final list of subcontractors is expected to be submitted by the apparent low bidder within seven (7) consecutive calendar days following the bid opening, per the specifications under section 1.8.A.9. Qualifications of Bidders, within the properly executed Contractor's Qualification Statement. This allows Bidder's request for time after bid closing to focus on the subcontractor list. Any modification of the list of subcontractors after bid opening shall not be an opportunity to adjust bid pricing as submitted.</p>
<p>We do not find the Owner's grading criteria for proposals published for this project. Please advise.</p>	<p>To clarify, this solicitation is an Invitation for Bid not a Request for Proposal. It is the intent of the County to award a contract to the lowest and best responsive and responsible bidder as determined per Section 002113, 1.16, Method of Award.</p>
<p>Will an online meeting be published to observe the opening/reading of all proposals? Please provide details on the plan for disclosure of submitted proposals.</p>	<p>A public bid opening will be held in the Office of the Purchasing Agent, 2300 Bloomdale Rd., Suite 3160, McKinney, TX 75071. There are no plans for an online meeting to be published. Bid responses are public information once they have been opened. A bid tabulation will be available on Collin County eBid after bid opening.</p>

Bid Questions and Answers, Addendum 7

<p>In the Line Items section, there is no place to enter the Base Bid Grand Total amount. I noticed the Bid Form was changed in Addendum 1, but not in the Ionwave System.</p> <p>Please advise if this will be updated.</p> <p>Thank you</p>	<p>If submitting electronically through Ionwave, bidder will enter their response to Items 1.1 Total Materials Cost and 1.2 Total Labor Cost. The system will total these line items and populate the Base Bid Grand Total.</p> <p>If submitting a manual bid form, bidder will enter their response to Items 1.1 and 1.2 and enter the total of these lines in the space provided for Base Bid Grand Total.</p> <p>Total Material Cost (Line 1.1) and Total Labor Cost (Line 1.2) must add up to the Base Bid Grand Total.</p> <p>No update is required for Bid Line Item 1.</p>
<p>Plan sheet A402 References "precast panel painted to match existing". We did not observe painted precast panels existing. Please confirm the intent is to have smooth face panels with reveals in a natural concrete grey.</p> <p>If additional sealants or coatings are required please clarify.</p>	<p>Concrete coating to match existing, over precast</p>
<p>Sheets S212 and S222 reference details on sheet S306. S306 is not included as part of the plan set. Please confirm which details should be used.</p>	<p>Drawing S306 has been provided in Addendum 2.</p>
<p>Sheet S306 is referenced on structural floor plans however this sheet appears to be missing. Please issue sheet.</p>	<p>Drawing S306 has been provided in Addendum 2.</p>
<p>Concrete beam B19 is noted on floor plans however it does not appear on the beam schedule, please advise.</p>	<p>The concrete beam schedule will be updated in an upcoming addendum.</p>
<p>Specification 323114 SITE PERIMETER SECURITY FENCE SYSTEM provides information for existing and new fencing per 8/A102. However, we do not find specifications to go with the new fencing per details 1-7/A102. Please provide specifications for this fencing including below grade anti-undermining materials.</p>	<p>Specification 32 31 15 Site Fencing vertical added in Addendum 4.</p>
<p>Is the General Contractor to carry the cost of the building permit in the proposal?</p>	<p>The County will pay for the City of McKinney Building Permit.</p>
<p>what is budget estimate for this project?</p>	<p>The opinion of probable construction cost for this contract is \$39,268,000.</p>
<p>Addendum #2 indicates drawing A290 is to be replaced with Drawing A290 ADDENDUM 1, however this revised drawing A290 is not in the list of documents under the tab Attachments. Please issue the revised drawing.</p>	<p>Drawing A290 Addendum 1 was added to bid attachments in Addendum 2. The drawing was #32 on the second page of attachments.</p> <p>A290 Addendum 1 has been moved to attachment #13.</p>

