



**DAWSON COUNTY GOVERNMENT
REQUEST FOR PROPOSALS
FOR
CONSTRUCTION SERVICES - COMPREHENSIVE
SECURITY SYSTEM UPGRADE FOR DAWSON COUNTY**

SUBMISSIONS ARE DUE AT THE ADDRESS SHOWN BELOW NO LATER THAN

AUGUST 26, AT 10:30AM, EST

**DAWSON COUNTY BOARD OF COMMISSIONERS
ATTENTION: PURCHASING MANAGER
25 JUSTICE WAY, SUITE 2223
DAWSONVILLE, GA 30534**

RFP # 377-21

THE RESPONSIBILITY FOR SUBMITTING A RESPONSE TO THIS RFP ON OR BEFORE THE STATED DATE AND TIME WILL BE SOLELY AND STRICTLY THE RESPONSIBILITY OF THE OFFEROR.

ISSUE DATE: JULY 22, 2021

SECURITY SYSTEMS UPGRADE

DRAWING INDEX

ATTACHMENT “A”

DRAWING	TITLE
ES00	COVER SHEET
ES01	LEGEND AND GENERAL NOTES
ES11	SITE PLAN
ES12	SITE PLAN – FOR REFERENCE ONLY
ES21	1 ST FLOOR PLAN – JAIL/LEC
ES22	1 ST FLOOR MEZZANINE PLAN – JAIL/LEC
ES23	2 ND FLOOR PLAN – JAIL/LEC
ES24	2 ND FLOOR MEZZANINE PLAN – JAIL/LEC
ES25	1 ST FLOOR PLAN - COURTHOUSE
ES26	2ND FLOOR PLAN - COURTHOUSE
ES27	3RD FLOOR PLAN - COURTHOUSE
ES28	4TH FLOOR PLAN - COURTHOUSE
ES31	CENTRAL CONTROL ROOM LAYOUTS – EXISTING AND NEW
ES32	BOOKING CONTROL ROOM & EQUIPMENT ROOM LAYOUTS – EXISTING AND NEW
ES33	HOUSING CONTROL ROOM & EQUIPMENT ROOM LAYOUTS – EXISTING AND NEW
ES34	COURTHOUSE CONTROL ROOM & EQUIPMENT ROOM LAYOUTS – EXISTING AND NEW
ES35	COURTHOUSE DATA EQUIPMENT ROOM LAYOUTS
ES36	CONTROL ROOM ELEVATIONS
ES37	COURTHOUSE DATA EQUIPMENT ROOM ELEVATIONS
ES38	ADD ALTERNATE NO. 1 – INTAKE BOOKING CONTROL ROOM
ES41	TYPICAL HOUSING TOUCHSCREEN PANEL GRAPHIC LAYOUT
ES42	TYPICAL LOCKING CABINET LAYOUTS
ES43	TOUCHSCREEN LOCKING CONTROL ONE LINE DIAGRAM
ES51	IP CAMERA ONE LINE DIAGRAM
ES52	IP CAMERA DETAILS
ES53	IP CAMERA SCHEDULES
ES54	IP CAMERA SCHEDULES
ES61	ACCESS CONTROL SCHEDULE AND DETAILS

SECURITY SYSTEMS UPGRADE
SPECIFICATION INDEX
ATTACHMENT “B”

ELECTRICAL

SECTION NUMBER	SECTION NAME
260500	GENERAL - ELECTRICAL
260513	CONDUCTORS AND RACEWAYS
260515	WIRING DEVICES
260523	OUTLET BOXES AND JUNCTION BOXES
260526	GROUNDING AND BONDING
260529	SUPPORTS
260533	CONDUIT AND RACEWAY

COMMUNICATIONS (VOICE/DATA/COAX/FIBER)

SECTION NUMBER	SECTION NAME
270000	GENERAL - TELECOM COMMUNICATIONS
270510	FIRESTOPPING FOR TELECOMM SYSTEMS
270526	GROUNDING FOR TELECOMM SYSTEMS
270528	PATHWAYS FOR TELECOMM SYSTEMS
270543	UNDERGROUND DUCTS & RACEWAYS
270553	IDENTIFICATIONS
270800	COMMISSIONING
271113	ENTRANCE PROTECTION
271119	TERMINATION BLOCKS & PATCH PANELS
271323	FIBER OPTIC BACKBONE
271513	COPPER HORIZONTAL
271523	FIBER OPTIC HORIZONTAL CABLE
271543	FACEPLATES & CONNECTORS

**SECURITY SYSTEMS UPGRADE
SYSTEMS DESCRIPTIONS INDEX
ATTACHMENT “C”**

CCTV SYSTEM

INTERCOM AND PA SYSTEM

PLC SYSTEM

TOUCHSCREEN INDEX

UPS SYSTEM

VIDEO VISITATION SYSTEM

WATCHTOUR SYSTEM

**CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM
(QUANTITIES ARE SUBJECT TO CHANGE)
(HANWAH CAMERAS ARE ALSO SELECTED)**

MANUFACTURER	PART NUMBER	DESCRIPTION	QUANTITY
VICON OR HANWAH	V942D-W312MIR	2MP FIXED NETWORK CAMERA DOME	200
VICON OR HANWAH	V945D-W310MIR	5MP FIXED NETWORK CAMERA DOME	30
VICON OR HANWAH	V940-PLATE	ADAPTER PLATE	300
VICON OR HANWAH	V-CELL-HD-B	CORNER MOUNT CELL CAMERA	10
VICON OR HANWAH	V940-PH	PENDANT ADAPTER	5
VICON OR HANWAH	SVFT-WM-1	WALL MOUNT ARM	5
VICON OR HANWAH	VMDC-2V8	VIRTUAL MATRIX DISPLAY CONTROLLER	1
DELL	P2217H	22" CONTROL MONITOR	1
VICON OR HANWAH	VN-DECODER-2V8	DIGITAL VIDEO DECODER	2
VICON OR HANWAH	VNUC-SWV8	VICONNET NUCLEUS SERVER SOFTWARE	1
VICON OR HANWAH	VLR-CLIENT-RK	VIDEO VIEWING STATION	8
VICON OR HANWAH	VLR-APPSRV-RK	VALERUS APPLICATION SERVER	1
VICON OR HANWAH	VLR-262TB-R5-A	262TB RECORDING SERVER	8
STARTECH	RACKCONS1916	RACKMT 19" LCD CONSOLE 16 PORT KVM	1
STARTECH	SVECONUS6	2-IN-1 USB KVM CABLE 6'	15
CISCO	SG300-28PP-K9	28 PORT POE NETWORK SWITCH	25
CISCO	MGBSX1	GB SX MINI-GBIC SFP TRANSCEIVER	14
VICON OR HANWAH	VLR-VPRO-LIC	VALERUS ENTERPRISE LICENSE	230
VICON OR HANWAH	VLR-PRO-UPP-3	UPGRADE PROTECTION PLAN	230
DELL	ULTRASHARP U3219Q	32" LED MONITOR 1080P	7
SAMSUNG	UN50NU7100FXZA	50" CLASS HDR UHD MONITOR	10
PEERLESS	ST640	32"-50" MONITOR WALL MTS (7) 32" (10) 50"	7
CROWN	PZM-11LL	MICROPHONE	2
ALARMSAF	RM-2816F-600	16 CAMERA POWER SUPPLY	1
NITEK	EL1500C	POE OVER COAX EXTENDER	2
MIDDLE ATLANTIC	MRK-4431	FLOOR CABINET	2
MIDDLE ATLANTIC	LVFD-44	PERF FRONT DOOR	2
MIDDLE ATLANTIC	SPN-44-312	SIDE PANELS	2
MIDDLE ATLANTIC	PD-1220C-NS	20 AMP, 10 RECPT POWER STRIP	6
WESTPENN	4246	CAT6 ETHERNET CABLE	As Req'd

INTERCOM - PAGING SYSTEM
(QUANTITIES ARE SUBJECT TO CHANGE)

MANUFACTURER	PART NUMBER	DESCRIPTION	QUANTITY
TECHWORKS	ICA-202D	INTERCOM AMPLIFIER	12
RADIO DESIGN LABS	TX-70A	AUDIO MIXER	12
FRISBY	FMC-220	DESKTOP MICROPHONE	12
PHOENIX	2907038	25 POINT INTERCOM RELAY CARD	29
DIGIKEY	3-640601-4	4 PIN INTERCOM WIRE CONNECTOR	101
DIGIKEY	3-640601-2	2 PIN AUDIO WIRE CONNECTOR	31
OMRON	S8VK-C24024	24VDC 10A POWER SUPPLY	7
QUAM	CIS2/25	INTERCOM STATION	101
QUAM	CIB2	CALL BUTTON	9
SWC	CUSTOM	DRIVE UP PEDESTAL (Single IC station)	1
CARTEL	CTB	VEHICLE DETECTOR CONTROL BOARD	1
CARTEL	CT350	VEHICLE DETECTOR PROBE & 350' CABLE	1
NORTHERN TECH.	PLP-42S	INTERCOM SURGE SUPPRESSION (New & Exist Ped)	2
QUAM	SYSTEM 1VP	SPEAKER ASSEMBLY - SURFACE (Vandal-Proof)	129
QUAM	8C10PAOT	8" CONE SPEAKER	Incl.
QUAM	BS8VP	SQUARE VANDAL PROOF BAFFLE	Incl.
QUAM	SE1WVP	SQUARE SURFACE BACK BOX	Incl.
QUAM	TBLU	25/70 VOLT TRANSFORMER	Incl.
QUAM	C10X/B25/SVP	FLUSH MOUNT VANDAL ASSEMBLY	14
QUAM	8C10PAX	8" CONE SPEAKER	Incl.
QUAM	BS8VP	SQUARE VANDAL PROOF BAFFLE	Incl.
QUAM	TBLU	25/70 VOLT TRANSFORMER	Incl.
QUAM	SSB2	TILE SUPPORT	14
QUAM	ES-8	SQUARE FLUSH BACKBOX MOUNTS TO SSB2	14
MIDDLE ATLANTIC	MRK-4431	FLOOR CABINET 83.125" H x 22" W x 31.4" D	3
MIDDLE ATLANTIC	MW-ST	SOLID TOP	3
MIDDLE ATLANTIC	SPN-44-312	SIDE PANELS	3
MIDDLE ATLANTIC	FD-44	FRONT DOOR	3
WESTPENN	357	INTERCOM CABLE 2 PAIR 22awg	As Req'd
WESTPENN	292	SPEAKER CABLE 1 PAIR 20awg	As Req'd

**PLC, ELECTRONIC CONTROL SYSTEM
(QUANTITIES ARE SUBJECT TO CHANGE)**

MANUFACTURER	PART NUMBER	DESCRIPTION	QUANTITY
OMRON	CJ2MCPU34	PLC CPU	7
OMRON	CJ1WIC101	EXPANSION MODULE	4
OMRON	CJ1W-PA205R	PLC POWER SUPPLY	7
OMRON	CJ1W-SCU21V1	SERIAL COMMUNICATION BOARD	1
OMRON	CJ1W-ID261	64 POINT INPUT CARD	29
OMRON	CJ1W-OD261	64 POINT OUTPUT CARD	36
OMRON	CJ1W-EIP21	ETHERNET MODULE	1
OMRON	G2R-1-SND 24VDC	SPDT SLIDER DOOR RELAY	As Req'd
OMRON	P2RF-050-E	RELAY BASE FOR G2R-1-SND	As Req'd
OMRON	S8VK-C24024	24VDC 10A POWER SUPPLY	7
NETGEAR	GSM7328FS	NETWORK SWITCH AT MAIN CTRL J298	1
PHOENIX	2891026	NETWORK SWITCH (6) RG45 (2) FO	6
PHOENIX	2966171	DOOR CONTROL RELAY 1PDT	As Req'd
PHOENIX	2967060	TELE CONTROL RELAY 2PDT	As Req'd
PHOENIX	712314	10A BREAKER	As Req'd
PHOENIX	712259	4A BREAKER	As Req'd
PHOENIX	3118203	BREAKER BASE	As Req'd
PHOENIX	3044076	SINGLE TERMINAL BLOCK	As Req'd
PHOENIX	3044092	GROUND TERMINAL BLOCK -SNAP ON	As Req'd
PHOENIX	3030226	JUMPER BAR -PUSH IN	As Req'd
PHOENIX	3047167	.09 INSULATOR	As Req'd
PHOENIX	3022218	END BARRIER	As Req'd
SCHNEIDER	389FXAXC1-24D	SPDT RECEPTACLE RELAY	As Req'd
CUTLER HAMMER	WMZS1C20	20A 1 POLE CIRCUIT BREAKER	As Req'd
SWC	SWC23672	72" WALL CABINET	7
SAGINAW	24P20	TELE RELAY BACKPANEL	3
CERROWIRE	THHN	14 AWG STRANDED WIRE (<i>DOOR LOCKS</i>)	As Req'd
CERROWIRE	THWN	18 AWG STRANDED WIRE (<i>DPS STATUS</i>)	As Req'd
BELDEN	9543	25 CONDUCTOR CABLE	As Req'd
WEST PENN	D430	2 PAIR DATA CABLE	As Req'd
WEST PENN	4246	CAT 6 CABLE	As Req'd

BILL OF MATERIALS

**TOUCHSCREEN CONTROL SYSTEM
(QUANTITIES ARE SUBJECT TO CHANGE)**

MANUFACTURER	PART NUMBER	DESCRIPTION	QUANTITY
WONDERWARE	IN-TOUCH 10.5	TS SOFTWARE & LICENSE (<i>tag count as req'd</i>)	12
DELL	OPTIPLEX XE2	TOUCHSCREEN COMPUTER (Dual NIC)	12
ELO	E351600	22" LCD TOUCH MONITOR - 2202L	2
ELO	E222371	32" LCD TOUCH MONITOR - 3202L	10
ELO	E275623	LCD MONITOR STAND FOR 3202L	10
CYBER ACOUSTIC	CA-2880	TOUCHSCREEN SPEAKERS	2
HP	PRO M402N	LASER REPORT PRINTER	1
MONOPRICE	648	6' AUDIO EXTENSION CABLE	2
MONOPRICE	5433	6' USB EXTENSION CABLE	2
3M	CS100MB	ROLLING COMPUTER STAND	6
SWC	SPECIAL	CONTROL ROOM PEDESTAL	6
WEST PENN	4246	CAT 6 CABLE	As Req'd
SPARE PARTS REQUIRED BY SPECIFICATIONS			
DELL	OPTIPLEX XE2	TOUCHSCREEN COMPUTER (Dual NIC)	1
ELO	E222371	32" LCD TOUCH MONITOR - 3202L	1

VIDEO VISITATION SYSTEM
(QUANTITIES ARE SUBJECT TO CHANGE)

MANUFACTURER	PART NUMBER	DESCRIPTION	QUANTITY
VIDEO VISITATION SYSTEM TERMINALS			
I WebVisit		INMATE VISITATION TERMINAL	21
		<i>DETENTION GRADE ENCLOSURE</i>	<i>Incl.</i>
		<i>DUAL CORE THIN CLIENT (5060)</i>	<i>Incl.</i>
		<i>18" ARMORED CABLE HANDSET</i>	<i>Incl.</i>
		<i>LOGITECH HD WEBCAM (C525 HD)</i>	<i>Incl.</i>
		<i>17" LCD MONITOR (E1715S)</i>	<i>Incl.</i>
I WebVisit		PUBLIC VISITATION TERMINAL	9
		<i>DETENTION GRADE ENCLOSURE</i>	<i>Incl.</i>
		<i>DUAL CORE THIN CLIENT (5060)</i>	<i>Incl.</i>
		<i>32" ARMORED CABLE HANDSET</i>	<i>Incl.</i>
		<i>LOGITECH HD WEBCAM (C525 HD)</i>	<i>Incl.</i>
		<i>17" LCD MONITOR (E1715S)</i>	<i>Incl.</i>
VISIT DESK WORKSTATION			
I WebVisit	I WebVisit FWC	VISIT DESK COMPUTER	1
DELL	P2419H	VISIT DESK COMPUTER	1
TOKENWORKS	M260	ID / LICENSE SCANNER	1
FIREWALL, SERVERS & NETWORK COMPONENTS			
DELL	R6415	SCHEDULING SERVER	1
NETGEAR	RR33012	NETWORK ATTACHED STORAGE	1
WESTERN DIGITAL	WD40EFRX	4TB HARD DRIVE	12
NETGEAR	GS724Tv4	24 PORT MANAGED GIGABIT SWITCH	As Req'd
I WebVisit	I WebVisit FS	FACILITY SERVER	1
SOPHOS	SG105	SOPHOS FIREWALL APPLIANCE	1
SPARE PARTS			
I WebVisit		VIDEO VISITATION TERMINAL	1

WATCH TOUR SYSTEM
(QUANTITIES ARE SUBJECT TO CHANGE)

MANUFACTURER	PART NUMBER	DESCRIPTION	QUANTITY
GUARD 1	PIPE-II-TKS	THE PIPE (Touch Button Reader)	10
GUARD 1	PIPE-HOLSTER	HOLSTER (Belt Loop Style)	10
GUARD 1	PIPE-BUTTON-PP	PRISON PROOF WALL BUTTON	20
GUARD 1	PIPE-BUTTON-F5	5mm TOUCH MEMORY BUTTON	30
GUARD 1	LOGINBOARD-3COL	LOGIN BOARD (for 30 Memory Buttons)	1
GUARD 1	G1PLUS-SW-PKG	PIPE WATCH TOUR SOFTWARE (PRO EDITIO	1
DELL	OPTIPLEX XE2	WATCH TOUR ADMIN CPU	1
DELL	P2217H	22" WATCHTOUR CTR'L MONITOR	1
SPARE PARTS REQUIRED BY SPECIFICATIONS			
GUARD 1	PIPE-BUTTON-PP	PRISON PROOF WALL BUTTON	20

DAWSON COUNTY SPECIFICATION INDEX

ELECTRICAL

260500	GENERAL - ELECTRICAL
260513	CONDUCTORS AND RACEWAYS
260515	WIRING DEVICES
260523	OUTLET BOXES AND JUNCTION BOXES
260526	GROUNDING AND BONDING
260529	SUPPORTS
260533	CONDUIT AND RACEWAY

COMMUNICATIONS (VOICE/DATA/COAX/FIBER)

270000	GENERAL - TELECOM COMMUNICATIONS
270510	FIRESTOPPING FOR TELECOMM SYSTEMS
270526	GROUNDING FOR TELECOMM SYSTEMS
270528	PATHWAYS FOR TELECOMM SYSTEMS
270543	UNDERGROUND DUCTS & RACEWAYS
270553	IDENTIFICATION
270800	COMMISSIONING
271113	ENTRANCE PROTECTION
271119	TERMINATION BLOCKS & PATCH PANELS
271323	FIBER OPTIC BACKBONE
271513	COPPER HORIZONTAL
271523	FIBER OPTIC HORIZONTAL CABLE
271543	FACEPLATES & CONNECTORS
271619	PATCH CORDS & WORK STATION CORDS
272133	WIRELESS ACCESS

ELECTRONIC SECURITY

280000	GENERAL - ELECTRONIC SECURITY
280100	SCOPE OF WORK - SECURITY
280120	TOUCHSCREEN LOCKING CONTROLS
280140	PROGRAMMABLE LOGIC CONTROLLERS
280150	ELECTRONIC RELAY SYSTEM
280200	INTERCOM SYSTEM
280210	CELL MONITORING & INMATE ALARM
280290	VIDEO VISITATION - ALTERNATE
280280	CCTV IP CAMERAS, ACCESS CONTROL
280400	WATCH TOUR
280508	GROUNDING & BONDING
280650	METAL DETECTORS AND PACKAGE SCREENERS - ALTERNATE
280710	UPS
280800	SURGE PROTECTION
280900	WIRING METHODS

SECTION 26 05 00
ELECTRICAL GENERAL

PART 1 - GENERAL

1.1 SCOPE

- A. Division 26 includes all Specifications in the 26 series and the accompanying Electrical Drawings. Provide all labor, materials and equipment, and all necessary operations to provide the complete scope of the electrical systems intended under this Division. Division 26 is not a stand-alone document, but a part of the complete Project Documents.
- B. Attention is called to the fact that there are many interfaces between the work required in this Division and the work required in other Divisions. Provide the necessary interface and coordination with other Divisions to provide a complete project.

1.2 EXISTING CONDITIONS

- A. Attention is called to the fact that the work is to be performed within an existing, operational facility. Prior to the submission of bids, each bidder shall visit the project site, thoroughly investigate and be familiar with all existing conditions which will affect their work; especially the work to be performed above the existing ceilings.
- B. When this project is finished, the work under this Division shall be complete in every respect, completely integrated with all the existing systems, and left in perfect operating condition. The electrical service to the building shall not be interrupted at any time without written coordination of the building's Owner. All existing electrical equipment removed during the project shall be removed and turned over to the Owner. All existing electrical systems required to be operating at the project's completion or required to remain in use during the project shall be reconnected, replaced, rerouted or otherwise made to fit with proper workmanship techniques and left in safe working order.
- C. Connect new work to existing work in a neat and workmanlike manner. Where an existing structure must be cut or existing utilities interfere, such obstructions shall be bypassed, removed, replaced or relocated, patched and repaired. Work disturbed or damaged shall be replaced or repaired to its prior condition.
- D. Prior to the start of any demolition or construction, secure the services of a qualified, EPA Certified asbestos abatement agency to check the existing insulation, etc. for asbestos. Should asbestos be found, do not proceed with demolition or construction; notify the Design Professional in any case in writing of the agency's findings.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1.3 CODES AND REGULATIONS

- A. All work under this Division shall comply with all local building codes, laws, regulations, ordinances and the requirements of the 2008 National Electrical Code.
- B. Where conflicts of installation requirements occur between the aforementioned codes, regulations or the Contract Documents, the most restrictive shall govern.
- C. Obtain all permits and licenses and pay all fees required by local authorities. Arrange for all necessary inspections required by the authorities having jurisdiction and provide written certificates of approval to the project Owner or his designated representative.

1.4 DEFINITIONS

- A. Contract Documents: The complete set of project Drawings and Specifications.
- B. Provide: Furnish, install and connect.
- C. Work: All materials installed, including all labor to provide complete system.
- D. Wiring or Wired: All wire or cable installed in conduit from panelboard to equipment and connected at both ends with all required boxes, connectors, couplings, etc.
- E. Conduit: Rigid steel conduit intermediate metal conduit (I.M.C.), electrical metallic tubing (EMT) plastic conduit (PVC), electrical non-metal tubing (ENT), or flexible steel conduit.
- F. Rigid conduits shall be installed anywhere in all inmate areas from finished floor up to 18'-0" AFF. The placement of this shall be: 2 hole straps at both ends no greater than 18" from each end and 24" on center. At all 90 degree bends there will be an additional strap at the bend, both directions.

1.5 DRAWINGS AND SPECIFICATIONS

- A. The Drawings and Specifications together are to be considered as the Contract Documents. Any work shown in one and not shown in the other, or implied by either, shall be provided to give a complete project.
- B. Should any conflicts exist between the Drawings and Specifications or there is an item shown/called for which is not clearly defined, immediately submit a request for clarification. No additional monies will be granted later when a conflict is resolved or an item is more clearly defined.
- C. The Drawings are schematic and are not intended to show the exact location outlets, etc. or the routing of conduit.
- D. The exact location of equipment requiring electrical connections (security equipment, lights, etc.) shall be as located by other Divisions of the Contract

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

Documents. The right is reserved to relocate any receptacle, switch or other outlet a maximum of 10'-0" before it is permanently installed without incurring additions to the Contract amount.

1.6 SITE VISIT

- A. Visit the site and become familiar with all aspects of the site and existing conditions before submitting Contract price.
- B. No allowance will be made for lack of knowledge of existing conditions.

1.7 DEVIATIONS

- A. No deviations from the Contract Documents shall be made without the full knowledge and written consent of the Design Professional.
- B. If the existing conditions make it desirable to modify the Contract Documents in regard to any item, provide a written request to the Design Professional.

PART 2 - PRODUCTS

2.1 STANDARDS FOR MATERIALS AND WORKMANSHIP

- A. All materials used shall be new and shall be stamped with the label of Underwriters Laboratories, Inc. (UL).
- B. All materials shall meet the standards of the following associations and institutes where applicable:
 - 1. National Fire Protection Association (NFPA)
 - 2. American Society of Testing Materials (ASTM)
 - 3. American National Standards Institute (ANSI)
 - 4. National Electrical Manufacturer's Association (NEMA)
 - 5. Institute of Electrical and Electronic Engineers (IEEE)
- C. Manufacturers names and catalog numbers specified herein are intended to describe the material and set the standard of quality. All bids shall be based on material specified. Requests for approval of material not specified shall be considered if the request is in written form and submitted to the Design Professional no later than fourteen (14) days before bid date. All requests shall conform with the provisions of the general and supplementary conditions.
- D. Samples of materials requested to be substituted shall be furnished upon the request of the Design Professional.

2.2 SHOP DRAWINGS AND SUBMITTAL

- A. The Engineer's review of shop drawings or submittals is a cursory review to check

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

for general compliances of submittals with the design intent of the Contract Documents. The Design Professional's review does not relieve the Contractor of his responsibility of complying with the Contract Documents. All coordination of the work in strict compliance with the Contract Documents is the sole responsibility of the Contractor.

- B. The following items shall be submitted for review:
 - 1. Conduit and wire
 - 2. Grounding system
 - 3. Devices
 - 4. Coverplates
- C. All shop drawings and submittals shall be submitted in compliance with the requirements of the general and supplementary conditions. No more than four (4) copies of submittal data will be reviewed. Any additional copies will be returned unmarked. The responsibility of copying review comments on any additional copies will rest solely with the contractor.
- D. All submittals shall bear the name of the manufacturer to be used.
- E. All shop drawings and submittals shall include a stamped indication signifying that the submittal has been reviewed for compliance with the Contract Documents by the Contractor. This stamped indication also represents the fact that the Contractor has checked this submittal for its interaction with all other Divisions and certifies by his signature or initials that all coordination has taken place. The stamp shall include the date, name of the Contracting Firm, the signature of the Contractor, certification of compliance and approval. This stamp shall be on the submittal before the Engineer will review it.
- F. The engineer will review an individual submittal not more than twice. If the submittal is rejected again on the second review, the contractor will bare all responsibility for paying for the engineer's time for additional reviews. Such payments to the engineer shall be withheld from the next monthly pay application.

2.3 RECORD (AS-BUILT) DRAWINGS AND MAINTENANCE MANUALS

- A. At job completion, submit to the Design Professional, a set of cadd drawings on disks showing all deviations from the Contract Documents. The Drawings shall also have dimensions locating all underground conduits.
- B. At job completion, submit to the Owner, one (1) set of maintenance and instruction manuals and a back up copy on cd disk for all equipment furnished on the project.

PART 3 - EXECUTION

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3.1 COORDINATION

- A. Coordinate all space requirements with all other Divisions before installing any work. Install work such that adequate space will be allotted for all other work from other Divisions to be installed and also will allow room for future access for repair and maintenance.
- B. Any work installed without proper coordination shall be relocated at the Design Professional's direction without increasing the Contract price.
- C. During the bidding process or the pricing for a guaranteed maximum price, coordinate with all other Divisions for the total amount of work required in Division 16. Any work shown or implied in another Division requiring work in Division 16 shall be included in the Contract price regardless of whether or not it is addressed in Division 16.

3.2 PROTECTION OF MATERIALS

- A. All equipment shall have the original finish when the building is turned over to the Owner.
- B. Protect equipment during construction from dirt, water, chemical, mechanical damage, etc. Protect all conduit openings so that no foreign material will enter the conduit.

3.3 TESTS, DEMONSTRATION AND INSTRUCTIONS

- A. Test all systems described in this Division in the presence of the Owner or a designated representative upon completion of the work. Demonstrate that the installation is in accordance with Contract Documents.
- B. Any work found not to be in compliance with the Contract Documents shall be repaired or replaced without incurring any additions to the Contract price.
- C. Provide to the Owner, all instruction on maintenance and operation of all systems and equipment provided under this Division. Provide all necessary tools and personnel to thoroughly present these instructions.

3.4 WARRANTY

- A. All systems, equipment, components, work, etc. provided under this Division shall be covered by a one year warranty starting at the time of final acceptance of the work by the Owner. Any defects in the work, systems, equipment or components found during this year shall be corrected at no charge. The warranty shall include providing all necessary cutting, patchwork, repainting, etc. to make the work complete and new.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- B. Present this warrantee and any additional warranties on furnished equipment or systems to the Design Professional. All equipment or system warrantees are in addition to the general warrantee.

END OF SECTION

**SECTION 26 05 13
CONDUCTORS AND CABLES**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes building wires and cables and associated connectors, splices, and terminations for wiring systems rated 600 V and less.

1.2 SUBMITTALS

- A. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70 and NEC 2008.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
 - 2. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 CONDUCTORS AND CABLES

- A. Manufacturers:
 - 1. American Insulated Wire Corp.; a Leviton Company.
 - 2. General Cable Corporation.
 - 3. Senator Wire & Cable Company.
 - 4. Southwire Company.
- B. Refer to Part 3 "Conductor and Insulation Applications" Article for insulation type, cable construction, and ratings.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- C. Conductor Material: Copper complying with NEMA WC 5 or 7; solid conductor for No. 10 AWG and smaller, stranded for No. 8 AWG and larger.
- D. Conductor Insulation Types: Type THW, THHN-THWN, and XHHW complying with NEMA WC 5 or 7.

2.3 CONNECTORS AND SPLICES

- A. Manufacturers:
 - 1. AFC Cable Systems, Inc.
 - 2. AMP Incorporated/Tyco International.
 - 3. Hubbell/Anderson.
 - 4. O-Z/Gedney; EGS Electrical Group LLC.
 - 5. 3M Company; Electrical Products Division.
- B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3 - EXECUTION

3.1 CONDUCTOR AND INSULATION APPLICATIONS

- A. Service Entrance: Type THHN-THWN, single conductors in raceway.
- B. Exposed Feeders: Type THHN-THWN, single conductors in raceway.
- C. Feeders Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway.
- D. Feeders Concealed in Concrete, below Slabs-on-Grade, and in Crawlspace: Type THHN-THWN, single conductors in raceway.
- E. Exposed Branch Circuits: Type THHN-THWN, single conductors in raceway.
- F. Branch Circuits Concealed in Concrete and below Slabs-on-Grade: Type THHN-THWN, single conductors in raceway.
- G. Cord Drops and Portable Appliance Connections: Type SO, hard service cord.

3.2 INSTALLATION

- A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
- B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- E. Support cables according to Division 16 Section "Basic Electrical Materials and Methods."
- F. Seal around cables penetrating fire-rated elements according to the detail shown on the drawings. "Through-Penetration Firestop Systems."
- G. Identify and color-code conductors and cables according to Division 26 Section "Basic Electrical Materials and Methods."
- H. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
 - 1. Use oxide inhibitor in each splice and tap conductor for aluminum conductors.
- I. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.3 FIELD QUALITY CONTROL

- A. Testing: Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Section 7.3.1. Certify compliance with test parameters.
- B. Test Reports: Prepare a written report to record the following:
 - 1. Test procedures used.
 - 2. Test results that comply with requirements.
 - 3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

END OF SECTION

**SECTION 26 05 15
WIRING DEVICES**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Single and duplex receptacles and ground-fault circuit interrupters.
 - 2. Single- and double-pole snap switches and dimmer switches.
 - 3. Device wall plates.
 - 4. Floor service outlets, poke-through assemblies, and multioutlet assemblies.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.
- C. Samples: One for each type of device and wall plate specified, in each color specified.
- D. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70 and NEC 2008.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Wiring Devices:
 - a. Bryant Electric, Inc./Hubbell Subsidiary.
 - b. Eagle Electric Manufacturing Co., Inc.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- c. Hubbell Incorporated; Wiring Device-Kellems.
 - d. Leviton Mfg. Company Inc.
 - e. Pass & Seymour/Legrand; Wiring Devices Div.
2. Multioutlet Assemblies:
- a. Hubbell Incorporated; Wiring Device-Kellems.
 - b. Wiremold Company (The).
3. Poke-Through, Floor Service Outlets and Telephone/Power Poles:
- a. Hubbell Incorporated; Wiring Device-Kellems.
 - b. Pass & Seymour/Legrand; Wiring Devices Div.
 - c. Square D/Groupe Schneider NA.
 - d. Thomas & Betts Corporation.
 - e. Wiremold Company (The).

2.2 RECEPTACLES

- A. Straight-Blade-Type Receptacles: Comply with NEMA WD 1, NEMA WD 6, DSCC W-C-596G, and UL 498.
- B. Straight-Blade and Locking Receptacles: Heavy-Duty grade.
- C. Straight-Blade Receptacles: Hospital grade.
- D. GFCI Receptacles: Straight blade, feed-through type, Heavy-Duty grade, with integral NEMA WD 6, Configuration 5-20R duplex receptacle; complying with UL 498 and UL 943. Design units for installation in a 2-3/4-inch- (70-mm-) deep outlet box without an adapter.

2.3 SWITCHES

- A. Single- and Double-Pole Switches: Comply with DSCC W-C-896F and UL 20.
- B. Snap Switches: Heavy-Duty grade, quiet type.
- C. Combination Switch and Receptacle: Both devices in a single gang unit with plaster ears and removable tab connector that permit separate or common feed connection.
 - 1. Switch: 20 A, 120/277-V ac.
 - 2. Receptacle: NEMA WD 6, Configuration 5-15R.
- D. Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on/off switches and audible frequency and EMI/RFI filters.
 - 1. Control: Continuously adjustable slider; with single-pole or three-way switching to suit connections.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2. Incandescent Lamp Dimmers: Modular, 120 V, 60 Hz with continuously adjustable rotary knob, toggle switch, or slider; single pole with soft tap or other quiet switch; EMI/RFI filter to eliminate interference; and 5-inch (130-mm) wire connecting leads.
3. Fluorescent Lamp Dimmer Switches: Modular; compatible with dimmer ballasts; trim potentiometer to adjust low-end dimming; dimmer-ballast combination capable of consistent dimming with low end not greater than 20 percent of full brightness.

2.5 WALL PLATES

- A. Single and combination types to match corresponding wiring devices. All wall plates shall be of the oversized type.
 1. Plate-Securing Screws: Metal with head color to match plate finish.
 2. Material for Finished Spaces: Coordinate with Design Professional.
 3. Material for Unfinished Spaces: Smooth, high-impact thermoplastic.
 4. Material for Wet Locations: Thermoplastic with spring-loaded lift cover, and listed and labeled for use in "wet locations."

2.6 FLOOR SERVICE FITTINGS

- A. Type: Modular, flush-type, dual-service units suitable for wiring method used.
- B. Compartments: Barrier separates power from voice and data communication cabling.
- C. Service Plate: Round solid brass with satin finish.
- D. Power Receptacle: NEMA WD 6, Configuration 5-20R, gray finish, unless otherwise indicated.

2.7 POKE-THROUGH ASSEMBLIES

- A. Description: Factory-fabricated and -wired assembly of below-floor junction box with multichanneled, through-floor raceway/firestop unit and detachable matching floor service outlet assembly.
 1. Service Outlet Assembly: Flush type with two simplex receptacles and space for two RJ-45 jacks.
 2. Size: Selected to fit nominal 4-inch (100-mm) cored holes in floor and matched to floor thickness.
 3. Fire Rating: Unit is listed and labeled for fire rating of floor-ceiling assembly.
 4. Closure Plug: Arranged to close unused 4-inch (100-mm) cored openings and reestablish fire rating of floor.
 5. Wiring Raceways and Compartments: For a minimum of four No. 12 AWG conductors; and a minimum of two, 4-pair, Category 5 voice and data communication cables.

2.8 MULTIOUTLET ASSEMBLIES

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. Components of Assemblies: Products from a single manufacturer designed for use as a complete, matching assembly of raceways and receptacles.
- B. Raceway Material: Metal, with manufacturer's standard finish.
- C. Wire: No. 12 AWG.

2.9 SERVICE POLES

- A. Description: Factory-assembled and -wired units to extend power and voice and data communication from distribution wiring concealed in ceiling to devices or outlets in pole near floor.
 - 1. Mounting: Ceiling trim flange with concealed bracing arranged for positive connection to ceiling supports; with pole foot and carpet pad attachment.
 - 2. Finishes: Manufacturer's standard painted finish and trim combination.
 - 3. Wiring: Sized for minimum of five No. 12 AWG power and ground conductors; and a minimum of four, 4-pair, Category 3 or 5 voice and data communication cables.
 - 4. Power Receptacles: Two duplex, 20-A, heavy-duty, NEMA WD 6, Configuration 5-20R units.

2.10 FINISHES

- A. Color:
 - 1. Use stainless steel cover plates.
 - 2. Emergency receptacles shall have red cover plates.
 - 3. Isolated ground receptacles shall have orange cover plates.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install devices and assemblies level, plumb, and square with building lines.
- B. Install wall dimmers to achieve indicated rating after derating for ganging.
- C. Install unshared neutral conductors on line and load side of dimmers.
- D. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical, and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.
- E. Remove wall plates and protect devices and assemblies during painting.
- F. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3.2 IDENTIFICATION

- A. Receptacles: Identify panelboard and circuit number from which served. Use hot, stamped or engraved machine printing with white-filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.

3.3 CONNECTIONS

- A. Ground equipment according to Division 26 Section "Grounding and Bonding."
- B. Connect wiring according to Division 26 Section "Conductors and Cables."

3.4 FIELD QUALITY CONTROL

- A. Perform the following field tests and inspections and prepare test reports:
 - 1. After installing wiring devices and after electrical circuitry has been energized, test for proper polarity, ground continuity, and compliance with requirements.
 - 2. Test GFCI operation with both local and remote fault simulations according to manufacturer's written instructions.
- B. Remove malfunctioning units, replace with new units, and retest as specified above.

END OF SECTION

SECTION 26 05 23
OUTLET BOXES

1. PART 1 - GENERAL

1.01 DESCRIPTION

- A. Description of System: Standard galvanized steel boxes shall be provided at all outlets for lights, switches, receptacles, etc., except as specified herein.

1.02 QUALITY ASSURANCE

- A. Acceptable Manufacturers: Outlet boxes shall be Midland-Ross, Appleton, Raco, National Electric Products Company or Steel City Electric Company.

1.03 JOB CONDITIONS

- A. Protection: Anchor boxes securely to formwork. Provide necessary protection to prevent entry of concrete.
- B. Sequencing, Scheduling: Locations of outlets shown on the drawings are relative and approximate. Exact locations shall be determined on the job and the outlets accurately set according to the contract drawings, dimensions, building conditions and Owner's direction. The right is reserved to change the exact location of any switch, ceiling outlet or other outlet in any room before it is permanently installed.

2. PART 2 - PRODUCTS

2.01 OUTLET BOXES

- A. Standard Outlet Boxes: Boxes and covers shall be galvanized steel, not less than 1/16" thick and, in every instance, of such form and dimensions as to be adapted to its specific use and location, kind of fixtures to be used and number, size and arrangement of conduits or cables connecting thereto.
- B. Ceiling outlet boxes shall be 1-1/2 or 2-1/8 inches deep, 4 inches octagonal or 4 inches square when required due to number of wires. Plaster rings or device covers need not be provided on ceiling boxes.
- C. Wall outlet boxes for toggle switches and convenience outlets shall be 1-1/2 or 2-1/8 inches deep, 4 inches square. Provide with single device

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

plaster rings (or two-device plaster rings where needed). Plaster rings shall be raised type to compensate for thickness of plaster or gypsum board wall finish. All outlet boxes shall be set to within 1/8" of finished wall surface.

- D. Junction boxes shall be as specified for ceiling and wall outlet boxes. Provide flat steel covers on ceiling outlets painted to match surrounding ceilings. Provide blank device-type cover plates on wall outlets, of same materials and exact color as specified for device plates in same room or area.
- E. Outlet boxes for exposed conduit exposed to weather or dampness shall be cast ferrous alloy, galvanized.
- F. Covers: Where outlet boxes are to be capped, blank cover plates shall be used.
- G. Outlet boxes for use in masonry walls shall be not less than 1/16" steel with square corners, minimum 4" square x 2-1/2" deep, designed to be used in masonry walls.

3. PART 3 - EXECUTION

3.01 INSPECTION

- A. The location of all wall outlets, receptacles, etc., shall be verified to see that the outlet will clear any wall fixture, shelving, work tables, sinks, baseboard and fin type convectors, bulletin boards, etc., before they are installed.
- B. Coordination: Exact locations of outlet boxes shall be coordinated with other trades, so that outlet will not be covered by ductwork, piping, etc.
- C. The approximate locations of outlets are indicated on the drawings. The exact locations shall be determined during construction. The right is reserved to change, without additional cost, the exact location of any outlet, a maximum of 10 feet before it is permanently installed.

3.02 PREPARATION

- A. Placement: Outlets occurring in new and existing features shall be accurately centered in same. Space wall switch outlets equi-distant from door trims on the strike side of doors as actually installed.
- B. Mounting Height:
 - 1. Unless otherwise required, indicated or directed, outlet boxes shall be placed with center lines at the following distances above the

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

finished floor:

- a. Special Outlets As noted on the drawings.
- C. Install all outlet boxes in finished areas flush with wall or ceiling finish.
- D. All outlet boxes for switches at same level shall be installed with each center line on one horizontal line as shown on drawings.

3.03 INSTALLATION

- A. At all concealed outlets for wall receptacles, etc., installed in gypsum board construction, standard galvanized steel outlet boxes shall be provided. Provide plaster rings where required.
- B. Outlet boxes shall be firmly anchored in place and shall be provided with approved fixture studs where required.
- C. Outlet boxes installed in masonry construction shall be set plumb and flush with finished wall on all sides. Openings for boxes shall be cut to the same outside dimensions as the box or shall be finished with grout flush to the edges of the box.
- D. The edge of all outlet boxes shall be flush with the surface in which they are recessed. The devices that fit into the outlet boxes shall be screwed tight before the cover plate is installed and the cover plate shall not be used as a means of tightening the devices in place. The openings for each box shall be cut or finished so that the supporting ears for each device will be completely supported on top and bottom by the wall surface.

END OF SECTION

**SECTION 26 05 26
GROUNDING AND BONDING**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes grounding of electrical systems and equipment. Requirements specified in this Section may be supplemented by requirements of other Sections.

1.2 SUBMITTALS

- A. Product Data: For ground rods.
- B. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled under UL 467 as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Apache Grounding/Erico Inc.
2. Boggs, Inc.
3. Chance/Hubbell.
4. Copperweld Corp.
5. Dossert Corp.
6. Erico Inc.; Electrical Products Group.
7. Framatome Connectors/Burndy Electrical.
8. Galvan Industries, Inc.
9. Harger Lightning Protection, Inc.
10. Hastings Fiber Glass Products, Inc.
11. Heary Brothers Lightning Protection Co.
12. Ideal Industries, Inc.
14. Kearney/Cooper Power Systems.
15. Korns, C. C. Co.; Division of Robroy Industries.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

16. Lightning Master Corp.
17. Lyncole XIT Grounding.
18. O-Z/Gedney Co.; a business of the EGS Electrical Group.
19. Raco, Inc.
20. Robbins Lightning, Inc.
22. Superior Grounding Systems, Inc.
23. Thomas & Betts, Electrical.

2.2 GROUNDING CONDUCTORS

- A. For insulated conductors, comply with Division 16 Section "Conductors and Cables."
- B. Equipment Grounding Conductors: Insulated with green-colored insulation.
- C. Isolated Ground Conductors: Insulated with green-colored insulation with yellow stripe. On feeders with isolated ground, use colored tape, alternating bands of green and yellow tape to provide a minimum of three bands of green and two bands of yellow.
- D. Grounding Electrode Conductors: Stranded cable.
- E. Underground Conductors: Bare, tinned, stranded, unless otherwise indicated.
- F. Bare, Solid-Copper Conductors: ASTM B 3.
- G. Assembly of Bare, Stranded-Copper Conductors: ASTM B 8.
- H. Bare, Tinned-Copper Conductors: ASTM B 33.
- I. Copper Bonding Conductor: No. 4 or No. 6 AWG, stranded copper conductor.
- J. Copper Bonding Jumper: Bare copper tape, braided bare copper conductors, terminated with copper ferrules; 1-5/8 inches (42 mm) wide and 1/16 inch (1.5 mm) thick.
- K. Grounding Bus: Bare, annealed copper bars of rectangular cross section, with insulated spacer.
- N. Connectors: Comply with IEEE 837 and UL 467; listed for use for specific types, sizes, and combinations of conductors and connected items. Bolted type.

2.3 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel.
 1. Size: 3/4 by 8'0".

PART 3 - EXECUTION

3.1 INSTALLATION

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. Use only copper conductors for both insulated and bare grounding conductors in direct contact with earth, concrete, masonry, crushed stone, and similar materials.
- B. In raceways, use insulated equipment grounding conductors.
- C. Exothermic-Welded Connections: Use for connections to structural steel and for underground connections.
- D. Grounding Bus: Install in electrical and telephone equipment rooms, in rooms housing service equipment, and elsewhere as indicated.
 - 1. Use insulated spacer; space 1 inch (25.4 mm) from wall and support from wall 6 inches (150 mm) above finished floor, unless otherwise indicated.
 - 2. At doors, route the bus up to the top of the door frame, across the top of the doorway, and down to the indicated height above the floor.
- E. Underground Grounding Conductors: Use copper conductor, No. 2/0 AWG minimum. Bury at least 24 inches (600 mm) below grade or bury 12 inches (300 mm) above duct bank when installed as part of the duct bank.
- F. Equipment Grounding Conductors: Comply with NFPA 70, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 are indicated.
 - 1. Install insulated equipment grounding conductors in feeders and branch circuits.
 - 2. Computer Outlet Circuits: Install insulated equipment grounding conductor in branch-circuit runs from computer-area power panels or power-distribution units.
 - 3. Isolated Grounding Receptacle Circuits: Install an insulated equipment grounding conductor connected to the receptacle grounding terminal. Isolate grounding conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service, unless otherwise indicated.
 - 4. Isolated Equipment Enclosure Circuits: For designated equipment supplied by a branch circuit or feeder, isolate equipment enclosure from supply raceway with a nonmetallic raceway fitting listed for the purpose. Install fitting where raceway enters enclosure, and install an insulated equipment grounding conductor. Isolate equipment grounding conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service, unless otherwise indicated.
 - 5. Nonmetallic Raceways: Install an equipment grounding conductor in nonmetallic raceways unless they are designated for telephone or data cables.
 - 6. Air-Duct Equipment Circuits: Install an insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air cleaners and heaters. Bond conductor to each unit and to air duct.
 - 7. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install an insulated equipment grounding conductor to each electric water heater, heat-tracing, and antifrost heating cable. Bond conductor to heater units, piping, connected equipment, and components.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

8. Signal and Communication Systems: For telephone, alarm, voice and data, and other communication systems, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.
 - a. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-2-by-12-inch (6.4-by-50-by-300-mm) grounding bus.
 - b. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.
- G. Metal Frame Grounding for Buildings: Drive a ground rod at the base of every corner column and at intermediate exterior columns at distances not more than 60 feet (18 m) apart. Connect rod to column with an underground grounding conductor. Use tinned-copper conductor not less than No. 2/0 AWG for underground conductor, and bury 18 inches (450 mm) below grade, minimum.
- H. Ground Rods: Install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes.
 1. Drive ground rods until tops are 2 inches (50 mm) below finished floor or final grade, unless otherwise indicated.
 2. Interconnect ground rods with grounding electrode conductors. Use exothermic welds, except as otherwise indicated. Make connections without exposing steel or damaging copper coating.
- I. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- J. Bonding Straps and Jumpers: Install so vibration by equipment mounted on vibration isolation hangers or supports is not transmitted to rigidly mounted equipment. Use exothermic-welded connectors for outdoor locations, unless a disconnect-type connection is required; then, use a bolted clamp. Bond straps directly to the basic structure taking care not to penetrate any adjacent parts. Install straps only in locations accessible for maintenance.
- K. Metal Water Service Pipe: Provide insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes by grounding clamp connectors. Where a dielectric main water fitting is installed, connect grounding conductor to street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
- L. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with grounding clamp connectors.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- M. Bond interior metal piping systems and metal air ducts to equipment grounding conductors of associated pumps, fans, blowers, electric heaters, and air cleaners. Use braided-type bonding straps.
- N. Bond each aboveground portion of gas piping system upstream from equipment shutoff valve.
- O. Connections: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
 - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer to order of galvanic series.
 - 2. Make connections with clean, bare metal at points of contact.
 - 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
 - 4. Make aluminum-to-galvanized steel connections with tin-plated copper jumpers and mechanical clamps.
 - 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
 - 6. Exothermic-Welded Connections: Comply with manufacturer's written instructions. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.
 - 7. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure-type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.
 - 8. Noncontact Metal Raceway Terminations: If metallic raceways terminate at metal housings without mechanical and electrical connection to housing, terminate each conduit with a grounding bushing. Connect grounding bushings with a bare grounding conductor to grounding bus or terminal in housing. Bond electrically noncontinuous conduits at entrances and exits with grounding bushings and bare grounding conductors, unless otherwise indicated.
 - 9. Tighten screws and bolts for grounding and bonding connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.
 - 10. Compression-Type Connections: Use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on grounding conductor.
 - 11. Moisture Protection: If insulated grounding conductors are connected to ground rods or grounding buses, insulate entire area of connection and seal against moisture penetration of insulation and cable.

3.2 FIELD QUALITY CONTROL

- A. Testing: Perform the following field quality-control testing:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1. After installing grounding system but before permanent electrical circuitry has been energized, test for compliance with requirements.
2. Test completed grounding system at each location where a maximum ground-resistance level is indicated and at service disconnect enclosure grounding terminal. Measure ground resistance not less than two full days after the last trace of precipitation, and without the soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance. Perform tests, by the fall-of-potential method according to IEEE 81. If more than 25 ohms provide additional work to get to 25 ohms.
3. Provide drawings locating each ground rod, ground rod assembly, and other grounding electrodes. Identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results. Nominal maximum values are as follows:
 - a. Equipment Rated 500 kVA and Less: 10 ohms.
 - b. Equipment Rated 500 to 1000 kVA: 5 ohms.
 - c. Equipment Rated More Than 1000 kVA: 3 ohms.

END OF SECTION

SECTION 26 05 29
SUPPORTING DEVICES

1. PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section specifies the requirements for supporting or mounting of work installed under this Division.

1.02 QUALITY ASSURANCE

- A. Design Criteria: Materials employed for support shall be of a type manufactured and approved for the intended application.
- B. Published Data: Upon request, furnish data published by the manufacturer indicating load-bearing capacity and approved usage of the support.

2. PART 2 - PRODUCTS

2.01 CONCRETE INSERTS

- A. Grinnell "CB-Universal" or Hohmann & Barnard "HA" (or larger).

2.02 CONCRETE ANCHORS

- A. Philips "Red Head" or USM Corporation "Molly Parabolit".

2.03 STEEL FRAMING

- A. Kindorf or Unistrut steel channel or angle, with accessory fittings.
- B. Cable Clamps: Russell Stoll or O.Z.

3. PART 3 - EXECUTION

3.01 GENERAL

- A. Locate and install all inserts in the new construction before slabs are poured.
- B. Spacing of support and sizes of supports shall be governed by the load to be supported.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- C. Working load of supports shall be based on a safety factor not less than 4:1.
- D. Spacing intervals shall not exceed those required by the National Electrical Code.
- E. Exterior building walls below grade shall not be pierced by hanger bolts.

3.02 CONDUIT SUPPORT

- A. Individual conduits shall be hung using Kindorf 6H conduit straps with threaded rods or stud anchors.
- B. Multiple conduits shall be installed on gang hangers using channel iron with Kindorf C-105 straps.

3.03 CABLE SUPPORTS

- A. Install cable supports in vertical conduit risers at intervals prescribed by the National Electrical Code.
- B. Lace up cables to supports in switchboards using "Ty-wraps".

3.04 WOOD BACKBOARDS

- A. Not Used.

3.05 OTHER EQUIPMENT

- A. Mount other equipment as required using inserts or anchors of adequate size and spacing.
- B. Comply with manufacturer's recommended mounting method.

3.06 GROUTING

- A. Fill any voids left in inserts with grout.

END OF SECTION

**SECTION 26 05 33
CONDUIT & RACEWAYS**

1. PART 1 - GENERAL

1.01 DESCRIPTIONS

- A. Description of System: Provide raceways and conduit indicated on the drawings, complete with all required accessories, hangers, supports, connections and fittings necessary to make the system complete. All raceway must be concealed, except in electrical/mechanical rooms.
- B. Definitions:
1. Concealed Conduit: Conduit installed above suspended ceilings or within columns, slabs or walls.
 2. Exposed Conduit: Conduit exposed to view.

1.02 QUALITY ASSURANCE

- A. Acceptable Manufacturers:
1. Metallic Conduit: Triangle, Allied, Wheatland, Pittsburgh Standard, Jones and Laughlin, Youngstown or Wheeling-Pittsburgh.
 2. Non-Metallic Conduit: Carlon.
 3. Surface Metal Raceways: Walkerduct, Wiremold or Airey-Thompson.
 4. Flexible Metal Conduit:
 - a. Greenfield (flexible metal conduit with no cover)
 - b. Anaconda (liquid-tight conduit with PVC cover)

1.03 JOB CONDITIONS

- A. Protection: Secure conduits in place and protect where necessary to prevent damage to the work during construction. Plug ends of all conduit runs with cork or oakum to avoid filling with mortar, etc.
- B. Sequencing, Scheduling: The layout of conduit is diagrammatic only and where changes are necessary due to structural conditions, other

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

apparatus or other causes, such changes shall be made as approved by the Design Professional and without any additional cost to the Owner.

2. PART 2 - PRODUCTS

2.01 METALLIC CONDUIT

- A. Material: Conduit shall be of best quality steel, of standard pipe size, smooth inside and out and shall be hot dipped galvanized or sherardized.
- B. Rigid Steel Conduit:
 - 1. Fittings and couplings shall be hot dipped galvanized or sherardized. Aluminum alloy fittings shall not be used.
 - 2. Make threaded joints in exposed conduit with anti-seize compound applied to the male threads only.
 - 3. Use Bakelite, insulated bushings with separate locknuts on all rigid conduits entering panel cabinets, outlet boxes, etc.
 - 4. All connections in areas exposed to weather shall be made using watertight hubs.
 - 5. To be used in all locations 12' below finished floor, using 2 holes strips 18" from each end, on center of section where length is 7' or greater.
- C. Thin wall Steel Conduit (Electrical Metallic Tubing):
 - 1. All E.M.T. entering panel cabinets, outlet boxes, etc., shall be provided with an all steel insulated throat connector.
 - 2. Connectors, couplings and fittings for electrical metallic tubing shall be UL approved as raintight and concrete tight, of the interlocking compression-ring type. Each connector shall have a factory-installed insulated throat bushing.
- D. Flexible Conduit: Flexible conduit shall be single strip, shall have bonding jumper installed inside all flexible conduits and shall be bonded beyond each end of the flexible conduit to provide ground continuity.
- E. Liquidtight Flexible Conduit: Anaconda "Sealtite," Type "EF," PVC jacketed flexible metal conduit.
- F. Expansion Fittings: Provide expansion fittings with bonding jumpers in conduit at building expansion joints.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2.02 NON-METALLIC CONDUIT

- A. Material: Carlon Type 40 heavy wall rigid "PV-Duit" polyvinyl chloride conduit.
- B. Accessories: Fittings, couplings, bends, etc., shall be Carlon manufacturer.

2.03 SMOKE AND FIRE-STOP METHODS

- A. Openings in floor slabs or fire rated walls and ceilings through which cables, conduits or piping must pass shall be sealed by U.L. recognized fire barrier assembly with a rating equal to or greater than the rating of the wall, floor or ceiling which is penetrated. Such penetrations are not specifically indicated on the drawings and shall be located and verified by the Contractor.
- B. The method utilized for construction and installation of fire stops and barriers shall be in strict accordance with details and directives described in the U.L. Building Materials Directory, 1984.
- C. The materials utilized for construction of fire stopping and barriers shall be commercially manufactured caulks, wrapping, foams or strips, installed specifically per the manufacturers U.L. approved instructions. Materials shall be by 3M, Chase Technologies Corporation or Dow Corning.
- D. Only E.M.T. or rigid steel conduit or I.M.C. shall be used for any penetration of fire rated construction, except as noted on drawings.
- E. Interiors of large empty raceways for computer cables shall be filled with a fire sealant foam which remains soft, pliable and self-sealing throughout its life.

3. PART 3 - EXECUTION

3.01 LOCATION

- A. Layout: In general, the conduit installation shall follow the layout indicated on the drawings.
 - 1. Conduits will be utilized only as indicated on plans.
 - a. Conduit sleeves shall be used thru fire walls.
 - b. Conduit will be used for vertical runs in blocks in cells of stair wells and elevator shaft.
 - c. Conduit will be utilized for circuits that have large size

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

conductors (individual) in lieu of "NM" cable.

2. Generally all conduit shall be concealed, unless otherwise directed or indicated on the drawings.
3. Offsets in conduits are not indicated and must be furnished as required.

B. Schedule:

1. Metal conduit shall be used as a raceway system only as indicated for all wiring, except as specified otherwise herein or otherwise shown on drawings.
2. Non-metallic conduit shall be used where non-metallic conduit or plastic conduit (PVC) is specified herein or shown on the drawings. At the Contractor's option, raceways installed underground or below slabs on grade, may be Schedule 40 heavy wall rigid PVC conduit. Such raceways which carry electrical circuits shall be provided with separate ground wires as required by NEC Article 250 and 346. All elbows that turn up from below grade to above grade or above slab shall be rigid galvanized steel.
3. Where National and local codes prohibit use of electrical metallic tubing or rigid non-metallic conduit (Schedule 40 PVC), rigid hot-dipped galvanized steel conduit shall be used.

C. Sizes:

1. Unless otherwise indicated, all conduit shall be $\frac{3}{4}$ " trade diameter, minimum. Larger sizes shall be used where indicated or where required due to conductor quantity.
2. Conduit concealed in slabs shall not exceed 1-1/4" nor be less than 3/4".
3. No bends shall be made with a radius less than six (6) times the diameter of the conduit nor more than 90°.

3.02 SUPPORTING DEVICE INSTALLATION

- A. Spacing and Attachment: Support exposed or concealed conduit from walls or ceilings, at intervals required by Code but not to exceed intervals of 5'-0" for electrical metallic tubing and 10'-0" for rigid steel conduit, with approved galvanized iron clamps or hangers. Devices attached to masonry or slabs shall be secured with inserts or bolts or lead expansion sleeves. Where two or more conduits run adjacent, they shall be installed on gang hangers. To be used in all locations 12' below finished floor,

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

using 2 holes strips every 18" from each end, and center on sections 7' or greater.

- B. Cable Clamps: Provide cable clamps in vertical conduit riser at intervals prescribed by the National Electric Code.
- C. Limitations: Wire, pipe straps, nails, ceiling construction or other means shall not be used for supporting conduit runs, exposed or in suspended ceilings, nor shall they be strapped to other piping.

3.03 CONDUIT AND RACEWAY INSTALLATION

- A. Larger Sizes: The conduit sizes indicated on the drawings may be increased, if required, to facilitate the pulling of cables.
- B. Accessories: Provide junction boxes or pull boxes where shown on the drawings and where necessary to avoid excessive runs or too many bends between outlets. Where raceways are routed concealed in above grade concrete or masonry construction, pull boxes shall be provided if the total number of bends exceeds 180° or the length of run exceeds 100 feet. Additional pull boxes shall be provided as necessary to facilitate installation of cables or conductors. All such pull boxes shall be accessible after completion.
- C. Grouting: Grout around all conduits passing through walls, except where fire stops are used.
- D. Fire Stops: Provide fire stops wherever conduits pass through fire rated walls (elevator shaft and stairwells) or floor slabs. Install in strict accordance with manufacturer's instructions.
- E. Empty Raceways: Provide empty raceways where indicated on the drawings. An insulated plastic pull wire shall be pulled into each empty raceway and left for future use.
- F. Raceways run underground shall be a minimum of 36 inches below grade or paving.
- G. Where raceways are run below grade and in parallel configuration (e.g. service entrance or feeders exceeding 400 amps), such raceways shall be racked on conduit spacers manufactured for this purpose. Spacers shall be located at maximum spacing of 5'-0" along conduit run. Spacers shall be constructed so that conduits maintain a separation of 7.5 inches center to center.

END OF SECTION

SECTION 270000

TELECOM COMMUNICATIONS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of General Requirements/Provisions shall be considered a part of this section and shall have the same force as if printed herein full. In addition, all information related to communications infrastructure that is documented in the architectural, structural, mechanical, and electrical drawings/documents shall be included as part of the Communications documents.
- B. The telecommunications voice, data & coax & fiber cabling within these specifications may be provided by a telecommunication contractor TSC. If a separate contractor is performing the work, it is extremely important that the TSC review all the drawings and specifications provided in division 270000, 280000 and any other low voltage specifications or drawings here in.
- C. The TSC shall conform to the same requirements written both in this section and 280501 Security Electronics General.

1.02 QUALITY ASSURANCE

- A. Specifications, Standards and Codes: All work shall be in accordance with the following:
 - 1. The 2011 edition of the National Electrical Code (NFPA 70)
 - 2. American National Standards Institute (ANSI)
 - 3. National Electrical Manufacturers Association (NEMA)
 - 4. Telecommunications Industries Association (TIA)
 - 5. Electronic Industries Association (EIA)
 - 6. Institute of Electrical & Electronics Engineers (IEEE)
 - 7. Underwriters Laboratories (UL)
 - 8. American Standards Association (ASA)
 - 9. Federal Communications Commission (FCC)
 - 10. Occupational Safety and Health Administration (OSHA)
 - 11. American Society of Testing Material (ASTM)
 - 12. Americans with Disabilities Act (ADA)
 - 13. Local city and county ordinances governing electrical work
 - 14. In the event of conflicts, the more stringent provisions shall apply.
- B. The ESC scope of work shall consist of, but not be limited to the following as defined in the details of this division of the specifications and as shown on the plans.
 - 1. Firestopping
 - 2. Pathways
 - 3. Underground Conduits
 - 4. Identification for Telcom and Security Systems
 - 5. Commissioning for all Systems
 - 6. Entrance Protection
 - 7. Terminal Blocks and Patch Panels
 - 8. Fiber Optic Backbone
 - 9. Copper Horizontal Cable
 - 10. Faceplates and Connectors
 - 11. Patch Cords and Work Station Cords
 - 12. Wireless Access Points and WIFI units

1.03 SCOPE

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. The work to be done under this section of the Specifications shall include the furnishing of labor, material, equipment and tools required for the complete installation of the work indicated on the Drawings and as specified herein.
- B. All materials, obviously a part of the Communications Infrastructure and necessary to its proper operation, but not specifically mentioned and shown on the Drawings, shall be furnished and installed without additional charge.
- C. The Drawings and Specifications are complementary to each other and what is called for by one shall be as binding as if called for by both. If a discrepancy exists between the Drawing and Specifications, the higher cost shall be included, and the engineer shall be notified of the discrepancy.

1.04 WORK INCLUDED

- A. The Communications Infrastructure installed and work performed under this Division of the Specifications shall include but not necessarily be limited to the following:
 - A. Voice/Data Cabling Infrastructure
 - B. CATV Cabling Distribution System
 - C. Wireless Access System
 - D. Communications conduits, raceways, racks, cabinets and equipment mounting boards
 - E. Grounding and Bonding
 - F. Underground raceway excavation, backfill, and compaction
 - G. Concrete work for duct banks, maintenance holes, handholes, vaults and restoration.

1.05 DEFINITIONS

- A. Terms: The following definitions of terms supplement those of the General Requirements and are applicable to Division 27 - Communications:
- B. Provide: As used herein shall mean “furnish, install and test (if applicable) complete.”
- C. Infrastructure: As used herein shall mean cable, conduit, raceway, cable tray or j-hooks with all required boxes, fittings, connectors, and accessories; completely installed.
- D. Work: As used herein shall be understood to mean the materials completely installed, including the labor involved.
- E. TSC – TeleCommunication System Contractor

1.06 DRAWINGS

- A. Drawings are generally diagrammatic and show the arrangement and location of pathways, outlets, support structures and equipment. The Contractor shall carefully investigate the structural and finish conditions affecting his work and arrange his work accordingly. Should conditions on the job make it necessary to make adjustments to pathways or materials, the Contractor shall so advise the Engineer and secure approval before proceeding with such work.
- B. Where exact locations are required by equipment for stubbing-up and terminating conduit concealed in floor slabs, the Contractor shall request shop drawings, equipment location drawings, foundation drawings, and any other data required by him to locate the concealed conduit before the floor slab is poured.
- C. Materials, equipment or labor not indicated but which can be reasonably inferred to be necessary for a complete installation shall be provided. Drawings and Specifications do not undertake to indicate every item of material, equipment, or labor required to produce a complete and properly operating installation.
- D. The right is reserved to make reasonable changes in locations of equipment indicated on Drawings prior to rough-in without increase in contract cost.
- E. The Contractor shall not reduce the size or number of conduit runs indicated on the Drawings without the written approval of the Engineer.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- F. Any work installed contrary to Contract Drawings shall be subject to change as directed by the Engineer, and no extra compensation will be allowed for making these changes.
- G. The location of equipment, support structures, outlets, and similar devices shown on the Drawings are approximate only. Do not scale Drawings. Obtain layout dimensions for equipment from Architectural plans unless indicated on Communications plans.
- H. Schematic diagrams shown on the Drawings indicate the required functions only. The technology of a particular manufacturer may be used to accomplish the functions indicated without exact adherence to the schematic Drawings shown. Additional labor and materials required for such deviations shall be furnished at the Contractor's expense.
- I. Verify the ceiling type, ceiling suspension systems, and clearance above hung ceilings prior to ordering cabling and associated hardware. Notify the Engineer of any discrepancies.
- J. Review all architectural drawings for modular furniture.
- K. Portions of these Drawings and Specifications are abbreviated and may include incomplete sentences. Omissions of words or phrases such as "the Contractor shall," "shall be," "as indicated on the Drawings," "In accordance with," "a," "the" and "all are intended" shall be supplied by inference.

1.07 SUBMITTALS

- A. Submit for approval, details of all materials, equipment and systems to be furnished. Work shall not proceed without the Owner and/or the Project Manager's approval of the submitted items. Three (3) copies of the following shall be submitted:
 - 1. Submittals for individual systems and equipment assemblies that 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, reviewed or stored, and such submittals will not be returned except at the request and expense of the Contractor.
 - 2. Contractor shall generate shop drawings. Modify reviewed and accepted shop drawings to include revisions based upon completion of work. Submit shop drawings with record drawings on hard copy.
 - 3. Shop drawings shall include equipment racks, patch panels, termination blocks, connection details, rack mounting details and any other details not included in the construction drawings.
- B. Any materials and equipment listed that are not in accordance with Specification requirements may be rejected.
- C. The approval of material, equipment, systems and shop drawings is a general approval subject to the Drawings, Specifications and verification of all measurements at the job. Approval does not relieve the Contractor from the responsibility of shop drawing errors. The Contractor shall carefully check and correct all shop drawings prior to submission for approval.

1.08 QUALITY ASSURANCE

- A. Equipment and materials required for installation under these Specifications shall be the current model and new (less than one [1] year from the date of manufacture), unused and without blemish or defect.
- B. Equipment shall bear labels attesting to Underwriters Laboratories, where subject to label service. Manufacturers of equipment and materials pertinent to these items shall have been engaged in the manufacture of said equipment a minimum of three (3) years and, if so directed by the Owner, be able to furnish proof of their ability by submitting affidavits and descriptive data about their product including size and magnitude comparable to requirements specified herein.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1.09 CONTRACTOR QUALIFICATION

- A. The TSC Contractor shall have total responsibility for the coordination and installation of the work shown and described in the Drawings and Specifications. The Contractor shall be a company specializing in the design, fabrication and installation of integrated communications systems.
- B. Communications Systems specified shall be installed under the direction of a qualified Contractor. Qualification requirements shall include submittal by the Contractor to the Architect of the following:
 - 1. List of previous projects of this scope, size and nature; including names and sizes of projects, description of work, time of completion and names of contact persons for reference.
 - 2. Shall certify that they are manufacturer-authorized for work to be performed.
- C. Contractor must employ at least one (1) full-time Registered Communications Distribution Designer (RCDD). The RCDD shall be a W2 employee and not a subcontractor.
- D. The TSC shall not be a subcontractor to the ESC or the Electrical Contractor. The TSC shall be fully licensed and bonded to perform the work listed on the TS drawings and division 27 specifications.

1.10 COORDINATION WITH OTHER TRADES

- A. The TSC shall coordinate communications work with that of other sections as required to insure that the entire communications work will be carried out in an orderly, complete and coordinated fashion.
- B. The TSC shall coordinate with the ESC and the electrical contractor for underground conduits and for systems cabling.

1.11 SITE INVESTIGATION

- A. Prior to submitting bids of the project, visit the site of the work to become aware of existing conditions that may affect the cost of the project. Where work under this project requires extension, relocation, reconnections or modifications to existing equipment or systems, the existing equipment or systems, shall be restored to their original condition before the completion of this project.

1.12 PERMITS

- A. Obtain all permits and inspections for the installation of this work and pay all charges incident thereto. Deliver to the Owner all certificates of said inspection issued by authorities having jurisdiction.