Bid Questions and Answers, Addendum 7

<p>I cannot locate sheet A290 from Addendum 1. Please provide direction to access this plan sheet. Thanks.</p>	<p>Drawing A290 Addendum 1 was added to bid attachments in Addendum 2. The drawing was #32 on the second page of attachments. A290 Addendum 1 has been moved to attachment #13.</p>
<p>Addendum #2 added a unit cost to Deduct pier casing. Is the intent to include fully cased piers in the base bid cost with a deduct if casing is not used?</p>	<p>Correct</p>
<p>Plan sheet C119 states "Contractor to verify if 6" gas line crosses under proposed footprint. If in conflict with proposed building and/or retaining wall the 6" gas line will need to be rerouted" Is the base bid to include cost for this if required? Are there as-builts or points of connection available to indicate location of the 6" gas line?</p>	<p>Base bid is to construct as shown in the plans. All available data was used to depict the gas line shown in the plans. Contractor to verify location in the field during construction.</p>
<p>Pier P7 is indicated on the foundation plan but does not appear in the pier schedule on S301. Please advise on details for pier P7</p>	<p>The pier schedule will be updated in an upcoming addendum.</p>
<p>On page E201 note 5 and E202 note 6, it calls for fixtures in referenced area "SHALL BE CONTROLLED BY CEILING MOUNTED OCCUPANCY SENSORS. FIXTURES SHALL BE CONTROLLED GLOBALLY, INDIVIDUALLY FIXTURES SENSORS ARE NOT ACCEPTABLE. TYPICAL FOR ALL FIXTURES IN TWO OUTSIDE COLUMNS." Is the EC to provide one CEILING MOUNTED OCCUPANCY SENSOR per note reference? If not, how many CEILING MOUNTED OCCUPANCY SENSORS shall we provide for referenced areas?</p>	<p>The fixtures shall operate from several occupancy sensors to turn all the lights (globally) on (parallel). If each fixture has an individual sensor only that fixture will turn on, this is not acceptable. One sensor will not detect movement that is far away.</p>
<p>Precon RFI #6 Ref. Spec: 28 31 10 Please advise who the preferred Fire Alarm installer is for the existing Edwards EST3 Fire Alarm system.</p>	<p>The Fire Alarm contractor shall be an EST qualified fire alarm contractor. There is not a preferred Fire Alarm installer.</p>
<p>Precon RFI #7 Ref. DWGs: L2.00, A101, A102 Drawing L2.00 has a callout stating "fence & mow curb, ref. arch dwgs", however the Architectural Drawings do no mention a mow curb at any of the fences. Please advise if a mow curb is required at fencing.</p>	<p>There is no mow strip.</p>

Bid Questions and Answers, Addendum 7

<p>Precon RFI #8 Ref Spec & DWGs: 09 30 10, A800.</p> <p>Please advise on the location of the porcelain and/or ceramic tile in this project. Specification Section 09 30 10 - Tile was included but no tile is shown on the drawings.</p>	<p>Section 09 30 10 deleted in Addendum 4.</p>
<p>Precon RFI #9 Ref. Spec & DWGs: 01 03 00, 26 32 13.33, S240.</p> <p>Alternate #3 increases the size of the generator. Please advise if the concrete pad supporting it will need to increase as well. If yes, please provide a detail for the enlarged pad.</p>	<p>Yes pad will increase. ESTIMATED wet weight: 1000kW - 34,800 lb 1250kW - 52,690 lb</p>
<p>Precon RFI #10 Ref. DWG: A290.</p> <p>The narrative of Addendum #2 mentions drawing A290 with the note "Downspout connection to splash block or civil notes added." This drawing was not included with Addendum #2 on Ionwave (Collin County eBID). Please provide drawing A290.</p>	<p>Drawing A290 Addendum 1 was added to bid attachments in Addendum 2. The drawing was #32 on the second page of attachments. A290 Addendum 1 has been moved to attachment #13."</p>
<p>Precon RFI #11 Ref. Spec: 10 00 00</p> <p>Regarding the Pneumatic Tube System, of the three tube station locations, please advise which locations are to receive and which are to send.</p>	<p>All three stations are to send and receive to each other.</p>
<p>Precon RFI #12 Ref. Spec: 10 00 00</p> <p>Regarding the Pneumatic Tube System, Specification Section 10 00 00 states "Manufacture from heavy steel for durability." Please advise if this refers to the equipment or tubing of the system. If it refers to the equipment, please advise if aluminum tubing may be used for this system.</p>	<p>Follow specifications, steel tubes.</p>
<p>Precon RFI #13 Ref. Spec: 10 00 00</p> <p>Please advise on the design of the tubing routes for the Pneumatic Tube System between the three stations, as none are shown on the drawings.</p>	<p>Tube routing shown on M201, M202. See notes and related drawings.</p>

Bid Questions and Answers, Addendum 7

<p>Precon RFI #14 Ref. Spec: 10 00 00</p> <p>There is no type of carrier included in the specifications or drawings for the Pneumatic Tube System. Please advise if the Quick Tube Systems (QTS) 4" X 10" Lift the Dot Carrier with Air Disk and Bullnose end is acceptable to use. Please also advise on the quantity of carriers required.</p>	<p>Carrier to be compatible with system type. Carrier selection to be made by architect and owner from full product line of PTS system available options. Provide one carrier per tube connection. Provide one carrier as attic stock.</p>
<p>Precon RFI #15 Ref. DWGs: E010, ES301, ES403.</p> <p>Electrical one-line on E010 shows the I.T. Room 2017 UPS and Bypass Switch is by DIV 28. On ES301 detail 1, it indicates the UPS is by DIV 28, but the bypass switch is by DIV 26. ES403 detail 9 shows the UPS is by DIV 26 and the bypass switch is by DIV 28. All three documents conflict with one another. Please indicate which items are to be provided by which division.</p>	<p>UPS and bypass switch shall be provided by Div 28 contractor.</p>
<p>Precon RFI #16 Ref. DWGs: IT000, E101.</p> <p>Drawing IT000 refers to an "Outside Cable Plant" and drawing E101 note 6 states "Existing 5" underground conduit for data. Refer to I.T. Drawings." Please provide a drawing for the "Outside Cable Plant" and/or the IT site plan.</p>	<p>There is ONLY empty conduit for communications service entrance to I.T. 1213 from just beyond the building perimeter. Refer to keynote 16 on sheet IT601. There is no outside plant cabling to be included in this bid package. Collin County will contract directly with their vendor for the installation of any fiber or copper into the building from the Central Plant or otherwise.</p>
<p>Precon RFI #17 Ref. Spec 03 45 00.</p> <p>Specification Section 03 45 00 - Precast Architectural Concrete states that "The appearance of the new panels shall match the existing [in the opinion of the Architect]." In reference to an RFI asked on 8/4/2021, please confirm that the new precast panels are to be painted to match an existing concrete coating and that the concrete of the new precast panels does not need to match the existing concrete type (color, manufacturer, quarry source). If the concrete types are to match, please provide the contact information of the installer and manufacturer of the existing concrete and the date(s) when it was installed.</p>	<p>Precast panels to match exiting finish, see specifications.</p>