1.13 PREQUALIFICATION REQUIREMENTS

- A. All TSC's must be pre-approved and listed. TSC's not listed as being approved that desire to bid the project must request approval and shall submit the following qualification information to the Architect in writing no later than ten (10) days prior to bid. Request received after this time will not be considered under any condition. If approval is received, acknowledgment will be by the noted special addendum. Verbal approval will not satisfy the right to bid. The TSC shall be named and listed on the bid form. Any bid forms containing the name of any TSC not listed and pre-qualified will not be considered and will be thrown out as a non-qualifying bid. All TSC's shall submit all information exactly as herein requested or approval will not be considered. Disqualification shall immediately exist if the request is submitted in a manner inconsistent and or incomplete as requested following. Disqualification shall also exist if in the opinion of the Architect and or Consultant, the information submitted is inaccurate or does not satisfy the qualification requirements.
- B. The Architect / Consultant reserve the right to disqualify and or not approve any ESC for any reason if they deem it to be in the best interest of the Owner.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- C. The ESC shall be a true systems integrator specializing in the design, manufacture, installation and servicing of integrated security electronics and communication control systems.
- D. The evaluation of each perspective TSC's qualifications will be strictly and solely based on the qualification proposal. The proposal's format must be on a paragraph-by-paragraph basis to the items listed following:
 - 1. Provide a history of the company that reflects accurately the length of time the company has been licensed and performed services of an TSC. The company shall have been in business under and incorporated under the name submitted in the proposal for a minimum of ten (10) years. For companies with multiple offices, the proposal must contain information based only on the location that will be responsible for the entire management and operations for this project from award of bid through the warranty period.
 - 2. Provide a complete company organizational chart to include the owner(s), officers and key individuals.
 - 3. Provide an organizational chart to include the names and positions of the Project Manager, Engineering Manager, the principal Project Engineer, the Project Programmer(s), the Manufacturing Manager, the Project Superintendent, the Lead Technician, all Field Technicians and Technical Support Staff that are to be assigned to this project.
 - 4. For each of the individuals listed in the organizational chart, provide complete resumes and a delineation of each individual's responsibilities for this project. The resumes must include information about the individual's education, electronics systems detention experience, systems integration capabilities, factory training and certification and the length of time employed by the TSC. Provide a copy of each individual's manufacturer's certificate of certification for all systems, equipment and software for which each individual that will be involved.
 - 5. The TSC must employ and provide the names and resumes of the following resident staff personnel in its employ and such individuals must have oversight of the project. The resumes shall include the same information as listed in paragraph 4 above plus a copy of the certificates of certification required for each:
 - a. A Low Voltage Applications Employee.
 - b. A UL Trained Applications Employee.
 - 6. Provide a list of the ten (10) most recently completed projects involving the major systems similar to those described in these specifications for which the TSC has been the integrator and having furnished and installed. Each project shall be of the size, complexity and requirements of this project and must have been in successful operation for a minimum period of three (3) years. If more than ten (10) projects are listed, only the first ten (10) will be reviewed. Provide the following information for each project:
 - a. Project name and location.
 - b. Date project was completed.
 - c. Total project value.
 - d. Contract amount to the TSC.
 - e. Names of the TSC's Project Manager, Principal Project Employee and Field Superintendent.
 - f. Name and telephone number of Architect.
 - g. Name and number of the Security Consultant.
 - h. Name and number of the Architect's Project Manager and Site Project Engineer.
 - i. Name and number of an individual (preferably the maintenance manager) at each facility who is familiar with the operation,

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- performance and maintenance of the facility's security electronic system. Reference must be current or the TSC will be considered non-responsive.
- j. List and description of all systems on the project and the approximate value of each.
7. Provide a list of all completed projects, which the TSC has been, the integrator and having furnished and installed. Provide the following information for each project:
 - a. Project name and location.
 - b. Date project was started.
 - c. Total project value.
 - d. Contract amount to the TSC.
 8. Provide a list of all current projects, which the TSC is the integrator and is furnishing and installing. Provide the following information for each project:
 - a. Project name and location.
 - b. Date project was started.
 - c. Total project value.
 - d. Contract amount to the TSC.
 9. Provide a list of all projects, which the TSC was involved in any form of litigation. Provide the following information for each project:
 - a. Project name and location.
 - b. Date project was started or completed.
 - c. Total project value.
 - d. Contract amount to the TSC.
 10. Provide a list of all projects, which the TSC was assessed liquidated damages, even those projects for which the TSC did not have to pay a claim. Provide the following information for each project:
 - a. Project name and location.
 - b. Date project was started.
 - c. Total project value.
 - d. Contract amount to the TSC.
 11. Provide a current independently audited and certified financial statement showing a consolidated net worth of \$1,000,000.00.
 12. Provide a letter from the Surety Company reflecting the Surety Company's history with the TSC. The letter must state the position of the Surety relative to providing a 100% payment and performance bond should a contract be awarded to the TSC. The letter must be an original and include a current issue date and reference this project and state the estimated value of the ESC contract. Even though the TSC may be a subcontractor to the DEC, the TSC will be required to provide both a bid bond to bid (cashiers check or bank letter will not be acceptable) and a performance and payment bond in order to perform the work.
 13. Provide UL certificate and UL qualification number attesting to the TSC's approval and certification by UL that they are a UL listed Industrial Control Panel manufacturer.
 14. Provide UL certificate and UL qualification number attesting to the TSC's approval and certification by UL that they are a UL listed Information Technology Equipment supplier.
 15. Provide BICSI certificate and BICSI qualification attesting to the TSC's approval and that they are BICSI authorized.
 16. The TSC shall confirm in writing that they will have qualified personnel available to be on the project site daily for any and all coordination purposes throughout the total duration of the project. Provide the name(s) and resume(s) and the individual(s).
- E. Systems, equipment and products specified in this division shall be engineered,

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- programmed, manufactured and assembled, installed and serviced by an approved TSC.
- F. All work is to be performed in strict accordance to any and all applicable codes, ordinances, regulations and standards; Federal, state, local and otherwise including but limited to the following:
1. National Electrical Code (NEC), latest edition
 2. National Fire Protection Association (NFPA)
 3. Factory Mutual System (FM)
 4. Electronics Institute of America (EIA)
 5. BISCO
 6. Telecommunications Industry Association (TIA)
 7. Underwriters Laboratory (UL)
- G. Provide a statement attesting that the ESC has reviewed the entire set of bid documents not just Division 27 and understands the specified system and project requirements.
- H. Provide a riser diagram for each system specific to this project depicting all relevant details and information inclusive of but not limited to equipment layout and locations, conduit routing and sizing, cable and wiring requirements and power requirements.
- I. Provide for each system specified a delineation of the task required to be performed by the TSC. Provide technical proposals reflecting the TSC's experience in the field of scope.
- J. Provide a narrative description of all software to be used including programmable logic controllers, closed circuit television and video visitation.
- K. Provide from each manufacturer of each system certification that the ESC and its applicable personnel have been factory trained and certified to manufacture /assembly, install and service equipment contained in each system.
- L. Refer to each individual section of this division of the specification for the list of acceptable manufacturers. If the TSC preparing the proposal desires to request a substitute, he must do so within the confines of these proposal qualification requirements in writing twenty-one (21) days prior to the bid date. Manufacturers and equipment substitution proposal request must be submitted noting section, page, paragraph and item with a detailed cross-referencing and comparison. For proposed substitutions submit the following information exactly as requested:
1. Name of manufacturer
 2. Address of manufacturer
 3. Phone number of manufacturer
 4. Trade name
 5. Model and catalog designation
 6. Performance and test data
 7. Referenced standards
 8. Warranties
 9. Material construction
 10. Finish
- M. Electronic components shall be from manufacturers who at present have not less than ten (10) years continuous successful experience in the design and manufacture of the type products required for this project.
- N. In order to meet the high standard requirements for Quality Assurance, proprietary and custom systems are not acceptable. Integrators listed as being approved and/or Integrators having been approved by addendum shall use products as specified and defined by these specifications.
- O. All low voltage components shall be nationally available, off the shelf products.

PART 2 - PRODUCTS

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2.01 SUBSTITUTIONS

- A. Where equipment is identified by manufacturer and catalog number, it shall be as the base of requirements for quality and performance. Where manufacturers for equipment are identified by name, the Contractor may submit for approval, similar equipment of other manufacturers as substitution. The Engineer's decision as to whether the submitted equipment is acceptable shall be final and binding.
- B. All changes necessary to accommodate the substituted equipment shall be made at the Contractor's expense, and shall be as approved by the Engineer. Detailed drawings indicating the required changes shall be submitted for approval at the time the substitution is requested.
- C. If substitutions are made in lieu of device specified; form, dimension, design and profile shall be submitted to the Engineer for approval.
- D. Submit request for approval of substitute materials in writing to the Architect at least ten days prior to bid opening.

2.02 MATERIALS

- A. All materials used in this work shall be new and shall bear the inspection label of Underwriters' Laboratories Inc. or certification by other recognized laboratory.
- B. The published standards and requirements of the Telecommunications Industries Association (TIA), National Electrical Manufacturers Association (NEMA), the American National Standard Institute (ANSI), the Institute of Electrical and Electronic Engineers (IEEE), and the American Society of Testing Materials (ASTM), are made a part of these Specifications and shall apply wherever applicable.
- C. Materials and equipment furnished shall be of current production by manufacturers regularly engaged in the manufacture of such items, for which replacement parts are available.
- D. When more than one unit of the same class of equipment or material is required, such units shall be the products of a single manufacturer or partner manufacturers that offer a certified solution.
- E. Components of an assembled unit need not be products of the same manufacturer, but must offer a certified end-to-end solution.
- F. Manufacturers of equipment assemblies, which include components made by others, shall assume complete responsibility for the final assembled unit.
- G. Components shall be compatible with each other and with the total assembly for the intended service.

PART 3 - EXECUTION

3.01 EXAMINATION OF CONDITIONS

- A. Prior to the start of work, the Contractor shall carefully inspect the installed work of other trades and verify that such work is complete to the point where installation may properly commence. Start of work indicates acceptance of conditions.
- B. Install equipment in accordance with applicable codes and regulations, the original design and the referenced standards.
- C. In the event of a discrepancy, immediately notify the Project Manager.
- D. Do not proceed with installation until unsatisfactory conditions and discrepancies have been fully resolved.

3.02 PROTECTION OF SYSTEMS AND EQUIPMENT

- A. Protect materials and equipment from damage during storage at the site and throughout the construction period. Equipment and materials shall be protected

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

during shipment and storage against physical damage, dirt, theft, moisture, extreme temperature and rain.

- B. Damage from rain, dirt, sun and ground water shall be prevented by storing the equipment on elevated supports and covering the sides with securely fastened protective rigid or flexible waterproof coverings.
- C. During installation, equipment shall be protected against entry of foreign matter on the inside and be vacuum cleaned both inside and outside before testing, operating or painting.
- D. As determined by the Project Manager, damaged equipment shall be fully repaired or shall be removed and replaced with new equipment to fully comply with requirements of the Contract Documents. Decision of the Project Manager shall be final.
- E. Damaged paint on equipment and materials shall be repainted with painting equipment and finished with the same quality of paint and workmanship as used by the manufacturer.

3.03 ACCESS TO EQUIPMENT

- A. Equipment shall be installed in location and manner that will allow convenient access for maintenance and inspection.
- B. Working spaces shall be not less than specified in the National Electrical Code (NEC) for voltages specified.
- C. Where the Project Manager determines that the Contractor has installed equipment not conveniently accessible for operation and maintenance, equipment shall be removed and reinstalled, one time only, as directed by the Project Manager, at no additional cost to the Owner. "Conveniently accessible" is defined as being capable of being reached without the use of ladders or without climbing or crawling under or over obstacles such as motors, pumps, belt guards, transformers, piping and duct work.

3.04 CLEANING

- A. During construction, and prior to Owner acceptance of the building, remove from the premises and dispose of packing material and debris caused by communications work.
- B. Remove dust and debris from interiors and exteriors of electrical equipment. Clean accessible current carrying elements prior to being energized.

3.05 COMPLETION

- A. General: Upon completion of the work, remove excess debris, materials, equipment, apparatus, tools and similar items. Leave the premises clean, neat and orderly.
- B. Results Expected: Systems shall be complete and operational and controls shall be set and calibrated. Testing, start-up and cleaning work shall be complete.
- C. Maintenance Materials: Special tools for proper operation and maintenance of the equipment provided under this Specification shall be delivered to the Owner.

3.06 TESTING AND VERIFICATION

- A. See specific Division 27 sections for testing parameters of sub-systems.
- B. The Contractor shall verify that requirements of this Specification are met. Verification shall be through a combination of analyses, inspections, demonstrations and tests, as described below.
- C. Verification by inspection includes examination of items and comparison of pertinent characteristics against the qualitative or quantitative standard set forth in the Specifications. Inspection may require moving or partially disassembling the item to accomplish the verification, included as part of the work at no additional cost to the Owner.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- D. The Contractor shall verify by formal demonstrations or tests that the requirements of this Specification have been met. The Contractor shall demonstrate that the communications systems, components and subsystems meet Specification requirements in the “as-installed” operating environment during the “System Operation Test.” Even though no formal environmental testing is required, the Contractor shall measure and record temperature, humidity and other environmental parameters and the environmental conditions, which were encountered during the “System Operation Test.”
- E. The Contractor shall carefully plan and coordinate the final acceptance tests so that tests can be satisfactorily completed. The Contractor shall provide necessary instruments, labor and materials required for tests, including the equipment manufacturer's technical representative and qualified technicians in sufficient numbers to perform the tests within a reasonable time period.
- F. The Contractor shall satisfy all items detailed in the final acceptance check-off list (punch list). The list shall be a complete representation of specified installation requirements. At the time of final acceptance punch list items shall be corrected until the system is found to be acceptable to the Owner and the Project Manager.
- G. After the Contractor systems have been installed and tested, the completed test plan shall be signed by the Communications Contractor Project Manager and submitted for approval.

END OF SECTION

SECTION 270510

FIRESTOPPING FOR TELECOMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Firestopping for Communications Systems.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this Specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Firestopping Manufacturer(s)
 - 1. Flamestopper Thru-Wall Fitting - Wiremold Company (Firestop Devices)
 - 2. Unique Firestop Products (Firestop Devices)
 - 3. STI Firestop Products (Firestop Devices, Putties, Caulks, Sealants, etc.)
 - 4. Hilti (Putties, Caulks, Sealants, etc.)

2.02 TYPES OF PRODUCTS

- A. Sealants
 - 1. Intumescent Firestop Sealants and Caulks
 - 2. Latex Firestop Sealant
 - 3. Acrylic Water-Based Sealant
 - 4. Silicone Firestop Sealants and Caulks
 - 5. Firestop Putty
 - 6. Firestop Collars
 - 7. Wrap Strips
 - 8. 2-Part Silicone Firestop Foam
 - 9. Firestop Mortar
 - 10. Firestop Pillows
 - 11. Elastomeric Spray
 - 12. Accessories:
 - 13. Forming/Damming Materials: Mineral fiberboard or other type as per manufacturer recommendation
- B. Firestop Devices
 - 1. Thru-Wall Fitting (Flamestopper by Wiremold)
 - a. The firestop device box shall be constructed of 16 gage G90 steel.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- b. The firestop device intumescent block shall be constructed of a graphite base material with expansion starting at 375°F and an unrestrained expansion between 6 to 12 times. The intumescent block shall be held securely by the box in order to prevent tampering and damage during installation.
 - c. The firestop device shall have doors which can be adjusted to prevent materials from penetrating the device if the device is empty or completely full. The doors shall be constructed of 16 gage G90 steel with No. 10-32 screws use to adjust opening size.
 - d. The firestop device shall be available for 2" and 4" trade size EMT conduit.
 - e. The firestop device shall be available in safety yellow powder coat, custom colors and an unpainted galvanized finish.
- 2. Threaded Firestop Device (Unique Firestop Products)
 - a. Threaded steel sleeve device incorporating flat washers secured by threaded device shall be installed around cables. The device shall be available in 1, 2 and 4-inch sizes. Maximum diameter of the wall penetration for 1, 2 and 4-inch sizes shall be 1-1/4, 2-7/16 and 4-1/2 inches respectively.
 - 3. Smooth Firestop Device (Unique Firestop Products)
 - a. Smooth steel sleeve device incorporating flat washers secured by sliding compression couplers. The device shall be available in 1, 2 and 4-inch sizes. Maximum diameter of the wall penetration for 1, 2 and 4-inch sizes shall be 1-1/4, 2-7/16 and 4-1/2 inches respectively.
 - 4. Split-Sleeve Firestop Device (Unique Firestop Products)
 - a. Threaded steel sleeve halves incorporating split couplings and slotted washers to fit the specific diameter of the opening. The device shall be available in 1, 2 and 4-inch sizes. Maximum diameter of the wall penetration for 1, 2 and 4-inch sizes shall be 1-1/4, 2-7/16 and 4-1/2 inches respectively.
 - 5. Fire Rated Cable Pathway (STI EZ-PATH)
 - a. Fire rated cable pathway device modules shall be comprised of steel raceway with intumescent foam pads allowing 0-100 percent cable fill.

2.03 UL CLASSIFICATION

- A. Thru-Wall Fitting - The firestop device for use in through-penetration firestop systems shall have been examined and tested by Underwriters Laboratories Inc. to UL1479 (ASTM E 814) and bear the U.S. and Canadian UL Classification Mark.
- B. Threaded, Smooth and Split-Sleeve Firestop Devices - Firestopping sealants and devices shall be used together as a firestop system. All firestop systems shall bear a UL Classification system number. UL Classification system numbers are as follows:
 - 1. Threaded Firestop System
 - a. Block Wall - W-J-3049
 - b. Dry Wall - W-L-3138
 - 2. Threaded Firestop System (Vertical)
 - a. Slab - F-A-3010
 - 3. Smooth Firestop System
 - a. Block Wall - W-J-3048
 - b. Dry Wall - W-L-3137
 - 4. Split-Sleeve Firestop System
 - a. Block Wall - W-J-3047

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

b. Dry Wall - W-L-3136

2.04 FIRESTOPPING SYSTEMS

- A. Thru-Wall Fitting Firestop System:
 - 1. The device shall be classified for use in one-, two-, three, and four-hour rated gypsum, concrete and block walls and provide a maximum L rating of six cfm. The devices shall also been tested by Underwriters Laboratories Inc. to UL2043 and determined to be suitable for use in air handling spaces.
- B. Threaded, Smooth and Split-Sleeve Firestop Systems:
 - 1. Shall conform to both Flame (F) and Temperature (T) ratings as required by local building codes and as tested by nationally accepted test agencies per ASTM E814 or UL 1479 fire tests in a configuration that is representative of field conditions.
 - 2. The F rating must be a minimum of one (1) hour but not less than the fire resistance rating of the assembly being penetrated. T rating when required by code authority shall be based on measurement of the temperature rise on penetrating item(s). The fire test shall be conducted with a minimum positive pressure differential of 0.01 inches of water column.
 - 3. For joints, must be tested to UL 2079 with movement capabilities equal to those of the anticipated conditions
- C. Firestopping materials and systems must be capable of closing or filling through-openings created by 1) the burning or melting of combustible pipes, cable jacketing, or pipe insulation materials, or 2) deflection of sheet metal due to thermal expansion (electrical & mechanical duct work).
- D. Firestopping material shall be asbestos and lead free and shall not incorporate nor require the use of hazardous solvents.
- E. Firestopping sealants must be flexible, allowing for normal pipe movement.
- F. Firestopping materials shall not shrink upon drying as evidenced by cracking or pulling back from contact surfaces.
- G. Firestopping materials shall be moisture resistant, and may not dissolve in water after curing.

PART 3 - EXECUTION

3.01 CONDITIONS REQUIRING FIRESTOPPING

- A. General
 - 1. Provide firestopping for conditions specified whether or not firestopping is indicated, and if indicated, whether such material is designed as insulation, safing, or otherwise.
- B. Through-Penetrations
 - 1. Firestopping shall be installed in all open penetrations and in the annular space in all penetrations in any bearing or non-bearing fire-rated barrier.
- C. Membrane-Penetrations
 - 1. Where required by code, all membrane-penetrations in rated walls shall be protected with firestopping products that meet the requirements of third party time/temperature testing.
- D. Construction Joints/Gaps
 - 1. Firestopping shall be provided between the edges of floor slabs and exterior walls, between the tops of walls and the underside of floors, in the control joint in masonry walls and floors and in expansion joints.
- E. Smoke-Stopping
 - 1. As required by the other sections, smoke-stops shall be provided for through-penetrations, membrane-penetrations, and construction gaps with a material approved and tested for such application.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3.02 EXAMINATION

- A. Examine the areas and conditions where firestops are to be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected.
- B. Verify that environmental conditions are safe and suitable for installation of firestop products.
- C. Verify that all pipes, conduit, cable, and other items that penetrate fire-rated construction have been permanently installed prior to installation of firestops.

3.03 INSTALLATION

- A. General
 - 1. Installation of firestops shall be performed by an applicator/installer qualified and trained by the manufacturer. Installation shall be performed in strict accordance with manufacturer's detailed installation procedures.
 - 2. Apply firestops in accordance with fire test reports, fire resistance requirements, acceptable sample installations, and manufacturer's recommendations.
 - 3. Unless specified and approved, all insulation used in conjunction with through-penetrants shall remain intact and undamaged and may not be removed.
 - 4. Seal holes and penetrations to ensure an effective smoke seal.
 - 5. In areas of high traffic, protect firestopping materials from damage. If the opening is large, install firestopping materials capable of supporting the weight of a human.
 - 6. Insulation types specified in other sections shall not be installed in lieu of firestopping material specified herein.
 - 7. All combustible penetrants (e.g. non-metallic pipes or insulated metallic pipes) shall be firestopped using products and systems tested in a configuration representative of the field condition.
- B. Dam Construction
 - 1. When required to properly contain firestopping materials within openings, damming or packing materials may be utilized. Combustible damming material must be removed after appropriate curing. Noncombustible damming materials may be left as a permanent component of the firestop system.

3.04 FIELD QUALITY CONTROL

- A. Prepare and install firestopping systems in accordance with manufacturer's printed instructions and recommendations.
- B. Follow safety procedures recommended in the Material Safety Data Sheets.
- C. Finish surfaces of firestopping that are to remain exposed in the completed work to a uniform and level condition.
- D. All areas of work must be accessible until inspection by the applicable Code Authorities.
- E. Correct unacceptable firestops and provide additional inspection to verify compliance with this Specification.

3.05 CLEANING

- A. Remove spilled and excess materials adjacent to firestopping without damaging adjacent surfaces.
- B. Leave finished work in a neat and clean condition with no evidence of spill-overs or damage to adjacent surfaces.

3.06 IDENTIFICATION

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 270526

GROUNDING & BONDING FOR TELECOM SYSTEMS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Grounding and Bonding for Communications Systems.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this Specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Equipment Grounding Conductor Manufacturer(s)
 - 1. Southwire
 - 2. Or Approved Equal
- B. Approved Grounding Lug Manufacturer(s)
 - 1. Burndy
 - 2. Thomas & Betts
 - 3. Or Approved Equal
- C. Approved Grounding Busbar Manufacturer(s)
 - 1. Chatsworth Products, Inc.
 - 2. B-Line
 - 3. Harger

2.02 GROUNDING CONDUCTORS

- A. Grounding Conductor
 - 1. Construction shall be Type THHN copper conductors, insulated with heat and moisture resistant PVC over which a UL listed jacket is applied.
 - 2. Jacket color shall be green or black. Black jacketed cable shall be identified at each termination point with a wrap of green tape.

2.03 GROUNDING LUGS

- A. Grounding Lugs and Hardware
 - 1. Grounding lugs shall be 2-hole and installed with a crimper that when properly executed the die of the crimper impresses the die # on the lug base. All lugs shall be sleeved with clear heat-shrink to allow for inspection of the crimp. Silicon bronze or stainless steel bolts and washers shall be used to install lugs to equipment. Exothermic welding is also allowed.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2.04 GROUNDING BUSBARS

A. Grounding Busbar

1. The grounding busbar shall be made of 1/4" thick solid copper.
2. The grounding busbar shall be installed with minimum clearance, 1" offsets and 1-1/2" insulators.
3. The grounding busbar shall accommodate 2-hole compression lugs.
4. The grounding busbar shall meet or exceed ANSI/TIA-607-B requirements.

PART 3 - EXECUTION

3.01 GROUNDING

- A. The facility shall be equipped with a Communications Bonding Backbone (TBB). This backbone shall be used to ground all communications cable shields, equipment, racks, cabinets, raceways, and other associated hardware that has the potential to act as a current carrying conductor. The TBB shall be installed independent of the building's electrical and building ground and shall be designed in accordance with the recommendations contained in the ANSI/TIA-607-B Telecommunications Bonding and Ground Standard.
- B. The main entrance facility/equipment room in each building shall be equipped with a telecommunications main grounding busbar (TMGB). Each telecommunications room (TR) shall be provided with a telecommunications ground busbar (TGB). The TMGB shall be connected to the building electrical entrance grounding facility.
- C. All racks, metallic backboards, cable sheaths, metallic strength members, splice cases, cable trays, etc. entering or residing in the MC/IC/TC shall be grounded to the respective TGB or TMGB using a minimum #6 AWG stranded copper bonding conductor and compression lugs.
- D. All wires used for communications grounding purposes shall be identified with a green insulation. Non-insulated wires shall be identified at each termination point with a wrap or green tape. All cables and busbars shall be identified and labeled in accordance with the ANSI/TIA-606-A.
- E. See Section 27 05 43 - Underground Ducts and Raceways for Communications Systems for underground duct and raceway systems ground requirements.

3.02 IDENTIFICATION

- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 270528

PATHWAYS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Pathways for Communications Systems.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Rigid/Intermediate Conduit Manufacturer(s)
 - 1. Allied
 - 2. Triangle
 - 3. Wheatland
 - 4. Youngstown
- B. Non-Metallic (PVC) Manufacturer(s)
 - 1. Carlon
 - 2. Georgia Pipe Company
 - 3. Or Approved Equal
- C. Electrical Metallic Tubing (EMT) Manufacturer(s)
 - 1. Allied
 - 2. Triangle
 - 3. Wheatland
 - 4. Youngstown
- D. Electrical Non-Metallic Tubing (ENT) Manufacturer(s)
 - 1. Carlon
 - 2. Or Approved Equal
- E. EMT Fittings Manufacturer(s)
 - 1. Thomas & Betts
 - 2. Steel City
 - 3. Or Approved Equal
- F. ENT Fittings Manufacturer(s)
 - 1. Carlon
 - 2. Or Approved Equal
- G. Innerduct/Inner-Conduit Channel Manufacturer(s)
 - 1. Carlon

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2. Endot Industries
3. MaxCell
4. Petroflex
5. Eastern
- H. Metallic Communications Outlet Box Manufacturer(s)
 1. Steel City
 2. Raco
 3. Or Approved Equal
- I. Non-Metallic Communications Outlet Box Manufacturer(s)
 1. Thomas & Betts
 2. Carlon
 3. Or Approved Equal
- J. Pull Box Manufacturer(s)
 1. Hoffman
 2. OZ Gedney
 3. Or Approved Equal
- K. Approved Cable Hanger Manufacturer(s)
 1. Erico Products – Caddy
 2. B-Line
 3. Or Approved Equal
- L. Approved Tie Wrap/Velcro Strap Manufacturer(s)
 1. Leviton
 2. Panduit
 3. Or Approved Equal

2.02 CONDUIT

- A. Rigid and Intermediate Conduit
 1. Rigid conduit, intermediate conduit, couplings, locknuts, bushings, elbows and connectors shall be standard thread. All materials shall be steel. Set screw or non-threaded fittings are not permitted.
- B. Non-Metallic (PVC) Conduit
 1. Non-metallic conduit shall be heavy wall, Schedule 40 PVC.
 2. Couplings and connectors for non-metallic conduit shall be of the same material and be the product of the same manufacturer of the conduit furnished.
- C. Electrical Metallic Tubing (EMT)
 1. Electrical metallic tubing (EMT), couplings and connectors shall be steel. Malleable iron, pressure-cast or die-cast fittings are not permitted.
 2. Fittings for 2" EMT and smaller shall be steel set screw type, except where otherwise noted. Fittings for 2.5" and larger shall be steel set screw type with two (2) screws for connectors and four (4) screws for couplings. All connectors shall be insulated throat type.
- D. Electrical Non-Metallic Tubing (ENT)
 1. ENT shall be a pliable, non-metallic raceway manufactured of the same PVC material used for rigid non-metallic conduit.
 2. Fittings and outlet boxes shall be designed for use with ENT and listed by Underwriters Laboratories.
- E. Conduit Support
 1. Individual conduit hangers shall be galvanized spring steel specifically designed for the purpose and sized appropriately for the conduit type and diameter. Support individual conduits 1-1/2 inch and smaller with 1/4 inch threaded steel rods and use 3/8 inch rods for 2 inch and larger.
 2. Conduit support channels shall be 14 gauge galvanized (or equivalent treatment) channel sized for the amount of conduit to be supported.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

Channel suspension shall be 3/8" threaded steel rods. Attach suspension rods to structure with swivel type connectors. Conduit straps shall be spring steel type compatible with channel.

3. Conduit straps shall be single hole cast metal type or two hole galvanized metal type. Conduit clamps shall be spring steel type for use with exposed structural steel.
- F. Innerduct/Inner-Conduit Channel
1. Innerduct shall be corrugated plastic equipped with pull-string or mule tape.
 2. Inner-conduit channel (MaxCell) shall be 3-channel with each channel equipped with mule tape.
 3. See Drawings for innerduct / inner-conduit channel (MaxCell) details.

2.03 METALLIC COMMUNICATIONS OUTLET BOXES

- A. Metallic outlet boxes and device covers shall be galvanized steel not less than 1/16" thick.
- B. The dimensions of the metallic outlet box shall be 4" x 4" square with a minimum depth of 2-1/8".
- C. Metallic outlet boxes shall be equipped with single device covers (or two-device covers where needed). Where installed in plaster, gypsum board, etc., covers shall be raised to compensate for the thickness of the wall finish.
- D. Where metallic outlet boxes are to be empty for future use, blank coverplates shall be used.

2.04 NON-METALLIC COMMUNICATIONS OUTLET BOXES

- A. The non-metallic outlet box shall be thermoplastic and be rated according to the space it occupies.
- B. The dimensions of the non-metallic outlet box shall be approximately 4" x 4" square with a minimum depth of 2-1/8".
- C. Non-metallic outlet boxes shall be equipped with single device covers. Covers shall be raised to compensate for the thickness of the wall finish.
- D. Where non-metallic outlet boxes are to be empty for future use, blank faceplates shall be used.

2.05 PULL BOXES

- A. Pull boxes shall be constructed of galvanized steel with flat, removable covers fastened with plated steel screws.
- B. Pull boxes shall be equipped with keyhole screw slots in the cover to permit removal of the cover without extracting the screws.
- C. Pull boxes shall have provisions for grounding.

2.06 CABLE HANGERS

- A. J-Hooks
 1. J-hooks shall provide a bearing surface of sufficient width to comply with required bend radii of high-performance cables. J-hook shall be cULus Listed.
 2. J-hooks shall have flared edges to prevent damage while installing cables.
 3. J-hooks sized 1 5/16" and larger shall have a cable retainer strap to provide containment of cables within the hanger. The cable retainer strap shall be removable and reusable and be suitable for use in air handling spaces.
- B. Adjustable Non-Continuous Cable Support Sling

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1. Constructed from steel and woven laminate; sling length can be adjusted to hold up to 425 4-pair balanced twisted pair cables; rated for indoor use in non-corrosive environments. Rated to support Category 5 and higher cable, or optical fiber cable. Cable support sling shall be cULus Listed.
2. Adjustable non-continuous cable support sling shall have a static load limit of 100 lbs.
3. Adjustable non-continuous cable support sling shall be suitable for use in air handling spaces.

2.07 TIE WRAPS AND VELCRO STRAPS

A. Tie Wraps and Velcro Straps

1. Cables shall be fastened to support structures with tie wraps/Velcro straps.
2. Tie wraps/Velcro straps installed in air handling spaces must be plenum rated.
 - a. Non-plenum Tie Wrap color shall be black.
 - b. Plenum Tie Wrap color shall be red.
 - c. Non-plenum Velcro strap color shall be black.
 - d. Plenum Velcro strap color shall be red.

PART 3 - EXECUTION

3.01 PENETRATIONS

- A. Holes through concrete and masonry in new and existing structures shall be cut with a diamond core drill or concrete saw upon approval of the structural engineer of record for the base of building. Pneumatic hammer, impact electric, hand or manual hammer type drills shall not be allowed, except where permitted by the Project Manager as required by limited working space. X-ray all floor penetrations accordingly.
- B. Holes shall be located so as not to affect structural sections such as ribs or beams.
- C. Holes shall be laid out in advance. The Project Manager shall be advised prior to drilling through structural sections, for determination of proper layout.
- D. Structural Penetrations: Where conduits, wireways and other raceways pass through fire partitions, fire walls or walls and floors provide a code compliant effective barrier against the spread of fire, smoke and gases.
- E. All penetrations where conduit is not used shall be sleeved.
- F. No gaps or rough edges shall be allowed between wall and conduit/sleeve.

3.02 CONDUIT SYSTEM

- A. Conceal all conduits, except in unfinished spaces such as equipment rooms or as indicated by symbol on the Drawings.
- B. Leave all empty conduits with a 200 pound test nylon cord pull line.
- C. Flattened, dented, or deformed conduits are not permitted and shall be removed and replaced.
- D. Fasten conduit support device to structure with wood screws on wood, toggle bolts on hollow masonry, anchors as specified on solid masonry or concrete, and machine bolts, clamps, or spring steel clips, on steel.
- E. Install conduit with wiring, including homeruns as indicated on the Drawings. Any change resulting in a savings in labor or materials is to be made only in accordance with a contract change. Deviations shall be made only where necessary to avoid interferences and when approved by Engineer by written authorization.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- F. Conduit shall be run parallel or at right angles to existing walls, ceilings, and structural members.
- G. Attach backbone conduits larger than one-inch trade diameter to or from structure on intervals not exceeding twelve feet with conduit beam clamps, one-hole conduit straps or trapeze type support.
- H. Where conduits must pass through structural members obtain approval of Architect.
- I. Install all conduits or sleeves penetrating or routed within rated firewalls or fire floors to maintain fire rating of wall or floor. Conduit shall not be installed in rated floors or walls if it compromises or violates the fire rating of floor or wall. Refer to architectural documents.
- J. Provide expansion and deflection coupling where conduit passes over a building expansion joint.
- K. Service entrance conduits and feeder conduits in direct contact with earth shall be schedule 40, heavy wall PVC. All service entrance conduit elbows shall be galvanized rigid steel. Service entrance conduits installed exposed or concealed in walls or above ceilings shall be galvanized rigid steel (G.R.S.) or intermediate metal conduit (IMC). Service entrance conduits shall be installed "outside" of the building as defined by the N.E.C. Provide concrete encasement where required or as indicated on Drawings.
- L. All other conduit, unless specified herein, shall be electrical metallic tubing (EMT) or electrical non-metallic tubing (ENT). PVC conduit is not allowed in exposed or concealed areas, but only within concrete.
- M. Conduit Installations Within Slab/Floor
 1. Conduit shall be run following the most direct route between points.
 2. Conduit shall not be installed in concrete where the outside diameter is larger than 1/3 of the slab thickness.
 3. Conduits shall not be installed within shear walls unless specifically indicated on the Drawings. Conduit shall not be run directly below and parallel with load bearing walls.
 4. Protect each metallic conduit installed in concrete slab or conduits 1-1/2 inch and smaller passing through a concrete slab against corrosion where conduit enters and leaves concrete by wrapping conduit with vinyl all-weather electrical tape.
 5. Protect all conduits entering and leaving concrete floor slabs from physical damage during construction.
 6. Provide expansion fittings in all conduits where length or run exceeds 200 feet or where conduits pass through building expansion joints.
 7. Install all conduits penetrating or routed within rated fire floors to maintain the fire rating of the floor. Conduit shall not be installed in rated floors or walls if it compromises or violates the fire rating of floor or wall. Refer to architectural documents.
 8. Conduits installed within concrete floor slabs which are in direct contact with grade or which penetrate the building roof shall be galvanized rigid steel (G.R.S.), intermediate metal conduit (I.M.C.) or Schedule 40, heavy wall PVC.
- N. Communications cables shall not occupy conduits with power cables.
- O. Metallic conduits shall be grounded in accordance with ANSI/TIA-607-B.
- P. Conduit runs shall not have more than two (2) 90-degree bends between pull points.
- Q. Communications conduit system shall contain no condulets (also know as an LB).
- A. Rigid metal conduit (RMC) or intermediate metal conduit (IMC) shall be used for entrance conduits that exceed 50 feet into the building.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

B. Horizontal Conduits

1. Support horizontal conduits at intervals not exceeding ten feet and within three feet of each outlet, junction box, backboard, enclosure or cabinet. Support conduits from structural steel members with spring steel type or beam conduit clamps and to non-metallic structural members with one-hole conduit straps. For exposed conduits and where conduits must be suspended below structure, single conduit runs shall be supported from structure by hanger rod and conduit clamp assembly, and multiple conduits shall be supported by trapeze type support suspended from structure. Do not attach conduits to ceiling suspension system channels or suspension wires.
2. For runs that total more than 100 feet in length, insert pull boxes so that no segment between boxes exceeds the 100 feet limit.
3. Each horizontal home-run conduit can serve from one (1) to three (3) outlet boxes. For one (1) outlet box, a 3/4" conduit shall be used, minimum. For two (2) outlet boxes, a 1" conduit shall be used, minimum. For three (3) outlet boxes, a 1-1/4" conduit shall be used, minimum.

3.03 COMMUNICATIONS OUTLET BOXES

- A. Exact locations of the outlet boxes shall be coordinated with the electrical contractor and other trades.
- B. The approximate locations of the outlets are indicated on the Drawings. The exact locations of outlets shall be determined at the building. The right is reserved to change, without additional cost, the exact location of any outlet, a maximum of 10' before it is permanently installed.
- C. Orientation of outlet boxes (horizontal or vertical) shall be as indicated on the architectural elevations.
- D. Install all outlet boxes in finished areas flush with the wall. Maintain 1/4" or less space between outlet box front and finished wall surface.
- E. Outlet boxes shall be firmly anchored in place and shall not depend on the coverplate to hold it secure to the wall.
- F. Outlet boxes installed back-to-back in fire-rated walls shall be separated horizontally by a minimum of 24".

3.04 PULL BOXES

- A. Pull boxes shall be secured, independent of the conduit entries into the box. Pull boxes shall be secured to the building structure. In ceiling applications, pull boxes shall not be supported with ceiling wires.
- B. Conduits entering pull boxes shall connect to pull boxes using die-cast zinc connectors.
- C. Pull boxes shall be free from burrs, dirt and debris.
- D. Pull boxes shall be installed in accordance with ANSI/TIA-569-B.
- E. Pull boxes shall be grounded in accordance with ANSI/TIA-607-B.

3.05 CABLE HANGERS

- A. Installation and configuration shall conform to the requirements of ANSI/TIA-568-C.0, ANSI/TIA-568-C.1 & ANSI/TIA-569-B, NFPA 70 (National Electrical Code), applicable local codes, and to the manufacturer's installation instructions.
- B. Install cables using techniques, practices, and methods that are consistent with Category 5e or higher requirements and that supports Category 5e or higher performance of completed and linked signal paths, end to end.
- C. Install cables without damaging conductors, shield, or jacket.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- D. Do not bend cables, in handling or in installing, to smaller radii than minimums recommended by manufacturer.
- E. Pull cables without exceeding cable manufacturer's recommended pulling tensions. Use pulling means that will not damage media.
- F. Do not exceed load ratings specified by manufacturer.
- G. Adjustable non-continuous support sling shall have a static load limit of 100 lbs.
- H. To avoid electromagnetic interference (EMI), pathways shall provide minimum clearances of four feet from motors or transformers, one foot from conduit and cables used for electrical power distribution, and five inches from fluorescent lighting. Pathways shall cross perpendicular to fluorescent lighting and electrical power cables or conduits.

3.06 TIE WRAPS AND VELCRO STRAPS

- A. Tie wraps/Velcro straps shall be installed around cables at intervals of 12" minimum.
- B. Tie wraps shall secure cables to cable trays using an "X" pattern.
- C. Do not over-cinch cables.

3.07 IDENTIFICATION

- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 270543

UNDERGROUND DUCTS AND RACEWAYS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Underground Ducts and Raceways for Communications Systems.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Rigid/Intermediate Conduit Manufacturer(s)
 - 1. Allied
 - 2. Triangle
 - 3. Wheatland
 - 4. Youngstown
- B. PVC/HDPE Conduit Manufacturer(s)
 - 1. Carlon
 - 2. Georgia Pipe Company
 - 3. FiberTel
 - 4. Or Approved Equal
- C. Innerduct/Inner-Conduit Channel Manufacturer(s)
 - 1. Carlon
 - 2. Endot Industries
 - 3. MaxCell
 - 4. Petroflex
- D. Marker Tape Manufacturer(s)
 - 1. William Frick & Associates
 - 2. Or Approved Equal
- E. Approved Maintenance Hole/Handhole Manufacturer(s)
 - 1. Old Castle
 - 2. Pencil (Handholes Only)
 - 3. Quazite (Handholes Only)
 - 4. Or Approved Equal
- F. Approved Conduit Plug/Cap Manufacturer(s)
 - 1. Jack Moon
 - 2. Or Approved Equal

2.02 CONDUIT SYSTEM

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. PVC conduit for concrete encasement shall be Type DB, UL Labeled for 90 degrees C cables. Fittings shall be Type DB, solvent type, and from the same manufacturer as the conduit.
- B. Concrete shall have a minimum strength of 2,500 psi at 28 days.
- C. PVC conduit for direct burial shall be Schedule 40, UL Labeled for 90 degrees C cables. Fittings shall be Schedule 40, solvent type, and from the same manufacturer as the conduit.
- D. Rigid and Intermediate Conduit
 - 1. Rigid conduit, intermediate conduit, couplings, locknuts, bushings, elbows and connectors shall be standard thread. All materials shall be steel. Set screw or non-threaded fittings are not permitted.
 - 2. Galvanized rigid steel conduit shall be hot dipped galvanized inside and outside, in 10 foot lengths and threaded on both ends. Fittings and bushings shall be threaded, cast or malleable iron, and hot dipped galvanized inside and outside.
- E. Non-Metallic Conduit
 - 1. Non-metallic conduit shall be heavy wall, Schedule 40 PVC / HDPE.
 - 2. Couplings and connectors for non-metallic conduit shall be of the same material and be the product of the same manufacturer of the conduit furnished.
- F. Conduit Support
 - 1. Conduit straps shall be single-hole cast metal type or two hole galvanized metal type. Conduit clamps shall be spring steel type for use with exposed structural steel.
- G. Innerduct/Inner-Conduit Channel
 - 1. Innerduct shall be non-corrugated PVC equipped with mule tape.
 - 2. Inner-conduit channel (MaxCell) shall be 3-channel with each channel equipped with mule tape.
 - 3. See Drawings for innerduct/inner-conduit channel (MaxCell) details.
- H. Marker Tape
 - 1. Marker tape shall be detectable, orange for communications, and labeled to indicate the type of circuit buried below.

2.03 MAINTENANCE HOLES/HANDHOLES

- A. Maintenance Holes
 - 1. Maintenance holes shall be pre-cast or cast in place concrete with a strength of 3,500 psi at 28 days, and steel reinforced.
 - 2. Maintenance holes shall include a cast iron frame with cover, a hot dipped galvanized steel ladder, and hot dipped galvanized pulling eyes embedded in the concrete opposite each duct entrance and in the floor beneath the cover.
 - 3. Maintenance holes shall be equipped with grounding busbar.
 - 4. Maintenance holes shall be equipped with racking for cable storage.
 - 5. Ground splices and connections at maintenance holes shall be exothermic welds, copper or bronze compression ground fittings, or bolted compression ring lugs.
 - 6. The cover for maintenance holes shall have the lettering, "COMMUNICATIONS."
- B. Handholes
 - 1. Handholes shall be non-conductive and shall not require grounding for safety. Handholes shall be unaffected by freeze/thaw and resistant to sunlight and chemicals. Handholes shall be pre-cast polymer concrete, heavy duty rated and bottomless.
 - 2. Handholes shall be equipped with racking for cable storage.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3. Handholes shall have the word “COMMUNICATIONS” molded in the cover by the manufacturer. The cover shall be attached with penta-head stainless steel bolts.
 4. Handholes shall be able to withstand 10,000 lbs minimum.
 5. See Drawings for handhole dimensions and locations.
- 2.04 CONDUIT PLUGS/CAPS
- A. Conduit Plugs/Caps
 1. Conduit plugs shall provide a watertight seal at expose ends of conduits.
 2. Conduit plugs shall be conduit size specific.
 3. Triplex and Quadplex duct plugs shall provide a watertight seal between the conduit and innerduct(s).
 4. Simplex duct plugs shall provide a watertight seal between the innerduct and the cable that occupies it.

PART 3 - EXECUTION

- 3.01 CONDUIT SYSTEM
- A. Excavation and Backfill
 1. Contractor shall call underground utilities locator company before digging.
 2. Barricades shall be provided around open holes and trenches. Temporary bridges shall be provided over trenches cut through major sidewalk routes. Major sidewalk routes shall not be closed to pedestrian traffic.
 3. Barriers shall be provided to protect landscaping adjacent to the excavation area.
 4. When rocks, concrete or other debris are encountered during excavation, remove completely.
 5. Where sidewalk sections must be removed for installation of underground ducts, remove the sidewalk sections completely from joint to joint.
 6. Where asphalt must be removed for installation of underground ducts, saw cut the asphalt in two, straight, parallel lines.
 7. Backfill excavations in 6-inch layers and mechanically compact to 98 percent compaction.
 8. Excavated materials may be used as backfill only if the backfill is sand or clean dirt that is free of rocks and debris over 3/4" in diameter.
 9. In landscaped areas, backfill and mechanically compact to a depth of 6 inches below grade.
 10. Backfill the last 6 inches with clean topsoil. Reseed lawn areas.
 11. Restore concrete sidewalks and asphalt.
 12. The Contractor shall perform all excavation to install the electrical work herein specified and as indicated on Drawings. During excavation, material for backfilling shall be piled back from the banks of the trench to avoid overloading and to prevent slides and cave-ins. All excavated materials not to be used for backfill shall be removed and disposed of by the Contractor. Grading shall be done to prevent surface water from flowing into trenches and others excavation and any water accumulating therein shall be removed by pumping. All excavation shall be made by open cut.
 13. The bottom of the trenches shall be graded to provide uniform bearing and support for conduits, cables, or duct bank on undisturbed soil at every point along its entire length. Overdepths shall be backfilled with loose, granular, moist earth, tamped. Remove unstable soil that is not capable of supporting equipment or installation and replace with

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

specified material for a minimum of 12" below invert of equipment or installation.

14. The trenches shall be backfilled with the excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand and gravel or soft shale, free from large clods of earth and stones, deposited in 6" layers and rammed until the installation has a cover of not less than the adjacent ground but not greater than 2" above existing ground. The backfilling shall be carried on simultaneously on both sides of the trench so that injurious pressures do not occur. The compaction of the filled trench shall be at least equal to 95% of the maximum density as determined by the Standard Proctor Test. Settling the backfill with water will not be permitted. Reopen any trenches not meeting compaction requirements or where settlement occurs, refill, compact, and restore the surface to the grade and compaction indicated, mounded over and smoothed off

B. Duct Banks

1. Duct banks shall be sloped downward toward maintenance holes/handholes and away from buildings a minimum of 6 inches per 100 feet. Duct banks shall not route water from maintenance holes handholes into buildings. Duct banks shall not contain traps between maintenance holes/handholes where water may accumulate.
2. Directional changes in duct banks shall be made with 20' minimum radius bends. Duct banks and direct buried ducts shall be supported on undisturbed soil or on piers extending down to undisturbed soil.
3. Where power and communications duct banks run in parallel, they shall be separated by a minimum of 12 inches.
4. Prior to concrete encasement, ducts, reinforcing steel and ground wires shall be secured with nonmetallic straps or cable ties to nonmetallic duct spacers at intervals not exceeding 8 feet. Duct spacers shall be sized for the ducts being held, and shall provide the minimum spacing between ducts required for concrete flow and by the NEC. Duct spacers shall be anchored to the ground using nonmetallic bands and stakes.
5. Duct banks shall have a minimum of 3 inches of concrete cover on all sides.
6. Where duct banks enter maintenance holes or buildings, they shall be constructed as integral to the wall.
7. Duct bank shall extend to the inside surfaces of the walls, and the duct bank reinforcing shall be integrated with the wall reinforcing.
8. Bell ends shall be provided on ducts where the ducts enter maintenance holes or buildings.
9. Direct buried ducts and fittings shall have bend radii greater than the minimum bend radii of the cables enclosed, and shall not be smaller than the radii of standard manufactured elbows.
10. Direct buried ducts shall be installed parallel to or at right angles to building lines and site features, and as close to curbs and sidewalks as possible to avoid interferences with future landscaping.
11. Where direct buried PVC ducts cannot be buried deep enough to meet the NEC minimum cover requirements, rigid steel conduits shall be installed instead, or a concrete cover shall be poured over the ducts.
12. An orange detectable marker tape (for communications) shall be buried in the backfill approximately 12 inches above duct banks or direct buried cables for the entire length of the duct run.
13. A flexible mandrel and a stiff bristled brush shall be pulled through the ducts to clean them prior to cable pulling.
14. Ducts shall be identified in the maintenance holes and at both ends.

C. Additional OSP Conduit Requirements

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1. Leave all empty conduits with a 200-pound test nylon cord pull line.
 2. Install a #14 AWG tracer wire in one conduit for the entire length of each duct run.
 3. Flattened, dented, or deformed conduits are not permitted and shall be removed and replaced.
 4. Install conduit, including homeruns as indicated on the Drawings. Any change resulting in a savings in labor or materials is to be made only in accordance with a contract change. Deviations shall be made only where necessary to avoid interferences and when approved by Engineer by written authorization.
 5. Where conduits must pass through structural members obtain approval of Architect.
 6. Install all conduits or sleeves penetrating or routed within rated firewalls or fire floors to maintain fire rating of wall or floor. Conduit shall not be installed in rated floors or walls if it compromises or violates the fire rating of floor or wall. Refer to architectural documents.
 7. Provide expansion and deflection coupling where conduit passes over a building expansion joint.
 8. Service entrance conduits and feeder conduits in direct contact with earth shall be schedule 40, heavy wall PVC/HDPE. All service entrance conduit elbows shall be galvanized rigid steel. Service entrance conduits installed exposed or concealed in walls or above ceilings shall be galvanized rigid steel (GRS) or intermediate metal conduit (IMC). Service entrance conduits shall be installed "outside" of the building as defined by the N.E.C. Provide concrete encasement where required or as indicated on Drawings.
 9. Seal all conduits entering building to prevent entrance of moisture.
 10. Conduit fittings shall be gland and ring compression type for all conduit exposed to outdoor environments.
 11. Below Grade Conduit Installations
 - a. Install top of conduits 24 inches minimum below finished grade or as indicated on Drawings.
 - b. Install top of conduits 6 inches minimum below bottom of building slabs.
 - c. Where transition is made from below grade PVC installation to a metallic conduit system above grade or slab.
 12. Communications cables shall not occupy conduits with power cables.
 13. All metallic conduits shall be grounded in accordance with ANSI/TIA-607-B.
 14. For runs that total more than 400 feet in length, insert handholes/maintenance holes so that no segment exceeds the 400 feet limit.
 15. Conduit runs shall not have more than two (2) 90-degree bends between pull points.
 16. Communication conduit system shall contain no condulets (also known as an LB).
- 3.02 MAINTENANCE HOLES/HANDHOLES
- A. Maintenance holes/handholes shall be installed on a base of pea gravel at least 12 inches deep.
 - B. Tops of maintenance holes/handholes shall be level with the existing grade.
 - C. Ducts should enter as perpendicular to the wall surface as possible.
 - D. Maintenance holes shall be grounded with four 3/4 inch diameter by 8 foot long ground rods, one driven inside of the maintenance hole at each corner. Connect the ground rods and any duct bank ground conductors together with a No. 4/0 AWG bare, stranded copper ground wire loop. A No. 2 AWG bare stranded copper pigtail from the ground wire loop shall be used to ground the maintenance

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

hole cover frame, ladder support bracket, any metallic concrete inserts and metallic cable racks, and the shields of any cables that are spliced in the maintenance hole.

3.03 CONDUIT PLUGS/CAPS

- A. Protect conduits against dirt, plaster, and foreign debris with conduit plugs. Plugs shall remain in place until ready for use.
- B. Simplex, triplex or quadplex duct plugs shall be installed in conduits to house and seal cables.

3.04 IDENTIFICATION

- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 270553

IDENTIFICATION FOR TELECOMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the equipment and execution requirements relating to Identification for Communications Systems.
- C. Equipment specifications, general considerations, and guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 WORK INCLUDED

- A. The work included under this Specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - LABELING

2.01 LABELING REQUIREMENTS

- A. Labeling shall be done in accordance with the recommendations made in the ANSI/TIA-606-A document, manufacturer's recommendations and best industry practices.
- B. All spaces, pathways, outlets, cables, termination hardware, grounding system and equipment shall be labeled with machine-generated labels.
- C. All labels shall be clear with black text.
- D. All cables shall be labeled with machine generated, wrap around labels.
- E. A total of three (3) labels per horizontal cable are required at the following intervals: 6" from outlet; 18" from outlet' 12" from termination block/patch panel.
- F. Labeling scheme shall be alphanumeric.

PART 3 - NOT USED

END OF SECTION

SECTION 270800

COMMISSIONING OF TELECOMMUNICATIONS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the equipment and execution requirements relating to Commissioning of Communications.
- C. Equipment specifications, general considerations, and guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - TESTING

2.01 TESTING REQUIREMENTS

- A. General
 - 1. All cables and termination hardware shall be 100% tested for defects in installation and to verify cabling system performance under installed conditions according to the requirements of ANSI/TIA-568-C.0, ANSI/TIA-568-C.1, and/or ANSI/TIA-1152. All conductors of each installed cable shall be verified prior to system acceptance. Any defect in the cabling system installation including but not limited to cable, connectors, feed through couplers, patch panels, and connector blocks shall be repaired or replaced in order to ensure 100% useable conductors in all cables installed.
- B. Copper Testing
 - 1. All twisted-pair copper cable links shall be tested for continuity, pair reversals, shorts, opens and performance as indicated below. Additional testing is required to verify Category 6 performance. Horizontal balanced twisted pair cabling shall be tested using a level IIe, III, or IV test unit for category 6 performance compliance.
 - 2. Continuity - Each pair of each installed cable shall be tested using a test unit that shows opens, shorts, polarity and pair-reversals, crossed pairs and split pairs. The test shall be recorded as pass/fail as indicated by the test unit and referenced to the appropriate cable identification number and circuit or pair number. Any faults in the wiring shall be corrected and the cable re-tested prior to final acceptance.
 - 3. Length - Each installed cable link shall be tested for installed length using a TDR type device. The cables shall be tested from patch panel to patch panel, block to block, patch panel to outlet or block to outlet as appropriate. The cable length shall conform to the maximum distances set forth in the ANSI/TIA-568-C.2 Standard. Cable lengths shall be recorded, referencing the cable identification number and circuit or pair number. For multi-pair cables, the shortest pair length shall be recorded as the length for the cable.
 - 4. Approved tester is as follows:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

Fluke DTX

C. Fiber Testing

1. All fiber testing shall be performed on all fibers in the completed end-to-end system. There shall be no splices unless clearly defined in the RFP and/or Drawings. These tests also include continuity checking of each fiber.
2. Multimode
 - a. Test the optical fiber cable bi-directionally with an OTDR and uni-directionally with a power meter/light source. Fiber must be tested at both 850nm and 1300nm. Maximum attenuation dB/Km @ 850nm/1300nm shall be 3.5/1.5. Maximum attenuation per connector pair shall be .75 dB. Attenuation testing shall be performed with a stable launch condition using a one-meter or two-meter jumper, wrapped around a mandrel sized according to fiber type, to attach the light source to the cable plant. Fiber jumper shall be wrapped around mandrel no less than five (5) times. The jumper-mandrel assembly shall remain connected to the light source after calibration and the power meter moved to the far end using a new jumper to take measurements. Test set-up and performance shall be conducted in accordance with ANSI/TIA-568-C.3, and to the manufacturer's application guides.
3. Singlemode
 - a. Test the optical fiber cable bi-directionally with an OTDR and uni-directionally with a power meter/light source. Fiber must be tested at both 1310nm and 1550nm. Maximum attenuation dB/Km @ 1310nm/1550nm shall be 0.5/0.5 for outside plant and 1.0/1.0 for inside plant. Maximum attenuation per connector pair shall be .75 dB. Attenuation testing shall be performed with a stable launch condition using one-meter or two-meter jumpers to attach the test equipment to the cable plant. The light source shall be left in place after calibration and the power meter moved to the far end to take measurements. Test set-up and performance shall be conducted in accordance with ANSI/TIA-568-C.3, and to the manufacturer's application guides.
4. Approved optical fiber test equipment manufacturers are as follows:
 - a. Power Meters & Light Sources
Optical Wavelength Laboratories (OWL)
Noyes
Photonix
Fluke
Agilent
 - b. Optical Time Domain Reflectometers (OTDR)
GN Nettest
Agilent
Fluke
Anritsu
Tektronix

D. Coaxial Testing

1. Sweep testing of each reel of coaxial cable shall be performed over the 5 MHz through 1 GHz range by the cable manufacturer for transmission and structural return loss and be so certified in writing by the cable manufacturer.
2. Verification testing with a verification field test instrument will determine shorts, continuity, termination location and length of cable.
3. Approved testers are as follows:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

Fluke DTX

4. Signal strength measurement shall be performed with a field strength meter.
5. Signal level at each outlet will be +5 dBmV, + 3 dB.
6. Approved signal strength meters are as follows:

Acterna

Sadelco

Promax

E. Test Results

1. Test documentation shall be provided on disk as part of the as-built package. The disk shall be clearly marked on the outside front cover with the words "Project Test Documentation," the project name, and the date of completion (month and year). The results shall include a record of test frequencies, cable type, conductor pair (or strand) and cable (or outlet) I.D., measurement direction, reference setup, and crew member name(s). The test equipment name, manufacturer, model number, serial number, software version and last calibration date will also be provided at the end of the document. Unless the manufacturer specifies a more frequent calibration cycle, an annual calibration cycle is anticipated on all test equipment used for this installation. The test document shall detail the test method used and the specific settings of the equipment during the test as well as the software version being used in the field test equipment.
2. The field test equipment shall meet the requirements of ANSI/TIA-568-C.2, ANSI/TIA-568-C.3, and/or ANSI/TIA-1152.
3. Printouts generated for each cable by the wire (or fiber) test instrument shall be submitted as part of the documentation package. Alternately, the Contractor may furnish this information in electronic form (CD). These CDs shall contain the electronic equivalent of the test results as defined by the Specification and be of a format readable from Microsoft Word.
4. When repairs and re-tests are performed, the problem found and corrective action taken shall be noted, and both the failed and passed test data shall be documented.

PART 3 - DOCUMENTATION, AS-BUILTS, TRAINING AND RECORDS

3.01 DOCUMENTATION & AS-BUILTS

- A. As-Built record documentation for communications work shall include:
 1. Cable routing and identification
 2. System function diagrams
 3. Manufacturers' description literature for equipment
 4. Connection and programming schedules as appropriate
 5. Equipment material list including quantities
 6. Spare parts list with quantities
 7. Details not on original Contract Documents
 8. Test results
 9. Warranties
 10. Release of liens
- B. The Contractor shall provide and maintain at the site a set of prints on which shall be accurately shown the actual installation of all work under this section, indicating any variation from contract drawings, including changes in pathways, sizes, locations and dimensions. All changes shall be clearly and completely indicated as the work progresses.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- C. Progress prints shall be available for inspection by the Owner or any of his representatives and may be used to determine the progress of communications infrastructure work.
- D. At the completion of the work, prepare a new set of as-built drawings, of the work as actually noted on the marked-up prints, including the dimensioned location of all pathways.
- E. Furnish as-built drawings and documentation to the Project Manager. As-built drawings shall be generated in AutoCad 2006 or later. Submit as-built drawings electronically on C.D. and hard copy.

3.02 OPERATIONS AND MAINTENANCE MANUAL

- A. After completion of the work, the Contractor shall furnish and deliver to the Engineer three (3) copies of a complete Operations & Maintenance Manual. A system wiring diagram shall be furnished for each separate system.
- B. The manual shall be subdivided into separate sections with tab dividers to identify subsystems of the integrated system. Reference appropriate Specification sections.
- C. Provide the following additional information for each electronic system. Information shall be edited for this project where applicable.
 - 1. Operations manuals for components and for systems as a whole
 - 2. Maintenance manuals for components and for system as a whole
 - 3. Point-to-point diagrams, cabling diagrams, construction details and cabling labeling details
 - 4. List of spare parts, materials and suppliers of components. Provide name, address and telephone number for each supplier.
 - 5. Emergency instructions for operational and maintenance requirements
 - 6. Delivery time frame for replacement of component parts from suppliers
 - 7. Recommended inspection schedule and procedures for components and for system as a whole
 - 8. List of spare parts, materials and suppliers of components. Provide name, address and telephone number for each supplier.
 - 9. Complete "reviewed" shop drawings and product data for components and system as a whole
 - 10. Troubleshooting procedures for each system and for each major system component

3.03 TRAINING

- A. The Contractor shall be responsible for training of facility personnel. Training shall take place after occupancy and before acceptance and shall include programs for on-site operations and maintenance of technology and communications systems. Training shall be for not more than ten (10) people, shall be held at the Owner's site and shall be of sufficient duration and depth to ensure that the trained personnel can operate the installed systems and can perform usual and customary maintenance actions.

3.04 WARRANTY

- A. General
 - 1. All equipment is to be new and warranted free of faulty workmanship and damage.
 - 2. Replacement of defective equipment and materials and repair of faulty workmanship within 24 hours of notification, except emergency conditions (system failures), which must be placed back in service within eight (8) hours of notification, all at no cost to the Owner.
 - 3. The minimum warranty provisions specified shall not diminish the terms of individual equipment manufacturer's warranties.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- B. Voice & Data Structured Cabling
 - 1. Manufacturer(s) shall provide a minimum 25-year warranty for components used in the installed Voice & Data Structured Cabling System. Defective and/or improperly installed products shall be replaced and/or correctly installed at no cost to the Owner.
- C. Coaxial Cabling Infrastructure
 - 1. Manufacturer(s) shall provide a minimum 1-year warranty for components used in the installed Coaxial Cabling Infrastructure. Defective and/or improperly installed products shall be replaced and/or correctly installed at no cost to the Owner.
- D. CATV Distribution System
 - 1. Manufacturer(s) shall provide a minimum 1-year warranty for components used in the installed CATV Distribution System. Defective and/or improperly installed products shall be replaced and/or correctly installed at no cost to the Owner.
- E. Wireless Access System
 - 1. Manufacturer(s) shall provide a minimum 1-year warranty for components used in the installed Wireless Access System. Defective and/or improperly installed products shall be replaced and/or correctly installed at no cost to the Owner.
- F. Pathway & Support Infrastructure
 - 1. Manufacturer(s) shall provide a minimum 1-year warranty for components used in the installed Pathway & Support Infrastructure. Defective and/or improperly installed products shall be replaced and/or correctly installed at no cost to the Owner.

END OF SECTION

SECTION 271113

TELECOMMUNICATIONS ENTRANCE PROTECTION

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Communications Entrance Protection.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Building Entrance Protector Terminal Manufacturer(s)
 - 1. Circa
 - 2. Marconi
 - 3. Porta Systems
- B. Approved Bonding Shield Connector Manufacturer(s)
 - 1. 3M
 - 2. Or Approved Equal

2.02 BUILDING ENTRANCE PROTECTOR TERMINALS

- A. Indoor Building Entrance Protector Terminal
 - 1. The indoor building entrance protector terminal shall be equipped with 110-connector inputs and outputs and shall accommodate industry standard 5-pin protection modules.
 - 2. The indoor building entrance protector terminal shall protect up to 100-pairs and shall be equipped with an internal fuse link.
 - 3. The indoor building entrance protector terminal shall be wall or frame mountable, and able to be stacked for future expansion.
 - 4. The indoor building entrance protector terminal shall be equipped with external ground connectors that accept 6-14 AWG ground wire.
- B. Solid State Surge Protection Modules
 - 1. The solid-state surge protector module shall be 5-pin and shall provide transient and power fault protection for standard telephone line applications.
 - 2. The solid-state surge protector module shall be designed to provide a balanced configuration to protect against line-to-line metallic surges.
 - 3. The solid-state surge protector module shall feature an external failsafe mechanism, which permanently grounds module under sustained high current conditions.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

4. The solid-state surge protector module shall feature nanosecond response time and safe mode operation in adverse situations.
5. The solid-state surge protector module shall be UL & cUL Listed.

2.03 BONDING SHIELD CONNECTOR

A. Shield Connector

1. The purpose of the bonding shield connector is to make a stable, low resistant electrical connection between the shield of a communications cable and a ground conductor.
2. The bonding shield connector shall be tin-plated tempered brass.

PART 3 - EXECUTION

3.01 BUILDING ENTRANCE PROTECTOR TERMINALS

- A. All copper circuits shall be provided with protection between each building with an entrance cable protector panel. All building-to-building circuits shall be routed through this protector. The protector shall be connected with a #6 AWG copper bonding conductor between the protector ground lug and the telecommunications room (TR) busbar.
- B. Building entrance protector shall be installed in accordance with the recommendations contained in the ANSI/TIA-607-B Telecommunications Bonding and Ground Standard.
- C. Building entrance protector panels shall be installed as per the requirements specified by the manufacturer's installation guidelines.

3.02 BONDING SHIELD CONNECTOR

- A. Bonding shield connector shall be installed in accordance with the recommendations contained in the ANSI/TIA-607-B Standard.
- B. Bonding shield connector shall be installed as per the requirements specified by the manufacturer's installation guidelines.

3.03 IDENTIFICATION

- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 271119

TELECOMMUNICATIONS TERMINATION BLOCKS & PATCH PANELS

PART 1 - GENERAL

- 1.01 GENERAL REQUIREMENTS
- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
 - B. This document describes the products and execution requirements relating to Communications Termination Blocks and Patch Panels.
 - C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.
- 1.02 SUBMITTALS
- A. Provide product data from manufacturer's specifications.
- 1.03 WORK INCLUDED
- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

- 2.01 APPROVED PRODUCTS
- A. Approved Patch Panel Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. Panduit
 - B. Approved Optical Fiber Enclosure Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. Panduit
 - C. Approved Termination Block Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. Panduit
- 2.02 PATCH PANELS
- A. Category 6 Patch Panel
 - 1. The Category 6 patch panel shall be compatible with 19" equipment racks, cabinets or wall mount brackets.
 - 2. The Category 6 patch panel shall be equipped with 8-position modular ports and shall allow for termination using both T568A and T568B wiring schemes.
 - 3. The Category 6 patch panel shall be equipped with front labeling space to facilitate port identification.
 - 4. The connector module shall meet or exceed the Category 6 performance criteria per ANSI/TIA-568-C.2.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2.03 OPTICAL FIBER PANELS/ENCLOSURES

A. Rack Mount Optical Fiber Panel/Enclosure

1. The rack mount optical fiber panel/enclosure shall be equipped with either a swing out mechanism or a sliding drawer to access fibers.
2. The rack mount optical fiber panel/enclosure shall be capable of terminating tight-buffered or loose tube optical fiber cable.
3. The rack mount optical fiber panel/enclosure shall provide for bend radius control throughout the panel as well as storage space for slack cabling.
4. The panel/enclosure shall meet or exceed the performance criteria per ANSI/TIA-568-C.3.
5. The rack mount optical fiber panel/enclosure shall be equipped with optical fiber adapter panels.
 - a. The optical fiber adapter panels shall accommodate either multimode or singlemode terminated optical fiber.
 - b. The optical fiber adapter panels shall be compatible with LC connectors.
 - c. OM1 & OM2 multimode adaptors shall be beige in color and equipped with phosphor bronze sleeves.
 - d. OM3 laser optimized adaptors shall be aqua in color and equipped with zirconia ceramic sleeves.
 - e. Singlemode adaptors shall be blue or green in color and equipped with zirconia ceramic sleeves.

2.04 TERMINATION BLOCKS

A. 110 Type Wiring Blocks/Cross-Connect Kits:

1. The 110-type wiring blocks shall be available in 100- and/or 300-pair configurations.
2. The 110-type wiring block shall be Category 6.
3. The cross-connect kits shall include all the components required to complete a wall-mounted 110 cross-connect installation and be available in both 100- and/or 300-pair configuration. (Includes 110-blocks, connecting blocks and designation strips).
4. The termination block shall meet or exceed the performance criteria per ANSI/TIA-568-C.2.
5. Backbone blocks shall use 5-pair connecting blocks on each 25-pair row.
6. Horizontal blocks shall use 4-pair connecting blocks on each 25-pair row.

B. 66-Blocks

1. The 66-type wiring block shall be a 50-pair configuration.
2. The 66-type wiring block shall have a split clip system using bridge clips to connect incoming pairs to outgoing pairs.
3. The 66 block's labeling system shall use designation strips or covers to accommodate labels.

PART 3 - EXECUTION

3.01 PATCH PANELS

- A. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C.1, manufacturer's recommendations and best industry practice.
- B. Pair untwist at the termination shall not exceed 13 mm (0.5 inch).
- C. Bend radius of the cable in the termination area shall not exceed 4 times the outside diameter of the cable.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- D. Cables shall be neatly bundled and dressed to their respective patch panel. Each patch panel shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.
- E. Each cable shall be clearly labeled on the cable jacket behind the patch panel at a location that can be viewed without removing the bundle support ties. Cables labeled within the bundle, where the label is obscured from view shall not be acceptable.

3.02 OPTICAL FIBER PANELS/ENCLOSURES

- A. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C.1, manufacturer's recommendations and best industry practices.
- B. Each cable shall be individually attached to the respective splice enclosure by mechanical means. The cables strength member shall be securely attached the cable strain relief bracket in the enclosure.
- C. Bend radius of the optic fiber cable in the panel/enclosure shall not exceed 10 times the outside diameter of the cable.
- D. Each fiber bundle shall be stripped upon entering the splice tray and the individual fibers routed in the splice tray.
- E. Each cable shall be clearly labeled at the entrance to the splice enclosure. Cables labeled within the bundle shall not be acceptable.
- F. A maximum of 12 strands of fiber shall be spliced in each tray
- G. All spare strands shall be installed into spare splice trays.
- H. Fiber slack shall be neatly coiled within the fiber splice tray or enclosure. No slack loops shall be allowed external to the fiber panel.

3.03 TERMINATION BLOCKS

- A. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C.1, manufacturer's recommendations and best industry practice.
- B. Pair untwist at the termination shall not exceed 13 mm (0.5 inch).
- C. Bend radius of the cable in the termination area shall not exceed 4 times the outside diameter of the cable.
- D. Cables shall be neatly bundled and dressed to their respective termination block. Each termination block shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.
- E. Each cable shall be clearly labeled on the cable jacket within 12" of the termination block at a location that can be viewed without removing the bundle support ties. Cables labeled within the bundle, where the label is obscured from view shall not be acceptable.
- F. Wall mounted termination block fields shall be mounted on communications backboard.
- G. Wall mounted termination block fields shall be installed as per the requirements specified by the manufacturer's installation guidelines.

3.04 IDENTIFICATION

- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

SECTION 271323

COMMUNICATIONS OPTICAL FIBER BACKBONE CABLING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Communications Optical Fiber Backbone Cabling.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.
- B. Provide a complete Firewall for the fiber optic system

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Optical Fiber Backbone Cable (Inside Plant) Manufacturer(s)
 - 1. Superior Essex
 - 2. Systemax
 - 3. Siemon
 - 4. Cisco
- B. Approved Optical Fiber Backbone Cable (Outside Plant) Manufacturer(s)
 - 1. Superior Essex
 - 2. Systemax
 - 3. Siemon
 - 4. Cisco
- C. Approved Optical Fiber Connectivity Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. Cisco
- D. Approved Splice Case Manufacturer(s)
 - 1. 3M
 - 2. Corning
 - 3. Systemax
 - 4. Cisco

2.02 OPTICAL FIBER BACKBONE CABLE (INSIDE PLANT)

- A. Plenum - Indoor Distribution 850nm Laser-Optimized 50/125 Multimode Optical Fiber Non-Conductive (OFNP) Tight Buffered Cable (OM3)
 - 1. Generic Characteristics

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- a. The indoor optical fiber cable shall be available with up to twelve 900-micron tight-buffered 250-micron fibers placed in a color-coded sub-unit bundle with aramid strength elements.
 - b. The indoor optical fiber cable shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 - c. The indoor optical fiber cable shall have sequential length marking printed on the cable jacket.
 - d. Maximum attenuation dB/Km @ 850/1300 nm: 3.5/1.5
 - e. Minimum overfilled modal bandwidth: 1500 MHz-km @ 850 nm.
 - f. Minimum overfilled modal bandwidth: 500 MHz-km @ 1300 nm.
 - g. Minimum effective modal bandwidth: 2000 MHz-km @ 850nm
- B. Plenum - Indoor Distribution 8.3/125-micron Singlemode Optical Fiber Non Conductive (OFNP) Tight Buffered Cable
1. Generic Characteristics
 - a. The indoor optical fiber cable shall be available with up to twelve 900-micron tight-buffered, 250-micron fibers placed in a color-coded sub-unit bundle with aramid strength elements.
 - b. The indoor optical fiber cable shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 - c. The indoor optical fiber cable shall have sequential length markings printed on the cable jacket.
 - d. All singlemode fibers shall be pigtail spliced into a rack mounted optical fiber enclosure or wall-mounted enclosure.
 - e. The loss of fiber shall not exceed 1.0 dB per kilometer @ 1550 nm and 1.0 dB per kilometer @ 1310 nm.
- 2.03 OPTICAL FIBER BACKBONE CABLE (OUTSIDE PLANT)
- A. Indoor/outdoor 850nm Laser Optimized 50/125 Multimode Optical Fiber Non Conductive (OFNR) Loose Tube Cable (OM3)
 1. Generic Characteristics
 - a. The indoor/outdoor optical fiber cable with up to twelve 250-micron coated fibers placed in a color-coded sub-unit bundle with moisture-blocking gel.
 - b. The indoor/outdoor optical fiber cable shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 - c. The indoor/outdoor optical fiber cable shall have sequential length markings printed on the cable jacket.
 - d. Maximum attenuation dB/Km @ 850/1300 nm: 3.5/1.5
 - e. Minimum overfilled modal bandwidth: 1500 MHz-km @ 850 nm.
 - f. Minimum overfilled modal bandwidth: 500 MHz-km @ 1300 nm.
 - g. Minimum effective modal bandwidth: 2000 MHz-km @ 850nm
 - B. Indoor/outdoor 8.3/125-micron, Singlemode Optical Fiber Non Conductive (OFNR) Loose Tube cable
 1. Generic Characteristics
 - a. The indoor/outdoor optical fiber cable with up to twelve 250-micron coated fibers placed in a color-coded sub-unit bundle with moisture-blocking gel.
 - b. The indoor/outdoor optical fiber cable shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 - c. The indoor/outdoor optical fiber cable shall have sequential length markings printed on the cable jacket.
 - d. All singlemode fibers shall be pigtail spliced into a rack mounted optical fiber enclosure or wall-mounted enclosure.
 - e. The loss of fiber shall not exceed 0.50 dB per kilometer @ 1550 nm and 0.50 dB per kilometer @ 1310 nm.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2.04 OPTICAL FIBER CONNECTORS

- A. Laser Optimized Multimode Fiber Connectivity OM3
 - 1. The optical fiber field-installable connector shall be LC, for installation onto multimode a laser optimized 50/125-micron fiber.
 - 2. The optical fiber field-installable connector shall be compatible with 900-micron buffered fibers.
 - 3. The optical fiber field-installable connector shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 - 4. The optical fiber field-installable connector shall have a maximum Loss of 0.5 dB.
 - 5. The optical fiber adapter module that occupies the faceplate shall be equipped with zirconia ceramic sleeve.
 - 6. Laser optimized multimode fiber connector color shall be aqua.
- B. Singlemode Fiber Connectivity
 - 1. The optical fiber field-installable connector shall be LC, for installation onto singlemode 8.3/125-micron fiber.
 - 2. The optical fiber field-installable connector shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 - 3. The optical fiber field-installable connector shall be compatible with 900-micron buffered fibers or 250-micron loose-tube fibers.
 - 4. The preferred method of terminating loose-tube singlemode fiber is pigtail splicing into a rack mounted optical fiber panel or wall-mounted enclosure. Pigtails shall be factory terminated and 3 meters in length. A fiber enclosure with slack storage trays must be used when pigtail-splicing method is used.
 - 5. The splice loss through each connector pair shall not exceed 0.50 dB.
 - 6. The optical fiber adapter module that occupies the faceplate shall be equipped with zirconia ceramic sleeve.
 - 7. Singlemode fiber connector color shall be blue.