Bid Questions and Answers, Addendum 7

<p>Precon RFI #18 Ref. Spec: 08 34 95.</p> <p>Specification Section 08 34 95 - Fire And Smoke Curtains subpart 1.01.A.1 mentions a "monumental stair" between the lower level and level 1. Please advise which stair on the drawings is the "monumental stair" as mentioned.</p>	<p>Specification 08 34 95 to read "at the windows in Records / Bond Office Station, room 1308."</p>
<p>Electrical one-line on E010 shows the I.T. Room 2017 UPS and Bypass Switch is by DIV 28. On ES301 detail 1, it indicates the UPS is by DIV 28, but the bypass switch is by DIV 26. ES403 detail 9 shows the UPS is by DIV 26 and the bypass switch is by DIV 28. All three documents conflict with one another. Please indicate which items are to be provided by which division?</p>	<p>UPS and bypass switch shall be provided by Div 28 contractor.</p>
<p>Electrical one-line on E010 shows the I.T. Room 2017 UPS and Bypass Switch is by DIV 28. On ES301 detail 1, it indicates the UPS is by DIV 28, but the bypass switch is by DIV 26. ES403 detail 9 shows the UPS is by DIV 26 and the bypass switch is by DIV 28. Please advise who is to provide the UPS and Bypass Switch.</p>	<p>UPS and bypass switch shall be provided by Div 28 contractor.</p>
<p>Precon RFI #19 Ref. DWGs: S201, S202, S301.</p> <p>There is a pier type noted on the structural foundation drawings (S201 & S202) as "P7". However, this pier type is missing from the Pier Schedule on 01/S301. Please revise the Pier Schedule to include the information for pier type P7.</p>	<p>Pier P7 added to the schedule on 1/S301 in Addendum 4.</p>
<p>Is it possible to set up a site walk to inspect the existing electrical room?</p>	<p>An electrical room site walk has been scheduled for 9:00 AM on August 17. See Addendum 3.</p>
<p>1. Architectural drawings A020, A021 & A022 regarding the code show all outer walls as 1 hour fire barrier per the line colors in the legend. Further down the legend under fire resistance it states 'Window assembly in rated exterior walls to be 3/4 hour, glazing at OH-45 or W-60.</p> <p>- Do the DA and DA.1 (and DK, DL, DM, DM.1 and DN) windows require a fire rating?</p>	<p>Unprotected openings are permitted per 2018 IBC 705.8, note on window assemblies updated in Addendum 4.</p>

Bid Questions and Answers, Addendum 7

<p>2. Specification 11 19 00 Detention, 2.01 Manufacture, K. Detention Windows, calls out our firm as the basis of design and under 2.18 Exterior Detention Windows it calls out our DSW 6060 fixed, fully thermally broken aluminum detention security windows with a stainless steel interior cladding.</p> <ol style="list-style-type: none"> 1. Interior glazing - type M 2. Exterior glazing - 1" insulated unit. <p>- drawing D702, window DA shows TM glass. Which is correct?</p>	<p>TM</p>
<p>3. D213, room 2219 has an exterior window which is not called out. Should this also be a DA window?</p>	<p>Yes, D213 updated in Addendum 4.</p>
<p>4. D214, room 2003 and stairway ST07 show DB windows at exterior wall. Should these also be the same composition at the DA windows?</p>	<p>See elevations one D702</p>
<p>5. On drawing D702, elevations DA, DA.1 (and DB), the details reference 12/A515, 11/A516 and 4/D711 and 5/D711; all refer to detention hollow metal frame details. These are not our details, nor are they thermally broken, nor do they show the glazing types as stated in the specification. Please confirm the DSW 6060 product called out in the specification 11 19 00 Detention, 2.18 Exterior Detention Windows in fact takes precedence.</p>	<p>Specifications take precedence.</p>
<p>6. The outdoor rec yards have an exterior wall design as they are open to the exterior. Wouldn't the frames DK, DL, DM, DM.1 and DN be considered exterior windows? Please confirm.</p>	<p>Yes these are exterior windows, see 11 19 00.</p>
<p>7. If the windows in the outdoor rec yards are considered exterior frame and covered by our DSW 6060 design, the corresponding details refer to detention hollow metal. Please confirm the specified exterior window system would preside.</p>	<p>See specification 11 19 00.</p>
<p>8. If the outdoor rec yard windows are glazed with an insulated glass at the lower windows, this glass can be easily damaged. This would be very costly to the county if an IGU or TM glass is used. Should the Exterior Window DSW 6060 be used at the rec yards, consider a more robust glass on both inmate facing facades of the windows. Use TM on the exterior but face the attack rated glass towards the exterior and the thin 1/4" tempered towards the interstitial space and use M glass at the interior as foreseen. The higher up windows would not need this.</p>	<p>Use DHM windows with type M glazing at the lower locations; detention windows with Type TM glazing at upper, with exterior lites fully tempered.</p>

Bid Questions and Answers, Addendum 7

<p>Precon RFI #20 Ref. Spec & DWGs: 01 03 00, E010.</p> <p>Per Specification Section 01 03 00, Alternate #3 states "to modify the size of the generator from 900 KW to 1250 KW." However, detail 01/E010 states the diesel generator is 1000 KW. Please clarify which KW size is to be included in the base bid: 900 KW or 1000 KW.</p>	<p>Provide 1000KW</p>
<p>The bid documents do not appear to be calling for cased piers. Note N on sheet S100 under DRILLED PIERS indicates we are to provide unit prices for casings. However, the unit prices on the current Addendum 3 bid form are inconsistent with this note. If we are to bid the piers dry (which appears to be the case), the unit prices need to be modified to include an adder for casing per LF for each pier size, and unit price 7 for a casing deduct needs to be deleted.</p>	<p>Unit price line item 7.7 has been added to the bid line items. Refer to Section 01 22 00 Addendum 1, issued in Addendum 2.</p>
<p>Enlarged Plan 1/A240 for Alternate 1 shows wall tags and dimensions, but no door numbers, door types, window frame types and glazing types can be found. Please clarify what equipment is required to be furnished in the Alternate 1 shell-out (window elevations, door types, glazing types, etc.)</p>	<p>See updated sheet A240 in Addendum 5.</p>
<p>Is site visit mandatory and will there be another site visit scheduled for Construction, Collin County Adult Detention Facility, Phase 1 Addition?</p>	<p>The pre-bid conference and site-walks are not mandatory. An electrical room site walk has been scheduled for 9:00 AM on August 17. See Addendum 3.</p>

Bid Questions and Answers, Addendum 7

<p>1. TA-52 calls for ADA bench kits by WB MFG but I only see benches on the enlarged detention plans labeled as 702-W on D221. 702-W is labeled as a stainless steel floor-mounted detention bench. Can you please clarify which benches, if any, are the TA-52A, B, and X? 2. Please also advise if TA-35X-1 and TA-35X-4 will be required as the spec states to provide where shown on drawings but there are none shown for either those or TA-35. 3. Please clarify where the TA-23XB mirrors are in the shower rooms and holding cells as those locations do not have lavs/sinks. The spec states to provide an additional TA-23XB mirror in those locations. 4. Lastly, there are multiple accessories in the spec that state to refer to drawings for locations where indicated but they are not shown so I will omit these unless the drawings are revised to add locations. For example: TA-42, TA-04, TA-06X, TA-07, TA-24, and TA-40.</p>	<p>"1. There should be no TA-52 ADA benches anywhere inside the detention areas. 702-W is a wall mounted stainless steel detention bench, and is called out as such on the detention equipment schedule on D010. – if used they would be shown on the enlarged plans. 2. There are no instances of TA-35(X) in this project – check enlarged plans 3. Check enlarged detention plans (D221 & D222) for the locations of TA-23XA and XB. Mounting height drawing on D020 will be corrected in addendum #3. 4. If used – check enlarged plans."</p>
<p>Fire Alarm Specs and Plans? Not Fire Protection... I'm looking for Fire Alarm expansion/add to new building? Are you looking for this to be Engineered by the selected FA Contractor? IF this is handled by a "preferred vendor" or outside of Project by Collin County direct please advise...</p>	<p>The Fire Alarm is a performance based design listed in the specifications (28 31 10 and 28 31 46). The Fire Alarm contractor shall be and EST qualified fire alarm contractor. This is part of the project costs.</p>
<p>We have been unable to locate specifications for the permanent retention system at the existing building shown on drawing S202 and 1/S307. Please provide specifications for this work.</p>	<p>Permanent retention system requirements are shown in 1/S307</p>
<p>LJ Power is a registered bidder for Collin County, has provided multiple generator bids in the past for the County and has been approved for past MD Engineering projects. However, I don't see us listed in the specifications. LJ Power Generators is acceptable to bid as a generator supplier / manufacturer for this project, correct?</p>	<p>Provide substitution information since manufacturer is not listed in specifications.</p>
<p>Drawing C105 shows two different retaining walls, and both say to "REFER TO STRUCTURAL PLANS". There are two different details provided for retaining walls on the structural plans (1/S307 and 4/S307). Please advise which detail is to be utilized for each location.</p>	<p>Detail 1/S307 shall be used adjacent to the existing building where shown on structural plan sheet S202. Detail 4/S307 shall be used for the wall shown by the entry road south of the building.</p>