2.05 SPLICE CASES

- A. Canister Splice Case
 - 1. Splice cases shall be water tight and designed for outside plant applications.
 - 2. All splice trays, seals and hardware shall be from the same manufacturer as the splice case.
 - 3. Splice trays shall utilize heat-shrink seals.
 - 4. See Drawings for size requirements.

PART 3 - EXECUTION

3.01 BACKBONE CABLES (INSIDE PLANT)

- A. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C.1, manufacturer's recommendations and best industry practices.
- B. Backbone cables shall be installed separately from horizontal distribution cables
- C. A plastic or nylon pull cord with a minimum test rating of 90 Kg (200 lb.) shall be co-installed with all cable installed in any conduit.
- D. Where cables are housed in conduits, the backbone and horizontal cables shall be installed in separate conduits
- E. Exposed cables must be OFNP rated if installed in an air return plenum. Riser rated cables shall be installed in metallic conduit if installed in an air return plenum.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- F. Where backbone cables and distribution cables are installed in a cable tray or wireway, backbone cables shall be installed first and bundled separately from the horizontal distribution cables.
- G. Leave 10' of slack on each end of fiber backbone cable.
- H. Backbone cables spanning more than three floors shall be securely attached at the top of the cable run with a wire mesh grip and on alternating floors or as required by local codes.
- I. Vertical runs of cable shall be supported to messenger strand, cable ladder, or other method to provide proper support for the weight of the cable.
- J. Large bundles of cables and/or heavy cables shall be attached using metal clamps and/or metal banding to support the cables.
- K. The cable's minimum bend radius and maximum pulling tension shall not be exceeded. Refer to manufacturer's requirements.
- L. Each optical fiber cable shall be individually attached to the respective enclosure by mechanical means. The cables strength member shall be securely attached the cable strain relief bracket in the enclosure.
- M. Each optical fiber cable shall be clearly labeled at the entrance to the enclosure. Cables labeled within the bundle shall not be acceptable.
- N. Each fiber bundle shall be stripped upon entering the splice tray and the individual fibers routed in the splice tray.
- O. A maximum of 12 strands of fiber shall be spliced in each tray
- P. All spare fiber strands shall be installed into spare splice trays.
- Q. Fiber slack shall be neatly coiled within the fiber splice tray or enclosure. No slack loops shall be allowed external to the fiber panel.

3.02 BACKBONE CABLES (OUTSIDE PLANT)

- A. All OSP cables brought to the Entrance Facilities shall have 15 ft of slack coiled and secured to the wall in the proximity of the fiber enclosure.
- B. All cables shall be tagged and identified within each handhole/maintenance hole.
- C. Place initial cables in bottom conduits to facilitate easy subsequent cable placement.
- D. Place leader guard in the duct before placing cable to prevent damaging the cable sheath on the sharp edge of the duct.
- E. Ventilate maintenance where gas has been detected before entering the maintenance hole.
- F. To ensure that the optical fiber cable's qualities and characteristics are not degraded during installation, excessive pulling tensions and short bending radii will not be allowed. The maximum pulling tension is 600 lbs. The minimum bending radius for cable under tension is 20 times the outside diameter of the cable and for cable at rest is 10 times the outside diameter of the cable.
- G. A 600 lb. break-away swivel, along with a slip clutch capstan winch that shows the dynamometer (pulling tension) reading, shall be used at all times during pulling.
- H. At each splice location the cable ends will be sealed watertight at all times. Reels will be continuously manned during cable installation.
- I. Contractor shall coil 60 feet of spare optical fiber cable in each handhole/maintenance hole without a splice and 75 feet of each optical fiber cable in each handhole/maintenance hole with a splice. Cable coils shall have at least two points of support on the optical fiber racking system.
- J. When mounting the optical fiber slack coils, the minimum bend radius shall not be exceeded; this radius is equal to 10 times the outside diameter of the cable in a static application and 20 times the outside diameter in a dynamic application. At anytime during the entire handling process of the optical fiber cable, as much care as possible should be maintained and all the manufacturer's recommendations should be followed.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 3.03 OPTICAL FIBER CONNECTIVITY / SPLICING
- A. Optical fiber connectors shall be installed as per the requirements specified by the manufacturer's installation guidelines.
 - B. All splicing shall be of the fusion type made under Light Injection and Detection Mode, whenever applicable. The Contractor shall provide certified and experienced personnel for splicing.
 - C. Contractor's tools and equipment shall be in excellent working order. Any worn or improperly working tools shall be discarded and not used on this project. All fusion splicers shall be calibrated and labeled according to the manufacturer's specifications. Contractor shall submit certification of calibration for the fusion splicers to the Engineer.
- 3.04 SPLICE CASES
- A. Splice Cases shall be installed as per the requirements specified by the manufacturer's installation guidelines.
- 3.05 IDENTIFICATION
- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 271513

COMMUNICATIONS COPPER HORIZONTAL CABLING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Communications Copper Horizontal Cabling.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Horizontal Copper Cable Manufacturer(s)
 - 1. Superior Essex
 - 2. Systemax
 - 3. Siemon
 - 4. No Exceptions

2.02 HORIZONTAL COPPER CABLE

- A. 100 OHM Category 6 Balanced Twisted Pair Cable
 - 1. The horizontal balanced twisted pair cable shall meet or exceed the Category 6 transmission characteristics per issue of ANSI/TIA/EIA-568-C.2.
 - 2. Cable jacket shall be CMR or CMP rated (according to the space it occupies).
 - 3. Jacket color shall be:
 - a. Gray for voice.
 - b. Blue for data

PART 3 - EXECUTION

3.01 HORIZONTAL CABLES

- A. Cable shall be installed in accordance with manufacturer's recommendations and best industry practices.
- B. A plastic or nylon pull cord with a minimum test rating of 90 Kg (200 lb.) shall be co-installed with all cable installed in any conduit.
- C. Cable raceways shall not be filled greater than the ANSI/TIA/EIA-569-B maximum fill for the particular raceway type.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- D. Cables shall be installed in continuous lengths from origin to destination (no splices) except for transition points, or consolidation points.
- E. Riser rated cable shall be installed in metallic conduit when installed in a plenum space.
- F. Where transition points or consolidation points are allowed, they shall be located in accessible locations and housed in an enclosure intended and suitable for the purpose.
- G. The cable's minimum bend radius and maximum pulling tension shall not be exceeded. Refer to manufacturer's requirements.
- H. If a J-hook or trapeze system is used to support cable bundles all horizontal cables shall be supported at a maximum of 48 to 60 inch (1.2 to 1.5 meter) intervals. At no point shall cable(s) rest on acoustic ceiling grids or panels.
- I. Horizontal distribution cables shall be bundled in groups of no more than 50 cables. Cable bundle quantities in excess of 50 cables may cause deformation of the bottom cables within the bundle and degrade cable performance.
- J. Cable shall be installed above fire-sprinkler systems and shall not be attached to the system or any ancillary equipment or hardware. The cable system and support hardware shall be installed so that it does not obscure any valves, fire alarm conduit, boxes, or other control devices.
- K. Cables shall not be attached to ceiling grid or lighting fixture wires. Where support for horizontal cable is required, the Contractor shall install appropriate carriers to support the cabling.
- L. Any cable damaged or exceeding recommended installation parameters during installation shall be replaced by the Contractor prior to final acceptance at no cost to the Owner.
- M. Cables shall be dressed and terminated in accordance with the recommendations made in the ANSI/TIA/EIA-568-C.2 document, manufacturer's recommendations and best industry practices.
- N. Leave a minimum of 12" of slack for twisted pair cables at the outlet. Cables shall be coiled in the in-wall box, surface-mount box or modular furniture raceway if adequate space is present to house the cable coil without exceeding the manufacturers bend radius. In hollow-wall installations where box-eliminators are used, excess wire can be stored in the wall. Excess slack shall be loosely coiled and stored in the ceiling above each drop location when there is not enough space present in the outlet box to store slack cable.
- O. Cables shall be neatly bundled and dressed to their respective termination device. Each terminating device shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.
- P. Each cable shall be clearly labeled on the cable jacket behind the termination device at a location that can be viewed without removing the bundle support ties. Cables labeled within the bundle, where the label is obscured from view shall not be acceptable.

3.02 IDENTIFICATION

- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 27 15 23

COMMUNICATIONS OPTICAL FIBER HORIZONTAL CABLING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Communications Optical Fiber Horizontal Cabling.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Horizontal Optical Fiber Cable Manufacturer(s)

- 1. Berk-Tek
- 2. OCC Cable

2.02 HORIZONTAL OPTICAL FIBER CABLE

- A. 62.5/125 Multimode Optical Fiber, Non Conductive, Tight Buffered Cable (OM1)
 - 1. The horizontal optical fiber cable shall be available with two (2) 900-micron tight-buffered 250-micron fibers with aramid strength elements.
 - 2. The horizontal optical fiber cable shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 - 3. The horizontal optical fiber cable shall have sequential length markings printed on the cable jacket.
 - 4. Maximum attenuation dB/Km @ 850/1300 nm: 3.5/1.5
 - 5. Minimum overfilled modal bandwidth: 200 MHz-km @ 850 nm.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

6. Minimum overfilled modal bandwidth: 500 MHz-km @ 1300 nm.
 7. Cable jacket shall be CMR or CMP rated (according to the space it occupies).
- B. 50/125 Multimode Optical Fiber, Non-Conductive, Tight Buffered Cable (OM2)
1. The horizontal optical fiber cable shall be available with up to two (2) 900-micron tight-buffered 250-micron fibers with aramid strength elements.
 2. The horizontal optical fiber cable shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 3. The horizontal optical fiber cable shall have sequential length marking printed on the cable jacket.
 4. Maximum attenuation dB/Km @ 850/1300 nm: 3.5/1.5
 5. Minimum overfilled modal bandwidth: 500 MHz-km @ 850 nm.
 6. Minimum overfilled modal bandwidth: 500 MHz-km @ 1300 nm.
 7. Cable jacket shall be CMR or CMP rated (according to the space it occupies).
- C. Laser-Optimized 50/125 Multimode Optical Fiber Non-Conductive, Tight Buffered Cable (OM3)
1. Generic Characteristics
 2. The indoor optical fiber cable shall be available with up to twelve 900-micron tight-buffered 250-micron fibers placed in a color-coded sub-unit bundle with aramid strength elements.
 3. The indoor optical fiber cable shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
 4. The indoor optical fiber cable shall have sequential length marking printed on the cable jacket.
 5. Maximum attenuation dB/Km @ 850/1300 nm: 3.5/1.5
 6. Minimum overfilled modal bandwidth: 1500 MHz-km @ 850 nm.
 7. Minimum overfilled modal bandwidth: 500 MHz-km @ 1300 nm.
 8. Minimum effective modal bandwidth: 2000 MHz-km @ 850nm
 9. Cable jacket shall be CMR or CMP rated (according to the space it occupies).

PART 3 - EXECUTION

3.01 HORIZONTAL CABLES

- A. Cable shall be installed in accordance with manufacturer's recommendations and best industry practices.
- B. A plastic or nylon pull cord with a minimum test rating of 90 Kg (200 lb.) shall be co-installed with all cable installed in any conduit.
- C. Cable raceways shall not be filled greater than the ANSI/TIA-569-B maximum fill for the particular raceway type.
- D. Cables shall be installed in continuous lengths from origin to destination (no splices) except for transition points, or consolidation points.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- E. Riser rated cable shall be installed in metallic conduit when installed in a plenum space.
- F. Where transition points or consolidation points are allowed, they shall be located in accessible locations and housed in an enclosure intended and suitable for the purpose.
- G. The cable's minimum bend radius and maximum pulling tension shall not be exceeded. Refer to manufacturer's requirements.
- H. If a J-hook or trapeze system is used to support cable bundles all horizontal cables shall be supported at a maximum of 48 to 60 inch (1.2 to 1.5 meter) intervals. At no point shall cable(s) rest on acoustic ceiling grids or panels.
- I. Horizontal distribution cables shall be bundled in groups of no more than 50 cables. Cable bundle quantities in excess of 50 cables may cause deformation of the bottom cables within the bundle and degrade cable performance.
- J. Cable shall be installed above fire-sprinkler systems and shall not be attached to the system or any ancillary equipment or hardware. The cable system and support hardware shall be installed so that it does not obscure any valves, fire alarm conduit, boxes, or other control devices.
- K. Cables shall not be attached to ceiling grid or lighting fixture wires. Where support for horizontal cable is required, the Contractor shall install appropriate carriers to support the cabling.
- L. Any cable damaged or exceeding recommended installation parameters during installation shall be replaced by the Contractor prior to final acceptance at no cost to the Owner.
- M. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C-1, manufacturer's recommendations and best industry practices.
- N. Leave a minimum of 36" of slack for optical fiber at the outlet. Cables shall be coiled in the in-wall box, surface-mount box or modular furniture raceway if adequate space is present to house the cable coil without exceeding the manufacturers bend radius. Excess slack shall be loosely coiled and stored in the ceiling above each drop location where there is not enough space present in the outlet box to store slack cable.
- O. Cables shall be neatly bundled and dressed to their respective termination device. Each terminating device shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.
- P. Each cable shall be clearly labeled on the cable jacket behind the termination device at a location that can be viewed without removing the bundle support ties. Cables labeled within the bundle, where the label is obscured from view shall not be acceptable.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3.02 IDENTIFICATION

- A. Refer to Section 27 05 53 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 271543

COMMUNICATIONS FACEPLATES AND CONNECTORS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Communications Faceplates and Connectors.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this Specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Copper Connectivity Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. No exceptions
- B. Approved Optical Fiber Connectivity Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. No Exceptions
- C. Approved Coaxial Connectivity Manufacturer(s)
 - 1. Cable Connectors
 - a. Gilbert
 - b. PPC
 - c. Digicon
 - d. No Exceptions
 - 2. F-Connectors
 - a. Leviton
 - b. Systemax
 - c. Siemon
 - d. No Exceptions
- D. Approved Faceplate Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. No Exceptions
- E. Approved Surface Mount Box manufacturer(s)
 - 1. Leviton

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2. Systimax
3. Siemon
4. No Exceptions

2.02 COPPER CONNECTIVITY

A. Voice/Data Jacks

1. Category 6, 8-Position, 8-Contact (8P8C) Modular Jack
 - a. The connector module shall meet or exceed the Category 6 performance criteria per ANSI/TIA-568-C.2.
 - b. The eight-position connector module shall accommodate six-position modular plug modular cords without damage to either the cord or the module.
 - c. The connector module shall be designed for use at the work area (WA), communications room (TR) and/or equipment room (ER) without modification.
 - d. The connector module shall be available in both the T568A and T568B wiring configurations within the same module.
 - e. The connector module shall have an insulation displacement connection featuring insulation slicing of 22 to 24 AWG plastic-insulated solid copper conductors forming a gas-tight connection.
 - f. Icons shall be used if offered from the manufacturer.
 - g. Jack/Icon colors shall be:
Gray for voice
Blue for data

2.03 FIBER CONNECTIVITY

A. Laser Optimized Multimode Fiber Connectivity OM3

1. The optical fiber field-installable connector shall be LC for installation onto multimode a laser optimized 50/125-micron fiber.
2. The optical fiber field-installable connector shall be compatible with 900-micron buffered fibers.
3. The optical fiber field-installable connector shall meet or exceed the performance criteria found in ANSI/TIA-568-C.3.
4. The optical fiber field-installable connector shall have a maximum Loss of 0.5 dB.
5. The optical fiber adapter module that occupies the faceplate shall be equipped with zirconia sleeve.
6. Laser optimized connector color shall be aqua.

2.04 COAXIAL CONNECTIVITY

- A. Connectors shall be solderless, 75-Ohm impedance and be designed for the specific type of cable used.
- B. Series-6 connectors shall be one piece. Series-11 connectors shall use the cable's center conductor as the connector's center pin.
- C. All Series-6 and Series-11 connections shall be made with compression-type connectors.
- D. Screw-on connectors are not acceptable.
- E. The coaxial adapter module that occupies the faceplate shall be a 75-ohm, F-type connector.

2.05 FACEPLATES

A. Faceplates

1. The faceplate housing the connector modules shall have no visible mounting screws.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2. It shall be possible to install the connector modules in wall-mounted single- and dual-gang electrical boxes, utility poles and modular furniture (cubicle) access points using manufacturer-supplied faceplates and/or adapters.
3. The faceplate housing the connector modules shall have the option of being mounted on adapter boxes for surface mount installation.
4. The faceplate housing the connector modules shall have a labeling capability using built-in labeling windows, to facilitate outlet identification and ease network management.
5. The faceplate housing the connector modules shall provide flexibility in configuring multimedia workstation outlets that respond to present or future network needs such as audio, video, coaxial and optical fiber applications.
6. Color shall be same as electrical faceplates.

PART 3 - EXECUTION

3.01 COPPER CONNECTIVITY

- A. 8-position, 8-contact (8P8C) modular jacks shall be installed in accordance with manufacturer's recommendations and installation guides, and best industry practices.
- B. Pair untwist at the termination shall not exceed 13 mm (0.5 inch).
- C. Data jacks, unless otherwise noted in Drawings or fiber adapter modules are present, shall be located in the bottom position(s) of each faceplate. Data jacks in horizontally oriented faceplates shall occupy the right-most position(s).
- D. Voice jacks, unless otherwise noted in Drawings, shall occupy the top position(s) on the faceplate. Voice jacks in horizontally oriented faceplates shall occupy the left-most position(s).

3.02 OPTICAL FIBER CONNECTIVITY

- A. Optical fiber connectors shall be installed in accordance with manufacturer's recommendations and installation guides, and best industry practices.
- B. Fiber adapter modules, unless otherwise noted in Drawings, shall be located in the bottom position(s) of each faceplate. Fiber adapter modules in horizontally oriented faceplates shall occupy the right-most position(s).

3.03 COAXIAL CONNECTIVITY

- A. F-connectors shall be installed in accordance with manufacturer's recommendations and installation guides, and best industry practices.
- B. Cable preparation and connector application shall be done only with tools approved for use with the connector.

3.04 FACEPLATES

- A. Blank inserts shall be installed where ports are not used.
- B. The same orientation and positioning of jacks and connectors shall be utilized through out the installation.
- C. Faceplates shall be installed straight and level.
- D. Faceplates shall be installed at the same heights as electrical faceplates.

3.05 IDENTIFICATION

- A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 271619

COMMUNICATIONS PATCH CORDS AND WORKSTATION CORDS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Communications Patch Cords and Workstation Cords.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturer's specifications.

1.03 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Copper Patch Cord/Workstation Cord Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. No Exceptions
- B. Approved Fiber Patch Cord/Workstation Cord Manufacturer(s)
 - 1. Leviton
 - 2. Systemax
 - 3. Siemon
 - 4. No Exceptions

2.02 COPPER PATCH CORDS/WORKSTATION CORDS

- A. Category 6 Patch Cords/Workstation Cords
 - 1. The Category 6 patch cord/workstation cord shall be 4-pair, with 24 AWG solid or stranded copper conductors and 8-position modular plug.
 - 2. The Category 6 modular cord cable shall be UL Listed as Type CMR.
 - 3. The Category 6 patch cord/workstation cord shall meet or exceed the requirements of ANSI/TIA-568-C.2.
 - a. The Category 6 patch cord/workstation cord color for voice shall be: Gray
 - b. The Category 6 patch cord/workstation cord color for data shall be: Blue

2.03 FIBER PATCH CORDS / WORKSTATION CORDS

- A. Multimode Fiber Patch Cords/Workstation Cords
 - 1. 50/125-Micron 850nm Laser Optimized Multimode Fiber Patch Cord/Workstation Cord (OM3)

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- a. The 50/125-micron fiber used in the multimode fiber patch cord/station cord shall have a maximum attenuation of 3.5dB/km@ 850 nm and 1.5 dB/km @1300 nm.
 - b. The 50/125-micron 850nm laser optimized multimode fiber patch cord/station cord shall meet or exceed the requirements of ANSI/TIA-568-C.3.
 - c. The optical fiber cord connector shall be LC.
 - d. The multimode fiber cord assembly shall be dual zip jacketed.
- B. Singlemode Fiber Patch Cords
- 1. 8.3/125-micron singlemode fiber patch cord:
 - a. The 8.3/125-micron fiber used in the singlemode fiber patch cord shall have a maximum attenuation of 1.0 dB/km @ 1310 nm and 1.0 dB/km @ 1550 nm.
 - b. The optical fiber cord connector shall have a maximum insertion loss of 0.5 dB and a reflectance of -30 dB.
 - c. The 8.3/125-micron singlemode fiber patch cord/station cord shall meet or exceed the requirements of ANSI/TIA-568-C.3.
 - d. The optical fiber cord connector shall be LC.
 - e. The singlemode fiber patch cord assembly shall be dual zip jacketed.
 - f. Angle polish connectors shall be used for video distribution.

PART 3 - EXECUTION

- 3.01 COPPER PATCH CORDS/WORKSTATION CORDS
 - A. Copper patch cords/workstation cords shall be installed as per the requirements specified by the manufacturer's installation guidelines.
- 3.02 FIBER PATCH CORDS/WORKSTATION CORDS
 - A. Fiber patch cords/workstation cords shall be installed as per the requirements specified by the manufacturer's installation guidelines.
- 3.03 IDENTIFICATION
 - A. Refer to Section 270553 - Identification for Communications Systems for labeling details.

END OF SECTION

SECTION 272133

WIRELESS ACCESS POINTS

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
- B. This document describes the products and execution requirements relating to Wireless Access Points requirements.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.02 SUBMITTALS

- A. Provide product data from manufacturers' specifications.

1.03 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.01 APPROVED PRODUCTS

- A. Approved Indoor Wireless Access Point Manufacturer(s)
 - 1. Leviton / Meru
 - 2. Cisco
- B. Approved PoE Switch / Controller Manufacturer(s)
 - 1. Leviton / Meru
 - 2. Cisco
- C. Approved WIFI units
 - 1. Mist
 - 2. Ruckus

PART 3 - EXECUTION

3.01 WIRELESS ACCESS POINTS

- A. Wireless access points and supporting equipment shall be installed as per the requirements specified by the manufacturers' installation guidelines and best industry practice
- B. Provide all necessary interconnections, services, and adjustments required for a complete and operable system.
- C. Install control signal, communications, and data transmission line grounding as necessary to preclude ground loops, noise, and surges from adversely affecting system operation.

3.02 FIELD QUALITY CONTROL

- A. Testing
 - 1. All devices shall be tested for full operational compliance.
 - 2. Testing of system shall be the sole responsibility of the Contractor.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3.03 LABELING

- A. Label all cables at each end of each cable. Labels shall be machine generated, wrap-around type.
- B. Labeling system shall designate the cable's origin and destination on each end of each distribution/horizontal cable.

3.04 WARRANTY

- A. All equipment, components, etc., shall be guaranteed free of defects and any faulty workmanship for a period of one year after final acceptance.
- B. The Contractor shall replace defective materials and repair faulty workmanship within 24 hours of discovery at no cost to the Owner.

END OF SECTION

SECTION 280000
SECURITY ELECTRONICS, GENERAL

PART 1 - GENERAL

1.01 SUMMARY.

- A. This division of the specifications covers the complete security controls, communications and alarm systems as indicated on the drawings and specified herein. The Electronics Systems Contractor (ESC) shall be the single contractor responsible for all systems and all other divisions covered by the complete contract specification documents and any and all supplementary documents and addenda and shall provide all design, labor, material, equipment and supervision to install the specified equipment and systems for a complete integrated operational security systems package inclusive of any and all equipment to effect a complete and functional system in accordance with and in strict compliance to the complete contract specifications and drawings.
- B. A single Electronics Systems Contractor (ESC) having met all the requirements listed hereafter and having been approved by addendum, shall assume control and accountability for furnishing and installing all systems as specified hereafter using only equipment of pre-approved manufacturers and/or approved equal.
- C. The ESC shall be responsible for the total integration and interfacing of the products and systems specified in this section and all other sections in accordance with submittals, which have been reviewed and approved by the Owner and/or Consultant.
- D. The ESC must maintain a fully staffed office owned and operated by the ESC and under the same name that shall be located in the regional area within 300 miles of the project location in order to provide the following services. The office must have and maintain permanent employees under it's hire for positions of project management and trained electronics technicians sufficient to provide the proper service to the defined project throughout the warranty period and a minimum of one (1) year following the warranty period. Response time to a call shall not exceed twenty-four (24) hours in a normal situation or four (4) hours in an emergency situation. Warranty service must be available through a toll free number to the Owner, twenty-four (24) hours a day and seven (7) days a week.
- E. Related Sections:
 - 1. All Security Sections
 - 2. All Electrical Sections
 - 3. All Low Voltage Sections

1.02 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)
- D. Institute of Electronic and Electrical Engineers (IEEE)

IEEE 802.3 CSMA/CD (ETHERNET)

1.03 SCOPE AND RESPONSIBILITY

- A. The scope of work and project responsibility shall consist of the total content of any and all portions of the contract document drawings and specifications. The scope of work shall generally include but not be limited to the following outline of major project requirements and responsibilities.
- B. The ESC scope of work shall consist of, but not be limited to the following as defined in the details of this division of the specifications and as shown on the plans.
1. Security Electronics, General
 2. Electrical, General
 3. Low Voltage, General
 4. Touch Screen Locking Control System
 5. Programmable Logic Controller
 6. Electronic Relay System
 7. Intercom and Paging System
 8. Cell Monitoring Presence Detection
 9. Video Visitation System
 10. IP Closed Circuit Television System
 11. Watch Tour System
 12. Uninterruptible Power Supply (UPS)
 13. Surge Protection
 14. Grounding and Bonding
 15. Metal Detectors and Package Screening.
- C. The ESC scope of work shall additionally consist of the following:
1. Raceway and conduit system: The ESC shall furnish and install a complete conduit and raceway system including all necessary conduit, back boxes, wire ways, pull strings, pull/junction boxes, fittings, straps, access panels and connectors for a complete raceway system for all new work and replacing existing if required contained within this section. Each system requires an independent raceway and conduit system. The ESC shall install the raceway and conduits systems per applicable Sections of the Division 260000 specifications and the latest revision of the National Electrical Code as applicable at the time of contract award. The ESC shall create complete conduit plans and details for the Owner and Consultants review and approval.
 2. Furnishing, installing (pulling) and terminating of all wire, wiring and cable.
 3. The ESC shall be responsible for furnishing and installing all equipment, wiring, installation and testing of systems defined in Divisions 26, 27 and 28. **The sub-contracting of any equipment installation shall not be acceptable.** The ESC shall be responsible for the design, fabrication, project management, installation and warranty of all systems within this division of work.
 4. The security system shall be on an autonomous network and shall be completely isolated from the internet.
 5. Complete engineering documents consisting of conduit plans, equipment plans, cut sheets and manuals for a coordinated total system including documentation for submittal, installation, operation and maintenance.
 6. Project management on and off site to oversee and supervise all work performed by, for or in coordination with the scope of work by the ESC. Inspection and verification of the site and building prior to installation to insure correctness of structure.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

7. Although such work may not be specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a complete and operating system.
 8. Furnish and install all necessary power transformation and surge protection required to operate control system equipment and functions.
 9. The plans and specifications show and or specify a conduit and raceway system to be provided by the ESC under the requirements of the NEC and Division 260000 requirements. It is the responsibility of the ESC to review the plans and specifications to insure that the requirements adequately cover the requirements of this division, if not the ESC shall be responsible to notify the Consultant and Owner concerning the deficiencies of the bid documents. Any additional requirements for conduit and raceways beyond that shown and or specified that are a result of the ESC changing or utilizing a system or design different from that shown and specified, then the ESC shall be responsible for any additional requirements for conduit and raceways beyond that shown and or specified. All installations shall be in strict accordance and compliance with the NEC and Division 260000.
- D. The ESC shall also be responsible for the following, but not limited to:
1. Site work including any trenching if and as applicable.
 2. Concrete work including bases and anchor bolts for units such as exterior intercom pedestals and camera poles.
 3. Casework and millwork.
 4. Electrical work.
 5. Control work and/or annunciation.
 6. All power and branch circuits including raceways, conduit, wiring and terminations from power distribution panels to terminal strips and/or receptacles in electronic control cabinets/panels and/or at electronic system devices. All distribution circuits shall be connected to the emergency power source.
 7. Painting and touch up.
 8. Patching of concrete, tile and masonry.
 9. All caulking and sealants.
 10. Final cleaning.
 11. Fireproof caulking.
- E. Related work requiring coordination with existing systems.
1. Lighting, utility and receptacle control relays will be provided by this section. The conduit, wiring and terminations for the high voltage lighting, receptacle and all utility control.
 2. The conduit system for the control equipment must be closely coordinated between Division 26 and Division 28 specifications.
 3. The control equipment requires power at the following locations:
 - a. All control panel and touch screen locations.
 - b. All relay cabinet locations.
 - c. All camera, intercom, access control and equipment cabinet locations.
 - d. All CCTV monitor and control locations and exterior PTZ cameras.
 4. Elevator, generator and water flow controls.
 5. Control of existing Roll Up Doors And Gates.
- F. Acceptable ESC's
1. SWC – South Western Communications, Inc., Decatur, AL
 2. A/E Security, GA
 3. Stanley, San Antonio, TX
 4. Cornerstone Electronics, Montgomery, AL

1.04 PREQUALIFICATION REQUIREMENTS

- A. All ESC's must be pre-approved and listed. ESC's not listed as being approved that desire to bid the project must request approval and shall submit the following qualification information to the Owner and Consultant in writing no later than seven (7) days prior to bid. Request received after this time will not be considered. If approval is received, acknowledgment will be by addendum. Verbal approval will not satisfy the right to bid. The ESC shall be named and listed on the bid form. Any bid forms containing the name of any ESC not listed and pre-qualified will not be considered. All ESC's shall submit all information exactly as herein requested or approval will not be considered. Disqualification shall immediately exist if the request is submitted in a manner inconsistent and or incomplete as requested following. Disqualification shall also exist if in the opinion of the Architect and or Consultant, the information submitted is inaccurate or does not satisfy the qualification requirements.
- B. The Owner and Consultant reserve the right to disqualify and or not approve any ESC for any reason if they deem it to be in the best interest of the Owner.
- C. The ESC shall be a true systems integrator specializing in the design, manufacture, installation and servicing of integrated security electronics and communication control systems.
- D. The evaluation of each perspective ESC's qualifications will be strictly and solely based on the qualification proposal. The proposal's format must be on a paragraph-by-paragraph basis to the items listed following:
 1. Provide a history of the company that reflects accurately the length of time the company has been licensed and performed services of an ESC. The company shall have been in business under and incorporated under the name submitted in the proposal for a minimum of ten (10) years. For companies with multiple offices, the proposal must contain information based only on the location that will be responsible for the entire management and operations for this project from award of bid through the warranty period.
 2. ESC's shall be properly licensed by the State to perform this scope of work. Provide a copy of the Georgia Low Voltage Alarm Contractor License as required by the Georgia Construction Industry Licensing Board.
 3. Provide a complete company organizational chart to include the owner(s), officers and key individuals.
 4. Provide an organizational chart to include the names and positions of the Project Manager, Engineering Manager, the principal Project Engineer, the Project Programmer(s), the Manufacturing Manager, the Project Superintendent, the Lead Technician, all Field Technicians and Technical Support Staff that are to be assigned to this project.
 5. For each of the individuals listed in the organizational chart, provide complete resumes and a delineation of each individual's responsibilities for this project. The resumes must include information about the individual's education, electronics systems detention experience, systems integration capabilities, factory training and certification and the length of time employed by the ESC. Provide a copy of each individual's manufacturer's certificate of certification for all systems, equipment and software for which each individual that will be involved.
 6. The ESC must employ and provide the names and resumes of the following resident staff personnel in its employ and such individuals must have oversight of the project. The resumes shall include the same information as listed in paragraph 4 above plus a copy of the certificates of certification required for each:
 - a. A Microsoft Certified Professional.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- b. A UL Trained Applications Engineer.
7. Provide a list of the ten (10) most recently completed projects involving the major systems similar to those described in these specifications for which the ESC has been the integrator and having furnished and installed. Each project shall be of the size, complexity and requirements of this project and must have been in successful operation for a minimum period of three (3) years. If more than ten (10) projects are listed, only the first ten (10) will be reviewed. Provide the following information for each project:
 - a. Project name and location.
 - b. Date project was completed.
 - c. Total project value.
 - d. Contract amount to the ESC.
 - e. Names of the ESC's Project Manager, Principal Project Engineer and Field Superintendent.
 - f. Name and telephone number of Architect.
 - g. Name and number of the Security Consultant.
 - h. Name and number of the Architect's Project Manager and Site Project Engineer.
 - i. Name and number of an individual (preferably the maintenance manager) at each facility who is familiar with the operation, performance and maintenance of the facility's security electronic system. Reference must be current or the ESC will be considered non-responsive.
 - j. List and description of all systems on the project and the approximate value of each. System values must exceed the following amounts for at least two (2) of the projects:
 - 1) Graphic Door Control System - \$100,000
 - 2) Touch Screen Door Control System - \$100,000
 - 3) Intercommunication System - \$100,000
 - 4) Video Surveillance System - \$100,000
 - 5) Programmable Logic Controller - \$100,000
 - 6) Video Visitation System - \$100,000
8. Provide a list of all projects, which the ESC was involved in any form of litigation. Provide the following information for each project:
 - a. Project name and location.
 - b. Date project was started or completed.
 - c. Total project value.
 - d. Contract amount to the ESC.
9. Provide a list of all projects, which the ESC was assessed liquidated damages, even those projects for which the ESC did not have to pay a claim. Provide the following information for each project:
 - a. Project name and location.
 - b. Date project was started.
 - c. Total project value.
 - d. Contract amount to the ESC.
10. Provide a current independently audited and certified financial statement showing a consolidated net worth of \$1,000,000.00.
11. Provide a letter from the Surety Company reflecting the Surety Company's history with the ESC. The letter must state the position of the Surety relative to providing a 100% payment and performance bond should a contract be awarded to the ESC. The letter must be an original and include a current issue date and reference this project and state the estimated value of the ESC contract. Even though the ESC will be a subcontractor to the DEC, the ESC will be required to provide both a bid bond

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- to bid (cashiers check or bank letter will not be acceptable) and a performance and payment bond in order to perform the work.
12. Provide Microsoft certificate and Microsoft qualification number attesting to the ESC's approval and certification by Microsoft that they are a Microsoft listed and authorized Microsoft Certified Professional.
 13. Provide BICSI certificate and BICSI qualification attesting to the ESC's approval and that they are BICSI authorized.
 14. The ESC shall confirm in writing that they will have qualified personnel available to be on the project site daily for any and all coordination purposes throughout the total duration of the project. Provide the name(s) and resume(s) and the individual(s).
- E. Systems, equipment and products specified in this division shall be engineered, programmed, manufactured and assembled, installed and serviced by an approved ESC.
- F. All work is to be performed in strict accordance to any and all applicable codes, ordinances, regulations and standards; Federal, state, local and otherwise including but limited to the following:
1. National Electrical Code (NEC), latest edition
 2. National Fire Protection Association (NFPA)
 3. Factory Mutual System (FM)
 4. Electronics Institute of America (EIA)
 5. Underwriters Laboratory (UL)
- G. Provide a statement attesting that the ESC has reviewed the entire set of bid documents not just Division 28000 and understands the specified system and project requirements.
- H. Provide a riser diagram for each system specific to this project depicting all relevant details and information inclusive of but not limited to equipment layout and locations, conduit routing and sizing, cable and wiring requirements and power requirements.
- I. Provide for each system specified a delineation of the task required to be performed by the ESC. Provide technical proposals reflecting the ESC's experience in the field of scope.
- J. Provide a narrative description of all software to be used including touch screen, programmable logic controllers, access control, systems management, closed circuit television and video visitation.
- K. Provide from each manufacturer of each system certification that the ESC and its applicable personnel have been factory trained and certified to manufacture /assembly, install and service equipment contained in each system.
- L. Refer to each individual section of this division of the specification for the list of acceptable manufacturers. If the ESC preparing the proposal desires to request a substitute, he must do so within the confines of these proposal qualification requirements in writing fourteen (14) days prior to the bid date. Manufacturers and equipment substitution proposal request must be submitted noting section, page, paragraph and item with a detailed cross-referencing and comparison. For proposed substitutions submit the following information exactly as requested:
1. Name of manufacturer
 2. Address of manufacturer
 3. Phone number of manufacturer
 4. Trade name
 5. Model and catalog designation
 6. Performance and test data
 7. Referenced standards
 8. Warranties
 9. Material construction

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

10. Finish

- M. Electronic components shall be from manufacturers who at present have not less than ten (10) years continuous successful experience in the design and manufacture of the type products required for this project.
- N. In order to meet the high standard requirements for Quality Assurance, proprietary and custom systems such as those manufactured by MTI, Simplex and or Comtec are not acceptable. Integrators listed as being approved and/or Integrators having been approved by addendum shall use products as specified and defined by these specifications.