Bid Questions and Answers, Addendum 7

<p>We have received a couple questions related to architectural woodwork as follows: 1) Specification 064000.2.02 calls for 3 cm tops and 2 cm splashes, but drawings show 3/4" tops. Please advise proper thickness of tops, and also for end supports. 2) Specification 064000.2.01D calls for doors and drawer fronts to be edged with .30 laminate matching the faces at dark colored laminate. Can PVC be used here to prevent a visible dark line around the perimeter of the faces?</p>	<p>1. 3/4" is nominal- the material only comes in CM thicknesses 2. Yes</p>
<p>Precon RFI #21 Ref. Spec & DWGs: 10 80 00, D221.</p> <p>Within Specification Section 10 80 00, TA-52 calls for ADA bench kits by WB MFG but the benches shown in the drawings are on the enlarged detention plans labeled as 702-W on D221. 702-W is labeled as a stainless steel floor-mounted detention bench. Please clarify which benches, if any, are the TA-52A, B, and X.</p>	<p>There should be no TA-52 ADA benches anywhere inside the detention areas. 702-W is a wall mounted stainless steel detention bench, and is called out as such on the detention equipment schedule on D010. – if used they would be shown on the enlarged plans.</p>
<p>Precon RFI #22 Ref. Spec: 10 80 00</p> <p>Please advise if TA-35X-1 and TA-35X-4 will be required as Specification Section 10 80 00 states to "provide at locations shown on drawings", but there are none shown for either those or TA-35.</p>	<p>There are no instances of TA-35(X) in this project – check enlarged plans</p>
<p>Precon RFI #23 Ref. Spec: 10 80 00</p> <p>There are multiple accessories listed within Specification Section 10 80 00 that state to refer to drawings for locations where indicated, but none are shown on the drawings. These accessories include, but are not limited to, the following: TA-42, TA-04, TA-06X, TA-07, TA-24, and TA-40. If these accessories are to be provided, please advise on their locations and/or quantities.</p>	<p>If used – check enlarged plans.</p>
<p>In specifications 06 40 00-1 2.02 a, Phenolic Tops are called out as 3cm at tops and 2cm at splashes. Drawings show ¾" thick tops. Per the phenolic top supplier. Top material is only available in 3/4" and 1" thick. Should the 3/4" be used at both splashes and tops? What thickness should be used for the end supports?</p>	<p>3/4" for both splash and tops.</p>

Bid Questions and Answers, Addendum 7

<p>specification section 06 40 00-1 2.01 d indicates Doors and drawer fronts are to be edged with .30 laminate matching the faces at dark colored laminate. The laminate may show a visible dark line around perimeter of faces.</p> <p>Could PVC be used here?</p>	<p>Yes.</p>
<p>Reference sheet A240. Please provide wall types associated with Alternate 001.</p>	<p>Updated in Addendum 5.</p>
<p>Are rooms 3105, 3209 and 3304 included in Alternate 004?</p>	<p>Yes, updated in addendum 5.</p>
<p>Please confirm if contractor will be required to have background checks and/or badging as part of this project or if the only background check requirements will be performed by Collin County per 1.51 in specification section 002113 Instructions to Bidders.</p>	<p>The Collin County Sheriff's office will perform background checks for free. No other background checks or badging will be required by the County. Not all contract personnel working on the project will be required to go through a background check. Example, contractors entering the secure areas of the existing building may be required to go through a background check.</p>
<p>Division 06 40 00, PART 3—EXECUTION, 3.01 FABRICATION, E. calls for dovetail construction of drawer boxes. One of our subs uses an AWI Premium Grade doweled and glued method of construction, with cleanable white melamine material, which complies with PART 2—PRODUCTS, 2.01, H. Drawers: Interiors of all drawers, except drawer face, shall receive white melamine. Please Advice if this can be used?</p>	<p>Substitution requests should be submitted per Section 002113, 1.7.</p>
<p>Section 06 40 00, PART 2—PRODUCTS, 2.01, B. states that doors and drawers fronts with dark colored laminates are to have plastic laminate edges and light colored laminates are to have PVC edges. The laminate selection is Wilsonart, Cosmic Strandz. Please advise if this laminate is considered light or dark so we will know which type of edge banding to use.</p>	<p>Provide samples for review and selection during construction submittal process.</p>
<p>Precon RFI #24 Ref. Spec: 06 40 00.</p> <p>Specification Section 06 40 00 Part 2 – Products, 2.01, B. states the following: "Paint tops of all cabinetry semi-gloss white." Please clarify the extent to which this comment is to be applied. Please advise if the "paint" may be white melamine. Please also advise if this comment is to be applied to cabinets with countertops on them.</p>	<p>Substitution requests should be submitted per Section 002113, 1.7.</p>