1.05 SUBMITTALS

- A. General: Submit listed Submittals in accordance with Conditions of the General Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's data sheets for all proposed system components. Submit six (6) copies with all specific items that will be provided clearly indicated and the options highlighted. Submit product data in PDF electronic format.
- C. Shop Drawings: Complete system Shop Drawings shall be prepared for this particular project which include device layout based on the building floor plan, point-to-point wiring diagram(s), conductor sizes and types, riser diagrams and schematics, theories of operation, full scale color Graphic Panel layout drawings, and full scale color Touch Screen map layouts. Submit six (6) copies for review and approval. Layout shall be based on an actual building floor plan provided by the Engineer as well as diagrammed for system clarity. Drawings shall show all equipment locations and quantities required. A final "as-built" plan layout shall be provided to the Owner upon Substantial Completion of the actual installation.
- D. Materials List: Submit a complete materials list indicating all equipment to be provided as part of this section.
- E. Samples: Submit selection and verification samples of finishes, colors, and textures as requested.
- F. Complete details of equipment mounting configuration.
- G. Manufacturing assembly and testing procedures and forms.
- H. Installation testing and check out procedures and forms to be used by the ESC and Architect and or Consultant.
- I. The conduit plans, equipment plans, riser diagrams, block diagrams and details are to be submitted in the latest version of MicroStation or AutoCad and shall be submitted on a minimum of a 'D' size drawings in electronic PDF format. Documents submitted in any other manner including marked up sets of the bid documents shall receive immediate rejection and will not be reviewed. A complete set of as built documents will be issued at the completion of the project inclusive of CAD files on CD.
- J. Submittals issued in a manner inconsistent with the requirements of these specifications shall receive immediate rejection and will not be reviewed. Submittals issued containing materials, products and or equipment not listed and approved addendum shall receive by the original bid document specifications or by immediate rejection and will not be reviewed.

1.06 OPERATION & MAINTENANCE MANUALS

- A. The ESC shall furnish three (3) sets of operational and maintenance manuals for all systems furnished. The manuals shall include component list, instructions for care,

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

operation instructions, and instructions for ordering replacement equipment and personnel to contact for warranty work.

B. Record Documents:

1. This Contractor shall supply Record Documents for the entire facility inclusive of existing areas (if applicable), systems and conditions. The as Record Documents at a minimum shall include floor plans, conduit plans, control room layouts, equipment room layouts, touch screen control layouts, equipment cabinet layouts(including existing to remain if applicable), theories of operation, wiring diagrams and schematic block diagrams.
2. At the time of project completion, this contractor shall turn over to the owner all original software media and manuals for all programmable systems to include but not be limited to Touch Screen Computers, Programmable Logic Controllers, Access Control System, Intercommunications System and Closed Circuit Television System.
3. At the time of project completion, all project installed hardware, software and programs becomes the sole property of the owner.

1.07 APPROVALS

- A. Deviations from this specification must be documented in writing to the Architect and Engineer at least fourteen (14) business days prior to the bid date.
- B. Complete catalogue data, product specifications, and technical information on alternative equipment must be provided including all associated cost savings or additions, including but not limited to equipment, equipment installation, power wiring and materials, programming, documentation, and project management.

1.08 DELIVERY & HANDLING

- A. General: Comply with Division 1 Product Requirements Section.
- B. Delivery: Deliver Materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials and equipment in an area protected from harmful weather conditions and at temperature conditions recommended by manufacturer. After initial installation, protect equipment from exposure to dust, dirt, paint, and other contaminants.

1.09 PROJECT CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings.
- B. Scheduling: Coordinate taking field measurements, fabrication schedule, and deliveries with construction progress schedule to avoid construction delays.

1.10 WARRANTY

- A. Manufacturer's Warranty: All equipment and labor provided under this section is warranted for two (2) year from Substantial Completion or System Commissioning, whichever occurs first.
- B. During the warranty period the ESC shall perform quarterly preventive maintenance inspections on all installed equipment.
- C. Nothing in the above warranty shall apply to material which has been misused, abused as follows; neglect by the owner, defects or damage caused by work or failure of work by others, ordinary wear or normal equipment adjustment.
- D. Additionally, any unauthorized modifications; repairs or tampering shall constitute termination of the warranty.

1.11 TRAINING

- A. The ESC shall provide forty (40) hours of on site training for operational purposes and forty (40) hours of training for maintenance purposes at the turn over of the project.
- B. It is mandatory that the ESC shall set up in their facilities all equipment for the project and shall test each and every component and operation prior to shipping to the project. Test reports as mentioned above shall be provided to the Architect/Engineer.
- C. The ESC shall include in their bid all expenses (travel, per diem, hotel and food) for twelve (12) operation officers and maintenance personnel to attend the factory testing of the systems for a three (3) days period.

PART 2 - PRODUCTS

- 2.01 See Individual Division 28 Specification sections for specific product requirements.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.

3.03 PREPARATION

- A. All equipment related to the system shall be factory tested before shipment.

3.04 INSTALLATION

- A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
- B. Install in accordance with manufacturer's handling and installation instructions.
- C. Install in accordance with all local and pertaining codes and regulations.
- D. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
- E. Equipment shall be ready to use condition at end of installation.
- F. Energize equipment in accordance with manufacturer's instructions.

3.05 PROTECTION AND CLEANING

- A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- B. Touch up, repair, or replace damaged components before Substantial Completion.
- C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
- D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.

3.06 WARRANTY

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of two (2) years from the date of substantial completion.

END OF SECTION 280000

SECTION 28 01 00
SCOPE OF WORK

PART 1 - GENERAL

1.01. SCOPE OF WORK

1. Provide complete electronic security systems upgrades and replacements for the existing Law Enforcement Center, Jail and Courthouse.
LEC/JAIL/COURTHOUSE.
2. Existing systems are as follows but not limited to:
 - a Touchscreen Locking Controls
 - b IPCCTV cameras
 - c Access Control System
 - d Intercom and paging
 - e Watchtour
 - f UPS
 - g Grounding and Bonding
 - h Video Visitation – ALTERNATE NO. 2
 - i Duress Panic Pushbuttons
 - j Metal Detectors and Package Screeners – ALTERNATE NO. 3
 - k New Door Controls, electric locks, card readers, etc. for existing doors
3. Replace all major systems with new headend equipment, relays, power supplies, etc. Existing cabinets may be reused.
4. Field verify all existing control locations and equipment, existing security equipment cabinet locations for all systems and as shown on the drawings.
5. Provide a new touchscreen locking control system. Duplicate all existing control stations, headend equipment, etc. The field locks, door position switches, call-in switches, etc. devices shall be tested and reused. Devices found inoperable shall be replaced with new.
6. Provide a new intercom system headend that duplicates the existing intercom system. The field intercoms, speakers, etc. devices shall be tested and reused. Devices found inoperable shall be replaced with new.
7. Provide a new IP camera system in the existing LEC/JAIL/COURTHOUSE. Replace all existing cameras with new cameras. Replace all existing Camera wire with new CAT6 cable. Provide new cameras where indicated on the drawings. Provide new headend and control equipment for all existing cameras and new cameras.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

8. Provide a new access control system in the existing LEC/JAIL/COURTHOUSE. Duplicate all existing locations. There are new access controls required at specific doors as shown on the drawings.
9. The new IP camera system and the access control system shall be managed by the same platform operating software.
10. The touchscreen locking control system and the IPCCTV operating platform software shall be by the same manufacturer.
11. There will be an opportunity to walk through the facility before the bid date. The Owner will provide bid date and pre-bid walk through at the facility.
12. Provide new security equipment cabinets including, but not limited to PLC's, I/O cards, CPU's, UPS units, cabinets, switches, relays, terminal strips, power supplies, fuses, led's, intercom headend, camera headend, etc.
13. Existing field devices, (locks, door position switches, intercoms, duress, call-in, etc.) shall remain. Existing field wiring shall be reused. (Except for CCTV wiring. All CCTV coax cable shall be replaced with new CAT6 cable.) Contractor to test all existing wiring, locks, call-in switches, door position switches, intercoms, watch tour devices, duress switches, etc. Contractor to provide Owner with list of all devices and the status of each. Contractor shall also inspect and test each device and indicate if any of the devices need replacing.
14. Provide new WIFI system for the new housing unit.
15. Site Fiber Optic cabling is existing and available for central control alarm reporting. Provide new fiber optic cabling between the existing LEC/JAIL and the existing COURTHOUSE. Provide new fiber connection to new security equipment.
16. Any medico locks for UPS/touchscreen PC cabinets, security equipment cabinets, cabinets, etc. shall have a new key code to match existing.
17. Test, adjust and commission the new touchscreen locking control system, new wiring and existing locks, door position switches, call-in switches, intercoms, duress switches, watch tour devices, etc.
18. The contractor shall be responsible for removing all existing locking equipment, switches, panels, consoles, wire etc. Coordinate location of storage and removal with the Owner. If the Owner wants to retain any equipment, he shall have the right to keep any existing equipment. Notify the Owner of all equipment to be disposed of.
19. The contractor shall provide a container on site for all material to be destroyed and removed.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

20. Replace the existing UPS system with new. All existing UPS units shall be replaced with new. New UPS units shall be required at all Touchscreen Locking Control Stations and Camera Operating Stations. New UPS shall be provided at the central control security equipment room.
21. Provide an allowance estimate for 4000' of THHN wire replacement, 400' of ¾" conduit, termination equipment and labor for any wire and conduit that may need replacing in the existing facility. See unit pricing requirements.
22. All new components in these specifications shall be UL listed.
23. The main UPS system is being replaced at the same time of this contract, by others. (not the UPS required for the security system herein). Coordinate with the Owner and UPS contractor for installation of the UPS to minimize down time for both systems.
24. Contractor shall provide a phasing of work plan and schedule as soon as the contract is awarded. A meeting shall be required with the Owner and staff to review both phasing and schedule plans. A phasing plan and schedule of work shall be required for both the Jail/LEC and the Courthouse.
25. Include in the bid, unit pricing for existing devices that are damaged and/or non-functional as follows:
 - a Intercoms
 - b Card readers
 - c Locking devices

1.02 ALTERNATE NO. 1

1. Provide a new intake control room. See ES38 for layout and specifications.
2. Demo the existing intake control room desk.

1.03 ALTERNATE NO. 2

1. The Video Visitation system shall be separate pricing. See specifications.
2. There are 26 units required.
3. Replace existing

1.04 ALTERNATE NO. 3

1. Provide new metal detector. X-HI-PE Multi-Zone Performance Walk-through Metal Detector.
2. Provide new package screener. Smith HI-SCAN 6040i. See attached cut sheets.

END OF SECTION

**SECTION 280120
TOUCH SCREEN SYSTEM**

PART 1 - GENERAL

1.01 SUMMARY.

- A. Provide Touch Screen control stations as specified herein and as shown on the schedules and drawings. Installing contractor shall receive, place, connect, and mount all equipment specified in this Section per the manufacturer's instructions. Installing contractor shall furnish all hardware, wire, connectors, and other necessary items as required for a complete and functional control system.
- B. Related Sections:
 - 1. Electrical
 - 2. Low Voltage
 - 3. Security Electronics, General
 - 4. Touchscreen Locking Controls
 - 5. Programmable Logic Controllers
 - 6. Electronic Relay System
 - 7. Intercommunications System
 - 8. IP Closed Circuit Television System

1.02 ACCEPTABLE INTEGRATORS

- A. Except as otherwise specified, herein, or in the General Conditions, the equipment and materials of this Section shall be products of the following manufacturers, subject to compliance with specification requirements and provided each specifications. Integrators and their products that utilize proprietary or custom software and or equipment such as those by MTI, OSS, Simplex and Comtec are not acceptable.
 - 1. SWC – Southwestern Communications, Inc., Decatur, AL
 - 2. Cornerstone Electronics, Montgomery, AL
 - 3. A&E Security
 - 4. Stanley

1.03 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)

1.04 WORK INCLUDED

- A. Provide materials, labor, equipment, and services necessary to furnish, deliver, and install a touch screen control system as shown on the drawings, as specified herein, and/or as required by job conditions.
- B. Major Sub-systems include:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1. Touch Screen Control Stations.
2. Programmable Logic Controllers (PLC's).
3. Electronic relay system.

1.05 COORDINATION WITH OTHER TRADES

- A. The Contractor shall coordinate the work of this Section with that of other Sections as required ensuring that the entire work of this Project will be carried out in an orderly, complete and coordinated fashion.
- B. Coordinate for new builder's hardware and existing security hardware.
- C. The ESC responsibilities for electro-mechanical locks and devices Shall include the following:
 1. The ESC shall provide relay cabinets in each equipment room as shown on the drawings to interface to the door locks, door status switches, and jam mounted push-buttons and key switches. Relay cabinet and associated terminal strips shall be sized as required to accommodate control equipment for specified lock functions.
 2. The ESC contractor shall be responsible for furnishing and installing all equipment, wiring, installation and testing of all systems herein. The sub-contracting of security equipment installation shall not be acceptable. The ESC contractor shall be responsible for the design, fabrication, project management, installation and warranty of all systems within this division of work.
 3. Provide all control hardware and systems to control or monitor all existing doors, gates, roof hatches, etc.
 4. For doors which include hardware, card readers intercoms, push buttons, and other control devices; the ESC shall furnish and install conductors, and cabling systems to support all door functions.
 5. After installation, verify proper control operation of all doors.
 6. The ESC shall be responsible for coordination of all interfaces with all existing Utilities including any lighting or power controls interface that may be required from the touchscreen control Systems. Duplicate all existing Utility controls.
 7. The ESC shall coordinate the exact locations and requirements for electrical power provided to the security equipments.
 8. The ESC shall be responsible for ensuring that all security system equipment is powered from an emergency power panel and that all security systems, except where otherwise noted, are powered from an uninterruptible power system (UPS).
- D. All existing security hardware electro-mechanical locks, door position switches and devices shall be controlled from the new touchscreen locking control system. Duplicate all existing control on the new touchscreen locking control system.
 1. All existing locks shall be tested before and after new touchscreen locking control system is installed.
 2. Provide written report of the status of all tested doors and locks.
- E. There are existing and new builders electro-mechanical locks and devices required and shall include the following:
 1. Furnish and install door locks, door position switches, limit switches, lock feature switches, card readers, exit request pushbuttons, passive IR exit devices and push buttons and key switches, as required for the system to perform the functions as defined herein.
 2. Furnished and installed electric locks and/or magnetic hardware to be installed and prepped complete including lock and switch pigtails being stripped and ready for termination.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3. Furnish wiring drawings and other information as required for design and installation of the control drawings.
4. Solenoids for direct current (DC) application shall be equipped with diodes for transient protection.
5. After installation, adjust all locks and switches for proper indication and mechanical alignment.
6. All doors requiring new control are existing. Field verify each door for exact conditions before installation. Provide shop drawings for each door for review and approval.

1.06 SUBMITTALS

A. General

1. Submittals shall be made in accordance with the General Provisions (Section 280000) of these specifications.

B. Specific Requirements:

1. Submit catalog cuts for all equipment and devices being furnished under this Section.
2. Submit full scale color drawings for each control screen which shall designate colors and icons for each controlled and/or monitored condition within the system.
3. Submit electronic files from which each screen may be viewed to reflect selected colors and icons. Software shall be provided to allow the Engineer and Owner to view the screens.

C. Software development

1. Within one (1) month of receiving the approved shop drawing submittal, the security equipment contractor shall schedule a preliminary meeting with the owner and architect/engineer. Specific operation and function of the security control system must be determined prior to the preliminary meeting. Extensive analysis outlining all performance of software design and application will be determined and approved at the preliminary meeting.
2. Based on the preliminary meeting, the ESC contractor shall develop the control and display software. The complete set of control screens shall be submitted as shop drawings on both paper prints and electronic CAD files. If necessary, shop drawings shall be resubmitted until approved.
3. Any changes or modifications to the system resulting from the shop drawings shall be incorporated into the system and demonstrated at a meeting to finalize the system.
4. Any modifications to the system resulting from the meeting will be incorporated and demonstrated at the factory testing.

D. Factory Testing

1. The ESC shall bear the cost of travel and subsistence for four (4) operation officers and two (2) maintenance and one (1) design professional personnel to witness factory testing of the touch screen control and monitoring system assembled in the factory. The contractor shall give written notice that the system is ready to be tested a minimum of 14 days prior to testing, and testing should occur approximately 4 months prior to the scheduled completion date for the project.

1.07 TOUCH SCREEN SYSTEM DESCRIPTION

- A. Touch Screen control stations provide the human interface device at locations as shown on the drawings for security alarm monitoring and control of security devices including doors, cameras, and intercoms.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- B. The Touch Screen control stations are comprised of a Pentium based PC, LCD monitor with touch screen transducer. The control icons serve as a means of interface to the programmable logic controller (PLC). The PLC then performs logic functions (such as timing and interlocking) and activates the appropriate field devices (such as locks or video Switcher control) based on the graphic control panel switch command.
- C. Monitoring functions: The PLC receives signals from field devices and routes the information to the Touch Screen control stations where icons and/or audible tones annunciate the condition of the controlled field devices.
- D. The touch screen terminal consists of a 32" high-resolution LCD color video monitor integrated with a touch screen transducer which is applied to the monitor surface. Touch screens shall be freestanding or rack mounted in casework as indicated on the drawings. Freestanding monitors shall have adjustable swivel bases secured to the casework.
- E. Log-In: Access to the touch screen system shall be password protected and all operators shall log into the system. Touch screen keypads shall utilize a "scramble" function so that the digits do not appear in the same location each time an operator logs into the system. All log-in/log-out activities shall be recorded on the system data logger. Terminals shall be limited to three consecutive invalid log-in attempts. After three failed attempts, the terminal shall be disabled and an alarm shall be generated at Central Control. Control of the screen must be returned from Central Control.
- F. Mouse: Each touch screen station shall also be equipped with a mouse to operate the terminal using an on-screen indicator rather by using the touch of a finger. Selecting a program segment or option requires moving the display cursor to the appropriate screen location with the mouse and depressing left mouse button.
- G. Control Transfer: Two methods of control/transfer shall be provided:
 - 1. Substation Transfer. Activating the "Log Off" icon on the touch screen monitors shall automatically transfer all control and indicating functions to the designated location. When logged off, the transferred terminal shall not be capable of performing control functions. Return to normal operation shall be accomplished by logging onto the system using the video keypad.
 - 2. Control "Takeover": Activating the "Takeover" icon on the touch screen monitor shall automatically transfer all control and indicating functions to the designated location. When logged off, the transferred terminal shall not be capable of performing control functions. Return to normal operation shall be accomplished by logging onto the system using the on-screen keypad.
- H. Takeover Hierarchy: Central Control shall be able to take over any control location.
- I. UPS Alarms: UPS Alarms shall send a text message to Central Control and be logged on the data logger.
- J. Failure of any touch screen or network PC shall not affect the operation of any other touch screen station. Touch screen control stations shall communicate directly with the PLC's for control functions via the security Ethernet LAN. PLC's shall be located in equipment rooms as shown on the drawings.
- K. Each Touch Screen control station shall contain a licensed copy of the Graphical User Interface Software (GUI). The use of server based systems shall be strictly prohibited. All copies of licenses shall be turned over to the owner at the time of substantial completion of the project and become the sole property of the owner.
- L. The system shall utilize voice instructions for alerting the operator to alarm conditions and critical control sequences such as interlock, interlock override, emergency release, and other functions as directed by the Owner/User. There shall also be a voice annunciation ON/OFF switch to enable and disable the voice instructions.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 1.08 TOUCHSCREEN SYSTEM – SCREEN CONTROLS/MONITORING FUNCTIONS – GENERAL:
- A. General: Control screens shall be comprised of icons and text fields. Icons shall designate the sensitive area for touch control and display, which provides a pictorial representation of a switch function.
1. All icon activations shall be annunciated with an audible tone, a color change of the icon, and a change of icon configuration.
 2. Each screen shall annunciate off-screen inputs, such as intercom calls and alarm events. The control terminal operator shall be notified of these events regardless of the screen that is currently displayed on the terminal.
- 1.09 TOUCHSCREEN SYSTEM – SCREEN CONTROLS/MONITORING FUNCTIONS - SPECIFIC
- A. Specific Icon Control Functions: The drawings include representative control and monitoring screens for several console locations. Following is a description of the control and monitoring functions for the icons presented on those drawings. The following descriptions may not include all control and monitoring functions for all icon types required for this project, but provides a representative sample to indicate the type and level of control and monitoring expected.
- B. Door Control and Monitoring
1. SWING DOOR. Momentarily touching the Unlock icon shall apply power for approximately one second to the lock motor, to begin it's unlocking cycle. A GRAY padlock shown locked indicates SECURE condition of the door. A RED padlock shown unlocked indicates UNLOCKED or UNSECURED condition of the door. If door is part of an INTERLOCK GROUP, the icon outline shall become yellow anytime another door in the group is unlocked. An attempt to unlock a door that is part of an interlock group (while another door of the interlock group is insecure) shall cause a dialogue box to be displayed indicating the presence of an interlock. The dialogue box shall include icons for OVERRIDE or CANCEL. Touching the OVERRIDE icon shall defeat the interlock and unlock the selected door. Touching the CANCEL icon shall cancel the dialogue box and return to the floor plan.
 2. MONITORED ONLY DOOR: A GRAY padlock shown locked indicates SECURE condition of the door. A RED padlock shown unlocked indicates UNLOCKED or UNSECURED condition of the door.
 3. FULLY OPERABLE SLIDING DOOR DEVICE: Open/Stop/Close. Momentarily touching the Open icon shall open the door. Momentarily touching the Stop icon shall halt any door movement. Momentarily touching the Close icon shall close the door. The device shall not be allowed to reverse operation without first going through an approximate one second delay of stop time. If the door is part of an interlock group and another door in the group is not secure, the door will not open without overriding the interlock group. A GRAY padlock shown locked indicates SECURE condition of the door. A RED padlock shown unlocked indicates UNLOCKED or UNSECURED condition of the door. If door is part of an INTERLOCK GROUP, the icon outline shall become yellow anytime another door in the group is unlocked. An attempt to unlock a door that is part of an interlock group (while another door of the interlock group is insecure) shall cause a dialogue box to be displayed indicating the presence of an interlock. The dialogue box shall include icons for OVERRIDE or CANCEL. Touching the OVERRIDE icon shall defeat the interlock and unlock the

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- selected door. Touching the CANCEL icon shall cancel the dialogue box and return to the floor plan.
4. ROLL UP DOOR, SLIDING VEHICLE GATE: See description for fully operable sliding door device.
 5. INTERLOCK OVERRIDE: This function shall be accomplished utilizing an interlock dialogue box. The dialogue box contains two icons, Override and Cancel. When an attempt to unlock or open a door within an Interlocked group of doors where one or more doors are in the insecure position, the Interlock dialogue box shall appear. Selecting the Override icon will allow the opening of the door. Selecting the Cancel icon will return the operator to the previous control screen. When a door is part of an Interlock group and another door within the group is insecure, the outline of the padlock door indication symbol shall illuminate yellow for all doors within the group. Once the door moves to the insecure position, the fill color of the icon shall turn red and depict an unlocked padlock symbol while the outline is simultaneously yellow.
 6. GROUP ASSIGN: There shall be a Group Assign toggle function. Once the Group Assign toggle function has been activated, touching any door icon within the associated group will assign the door to be released upon activation of the Group Release function. If a door has been selected for the Group Assign function the door indication icon shall have its keyhole circle change from black to blue in color to indicate the Group status of the door. Depressing the Group Assign toggle function a second time will disable the function and return the system to its previous operating condition.
 7. GROUP RELEASE: Touching the Group Release icon shall cause all doors within the group that have been previously assigned to unlock and the door status icons for each doorway will indicate the actual status of the doors. All doors connected to the group shall re-lock when closed.
 8. EMERGENCY RELEASE:
 - a. Touching the “Emergency Release” icon located in the menu bar of the Touch screen shall switch the view to the primary emergency release screen, which shall contain an Emergency Release icon for each ER group within the facility and an ER Enable icon. Touching the Enable” icon shall arm the system for emergency release and shall display an “Are you Sure?” prompt and “Yes” and “No” icons. Touching the “No” icon shall again display the primary emergency release screen. After touching the “Yes” icon, a pulsing audible tone shall sound every 4 seconds to indicate the system is armed.
 - b. While armed, touching a Emergency Release icon for any ER Group, an emergency Release door switch, or a normally controlled door release switch shall unlock the door or doors associated with that switch and the doors shall remain unlocked until reset. A “ER Reset” icon shall appear on each screen. Touching the “ER reset” icon and then an activated door or Emergency Release icon shall reset the emergency release function for that door or group and the door(s) shall lock.
 - c. The emergency release function shall continue to be armed and the audible tone shall continue to sound until the operator returns to the primary emergency release screen and touches the emergency release “Cancel” switch. The “Cancel” switch shall disarm the emergency release function, cancel the audible tone, and reset and lock all doors opened by the emergency release function.
 - d. The door indication icon for doors actively Emergency Released shall have its black keyhole change to a flashing black “E”. Once the Emergency Release has

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- been reset, the “E” shall change back to a keyhole and the icon shall depict the current status of the door as previously described.
9. INTERCOM CONTROL: When an intercom call-in is initiated from a sub-station the following conditions shall apply:
 - a. The intercom station icon shall have a speaker symbol that will flash green to indicate the call-in along with an audible tone every 4 seconds. Touching the intercom station icon will select the audio path to the station and cause the icon speaker symbol to change to steady and green. Touching the station icon a second time, or selecting another intercom station, will cause the audio path to be closed and the speaker symbol to turn gray in color to indicate the inactive status of the station.
 - b. Once an intercom station is active, the operator shall touch and hold the Push To Talk icon to talk to the associated intercom station, and release the Push To Talk icon to listen to the associated intercom station.
 - c. Intercom call-ins shall go into an intercom stack on a first in first out basis. Located in the menu bar shall be two intercom associated icons, “Select” and “Reset”. Touching the Select icon will select the first Intercom call-in within the stack and automatically change the control screen to the location of that Intercom icon. Each time the Select icon is touched the current intercom conversation will be terminated and the next call in the stack will be initiated and the appropriate graphic control screen will be called. Touching the “Reset” icon will cancel any current intercom station. Intercom stations are NOT to be displayed in the alarm queue of the Touch Screen control station.
 - d. Anytime an intercom station is active, the associated camera/cameras are to be displayed on the associated video segments. Video segment 2 is to display the camera viewing the side of the door where the intercom station is active. Video segment 3 is to display the camera viewing the opposite side of the door.
 10. INTERCOM ISOLATE: The Touch Screen shall allow cell intercom stations and/or any other station as directed by the Architect/Owner to be placed in to an isolated state.
 - a. There shall be an Intercom Isolate icon located in the menu area of the Touch Screen. Selecting the Isolate icon will activate the Isolate Mode and the Isolate icon background shall turn green in color to indicate the active status.
 - b. While the system is in the Isolate Mode, touching an Intercom Station icon will put the associated station in an isolate state. Each intercom station in an isolated state shall be indicated by a diagonal yellow line through the associated station icon.
 - c. While an intercom has been isolated, the audible message will not be played at the operator station when a remote intercom station places a call. The operator shall still be able to select the intercom station for communications.
 - d. The isolated intercom will automatically cancel after activation as determined by a user adjustable timer. The operator can reinstate the isolate function by repeating the initial steps.
 11. PAGING SPEAKER/ZONE: Touching a PAGE icon shall select a paging speaker zone for broadcast. Touching the PAGE icon a second time to reset. The associated Page icon shall have a speaker symbol that will turn green in color any time the page function is active. The speaker symbol shall be gray in color to indicate the inactive status of the Page The operator shall press and maintain pressure on the Push To Talk switch to talk in order to broadcast out to the affected speakers.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

12. ALARM QUEUE: Located at the bottom of each control screen shall be an alarm queue. This queue will display a list of alarms in the order at which they were initiated.
 - a. Each alarm shall be depicted in the queue by a text description as well as audibly announced with a voice command describing the alarm condition. Voice commands shall re-sound every 4 seconds until the alarm condition has been acknowledged and reset.
 - b. The alarm condition shall be acknowledged by highlighting the condition in the queue and touching the “Select” icon. This sequence will cause the appropriate control screen to be automatically displayed and display an alarm dialogue box with operator instructions for the alarm condition response.
13. ALARM SILENCE: Touching the Alarm Silence icon shall cause the audible alarm to silence. All visible indicators shall remain unaffected.
14. ALARM RESET: Touching the Alarm Reset icon will return all acknowledged alarm conditions to their normal state, and extinguish any alarm icons only after the alarm signal has been cleared.
15. CCTV CAMERA CONTROL: CCTV camera icons shall have a camera symbol located within the camera control icon. While a camera is inactive the camera symbol shall be gray. Touching the camera control icon shall display the camera to the appropriate on-screen video segment and cause the camera symbol to turn orange. Touching the camera control icon a second time will cause the associated on-screen video segment to go blank and return the camera symbol to gray to indicate the inactive status of the camera. If a camera is automatically called-up for an intercom call, the above described icon conditions shall apply for any active cameras.
 - a. There shall be four (4) individual video segments imbedded in the Touch Screen display. Video shall be streamed to each display directly from the digital video network. The use of analog video capture cards to accomplish this function shall not be allowed. Video segments shall be as described below:
 - 1) Segment 1 – Shall serve as a spot monitor that reacts to camera selection via on-screen camera icons.
 - 2) Segment 2 – Shall serve as an Intercom Active monitor. Each camera that is associated with a particular intercom shall be called to this video segment upon selection of the station.
 - 3) Segment 3 – Shall serve as an Intercom Opposite monitor. For each Intercom/Camera association where there is a camera view available for the opposite side of the associated door, the camera view for the opposite side of the door shall have the camera view displayed in this video segment simultaneously with the active intercom.
 - 4) Segment 4 – Shall serve as an Alarm Video segment. Any video associated with an alarm condition shall be displayed in this video segment.
16. WATCH TOUR:
 - a. START: Momentarily depressing the Guard Tour START icon shall activate the Guard Tour System and the icon shall indicate the “active” status of the system. The icon for each remote Guard Tour Station graphically located on the control screens shall illuminate steady when the Guard Tour has been started and each shall extinguish one at a time as each station key-switch has been turned.
 - b. COMPLETE: After the guard has checked into all remote watch tour stations, he must return to the control panel where the tour was started from and touch the

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- Guard Tour COMPLETE icon, which will indicate the completion of the tour. (The Complete switch represents the last station in the tour).
- c. RESET: Touching the RESET switch can end the active tour only before the first station key-switch has been turned, after the first station has been checked, the tour must be completed.
 - d. If the Guard Tour Stations are activated out of sequence or not activated in the specified allotted time, then all illuminated station icons will flash with an audible tone sounding at the control station.
 - e. The COMPLETE icon is inoperable until the last Guard Tour station has been checked, then the COMPLETE icon is operational and will act as the last station in the tour.
 - f. The following events shall be recorded in the SMS database:
 - 1) Start Guard Tour: “Guard Tour started at current time”
 - 2) Allotted time expired: “Guard Tour ended before completing – current time”
 - 3) Out of Sequence: “Guard Tour activated out of sequence – current time”
 - 4) Completed: “Guard Tour completed – current time”
17. EMERGENCY POWER: The Emergency Power icon shall flash and an audible tone shall sound when the system is operating on power derived from the UPS System. This shall be an alarm condition that is annunciated in the alarm queue. While operating on Emergency Power the Alarm Silence icon can be touched to silence the audible tone and cause the icon to illuminate steady. The associated icon shall extinguish when the system resumes operating on normal power.
18. UTILITY POWER CONTROL: Touching any of the Utility icons shall either turn on or turn off the associated utility. The associated indication icon shall be illuminated when the utility is on and shall extinguish when off.
- a. The utilities are defined as:
 - 1) PHONE: Inmate telephones located in the housing dayrooms. (off = telephones not operable)
 - 2) TV: Television power outlet located adjacent to the TV. (off = power is not present at TV)
 - 3) WATER: Water valves controlling water to inmate cells. (off = running water is not available)
 - 4) DAY: Light fixtures in Housing dayrooms are controlled on/off.
 - 5) NIGHT: Night light fixtures in the cells are controlled on/off.
 - 6) CELLS: Main cell light fixture is controlled on/off.
 - 7) VIDEO VISITATION: on/off
19. PANEL DISABLE: Pressing the panel disable icon will disable the control station and initiate an alarm at the Central Control touch screen. The station can be enabled only from the touch screen control station or master graphic control panel having control of the area. While disabled, the screen shall be blank and display “Panel Disabled”.
20. PANEL CONTROL: There shall be a screen that is called from the Touch Screen utility screen that shall have an icon for each Control Station/Graphic Panel in the system. The icon shall indicate the Enabled/Disable condition of each control location. This function is only available to the Master Control station located in Central Control. Each control station may be enabled/disabled from these control icons.
21. CONTROL TRANSFER/LOG-OFF: Touching the “LOG OFF” icon will switch control of all panel functions to the designated transfer control station and cause the “LOG-

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- IN” screen to be displayed. Control can be returned to the panel by entering a valid log-in code; no action is required by the station to which the panel was transferred.
22. MAIN SCREEN: Touching this icon will switch the display to an overall map of the facility. This control screen shall contain icons that will direct the operator to control screens for the various areas of the facility.
 23. AREA ICONS: Located under a screen from the Utilities screen shall be icons for control of each area of the facility. These icons shall determine which control station has authority to control each area of the facility.
 24. POST IT: information icon to input inmate information. One per cell, minimum.
- 1.10 TOUCHSCREEN SYSTEM ALARM REPORTING FUNCTIONS
- A. The following alarms shall be reported on the Central Control touch screen terminals and logged on the SMS computer:
 1. Unauthorized exit (opening) of any door monitored/controlled by the operator terminal or any station transferred to operator position.
 2. “Panel Disable” alarms from any control station.
 3. Duress Alarms
 4. UPS Alarms
 5. Interlock Overrides
 6. Emergency Release
- 1.11 SECURITY MANAGEMENT SYSTEM DESCRIPTION
- A. A Security Management System (SMS) shall be furnished and Installed and include the following interface terminals and equipment:
 1. Operator Terminals
 2. Printers
 3. File Server
 4. SMS components shall be interconnected utilizing a dedicated local area network (LAN)
 - B. The system shall:
 1. Provide a means of archiving alarm and other activity data in a SQL Server compatible data base.
 2. Provide packaged data reporting programs to generate activity reports based on user selectable search criteria. All reports shall be displayed in chronological order.
 3. Allow the user to create custom programs to retrieve data from the data base.
 - C. The Security Management System shall be served by the Ethernet LAN network. The file server/data logger shall retrieve data from the Touch screen operator terminals, card access system, and PLC’s. The system shall be configured such that system malfunctions of the SMS cannot in any way affect the performance of the PLC and touch screen systems.
 - D. As the touch screen terminal or PLC receives or generates data, the data shall be copied to the Security Management System.
 - E. In the event the Security Management System is incapable of receiving data from the remote terminal, the remote terminal shall store the last 200 alarm records and transfer the records when the SMS is again functional.
 - F. Logging: System shall log all control and alarm events in the facility, including door control, and operator log-on and log-off activities.
 - G. The administrative Terminal located in Central Control shall be configured to access the database and activity reports.