Bid Questions and Answers, Addendum 7

<p>Please confirm size of EQ-360 Bradley Lenox Z lockers in 1113. Please also confirm what style type is required.</p>	<p>Selection to be made from full range of Bradley Z-lockers, size as indicated in documents.</p>
<p>Precon RFI #25 Ref. Spec: 06 40 00.</p> <p>Section 06 40 00, PART 2—PRODUCTS, 2.01, B. states that doors and drawers fronts with dark colored laminates are to have plastic laminate edges and light colored laminates are to have PVC edges. The laminate selection is Wilsonart, Cosmic Strandz. Please advise if this laminate is considered light or dark so the proper type of edge banding may be applied.</p>	<p>Provide samples for review and selection during construction submittal process.</p>
<p>Precon RFI #26 Ref. Spec: 06 40 00.</p> <p>Division 06 40 00, PART 3—EXECUTION, 3.01 FABRICATION, E. calls for dovetail construction of drawer boxes. Millwork subcontractors provide an AWI Premium Grade doweled and glued method of construction, with cleanable white melamine material, which complies with PART 2—PRODUCTS, 2.01, H. Drawers: Interiors of all drawers, except drawer face, shall receive white melamine. Please note that Multiple dovetailed drawer construction is limited to solid wood or minimum 7-ply hardwood veneer core plywood. Reference Architectural Woodwork Standards, Section 10, 10.4.7 Assembly Rules. Please advise if the doweled and glued construction method, with cleanable white melamine material, is acceptable for drawer boxes on this project.</p>	<p>Substitution requests should be submitted per Section 002113, 1.7</p>
<p>Precon RFI #27 Ref. DWG: D010.</p> <p>The Detention Equipment Schedule on drawing D010 states that the Video Visitation Unit is Vendor Furnished Vendor Installed (VFVI). Please advise if this is to be provided and coordinated by the Owner. If not, please advise if this is to be included in the base bid of this project.</p>	<p>Updated in Addendum #5 to OFOI</p>

Bid Questions and Answers, Addendum 7

<p>Precon RFI #28 Ref. Spec: 06 40 00.</p> <p>Specification Section 06 40 00 Part 2 – Products, 2.13 refers to "BALLISTIC PROTECTION AT LOBBY" and states to "Provide at locations shown and at a minimum at Jail Lobby at new reception window locations." However, there is no ballistic fiberglass noted on the drawings. Please clarify the location(s) of this ballistic protection on the drawings.</p>	<p>There are none included in this project, spec updated in Addendum 5.</p>
<p>Precon RFI #29 Ref. Spec: 10 00 00.</p> <p>Specification Section 10 00 00 Part 2 item 2.5 refers to a "Roof Cable Entry System." Please advise on the location(s) and quantity of this system on the drawings, as it is not specifically noted.</p>	<p>There are none included in this project, spec updated in Addendum 5.</p>
<p>The retaining walls are spec'd as concrete with soldier piles. Please advise if a VE Alternate for Engineered Gravity Stone walls is acceptable</p>	<p>No.</p>
<p>Sheet M100 Note 1 states the underground chill water piping to be HDPE, but no specification has been issued specifying any other requirements. Please provide an underground chilled water specification indicating any pipe/fitting and insulation requirements.</p>	<p>Refer to specification 23 21 12, Paragraph 2.3</p>
<p>Sheet M100 Note 2 states to provide a new vault for future chilled water connections. Please provide a detail/specification for this vault including the size, access and material requirements.</p>	<p>Refer to added vault detail on sheet M100 and revised note by symbol 2, see Addendum #6</p>
<p>Specification 220529-2.1-H states the requirements for a Pipe Void system and sheet P402 detail 1 provides a section of the installation. Please advise if all piping and conduits located below grade within the building required to be installed with a Pipe Void system?</p>	<p>Void system only for sanitary waste pipes below grade under structure</p>
<p>Precon RFI #30 Ref. DWGs: ES501, ES502, ES503, ES504.</p> <p>Drawings ES501 through ES504 in the security drawing detail has conduits running from the new electrical room #1404 to two existing rooms: Existing Building Control Room #109 and Existing Equipment Room #129. After reviewing the drawing package, it is not clear where these rooms are located. Please advise on the locations of these rooms.</p>	<p>Revised rooms in Addendum 6.</p>