PART 2 - PRODUCTS

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2.01 Acceptable Integrators

- A. Except as otherwise specified, herein, or in the General Conditions, the equipment and materials of this Section shall be products of the following manufacturers, subject to compliance with specification requirements and provided each manufacturer meets all requirements of the Quality Assurance Section of this Specification. Proprietary and custom systems and those using on board processors as manufactured are not acceptable.
1. SWC - South Western Communications, Decatur, AL
 2. Cornerstone Electronics, Montgomery, AL
 3. A&E Security

2.02 TOUCH SCREEN SYSTEM

- A. Graphical User Interface Software: The touch screen software shall have the following characteristics:
1. Non-proprietary, standard, off-the-shelf product.
 2. Nationally distributed.
 3. National software technical support.
 4. Based upon a Microsoft Windows (latest version) operating system.
 5. Provided with documentation to allow User Programming.
 6. Software shall be Wonderware Intouch, GE Fanuc Simplicity, or pre-approved equal.
- B. LCD Monitor and Transducer: The touch screen monitor shall have the following characteristics:
1. Useful screen area: 27.48" Horizontal, 15.51" Vertical.
 2. Display size: 32" diagonal.
 3. Optimal resolution: 1366 X 768.
 4. Colors: 16.7 million (8 bit).
 5. LCD Panel brightness: 400 nits.
 6. Response time: 8 msec (typical).
 7. Viewing angle: Horizontal 178° total, Vertical 178° total.
 8. Contrast Ratio: 3500:1 (typical).
 9. Input Audio: Computer audio on 3.5mm stereo mini.
 10. Input Data: Serial or USB 1.1.
 11. Power Dissipation: 69 W (typical).
 12. Temperature: Operating 0oC to 40oC, Storage -20oC to 60oC.
 13. Speakers: Two built-in, 7W speakers in display head.
 14. Mounting Options: 400 mm x 200 mm Vesa mount, desk top mount.
 15. Monitor shall be Elo Touch Systems 3220L or pre-approved equal.
- C. Touch Screen Computer
1. Intel® Core i7-7700 Processor (Quad Core, 3.6GHz, 8MB Cache).
 2. Windows® 10 Professional 64 Bit.
 3. 8GB, DDR4 Memory, 2400MHz.
 4. 1GB video graphics card.
 5. 500 GB, 7200 RPM hard drive.
 6. 16XDVD+/-RW drive.
 7. 10/100/1000 Gigabit PCI Ethernet adapter.
 8. USB keyboard.
 9. Optical USB mouse.
 10. Digital PCI sound card.
 11. Shall be powered by UPS.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

12. CPU shall be located in a lockable metal enclosure.
 13. The operation of the touch screen shall not depend on a keyboard. The keyboard shall be stowed and shall not be normally accessible from the console surface except as required for installation and maintenance purposes.
 14. Acceptable PC manufacturers
 - a. Lenovo
 - b. Dell
 - c. Hewlett Packard
 15. Touch screen Spare Unit: The Contractor shall provide to the Owner a complete touch screen spare unit. The unit shall include a 32" color touch screen, CPU, mouse, operational programs and a licensed copy of the VGUI software.
- D. Network Switches
1. Ethernet switch shall be IEEE 802.3 compliant and based on a modular design consisting of a main chassis and plug on modules. The switch will have the ability to utilize a variety of media modules such as 10/100BaseT, single mode 10BaseFL and 100BaseFL and multimode 10BaseFL and 100BaseFL. The Ethernet switch shall be an intelligent device capable of automatically re-routing communications in the event of a downstream failure or cable malfunction.
 2. Shall be installed in a redundant ring topology capable of recognizing and responding to a loss of connection in the redundant ring in less than 300ms.
 3. The unit shall be capable of full and half duplex communication and housing multiple Ethernet modules supporting any standard Ethernet media at 10/100megabits per second Ethernet speed. Ethernet modules will be available for direct connection to an Ethernet network using 10BaseT, or 100BaseTX (RJ-45), and fiber optic 10Base FL or 100Base FX. All modules will be supplied with integral LED indicators for monitoring communication link status. All fiber optic modules will be IEEE 802.3 FIOI compliant.
 4. Configured to accept power from two independent 24VDC power supplies. Upon loss of power from the primary power supply, the switch shall automatically switch from the primary to the secondary power supply without loss of operation.
 5. The switch shall be able to signal device faults through an alarm dry contact output on the switch. The alarm contact shall be able to signal port link and power supply loss.
 6. Ethernet Switch will be DIN rail mountable.
 7. The Ethernet Switch shall support SNMP management.
 8. Switch(s) shall be Hirschmann MICE industrial Ethernet switch, Phoenix MMS series or approved equal.

2.03 SYSTEM PERFORMANCE

- A. The systems shall be configured to meet the following performance requirements:
1. Outputs to field devices such as door locks shall activate within 300 msec of the touch screen icon activation. Activation of any touch screen icon or control switch shall provide a short audible tone.
 2. Video screen displays shall be refreshed within 300 msec. Screen graphics shall be stored in RAM to effect fast refresh with no moving parts. Storage on disk drive shall be for back-up purposes only
 3. The system shall annunciate alarms including touch screen display, video graphic alarm display, and audible tone in 500 msec or less from the time the field device is activated. Alarm audibles shall be distinctly discernible from intercom call-in tones and touch screen audible feedback tones.

4. Touch screen terminals shall not be interdependent. The failure of one touch screen terminal shall not affect the operation of other touch screen terminals. The use of server based applications is strictly prohibited. Each Touch screen stations shall contain a licensed copy of the VGUI software.
5. System faults or crashes shall not be capable of activating field outputs such as door locks during system failure or reboot.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.

3.03 PREPARATION

- A. Division 28 Subcontractor shall develop custom software as required to effect the functions of the system as dictated by the drawings and Specifications.
- B. Division 28 Subcontractor shall provide equipment cabinets for installation of the control equipment and cable terminations to the equipment.
- C. All equipment related to the system shall be factory tested before shipment.

3.04 INSTALLATION

- A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
- B. Install in accordance with manufacturer's handling and installation instructions.
- C. Install in accordance with all local and pertaining codes and regulations.
- D. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
- E. Equipment shall be ready to use condition at end of installation.
- F. Energize equipment in accordance with manufacturer's instructions.

3.05 PROTECTION AND CLEANING

- A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- B. Touch up, repair, or replace damaged components before Substantial Completion.
- C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
- D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.

3.06 WARRANTY

- A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of two (2) year from the date of substantial completion.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3.07 EQUIPMENT AND SOFTWARE LICENSES

- A. There shall be only one license charge for any equipment and software provided under this section and all other sections. Reoccurring annual licenses charges are not acceptable. Equipment requiring reoccurring licenses are not allowed.
- B. The electronic security contractor (ESC) shall provide with the bid the following items including but not limited to:
 - 1. Licenses required for all touchscreen stations.
 - 2. Statement that Copies of programs for all touchscreen stations will be provided.
 - 3. Passwords and any other codes required to access software. These passwords shall become fully accessible for the Owner.
 - 4. The touchscreen locking control software intended to be used on this project.
- C. The Wonder Ware run time licenses for each touchscreen station shall be registered to Dawson County and not the ESC contractor/integrator. Provide a statement with the bid to confirm.

END OF SECTION 280120

SECTION 280140
PROGRAMMABLE LOGIC CONTROLLER

PART 1 - GENERAL

1.01 SUMMARY.

- A. Provide Programmable Logic Controllers as specified herein and as shown on the schedules and drawings. Installing contractor shall receive, place, connect, and mount all equipment specified in this Section per the manufacturer's instructions. Installing contractor shall furnish all hardware, wire, connectors, and other necessary items as required for a complete and functional control system.
- B. Related Sections:
 - 1. Existing Door Hardware
 - 2. Electrical
 - 3. Low Voltage
 - 4. Security Electronics, General
 - 5. Touch Screen System
 - 6. Electronic Relay System
 - 7. Intercommunications System
 - 8. IP Closed Circuit Television System

1.02 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)

1.03 WORK INCLUDED

- A. Provide materials, equipment, programming and services as required to install programmable logic controllers as shown on the drawings or as specified herein.
- B. Major Sub-systems include:
 - 1. Programmable Logic Controllers (PLC's).
 - 2. Electronic relay system.
 - 3. Touchscreen Locking
 - 4. IP Cameras

1.04 COORDINATION WITH OTHER TRADES

- A. Coordinate the work of this Section with that of other sections as required ensuring that the entire work of this Project will be carried out in an orderly, complete and coordinated fashion.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1.05 APPROVALS

A. General

1. Submittals shall be made in accordance with the General Provisions (Section 280000) of these specifications.

B. Specific Requirements:

1. Submit catalog cuts for all equipment and devices being furnished under this Section.

1.06 DESCRIPTION

A. Programmable Logic Controllers (PLC) shall provide control and monitoring functions for systems as described on the drawings and in these specifications.

B. The controllers shall provide all necessary logic functions, timing functions, memory, software, input/output points and communication capabilities for the operating features required to meet all of the requirements for the specifications.

C. Logic functions shall include but limited to AND, OR and INVERT functions with sufficient levels to provide operating features required to perform all of the functions required by the specifications.

D. Timing functions shall include, but not be limited to, on-delay, off-delay, stepping and pulsing. Sufficient variations of programmable timing shall be available to provide all the operating features as required by the specifications.

E. The controller shall be standard off the shelf, commercially available equipment. Proprietary or custom cage mounted discrete logic cards or custom PLC units and associated software are not acceptable.

PART 2 - PRODUCTS

2.01 MATERIALS

A. The PLC shall be the product of a manufacturer engaged in the production of controllers for industrial application for a minimum of ten years. Only manufactures with national distribution and local parts outlets will be considered.

B. The program shall be developed for each controller on an individual basis and shall be stored in a non-volatile memory.

C. The programming format shall be traditional relay ladder logic utilizing basic and advanced instruction sets for function generation. Controllers that utilize spreadsheets and other means of programming shall not be acceptable.

D. The I/O modules shall be standard backplane type mounting and shall contain status LED's for I/O point on the module. Input/Output modules shall be 32, 64 or 96 point modules and available in both sinking and sourcing inputs.

E. I/O modules shall be installed in any available slot in the CPU or expansion baseplates, and shall require no tools for insertion and extraction.

F. The system design shall accommodate the replacement of assemblies without having to disconnect field wiring. Wherever possible, removable connectors shall be used to connect field wiring to the individual circuit board assemblies

G. The controller shall operate on 105 to 130 VAC, 60 Hz and contain an Integral circuit breaker for overload protection. The controller shall Operate in temperatures of 0 to 60C and up to 95 percent humidity(non-condensing). The controller shall conform to electrical noise standards of IEEE-472.

H. PLC CPU and all associated power supplies (logic and CPU) shall be powered by a UPS.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- I. The PLC shall be Allen-Bradley PLC5 Series, GE Fanuc Series 90-70, Omron CS1 Series, or pre-approved equal.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.

3.03 PREPARATION

- A. All equipment related to the system shall be factory tested before shipment.

3.04 INSTALLATION

- A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
- B. Install in accordance with manufacturer's handling and installation instructions.
- C. Install in accordance with all local and pertaining codes and regulations.
- D. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
- E. Equipment shall be ready to use condition at end of installation.
- F. Energize equipment in accordance with manufacturer's instructions.

3.05 PROTECTION AND CLEANING

- A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- B. Touch up, repair, or replace damaged components before Substantial Completion.
- C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
- D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.

3.06 WARRANTY

- A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of two (2) year from the date of substantial completion.

END OF SECTION 280140

**SECTION 280150
ELECTRONIC RELAY SYSTEM**

PART 1 - GENERAL

1.01 SUMMARY.

- A. Provide Electronic Relay System as specified herein. Installing contractor shall receive, place, connect, and mount all equipment specified in this Section per the manufacturer's instructions. Installing contractor shall furnish all hardware, wire, connectors, and other necessary items as required for a complete and functional control system.
- B. Related Sections:
 - 1. Door Hardware
 - 2. Electrical
 - 3. Low Voltage
 - 4. Security Electronics, General
 - 5. Touch Screen System
 - 6. Programmable Logic Controller
 - 7. Intercommunications System
 - 8. IP Closed Circuit Television System

1.02 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)

1.03 WORK INCLUDED

- A. Provide relays, terminals, power supplies, cabinetry and other equipment as required to install an Electronic Relay System to facilitate a completely function system as shown on the drawings or as specified herein.
- B. Major Sub-systems include:
 - 1. Programmable Logic Controllers (PLC's).
 - 2. Electronic relay system.

1.04 COORDINATION WITH OTHER TRADES

- A. Coordinate the work of this Section with that of other sections as required to ensure that the entire work of this Project will be carried out in an orderly, complete and coordinated fashion.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1.05 APPROVALS

A. General

1. Submittals shall be made in accordance with the General Provisions (Section 280000) of these specifications.

B. Specific Requirements:

1. Submit catalog cuts for all equipment and devices being furnished under this Section.

1.06 DESCRIPTION

A. The relays shall provide the actual switching of power to all electric locking hardware, lights etc.

B. All relays shall be mounted in NEMA-1 type cabinets with removable steel mounting plate. The cabinet shall be sized according to the number of relays required by the job and constructed of code grade steel. The cabinets shall be mounted where shown on the drawings.

C. All relays shall be of the electro-mechanical type. The use of solid state type relays is strictly prohibited.

D. All relays, terminals and other equipment shall be standard off the shelf, commercially available components.

E. Relays and terminals for each device, i.e. doors, shall be grouped together and each terminal labeled with the device designation, wire color, power supply nomenclature and PLC I/O.

F. Each door shall have a device for overcurrent protection. Overcurrent protection devices shall be circuit breakers, fuses shall not be acceptable. The overcurrent device shall provide protection for both constant lock power (if applicable) and unlock/lock signal voltage.

G. All control wiring in the relay cabinet shall be grouped and laced with nylon tie straps with a maximum spacing of one inch. Straps will be placed within 1/2" on each side of all bundle breakouts. Wiring will be supported at intervals not exceeding four inches and labeled at both ends.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Relays

1. Nominal input voltage 24 VDC.

2. Nominal input current 9 mA.

3. Typical response time 5 ms.

4. Typical release time 8 ms.

5. Continuous current rating 10 A.

6. Relays shall be Din rail mounted with a base structure and field replaceable relay module. Relay boards containing multiple relays shall not be acceptable.

7. Shall have LED indication for relay status.

8. Acceptable Manufacturers

a. Phoenix

b. Omron

c. Idec

B. Power Supplies

1. Nominal input voltage 115 VAC.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2. Nominal output voltage 24 VDC.
 3. Output current 10 A.
 4. MTBF > 500,000 hrs
 5. Ambient temperature operating range -25 C to 70 C.
 6. Din rail mounted
 7. Acceptable Manufacturers
 - a. Phoenix
 - b. Power One
- C. Circuit Breakers
1. Shall be thermal miniature circuit breaker, pluggable in a screw type terminal block.
 2. Sized for the device being protected.
 3. Rated surge 3 kV.
 4. Nominal voltage 65 VDC, 250 VAC.
 5. Ambient operating temperature -20 C to 60 C.
 6. Acceptable Manufacturers
 - a. Phoenix

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.

3.03 PREPARATION

- A. All equipment related to the system shall be factory tested before shipment.

3.04 INSTALLATION

- A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
- B. All control wiring systems shall use solid or stranded copper conductors. Stranded conductors shall be acceptable only where all terminations can be made to lugs. Where stranded conductors are used, all terminations shall be made with crimp type lugs, correctly sized for termination, and applied to conductor with crimping tool intended for use with the lug used.
- C. All wiring systems shall be labeled and color coded with labeling and coding shown on shop drawings. White conductors shall be used only for neutral conductors and green only for grounding conductors. All conductors within junction boxes, pull boxes and equipment enclosures shall be grouped and laced with nylon tie straps with identification tabs (equivalent to Ideal Industries #41-693 write-on I.D. Marker plates) in individual sets, serving individual locks or groups. Conductor group shall be identified on the tab with respect to room or area served. Control system conductors shall not be spliced; control conductors shall be continuous between the control panel and the relay cabinet.
- D. Install in accordance with all local and pertaining codes and regulations.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- E. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
- F. Equipment shall be ready to use condition at end of installation.
- G. Energize equipment in accordance with manufacturer's instructions.
- H. All panels must be certified and listed by UL and must be labeled accordingly.

3.05 PROTECTION AND CLEANING

- A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- B. Touch up, repair, or replace damaged components before Substantial Completion.
- C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
- D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.

3.06 WARRANTY

- A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of two (2) year from the date of substantial completion.

END OF SECTION 280150

**SECTION 280200
INTERCOMMUNICATIONS SYSTEM**

PART 1 - GENERAL

1.01 SUMMARY.

- A. Provide Intercommunications equipment as specified herein and as shown on the schedules and drawings. Installing contractor shall receive, place, connect, and mount all equipment specified in this Section per the manufacturer's instructions. Installing contractor shall furnish all hardware, wire, connectors, and other necessary items as required for a complete and functional Intercommunications system.
- B. Related Sections:
 - 1. Electrical
 - 2. Low Voltage
 - 3. Security Electronics, General
 - 4. Touch Screen System
 - 5. Programmable Logic Controller
 - 6. IP Camera System

1.02 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)

1.03 WORK INCLUDED

- A. Intercom system is existing. Provide new headend equipment. Field intercoms and speakers shall be tested and reused where acceptable. Existing wire may be reused. Replace any damaged intercoms and speakers required.
- B. Provide relays, terminals, power supplies, intercom amplifiers, paging amplifiers, cabinetry and other equipment as required to install an Intercom System to facilitate a completely function system as shown on the drawings or as specified herein.
- C. Major Sub-systems include:
 - 1. Programmable Logic Controllers (PLC's).
 - 2. Touch Screen Control Stations.

1.04 APPROVALS

- A. General
 - 1. Submittals shall be made in accordance with the General Provisions (Section 280000) of these specifications.
- B. Specific Requirements:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1. Submit catalog cuts for all equipment and devices being furnished under this Section.
2. Submit a complete Intercom System riser diagram. Diagram shall include labeling of each station and the corresponding relay card point for termination, interconnecting wiring of all components including but not limited to relay cards, intercom amplifiers, paging amplifiers, intercom stations, paging speakers and master intercom stations.

1.05 DESCRIPTION

- A. The relays shall provide the actual switching of audio paths to all intercom stations and paging zones.
- B. All relays shall be mounted in NEMA-1 type cabinets with removable steel mounting plate. The cabinet shall be sized according to the number of relays required by the job and constructed of code grade steel. The cabinets shall be mounted where shown on the drawings.
- C. All relays shall be of the electro-mechanical type. The use of solid state type relays is strictly prohibited.
- D. All relays, terminals and other equipment shall be standard off the shelf, commercially available components.
- E. All intercom station and paging zone termination points shall be permanently labeled in the cabinet.
- F. The PLC shall be the basis of control for the integrated intercom system and shall provide switching and control through a series of input and output points from the PLC.
- G. All intercom controls shall be via the Touch screen control stations and/or Graphic Control Panels.
- H. Each remote station shall be a security grade station with a speaker, microphone, and a call push-button.
- I. Paging speakers located within inmate accessible areas shall have a vandal proof baffle installed.
- J. Each operator position shall have the option of communicating via desk-mounted intercom station employing a microphone and a speaker, or a headset. The desk mounted intercom station shall be equipped with a push-to-talk switch. A foot switch shall be furnished and installed to operate in parallel with the desk mounted switch.
- K. The Programmable Logic Controllers shall provide outputs to automatically call up cameras associated with each intercom station on the control panel's monitor while an intercom link is connected. Camera call-ups for each station are to be determined and at the discretion of the Architect/Engineer.
- L. For conditions where two CCTV cameras are identified to be viewed upon selection of the intercom, video shall be displayed on adjacent movement control monitors. When a single camera is associated with the intercom selection, CCTV video shall be displayed on one monitor and the adjacent monitor shall be blank.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Except as otherwise specified, herein, or in the General Conditions, the equipment and materials of this Section shall be products of the following listed manufacturers, subject to compliance with the specification requirements and provided each manufacturer meets all requirements of the Quality Assurance Section of this specification. Proprietary or custom units and associated software are not acceptable.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- B. Audio control boards as required to interface to remote intercom stations and paging zones.
- C. Power Supplies. Redundant power supplies shall be provided with alarm reporting of any failed power supply.
- D. Discrete input/output boards.
- E. Intercom master stations.
- F. Interface boards to the PABX for paging access (where required).
- G. All software and programming to perform the functions described herein.
- H. Custom interface to the Touch screen control stations and/or Graphic Control panels.
- I. All consoles shall have a gooseneck type, microphone with cardioid pattern, permanently mounted to the top of the console panel. Microphone shall be as manufactured by Astatic Model 827-17 or approved equal.
- J. All consoles shall have volume control for the intercom monitor speaker.
- K. System shall be the Tech-Works/Phoenix Intercom Systems or approved equal.

- L. Intercom Amplifiers
 - 1. Rated Power – 20 Watts @ 25 VRMS (balanced).
 - 2. Microphone Input – 1000 ohms balanced, –80dBm, with phantom power.
 - 3. Line level recording output.
 - 4. Operator Speaker Output: 3 Watts into 25 Volt speaker.
 - 5. Frequency Response 250 Hz to 10KHz.
 - 6. Distortion at Full Rated Output < 1% T.H.D.
 - 7. Page line level output.
 - 8. Power: 24VDC, 2A Power Supply.
 - 9. Unit shall be Tech Works ICA-220D or approved equal.

- M. Paging Amplifiers
 - 1. 60 Watt Amplifiers
 - a. Rated Output – 60 Watts RMS.
 - b. Frequency Response – 40 Hz to 15 KHz ± 1.5 dB at -3 dB below RPO.
 - c. Distortion – Less than 3%, 60 Hz to 15 KHz. Less than 2% 70 Hz to 10 KHz.
 - d. Noise Level – 84 dB below RPO (input control full on). 90 dB below RPO (input control full off).
 - e. Input Sensativity – 0.3 volts for RPO.
 - f. Input Impedance – 13,000 ohms unbalanced.
 - g. Output Impedance – 10.4 ohms, 25 V line.
 - h. Center Tap Balance - $\pm 2\%$.
 - i. Output Regulation – Less than 2dB, full load to no load.
 - j. Auxiliary Power Available – 1.2 amp @ 28 VDC fully isolated.
 - k. Unit shall be Rauland-Borg model DAX 60 or approved equal.

 - 2. 120 Watt Amplifiers
 - a. Rated Output – 120 Watts RMS.
 - b. Frequency Response – 40 Hz to 15 KHz ± 1.5 dB at -3 dB below RPO.
 - c. Distortion – Less than 3%, 60 Hz to 15 KHz. Less than 2% 70 Hz to 10 KHz.
 - d. Noise Level – 84 dB below RPO (input control full on). 90 dB below RPO (input control full off).
 - e. Input Sensativity – 0.3 volts for RPO.
 - f. Input Impedance – 13,000 ohms unbalanced.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- g. Output Impedance – 5.2 ohms, 25 V line.
- h. Center Tap Balance - $\pm 2\%$.
- i. Output Regulation – Less than 2dB, full load to no load.
- j. Auxiliary Power Available – 1.2 amp @ 28 VDC fully isolated.
- k. Unit shall be Rauland-Borg model DAX 120 or approved equal.

N. Intercom Station Card

- 1. Shall contain 25 DPDT relays.
- 2. Relays – 24 VDC at 25 mA; DPST precious metal contacts.
- 3. Each relay shall be hermetically sealed to prevent contact contamination, and have a life expectancy of more than 1,000,000 operations.
- 4. Unit shall be Phoenix Contact 2907028 or approved equal.

O. Power Supplies

- 1. Output Voltage – 24 VDC.
- 2. Output Current – 10 amps DC.
- 3. Efficiency > 92.5 %
- 4. Residual ripple < 50 mVPP (with nominal values)
- 5. Status display "DC OK" LED green / UOUT < 0.9 x UN: LED flashing
- 6. Ambient temperature (operation) -25 °C ... 70 °C (> 60°C derating)
- 7. Max. permissible relative humidity (operation) 95 % (at 25°C, no condensation)
- 8. Unit shall be Phoenix Contact QUINT-PS/1AC/24DC/10.

P. Intercom Stations

- 1. Intercom slave station shall be a flush-mounted security type with a 3" acrylic impregnated cotton cloth cone speaker. The unit shall have a momentary call-in switch, stainless steel tamperproof hardware, and a backbox. Unit shall have security steel offset grill and a 1/2" guage stainless steel plate. Unit shall mount on a standard three gang 3 1/2" deep masonry box. Gangable type boxes shall not be acceptable. Mount unit 48" AFF to top. All units mounted in exterior spaces shall be of the weatherproof configuration.
- 2. Intercom stations shall be Quam CIS2/25 or approved equal.

Q. Paging Speakers

- 1. 8" dual cone.
- 2. Power Handling – 25 Watts peak, 15 Watts RMS.
- 3. Sensitivity – 97 dB peak, 94 dB average.
- 4. Frequency Response – 45 Hz to 19 Khz nominal,.
- 5. Dispersion - 105° (2 Khz octave band, -6 dB points).
- 6. Magnet Weight – Nominal, 10 oz.
- 7. Shall have a built in matching transformer for both 25V & 70V audio lines.
- 8. Shall be Quam 8C10PAOT or approved equal.

R. Exterior Paging Horn

- 1. Power rating – 15 Watts continuous.
- 2. Frequency Response – 40 to 14,000 Hz nominal.
- 3. Sensitivity – 120 dB at 15 Watts (peak).
- 4. Dispersion Angle - 70° (-6 dB, 2000 Hz octave band).
- 5. Shall be Quam QH16T or approved equal.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- S. Vandal Proof Speaker Baffle
 - 1. Shall be cast from aluminum alloy with a tensile strength of 44,000 PSI and reinforced with a perforated 22-gauge CRS stud-mounting loudspeaker plate.
 - 2. Shall be matched with the appropriate surface or recessed speaker enclosure.
 - 3. Shall be Quam BS8VP or approved equal.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.

3.03 PREPARATION

- A. The ESC shall develop custom software as required to effect the functions of the system as dictated by the drawings and Specifications.
- B. The ESC shall provide equipment cabinets for installation of the control equipment and cable terminations to the equipment.
- C. All equipment related to the system shall be factory tested before shipment.

3.04 INSTALLATION

- A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
- B. Install in accordance with manufacturer's handling and installation instructions.
- C. Install in accordance with all local and pertaining codes and regulations.
- D. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
- E. Equipment shall be ready to use condition at end of installation.
- F. Energize equipment in accordance with manufacturer's instructions.

3.05 PROTECTION AND CLEANING

- A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- B. Touch up, repair, or replace damaged components before Substantial Completion.
- C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
- D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.

3.06 WARRANTY

- A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of two (2) year from the date of substantial completion.

END OF SECTION 280200

SECTION 28 08 80

VIDEO MANAGEMENT SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Video management system including the following as applicable:
 - 1. Digital video recording management and network software.
 - 2. Network video recorders.
 - 3. Network video recorder workstations.
 - 4. RAID storage devices.
 - 5. Network PTZ and fixed cameras.
 - 6. Video analytics.
 - 7. Electronic access control management system.

1.2 RELATED SECTIONS

- A. Section 26 00 00 - Electrical.

1.3 REFERENCES

- A. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. Certifications: CE, FCC Class A, IK7, IK10, IP66, ISO, NEMA4, ONVIF, PSIA, RoHS 2, UL, and cUL, NEMA 4.
- C. Institute of Electrical and Electronics Engineers (IEEE): IEEE 1100 Recommended Practice for Powering and Grounding Electronic Equipment.
- D. National Fire Protection Association (NFPA):
 - 1. NFPA 70 2005 National Electrical Code.
 - 2. NFPA 72 National Fire Alarm Code.
 - 3. NFPA 80 Fire Doors and Windows, 2007 Edition.
 - 4. NFPA 101 Life Safety Code, 2009 Edition.
- E. International Organization for Standardization (ISO): ISO 7816 Smart Card Standard.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Schematic of system components with physical space requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

products.

- B. Installer Qualifications: Minimum 2 year experience installing similar products.

1.6 PRE-INSTALLATION MEETINGS

- A. Convene minimum two weeks prior to starting work of this section.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Handle materials to avoid damage.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.10 DESCRIPTION

- A. The closed circuit television system shall monitor spaces as shown on the drawings and function as shown on the CCTV functional schematic.
- B. A Virtual Matrix Controller shall be furnished and installed to provide auto-select and manual selection of video cameras. Auto-select shall be initiated by acknowledging intercom call-in requests or by inputs from the Touch Screen or desk mounted video control panels. A manual video selector shall be incorporated into the Touch Screen System to provide for selection of a specific camera to be monitored by an operator. Switching logic for auto selection of video may be a single logic control unit or may represent logic control signals generated from other systems such as the intercom system or door locking control system.
- C. All CCTV cameras shall be equipped with auto-iris lens.
- D. Video Switching/Control:
 - 1. The Touch Screen station shall be equipped with two intercom video segments for movement control. The first segment (ex. M1) shall view the side of the door from which the intercom call was initiated. The second segment (ex. M2) shall view the opposite side of the door. Cameras on both sides of a door will be called up and displayed simultaneously upon acknowledging an intercom call. If a door has only one CCTV camera viewing it, the segment displaying the side without a camera shall be blank. Activating an intercom by touching the intercom icon on the touch screen shall switch the associated cameras to these intercom video segments. For conditions such as elevator lobbies, monitors shall display lobby video and cab video.
- E. The PLC shall be the basis of control for the integrated CCTV camera call-up. An Ethernet interface shall be provided between the PLC and the CCTV system.

1.10 WARRANTY

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. Manufacturer's limited warranty with 3 year parts and labor warranty period.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Vicon Industries; Avigilon; Hanwah
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 VIDEO MANAGEMENT SYSTEMS

- A. General:
1. All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer's system.
 2. All systems and components shall have been thoroughly tested and proven in actual use.
 3. All systems and components shall be provided with the availability of a toll free 24-hour immediate technical assistance for either the dealer/installer at no charge.
 4. All systems and components shall be provided with an explicit manufacturer warranty.
- B. Basis of Design: Valerus Video Management System as manufactured by Vicon Industries.
1. Application Servers: VLR-APPSRV-A-RK (rack-mount)
 2. Recording Servers: VLR-XTB-A-RK (preloaded rack-mount).
 3. Recording Servers: VLR-XTB-R5-A (internal RAID).
 4. Viewing Stations: VLR-CLIENT-A/VLR-CLIENT-4-A (desk-top; 2 or 4 monitor).
 5. Viewing Stations: VLR-CLIENT-A-RK/VLR-CLIENT-4-A-RK (rack-mount; 2 or 4 monitor).
 6. Digital Video Recording Management and Network Software - General:
 - a. Video Management Software (VMS): Browser-based application meeting requirements of business and government surveillance applications.
 - 1) Web client with single point of management for entire system.
 - 2) Configuration Sections of Application: Add, configure and operate recording servers, application servers, web servers, as well as IP cameras and encoders (edge devices).
 - 3) Operation and Maintenance Application: Complete and comprehensive for video surveillance system.
 - 4) Full live digital video and audio surveillance over a standard 1 Gbps network.
 - b. The VMS shall support recording, playback and archiving of video in standard industry compression formats, including H.265, H.264 and M-JPEG.
 - c. True Open Standards (ONVIF) as Basis: Thin client architecture. Centrally licensed. COTS compatible software or available preloaded on a manufacturer certified application/web server or recording server (NVR).
 - d. Three License Tiers: Associated with number of edge devices and a specific feature set. Licensing shall be based on a per edge device

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- basis.
- e. COTS PCs with a minimum of Intel Core i7 processor, 16 GB of RAM and 5 GB of disk space for installation and a minimum of 75 GB of disk space for a recording device.
 - 1) Operating System: Microsoft Windows 10 64-bit,
 - 2) Operating System: Microsoft Windows 2012, 2016 and 2019 64-bit Server.
 - 3) The Client (web) supports Windows 7 Operating systems.
 - f. Software Features: Easy to Use Tabs: Access configuration screen and dashboard monitoring systems health. Monitoring Screen: Video display area with available resources list. Multiple Display Views: Configurable with variety layouts. Multiple Monitors: Supported.
 - g. Live Video: Stream through Recording Server (NVR) with auto fail over to cameras. PTZ available from live video. Presets and tours are configurable. Digital zoom provided on video displays.
 - h. Web Based Interface:
 - 1) Access the VMS from any standard web browser enabled device.
 - 2) Browser compatibility: Internet Explorer 11 and Firefox. Chrome shall be able to be used with the Valerus Chrome extension from the Chrome store.
 - 3) Provide live viewing, playback and PTZ controls.
 - 4) Mobile App: Apple and Android smart phones and tablets. View live or recorded video. View concurrent multiple video streams; 4 on phones, 9 on tablets. Full control of PTZ, including presets. Quick and simple playback. Pinch to zoom on live and recorded video.
 - i. Export Icon: Easy access on display to save a video clip. Archived in MP4 format and authenticated in the player per the ONVF spec.
 - j. Playback: Supported from main screen without leaving live video viewing area. Clicking Playback from time icon will allow selecting the playback to start from a specific date and time using standard calendar tools.
 - k. Software Delivery: Provided on manufacturer's website.
 - l. Events: Setup in configuration area. Pre-Event Recording: Supported and with event notification.
 - m. Access Control System Support: Accessed using a simple tab click. Interface opens in popup window that can be used in conjunction with the VMS.
 - n. Enhanced Edge-based Analytics: Show bounding boxes around detected objects in live and playback video.
 - o. Authorization roles shall be configurable; these roles shall then be listed in the Resources list on the monitoring display screen. This Resources list can be viewed in a hierarchy view with these groups or as a flat list.
 - p. Video Masking: Available centrally through the VMS. Allow users with the correct authority to unmask video as needed using icon on the display screen. Unmask feature available on live and playback video.
 - q. Quick Configuration Wizard: Streamlined process for typical and basic system setup with minimal input required.
 - r. Search Functions: Four search functions available including museum search, thumbnail search, and events framework search and Analytics Search.
 - s. Capability for 360 degree lens dewarp available for use with cameras with fisheye lenses.
 - t. Integration with Active Directory (AD): Allow user management via the