Bid Questions and Answers, Addendum 7

<p>Precon RFI #31 Ref. DWGs: IT601.</p> <p>Note 16 on IT601 mentions to extend (4) 4" UG conduits beyond the perimeter roadway from the IT 1213 room. Please indicate the perimeter roadway these should be terminated at.</p>	<p>Keynote 16 on IT601 requests that the implied contractor is to coordinate with the 3rd party vendor CAPCO, a direct contractor of Collin County for final location and direction of these service entrance conduits. There is a perimeter roadway surrounding this project to plan north and plan east of the building. Distances are approximately identical to get beyond the roadway. Use best judgement for bidding purposes.</p>
<p>9. As it was recently clarified the 11 19 00, 2.18 Exterior Detention Windows are to be glazed with Type TM glass - which is an all clear product. Originally the Exterior Detention windows had a bronze tint.</p> <p>Please confirm Type TM glass used in the Exterior Detention Windows is in fact all clear and no bronze tint.</p>	<p>Confirmed</p>
<p>Specifications 271123 list part # for Vertical Cable Management as PR2VD06 Part # in Specifications 271116 2.1 C 2 & on Drawing IT603 is PR2VD08. Please clarify which Vertical Cable Management part # is required for project?</p>	<p>Use the larger of the two wire managers PR2VD08.</p>
<p>Specifications state - C. For all work taking place within the scope of the Project, the electrical contractor will provide the grounding system requirements including the TMGB, TGB, and TBB. The Telecomm Contractor will be responsible for grounding work for the portions of the work which inside of the MDF, TSER and IDF's from the cabling, cabinets and pathways to the TGB's. Drawing Note states that the TMGB and TGB are to be provided by Division 27 Please clarify what contractor is to provide the TMGB in IT 1213 and TGB in IT 2015?</p>	<p>Division 27 contractor shall provide the TMGB and TGB in IT 1213 and IT2015 respectively per keynote 10 on sheet IT601. Division 26 will provide the grounding backbone cables between IT2015, IT1213, & the main electrical ground.</p>

Bid Questions and Answers, Addendum 7

<p>Drawing IT603 states CAPCO responsible for Fiber & Copper Interconnects as follows:</p> <p>"Fiber interconnectThe fiber run will be completed by CAPCO; will be completed after the vendor has installed the 2-pole racks with UPS and PDU in the new wiring closet General Contractor to coordinate with CAPCO for all of CAPCO's activity related to this project.</p> <p>Copper interconnectThe copper run will be completed by CAPCO; will be completed after the vendor has installed the 2-pole racks with UPS and PDU in the new wiring closet General Contractor to coordinate with CAPCO for all of CAPCO's activity related to this project."</p> <p>Please clarify if CAPCO is responsible for all fiber and copper backbone cabling including parts listed under these 2 sections on drawing? or if any backbone cabling / materials required for backbone cabling is to be provided by Division 27 contractor?</p>	<p>CAPCO is responsible for installation and termination of all cabling entering the building into IT1213 from the Central Plant. Contractor is responsible for any other cabling and terminations such as the fiber and/or copper between IT1213 and IT2015 (detail 5/IT601).</p>
<p>Specifications 270526 3.3 A state the following: A. Provide MaxCell, 4" 3-cell innerducts in one (1) only of the 4" UG conduit between the MDF (IT1213) and Demarc room Mech/Elect. 1026. Please clarify if this is to be provided by Division 27 contractor?</p>	<p>"Specification 270528 3.3 A: Demarc is IT1213, provide MaxCell 4" 3-Cell innerducts in only one of the conduits noted in Keynote 16 on detail/sheet 3/IT601."</p>
<p>Drawing IT603 indicates to provide 6 UPS for the project. Should this be 2 instead of 6 so we have 1 per closet?</p>	<p>The schedule shown on drawing IT603 was provided intact by the owners. For bidding purposes use quantity of 6 BUT prior to order confirm with owner for actual amount.</p>
<p>Please confirm that Division 27 Structured Cabling Contractor is not responsible for installation of copper or fiber cabling to any security devices and Division 28 Contractor will install cabling for Security devices noted on ES series drawings.</p>	<p>Division 28 contractor shall be responsible for all cabling associated with the Security systems.</p>
<p>Addendum #1 Bid Form, Item 18, will it be a requirement of the Test and Balance Contractor to submit a Bid Bond certified check in the amount of 5% of the bid amount?</p>	<p>The County is in the process of selecting a Test and Balance firm through a separate solicitation. A bid bond is not required by Test and Balance firms for this IFB.</p>
<p>We have been unable to find and stainless steel tops on the project as specified in Section 050100 - MISC. METALS - STAINLESS STEEL TOPS. Can you please tell us where such tops are located or otherwise delete the specification if none are required?</p>	<p>Refer to plans, enlarged plans and detail referenced to D722.</p>

Bid Questions and Answers, Addendum 7

<p>Division 06, 06 40 00, Part 2 – Products, 2.01, B. “Paint tops of all cabinetry semi-gloss white.” Please clarify. Can this be white melamine? Does this include cabinets with countertops on them; to what extent does this comment apply?</p>	<p>Substitution requests should be submitted per Section 002113, 1.7</p>
<p>In regards to the geofoam, the plans reference the specifications. We are unable to find a geofoam specification. Please provide specifications for the geofoam.</p>	<p>Updated in Addendum 5, see 03 30 00.</p>
<p>We have been unable to locate any wire mesh partitions per Section 102213 WIRE MESH PARTITIONS on the project. Please advise the location of such partitions or delete the specification if not required.</p>	<p>Not used, removed in Addendum 6.</p>
<p>We do not find the roof cable entry system specified in 100000 - MISCELLANEOUS SPECIALTIES on the drawings. Please advise location and quantity of roof cable entry systems for the project.</p>	<p>Removed from spec in Addendum 5.</p>
<p>Please confirm all network switches, wireless access points, phones, and power distribution units (power strips) will be provided and installed by the Owner's vendor.</p>	<p>All Div.26 power strips shall be by the contractor, not the vendor.</p>
<p>Addendum 5 added Alternate 6 for rooftop equipment screens. We are unclear as to the "Decorative Architectural Metal Panel(s)" indicated on 2/A290. Are these panels those indicated in Specification 050100.2.02.H? If so, will McNichols panels meeting the specified requirements be acceptable? It appears the specified vendor is in Chicago and McNichols is right here in Dallas.</p>	<p>Please see updated section 07 60 00 in Addendum 6.</p>
<p>Hope's Windows would like to be listed as approved to provide our STB30 Steel Thermally Broken Detention Windows. Windows will fall under specification 111900 subsection 2.18. This series window is a better match to plan details and visually for other openings specified and maintains superior thermal performance.</p>	<p>Per Section 002113, 1.7, "No substitution will be considered unless written request has been submitted to the Architect for approval at least fourteen (14) consecutive calendar days prior to the date for receipt of bids". The deadline for substitution requests has passed.</p>
<p>Specification Section 23 07 00 – HVAC Insulation does not include the insulation requirements for the heating and chilled water piping. Can you please provide the insulation requirements for these piping systems.</p>	<p>Please see revised specification section 23 07 00 HVAC INSULATION</p>
<p>Can we make openings into the existing building at any time during the project?</p>	<p>Openings into the existing building should only be constructed toward the end of the project and only after a secure plywood barrier has been built inside the existing building. That way Contractors can work in an area separated from the inmates.</p>

Bid Questions and Answers, Addendum 7

<p>Precon RFI #32 Ref Dwg & Spec: A101, A102, A103, 32 31 14, 32 31 16.</p> <p>Please verify that Specification Section 32 31 14 refers to the "candy-cane" security fence that is to be demolished, salvaged, and reused. Please also verify that Specification Section 32 31 16 refers to the temporary fencing noted on drawing A101 and A103.</p>	<p>Yes</p>
<p>Precon RFI #33 Ref Dwg: A303</p> <p>Please clarify if the ceilings at rooms 2110 through 2125 and 2311 through 2316 are to be painted concrete, similar to rooms 2209 through 2235, as drawing A303 currently does not denote what their finish is to be.</p>	<p>All rooms on first level that have concrete ceilings are to be painted. See updated A303 in Addendum 7.</p>
<p>Precon RFI #34 Ref DWGs: M201, M202</p> <p>On drawings M201 and M202, it appears there are two separate 4" runs of pneumatic tube systems. It appears that both of the masters (one with recall control) are in room 1307. One goes to room 1308 and the other to 1102. Please confirm these are two separate systems and that no diverter is required.</p>	<p>Review architecture drawings and specification. A221 and A223, PTS shown as equipment number 1217-4, shown at rooms 1102 Booking, 1200 Property Storage, and 1308 Records/Bond Office - as described in specification 10 00 00. Specification says for powered station to be in Property Storage room.</p>
<p>Precon RFI #35 Ref DWGs: A901, A811, A813, A814</p> <p>Please clarify the heights of all vinyl wall coverings (VWC1), as there are no interior elevations or cut details within the drawings that show the heights.</p>	<p>At the furrdown above 1104 Booking, VWC1 is 3'-6" high. At the furrdown above 1004 Pre-Booking, VWC1 is 2'-0" high. In all Dayroom areas, VWC1 is floor to ceiling.</p>
<p>Precon RFI #36 Ref DWGs: A311, A811</p> <p>Drawings A811 calls out the following: "mural (VWC1) on gyp. Furrdown." The cut detail for this furrdown, 03/A311, shows the vertical height of this furrdown to be 3'-6". Please confirm the intent to have the mural (VWC1) on this entire 3'-6" height.</p>	<p>Yes</p>
<p>Precon RFI #37 Ref DWG: A821</p> <p>Please advise if a specification section can be provided for the vinyl wall covering (VWC1) as noted on drawing A821.</p>	<p>See 09 95 00 Wallcovering provided in Addendum 7</p>

Bid Questions and Answers, Addendum 7

<p>Precon RFI #38 Ref DWG: A311</p> <p>Detail 05/A311 notes a steel break metal trim that is to be painted to match planks. Please advise if this is to be field painted or pre-finished by manufacturer.</p>	<p>Field painted to match planks</p>
<p>Precon RFI #39 Ref Specs: 32 31 14, 32 31 15, 32 31 16</p> <p>Please confirm that all fencing is to be galvanized, or to repair existing finish, per Specification Sections 32 31 14, 32 31 15, and 32 31 16, and not to be field painted.</p>	<p>Yes</p>
<p>Precon RFI #40 Ref Spec: 08 11 13</p> <p>Specification Section 08 11 13 includes the following manufacturer and note: "Chicago bullet proofing - for bullet resistant doors only." Please clarify which doors are to be considered bullet resistant as there are no notes within the drawings or other related specifications identifying which doors are to be bullet resistant.</p>	<p>If used, see door schedule for comments.</p>