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- AD.
- u. Override mode: Allows operating in case AD communication is lost.
- v. Multi-language Support: All text in the user interface translated to selected language.
- w. Backup and Restore for system settings available.
- x. Keypads and PLC controls supported. Numeric IDs for devices configurable for use with controls. These devices shall be able to control remote monitors.
- y. Central Software Upgrade Interface: Provides the ability to upgrade the entire system by pushing the upgrade from the Application Server to all devices on the system.
- z. System supports IPv4/IPv6 and HTTPS.
- aa. A Gateway module shall be available to bridge migration from a legacy ViconNet Video Management System to this VMS and use the old system resources.
- bb. The system shall have built in Log Collection from all system PCs, making it easier to troubleshoot problems. An advanced tool shall be provided.
- cc. The system shall accept external text strings from third party systems.
- dd. Alarm notification shall be both visual and audible.
- ee. A Report button shall generate an Excel report of the devices sorted by their hosting NVRs or a flat list.
- ff. Devices shall be able to be replaced or moved, for load balancing purposes.
- gg. An NVR Failover unit shall be able to be configured to take over in the event of an NVR failure.
- hh. The VMS shall support integration with a pre-defined Video Analytics (separate license required).
- ii. A Mapping function shall be provided that allows the placement of resource devices on any imported map. The map shall be either a static or live map.
- jj. An Events Database shall exist to store any event that occurs in the system. From the Event Search screen, a query shall be able to be created to search for any event that occurs on the system from any resource in the system.
- kk. A video clip, either in live or playback, shall be able to be bookmarked for easy referral.
- ll. The ability to use mobile devices as mobile cameras shall be available. The mobile device shall be able to receive event alerts.
- mm. The VMS shall be able to accept partner systems through an integration framework.
- nn. A Snapshot function shall be provided to capture video from live or playback; this snapshot shall be able to be saved.
- oo. An Audit Log shall be available to track every user's actions.
- pp. Keypads/PLC shall have the ability to call up other remote monitors.
- qq. A thick-client solution shall be available for users who don't want to use a browser.
- rr. Shall be operational in a virtual environment.
- 7. Setup, Configuration and Security of VMS:
 - a. Multi-User Authorization Login Application.
 - 1) Offer levels of authorization based on functions.
 - 2) Setup Utility: Allows Administrator to configure additional users as well as user groups.
 - 3) User authorization: Configurable for specific system operations. Authorization Permission Setup: Performed using the User screen.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 4) Authorization Roles: Available to configure from the Authorization Roles screen. Permissions: Provide authority to perform all system functions.
 - 5) Users and groups on AD servers may be imported and become a group in the VMS.
 - 6) The software shall offer a full multi-user authorization process as follows: Authorization Roles: Created once globally. Authorized and given specific permissions. Users: Created once globally and may be given rights to groups. No virtual limit on number of groups and users authorized in the software. Authorization Roles to be authorized or denied access to: Monitoring screen for video display. Configuration. Dashboard. Video and audio (media) export. Override masking.
 - b. A user, given appropriate access, may remotely configure components connected to the network.
 - c. Software permits viewing of live video from any edge device connected to any recording server on the network.
 - d. Export Icon: Simplifies process of exporting video and creating archives and saving video to media, such as: USBs, CD, DVDs or solid-state drives. An embedded player shall be optional with each exported/archived video clip for playback on any machine if configured to do so.
 - e. Event Rules: Create rules triggered by an event occurrence. Define actions executed for a given event. Events are selectable. Rules are configurable after an event is selected.
 - f. Event Association: Multiple devices may be associated with an event. Actions Triggered by Event: Configurable as On and Off. Display live video. Display a view. Go to a preset. Operate a relay. Run a PTZ tour. Run a view tour. Start a URL. Delay function.
 - g. Scheduled Recordings: Applies to cameras, encoders and microphones. Scheduling is based on rules configurable for actions the system takes upon an event. Schedules accessible on recording tab in device configuration. Create and Schedule Recordings: By authorized users. How often schedules repeat; weekly, monthly, yearly or never. Determines how the systems prioritizes schedules if schedule times overlap. Schedules available when configuring recording and rules, saving the need to create multiple and duplicate schedules. Sequencing cameras, including multi-screen displays. Record cameras at different qualities and frame rates from any recorder on the network. Schedule shall allow running preconfigured combinations of camera, sensor and PTZ programmed routines.
 - h. System Components: Application/Web Server: Act as main system server; Windows based. Global configuration of the system is stored on this server. Recording Servers (NVRs): Windows based providing communication, live streaming, recording, video playback and audio from cameras and encoders.
 - i. Device Configuration: Valid devices to be configurable for system recognition and operation. Cameras, fixed or with integrated PTZ. Microphones. Encoders. Sensors. Relays.
 - j. Authentication: Video from cameras are enabled to verify the authentication of the video and present an authentication symbol on the displayed video for recorded playback through the player when enabled only on export.
8. User Interface for VMS:
 - a. User Friendly Tabs: Allow monitoring of live and playback video, and configuration of the system.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- b. Login Window: Consists of User Name and Password fields. Default User Name and Password: Available for initial login. Configurable for increased security; there shall be an option to enforce a complex password.
 - c. Serve operators, supervisors and system administrators.
 - d. Monitoring Display Screen:
 - 1) Selection of number of tiles to display.
 - 2) Resource list of devices in system. Viewable as flat list or hierarchical list based on user configured groups. Resources include names of devices and icons depicting devices. Video Channels (cameras) connected, differentiating between PTZ and fixed cameras. Audio Channels (microphones). Views. Tours. Web Pages. Relay Outputs.
 - 3) Display Area: Offers display configurations up to 36 tiles. Full screen View: Available. More views added by clicking the plus sign to create new view tabs while not losing the default view. Controls: Change the layout. Stop all displays. Export. Synchronize playback. Control current selected tab.
 - 4) Camera Controls: Display at top of a tile when mouse hovers and may be locked in place. Playback. PTZ control. Digital zoom. Unmask. Export. Configuration settings
 - 5) Playback controls: Visible when cameras go to playback. Looping a video section. Slow mode. Play from time. Rewind, fast rewind, pause, forward, and fast forward. Back to live video and current time.
 - 6) Access to all available programming menus.
 - 7) Viewing live devices is performed by dragging a device to any tile. Audio devices display in a smaller area below the video tiles.
 - e. Dashboard and Configuration Menu Access: Clicking a tab at the top of the screen.
9. Video Quality for VMS: Support any resolution video, jpeg and H.264 compression.
10. Add-Ins for VMS
- a. Access Control Systems: Available for integration.
 - 1) Meet requirements of business and government access control systems.
 - 2) Monitor and control facility access as well as video detection, temperature and communications loss monitoring.
 - 3) Provide control and access to users on Local Area Networks (LAN), Wide Area Networks (WAN), wireless networks and the Internet.
 - 4) Video viewing playback and PTZ control from the VMS.
 - b. A Video Analytics program shall be available for integration. This system shall allow real-time detection, business intelligence and search capabilities.
11. Digital Servers: Preloaded with Valerus VMS.
- a. Certifications: UL, CE, FCC Class A.
 - b. Application and Recording (NVR) Servers: PC computer fully equipped with the Digital VMS, with an external monitor, keyboard and mouse for operation..
 - 1) Rack-mounting bracket kit.
 - c. Server Capacities:
 - 1) Internal Raid Storage Device: 24-bay, 218 TB storage capacity.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- d. Client Viewing Station: Available with 2 or 4 monitor outputs.
- e. Electrical Parameters for Digital Servers:
 - 1) Certifications: UL, CE, FCC Class A.
 - 2) Input Voltage: 105 to 240 VAC, plus or minus 10 percent at 50 to 60 Hz.
 - 3) Current: 0.66 A at 115 VAC; 0.33 A at 240 VAC.
 - 4) 24-bay internal storage: 10 A at 115 VAC; 8 A at 240 VAC.
 - 5) Power Consumption: 24-bay internal storage: 975 W; includes redundant power supply.
 - 6) RAM Memory: 16 GB minimum.
 - 7) Heat Output: 266 btu/hour. Mini: 133 btu/hour.
 - 8) Storage: 1 TB to 20 TB. Depending on model.
 - 9) Operating System: Microsoft Windows 10 LTSB.
 - 10) Operating System: Microsoft Windows 10.
 - 11) LAN Interface: 100/1000 Base T Ethernet interface on main board.
 - 12) Front Panel Controls and Indicators: Power, network activity LEDs, USBs.
- 12. Mechanical Parameters.
 - a. Application: Indoor.
 - b. Twenty-four-Bay Internal Storage Weight: 82.0 lbs (37 kg).
 - c. Twenty-four-Bay Internal Storage Dimensions: Width (W): 19 in. (483 mm). Depth (D): 27.5 in. (711 mm). Height (H): 6.9 in. (176 mm).
 - d. Desktop Weight: 8.1 lbs (3.7 kg) approximately. Mini: 2.5 lbs (1.1 kg).
 - e. Desktop Dimensions: Width (W): 3.75 in. (95.25 mm). Depth (D): 10.5 in. (266.7 mm). Height (H): 9.5 in. (241.3 mm). Mini: Width (W): 7.9 in. (200 mm). Depth (D): 7.75 in. (197 mm). Height (H): 3.5 in. (89 mm).
 - f. Construction: Steel and plastic.
 - g. Color: Black.
- 13. Environmental Parameters:
 - a. Operating Temperature Range: 32 to 104 degrees F (0 to 40 degrees C).
 - b. Operating Humidity Range: 0 to 95 percent, non-condensing.
- 14. Encoders:
 - a. Basis or Design: VLR-ENC-16 Sixteen Channel ONVIF Video Encoder as manufactured by Vicon Industries.
 - 1) Ideal solution for creating hybrid analog/IP systems using analog cameras with IP VMS.
 - 2) Supports AHD, TVI and analog cameras up to 960H resolution.
 - 3) Video Input: Sixteen analog camera video input.
 - 4) Video Output: CVBS, VGA and HD.
 - 5) Compression: H.264.
 - 6) Streaming: Dual.
 - 7) Auto-sensing: NTSC/PAL.
 - 8) Transmission Rate: Up to 480 fps at D1/960H/720P resolutions; 240 fps at 1080P resolution.
 - 9) Alarms: Four inputs, one relay control output.
 - 10) PTZ port and four RCA audio inputs and one RCA audio output.
 - 11) Privacy masking and motion detection.
 - 12) Input voltage: 12 VDC; dual voltage (110/220 VAC) power supply provided.
 - 13) ONVIF Interface: Interoperability open platform systems.
 - b. Manufacturer requires the use of uninterruptible power supply systems (UPS) to prevent voltage fluctuations that can affect operation and cause damage to the equipment. Failure to comply voids the warranty.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2.3 CAMERAS FOR VIDEO MANAGEMENT SYSTEMS

A. General:

1. All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer's system.
2. All systems and components shall have been thoroughly tested and proven in actual use.

2.01 PTZ Pan Tilt Camera

- A. The compact network dome shall be comprised of a camera/lens and pan/tilt drive in an attractive covert enclosure. It shall have 2 MP resolution and shall have true WDR. It shall include an integral varifocal 4.5-135 mm lens (30X optical zoom). Day/night operation shall be achieved using a built-in IR-cut filter. It shall have starlight low-light imaging. IR distance shall be 492 ft (150 m) and it shall have automatic Smart IR/Adaptive IR capability.
- B. The dome camera shall provide Intelligent Video Analysis, tampering/defocus, intelligent motion detection, intrusion detection, line cross/counting, loitering, object left/removed, wrong direction and area counting.
- C. The dome camera shall be powered by PoE, 24 VAC or 48 VDC. It shall have a heater/blower system that maintains proper temperature in the camera housing and prevents fogging of the window.
- D. The dome camera shall have triple streaming video and provide network video transmission using either H.264/H.265 and M-JPEG compression. The camera shall also have smart encoding to further improve video encoding and improve storage capacity. The camera dome shall transmit high quality video across the network for remote viewing and recording and shall be configurable remotely from network digital video recorders and master workstations.
- E. Two alarm inputs shall be programmable for functional state (enabled or disabled); they shall be able to be set for Normally Open (NO) or Normally Closed (NC). The two alarm outputs shall be able to control external equipment; they shall be able to be set for Normally Open (NO) or Normally Closed (NC). An audio alert shall be available.
- F. There shall be 128 individual programmable preset positions available. Each preset shall be able to have an individual title and shall be adjustable for pan and tilt speed and manual or auto focus.
- E. There shall be four tours (patrols) available with up to 128 presets per tour. Each tour shall be able to have an individual title and shall be adjustable for pan, tilt and zoom speed and dwell time. Tours shall be able to be programmed to repeat.
- F. Pan and tilt functions shall be programmable. Maximum manual pan and tilt speeds shall be programmable. Maximum pan speed shall be 300 degrees/sec and maximum tilt speed shall be 160 degrees/sec. Pan and tilt speeds shall also be scalable to the zoom setting. The pan range shall be 360 degree continuous and tilt range shall be 195 degrees (-15 to 90 degrees).
- G. Camera features shall include electronic iris, AGC, TWDR, white balance, defog, flip, mirror, privacy masking, ROI and motion detection.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- H. The dome camera shall meet the FCC requirements for a Class A device. It shall include support for the industry-standard ONVIF S/T/G/Q interface. It shall be IP67-rated to withstand rain, dust and vandalism and IK7 rated for impact resistance. The camera shall meet the latest regulations required to be NDAA, GSA schedule and TAA approved.
- I. The dome camera shall provide a slot for an SD card for local storage.
- J. The dome camera shall meet or exceed the following design and performance specifications.

2.02 DAY/NIGHT IP DOME CAMERA SPECIFICATIONS

- A. Imaging Device: 1/2.8-inch progressive scan
- B. Max. Resolution: 2 MP and 5MP
- C. Shutter Speed: 1/30 - 1/10,000 sec
- D. Automatic Gain Control: On/Off selectable
- E. WDR: True WDR (120 dB)
- F. Sensitivity (@ 30 IRE): Starlight; Color: 0.007 lux; B&W: 0.002 lux
- G. Pan/Tilt Range: 360° continuous pan; 95° tilt (-15° to 90°)
- H. Lens: 4.5 – 135 mm, 30X optical zoom
- I. Digital Zoom: 10X
- J. Lens Adjustment: Motorized lens, P-iris automatically adjusts to zoom condition (manual mode)
- K. Horizontal Field of View: 60°-5° (wide-tele)
- L. Vertical Field of View: 38°-3° (wide-tele)
- M. IR Distance: 492 ft (150 m); Smart IR/Adaptive IR automatic IR
- N. Heater/Blower System: For low temperature operation: heater turns on at 59° F (15° C); blower is always on

2.03 ELECTRICAL SPECIFICATIONS

- A. Input Voltage: 24 VAC, 48 VDC or PoE
- B. Current: 24 VAC: 2.5 A; 48 VDC: 1.25 A
- C. Power Consumption: Total 36.4 W.
PTZ 11 W; IR: 19 W; Heater: 5,5 W; Blower: 0.9W
- D. Connectors: Power: 48 VDC or 24 VAC terminal block; PoE: RJ-45
Video/Data: RJ-45
Alarm: screw terminal
Audio: screw terminal
Slot for SD card (128 G max customer supplied card)
Reset button
Default button
- E. Radio Frequency Emission Rating: FCC Class A; CE

2.04 ENVIRONMENTAL SPECIFICATIONS

- A. Operating Temperature: -40° to 140°F (-40° to 60°C)
- B. Humidity: Up to 90% relative, non-condensing

2.05 PHYSICAL SPECIFICATIONS

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. Construction: Aluminum base; polycarbonate clear dome
- B. Dimensions: Height: 13.2 in. (336 mm),
Diameter: 7.5 in. (190 mm)
- C. Weight: 11.5 lb (5.2 kg)

2.06 MECHANICAL SPECIFICATIONS

- A. Camera Mount: Mounting accessories available
- B. Adjustments: Pan 360° continuous; tilt: 95° (-15°-90)

2.07 NETWORK VIDEO SPECIFICATIONS

- A. Communication Platform: Open platform; compatible with Valerus Video Management System
- B. Compression: Smart Encoding; H.264/H.265; M-JPEG
- C. LAN Interface: 10 Base-T/100 Base-TX, Unicast/Multicast
- D. Video Channels: Triple streaming
- E. Resolution and Frame Rate: 1920x1080, 1280x960/720, 800x600, 640x480, 640x360, 320x240
Max 30 fps
- F. Web Browser: Internet Explorer, Safari, Firefox, Chrome, Microsoft Edge
- G. Users: Live viewing for up to 10 clients
- H. Image Settings: Digital image effects defog, flip and mirror; configurable brightness, contrast, saturation, hue, sharpness; BLC; HLC; gamma correction; 3 DNR; motion detection; white balance, AGC; Electronic Shutter, automatic or manual; digital zoom; motion detection; privacy masks; motorized zoom and focus (lens); dynamic ROI
- I. Intelligent Video Analytics: Tampering/Defocus, Intelligent Motion Detection
Intrusion Detection; Line Counter/Cross, Object Left/Removed, Wrong Direction, Area Counting
- J. Supported Protocols: IPv4/IPv6, TCP, HTTP, HTTPS, RTSP, RTCP, RTP, RTMP, SMTP, SNMP v1/2c/3, UPnP, TLS/TTLS, FTP, HLS, ICMP, IGMP, LDAP, NTP, DHCP, DNS, DDNS, UDP, QoS, ARP, PPPoE, Bonjour, ONVIF S/G/Q/T

2.08 CERTIFICATIONS

- A. CE
- B. UL
- C. FCC, Class A
- D. IP67
- E. IK07
- F. ONVIF S/T/G/Q
- G. RoHS
- H. NDAA/GSA/TSA compliant

2.09 WARRANTY

- A. 3 years, parts and labor

2.10 APPROVED MANUFACTURERS

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- A. The outdoor IP PTZ dome camera shall be Vicon Industries V2002D-PTZ or equal.
- B. Pan-Tilt-Zoom (PTZ) Cameras:
1. Basis of Design: SN673V-C Cruiser Network Dome Cameras as manufactured and supplied by Vicon Industries:
 - a. Certifications: CE, FCC Class A, ONVIF Profile S Compliant.
 - b. General Features:
 - 1) Mounting: Surface mountable. Wall, corner and pole mounting accessories available.
 - 2) Camera/Lens: 1/1.7-in. progressive scan CMOS day/night with a 4.7-94 mm varifocal lens (optical 20x; 16X digital zoom).
 - 3) Outdoor model: IP66 rating with pan/tilt drive. Covert enclosure.
 - 4) Dome: Clear polycarbonate secured by tamperproof screws.
 - 5) Quad-streaming network video transmission using open platform H.264/H.265 or M-JPEG compression (3x H.264/H.265 and 1x M-JPEG) for remote viewing and recording. ONVIF interface enabling third party software recording.
 - 6) Configurable remotely from network digital video recorders and master workstations
 - 7) Alarm Inputs: Four, individually programmable NO or NC.
 - 8) Alarm output. One.
 - 9) Programmable Preset Positions: 256.
 - 10) Tours: 8 tours.
 - 11) Configuration: High level, programmable functions via a web browser. Gain control: Adjustable. White balance gain using red and blue scales. Shutter speed: Automatic or manual. Backlight compensation or Wide Dynamic Range: Programmable. Digital Noise Reduction: Programmable on or off.
 - 12) Real time clock and scheduler: Programmable for each day of the week. 15 programmable events. A schedule can be established for each event trigger.
 - 13) Privacy Masks: 16 programmable.
 - 14) Motion Detection: 16 windows for motion detection (8 include, 8 exclude). Sensitivity level programmable for each window.
 - 15) Image Inverting:
 - 16) Multilanguage menu system.
 - 17) Video Transmission Rate: 30 fps.
 - 18) Audio input: 1 audio in. 1 audio out.
 - 19) Viewing Streams: 10 live simultaneous and 3 playbacks per camera.
 - 20) Micro SD card slot for local storage.
 - c. Camera Parameters:
 - 1) Imaging Device: 1/1.7-inch progressive scan CMOS
 - 2) Resolution: 2 MP (1080p) resolution.
 - 3) Shutter Speed: 1/3 to 1/30,000 sec.
 - 4) Gain Control: Automatic and Manual
 - 5) Wide Dynamic Range (WDR): 120 dB; WDR on/Off selectable.
 - 6) Backlight Compensation: On/Off selectable.
 - 7) Sensitivity: Color: 0.35 lux. Black and White: 0.13ux, at 50IRE.
 - 8) Adjustment, Pan and Tilt: Continuous Pan: 360 degrees. Tilt: 180 degrees with digital flip. Pan speed: 380 degrees/sec. Tilt speed: 380 degrees/sec on preset. Variable speed: 0.1 to 380 degrees per sec.
 - 9) Iris Control: Automatic/Manual.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 10) Video Focus: Automatic/Manual (near-far).
 - 11) White Balance: Automatic/Manual; red/blue gain adjustable.
 - 12) Digital Noise Reduction: Programmable On/Off.
 - 13) Lens: 4.7 to 94 mm; 55.5 to 3 degrees horizontal angle of view
 - d. Electrical Parameters:
 - 1) Input Voltage: PoE; 24 VAC; 12 VDC. Maximum 12 W power consumption.
 - 2) Connectors, Power: 2-position removable screw terminal block.
 - 3) Connectors, Alarm Input: 8-position removable screw terminal block.
 - 4) Connectors, Network: RJ-45 CAT 5.
 - 5) Connectors, Audio: Two 1/8 in (3 mm) phono jacks.
 - 6) Connectors, Video Out: RJ-45.
 - 7) Connectors, Relay: 4-position removable screw terminal block.
 - 8) Radio Frequency Emission Rating: FCC Class A.
 - e. Physical Parameters:
 - 1) Operating Temperature: Minus 14 to 122 degrees F (minus 10 to 50 degrees C) in accordance with NEMA 2.1.5.1 STD2.
 - 2) Dimensions (H x Diameter): 5.9 in (150 mm) x 6.1 in (154 mm).
 - 3) Dome: 4.3 in (110 mm) diameter.
 - 4) Weight: 3.5 lbs (1.6 kg).
 - f. Network Parameters:
 - 1) Compression: H.265, H.264, M-JPEG.
 - 2) Video Output: 1920 x 1080 at 30 fps
 - 3) Programming Interface: ONVIF Profile S, NTCIP.
 - 4) Protocols: IPv4/IPv6, HTTP, HTTPS, RTSP/RTP, RTCP, FTP, uPnP, TCP/IP, DHCP, UDP, ARP, QoS, Zeroconfig, and Bonjour.
- C. Specialty Cameras:
1. Basis of Design: V-CELL-HD-B Corner Mounted HD Day/Night Cameras as manufactured by Vicon Industries:
 - a. Certifications: CE, FCC Class A, IK10, IP66, UL, and cUL.
 - b. Features:
 - 1) Made for custodial suites and prison cells.
 - 2) Mounting: Stainless steel, waterproof housing. Fits into 90 degree corners. Fixed mounting frame and removable front plate. Assembly is permanently sealed to walls and ceiling making housing ligature proof. Front plate is recessed and secured to fixed frame with security screws. Two windows in front plate protect camera and IR LED illuminators.
 - 3) Camera Mount: Adjustable allowing for tilting up or down for an exact view.
 - 4) Alarms and audio.
 - 5) Privacy masks.
 - c. Camera Parameters:
 - 1) Imaging Device: 1/2.8-inch progressive scan RGB CMOS.
 - 2) Camera Type: True day/night (IR cut filter)
 - 3) Sensitivity: 0.0 lux (IR On)
 - 4) IR Distance: 65 ft (20 m) with 36 IR LEDs. Programmable intensity.
 - 5) Lens Focal Length: 2.3 mm, fixed wide angle.
 - 6) Aperture: f/2.0 maximum.
 - 7) Horizontal Field of View: 124 degrees.
 - 8) Vertical Field-of-View: 94 degrees.
 - d. Physical Parameters:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 1) Operating Temperature: 32 to 140 degrees F (0 to 60 degrees C).
- 2) Application: Indoor.
- 3) Construction: Enclosure: Stainless steel; brushed satin.
Mounting Frame: 14 gauge; camera mount: 14 gauge. Windows: polycarbonate. IR: 5 mm thick. Camera: 6 mm thick. Dimensions: 15 in. (380 mm) x 12.6 in. (320 mm).
- 4) Weight: 3.5 lbs (1.6 kg) approximate. Electrical Parameters:
- 5) Input Voltage/Current: 24 VAC 250 mA. 12 VDC 500 mA. PoE 125 mA.
- 6) Power Consumption (IR on): 24 VAC: 6 W. 12 VDC: 6 W. PoE: 6 W.
- 7) Connectors, 24 VAC and 12 VDC: Screw terminal.
- 8) Connectors, PoE: RJ-45.
- 9) Connectors, Alarms (In/Out) and Audio (mic/spkr): Screw terminal.
- 10) Radio Frequency Emission Rating: FCC Class A.
- e. Network Parameters:
 - 1) Compression: H.264, MPEG-4 or M-JPEG and analog.
 - 2) Video Streams: 10 concurrent.
 - 3) Video Resolution: 2048x1536 (3 MP), 1920x1080 (Full HD 1080P), 1280x1024 (SXVGA), 1280x720 (HD 720P), 704x480/576 (D1), 640x480 (VGA), 352x240/288 (CIF), 320x240 (QVGA).
 - 4) Frame Rate: Up to 30 fps.
 - 5) Video Bandwidth: 10/100 Mbps.
2.
 - a)
 - a) Width: 7.2 inch (182 mm).
 - b) Length: 8.3 inch (212 mm).
 - c) Weight: 4.4 lbs (2 kg).
 - 2) Camera Mount: Surface mount; wall or pendant, ceiling mount. Tripod mount available.
 - 3) Adjustments: Mount allows positioning.
- b. Network Video Specifications:
 - 1) Communication Platform: Open platform; compatible with Valerus and ViconNet Video Management System or other ONVIF-based VMS.
 - 2) Compression: H.264/H.265; M-JPEG.
 - 3) LAN Interface: 10/100 Base-T; one IP address for two channel.
 - 4) Resolution and Frame Rate: Thermal Camera: Main Stream: D1; Sub-Stream: CIF Visible Camera: Main Stream: 1920x1080 (2 MP), 280x720; Sub-Stream: D1, VGA, 640x360, CIF, QVG, Max 30/25 fps.
 - 5) Web Browser: Internet Explorer, Firefox, Chrome.
 - 6) Users: Live viewing for up to 10 clients.
3. Basis of Design: V1020-WIR-360 Multi-Sensor Cameras as manufactured by Vicon Industries:
 - a. Certifications: CE, FCC Class A, IK10, IP66, UL, and ONVIF S/G/Q/T.
 - b. Features:
 - 1) Outdoor multi-sensor camera incorporating four camera or lens modules for a 360 degree panoramic view.
 - 2) True WDR and IR capability with four integral motorized lenses.
 - 3) Electronic iris, AGC, white balance, backlight compensation, tampering, flip, mirror, privacy masks and motion detection.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 4) Mounting: Surface mountable. Wall, corner and pole mounting accessories available.
- c. Camera Parameters:
 - 1) Imaging Device: 5 MP: 4x 1/2.8-inch progressive scan CMOS.
 - 2) Maximum Resolution: 4x 2592 x 1944, 5 MP.
 - 3) Shutter Speed: 1/7 - 1/20,000 sec.
 - 4) Automatic Gain Control: On/Off selectable.
 - 5) Sensitivity: Color: 0.03 lux; B&W: 0.01 (IR OFF), 0 lux (IR On) @30 IRE.
 - 6) Wide Dynamic Range: True WDR, 120dB.
 - 7) Lens Focal Length: 4x 3.1-10 5 mm.
 - 8) Horizontal Field of View: 32 to 96 degrees.
 - 9) Vertical Field-of-View: 24 to 69 degrees.
 - 10) Field-of-View Depth: 40 to 124 degrees.
 - 11) IR Distance: 98 to 131 feet (29,870 to 39,930 mm).
- d. Physical Parameters:
 - 1) Operating Temperature: -40 to 131 degrees F (-40 to 55 degrees C).
 - 2) Operating Humidity: 10 to 90 percent relative, non-condensing.
 - 3) Application: Indoor or Outdoor.
 - 4) Construction: Enclosure: Die-cast aluminum housing. Dome: Clear polycarbonate. Dimensions: 5.6 in. (142.3 mm) x 9.7 in. (247.5 mm) diameter.
 - 5) Weight: 5.2 lbs (2.36 kg) approximate.
- e. Electrical Parameters:
 - 1) Input Voltage/Current: PoE+, 24 VAC, 24 VDC. 1.7 A.
 - 2) Power Consumption (IR on): 40 W.
 - 3) Connectors: Pigtail: Power: terminal block.
 - 4) Connectors, PoE: RJ-45.
 - 5) Connectors, Alarms (In/Out): Terminal block.
 - 6) Connectors, Audio: Phone jack.
 - 7) Connectors: Slot for SD card.
 - 8) Radio Frequency Emission Rating: FCC Class A; CE.
- f. Network Parameters:
 - 1) Communications: Open platform; compatible with Valerus and ViconNet Video Management Systems
 - 2) Compression: H.264/H.265.
 - 3) LAN Interface: Triple streaming.
 - 4) Video Resolution: 4x 2592x1944.
 - 5) Frame Rate: Up to 30 fps.
 - a) Web Browser: Internet Explorer, Firefox, Google Chrome.
 - 6) Users: Live viewing for up to 10 clients.
 - 7) Image Settings: Day/night mode; flip and mirror; configurable brightness, contrast, hue, sharpness, saturation; white balance, gain control; DNR; true WDR (120dB); privacy masks (5); motion detection; BLC; Exposure; Audio.
 - 8) Video Content Analytics: Video Contents Analysis: Tampering; VMD; Intrusion Detection.
 - 9) Supported Protocols: IPv4/IPv6, TCP/IP, HTTP, HTTPS, RTSP, RTP, RTCP SMTP, FTP, UDP, uPnP, QoS, ICMP, SNMP v2c/v3, SSL, DNS, NTP, LDAP (client), Zeroconfig, DynDNS, ONVIF S/G/Q/T.
4. Basis of Design: V2000D Outdoor IP Micro Dome Cameras as manufactured by Vicon Industries:
 - a. Certifications: CE, FCC Class A, IK10, IP66, UL, and ONVIF S/G/Q/T.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- b. Features:
 - 1) Outdoor fixed dome camera shall incorporate a fixed camera/lens combination.
 - 2) True WDR and Smart or Adaptive IR capability.
 - 3) Intelligent Video Analysis, tampering, intelligent motion detection, intrusion detection, line counting/cross, loitering, object left/removed, wrong direction and area counting.
 - 4) Mounting: Surface mountable.
- c. Camera Parameters:
 - 1) Imaging Device: 1/2.8-inch progressive scan.
 - 2) Maximum Resolution: 2 MP.
 - a) Sensitivity: Color: 0.007 lux; Black and White: 0.003 (IR OFF), 0 lux (IR On).
 - b) Horizontal Field of View: 109 degrees.
 - c) Vertical Field-of-View: 59 degrees.
 - d) Field-of-View Depth: 128 degrees.
 - e) Resolution: 1920x1080, 1280x960/720, 800x600, 640x480, 640x360, 320x240.
 - 3) Maximum Resolution: 5 MP.
 - a) Sensitivity: Color: 0.03 lux; Black and White: 0.01 (IR OFF), 0 lux (IR On).
 - b) Horizontal Field of View: 104 degrees.
 - c) Vertical Field-of-View: 78 degrees.
 - d) Field-of-View Depth: 134 degrees.
 - e) Resolution: 2592x1944/1520, 2560x1440, 2048x1536, 2304x1296, 1920x1080, 1600x1200, 1440x1080, 1600x900, 1280x960/720, 800x600, 640x480, 640x360, 320x240, 320x180.
 - 4) Shutter Speed: 1/2 - 1/10,000 sec.
 - 5) Automatic Gain Control: On/Off selectable.
 - 6) Digital Zoom: Yes, ROI.
 - 7) Lens Adjustment: Fixed.
 - 8) Lens Focal Length: 2.8 mm.
 - 9) IR Distance: Smart IR/Adaptive IR; 49 ft (15 m) with 8 IR LEDs.
- d. Physical Parameters:
 - 1) Operating Temperature: Minus 4 to 131 degrees F (Minus 20 to 55 degrees C).
 - 2) Operating Humidity: Up to 90 percent relative, non-condensing.
 - 3) Application: Indoor or Outdoor.
 - 4) Construction: Aluminum dome housing; polycarbonate clear dome. Dimensions: 2.2 in. (57 mm) x 4.3 in. (110 mm) diameter.
 - 5) Weight: 1.65 lbs (0.75 kg).
- e. Electrical Parameters:
 - 1) Input Voltage/Current: PoE, 0.28A.
 - 2) Power Consumption, IR on: 13.5 W.
 - 3) Connectors:
 - a) Pigtail cable.
 - b) PoE: RJ-45.
 - c) Video and Data: RJ-45.
 - d) Audio: Screw terminal, audio level alarm alert.
 - e) Slot for SD card.
 - f) Reset button.
 - g) Default button.
 - 4) Radio Frequency Emission Rating: FCC Class A; CE.
- f. Network Parameters:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 1) Communications: Open platform; compatible with Valerus Video Management System.
 - 2) Compression: Smart Encoding; H.264/H.265; M-JPEG.
 - 3) LAN Interface: 10 Base-T/100 Base-TX, Unicast/Multicast.
 - 4) Frame Rate: Up to 30 fps.
 - 5) Web Browser: Internet Explorer, Safari, Firefox, Google Chrome, Microsoft Edge.
 - 6) Users: Live viewing for up to 10 clients.
 - 7) Image Settings: Digital image effects defog, flip and mirror; configurable brightness, contrast, saturation, hue, sharpness; BLC; HLC; gamma correction; 3 DNR; motion detection; white balance, AGC; Electronic Shutter, automatic or manual; digital zoom; motion detection; privacy masks; motorized zoom and focus (lens); dynamic ROI.
 - 8) Intelligent Video Analytics: Tampering/Defocus, Intelligent Motion Detection, Intrusion Detection; Line Counter/Cross, Loitering, Object Left/Removed, Wrong Direction, Area Counting.
 - 9) Supported Protocols: IPv4/IPv6, TCP, HTTP, HTTPS, RTSP, RTCP, RTP, RTMP, SMTP, SNMP v1/2c/3, UPnP, TLS/TTLS, FTP, HLS, ICMP, IGMP, LDAP, NTP, DHCP, DNS, DDNS, UDP, QoS, ARP, PPPoE, Bonjour, ONVIF S/G/Q/T.
5. Basis of Design: V2000D Outdoor IP Dome Cameras as manufactured by Vicon Industries:
- a. Certifications: CE, FCC Class A, IK10, IP67, UL, RoHS, ONVIF S/G/Q/T and NDAA/GSA/TSA compliant.
 - b. Features:
 - 1) Outdoor fixed dome camera shall incorporate a fixed camera/lens combination.
 - 2) True WDR and Smart or Adaptive IR capability.
 - 3) Intelligent Video Analysis, tampering, intelligent motion detection, intrusion detection, line counting/cross, loitering, object left/removed, wrong direction and area counting.
 - 4) Mounting: Surface mountable.
 - c. Camera Parameters:
 - 1) Maximum Resolution: 2 MP.
 - a) Imaging Device: 1/2.8-inch progressive scan.
 - b) Sensitivity: Color: 0.007 lux; Black and White: 0.002 (IR OFF), 0 lux (IR On).
 - c) Horizontal Field of View: 110 to 34 degrees.
 - d) Vertical Field-of-View: 58 to 20 degrees.
 - e) Field-of-View Depth: 134 to 40 degrees.
 - f) Resolution: 1920x1080, 1280x960/720, 800x600, 640x480, 640x360, 320x240.
 - g) Lens Focal Length: 3.1 to 10 mm varifocal.
 - h) Current: PoE: 0.24 A; 24 VAC: 0.48 A; 12 VDC: 0.96 A.
 - i) Power Consumption IR and Heaters On: 11.52 W.
 - 2) Maximum Resolution: 5 MP.
 - a) Imaging Device: 1/2.8-inch progressive scan.
 - b) Sensitivity: Color: 0.03 lux; Black and White: 0.01 (IR OFF), 0 lux (IR On).
 - c) Horizontal Field of View: 96 to 32 degrees.
 - d) Vertical Field-of-View: 69 to 24 degrees.
 - e) Field-of-View Depth: 124 to 40 degrees.
 - f) Resolution: 2592x1944/1520, 2560x1440, 2048x1536, 2304x1296, 1920x1080, 1600x1200, 1440x1080,

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 1600x900, 1280x960/720, 800x600, 640x480, 640x360, 320x240, 320x180.
- g) Lens Focal Length: 3.1 to 10 mm varifocal.
- h) Current: PoE: 0.3 A; 24 VAC: 0.6 A; 12 VDC: 1.2 A.
- i) Power Consumption IR and Heaters On: 14.4 W.
- 3) Maximum Resolution: 8 MP.
 - a) Imaging Device: 1/1.8-inch progressive scan.
 - b) Sensitivity: Color: 0.02 lux; Black and White: 0.01 (IR OFF), 0 lux (IR On).
 - c) Horizontal Field of View: 96 to 46 degrees.
 - d) Vertical Field-of-View: 54 to 26 degrees.
 - e) Field-of-View Depth: 113 to 54 degrees.
 - f) Resolution: 3840x2160, 3264x1840, 2592x1944, 2688x1520, 2048x1536, 1920x1080, 1280x960/720, 800x600, 640x480, 640x360, 320x240.
 - g) Lens Focal Length: 3.6 to 10 mm varifocal.
 - h) Current: PoE: 0.27 A; 24 VAC: 0.55 A; 12 VDC: 1.1 A.
 - i) Power Consumption IR and Heaters On: 13.14 W.
- 4) Shutter Speed: 1/2 - 1/10,000 sec.
- 5) Automatic Gain Control: On/Off selectable.
- 6) Digital Zoom: Yes, ROI.
- 7) Tilt and Horizontal: Three-direction adjustment, allowing for adjustment of pan, tilt and lens rotation.
- 8) Lens Adjustment: Motorized lens, P-iris automatically adjusts to zoom condition.
- 9) IR Distance: Smart IR/Adaptive IR; 131 ft (40 m) with 22 IR LEDs.
- d. Physical Parameters:
 - 1) Operating Temperature: Minus 40 to 140 degrees F (Minus 40 to 60 degrees C).
 - 2) Operating Humidity: Up to 90 percent relative, non-condensing.
 - 3) Application: Indoor or Outdoor.
 - 4) Construction: Aluminum alloy body; polycarbonate clear dome. Dimensions: 4.49 in. (125 mm) x 5.3 in. (135 mm) diameter.
 - 5) Weight: 2.6 (1.2 kg).
- e. Electrical Parameters:
 - 1) Input Voltage: 24 VAC, 12 VDC or PoE.
 - 2) Connectors:
 - a) Two conduit access holes for internal cable termination.
 - b) Power: 12 VDC or 24 VAC terminal block.
 - c) PoE: RJ-45.
 - d) Video and Data: RJ-45.
 - e) Alarm: Screw terminal.
 - f) Audio: Screw terminal, audio level alarm alert.
 - g) Slot for SD card.
 - h) Composite output for installation-2-pin connector.
 - i) Reset button.
 - j) Default button.
 - 3) Radio Frequency Emission Rating: FCC Class A; CE.
- f. Network Parameters:
 - 1) Communications: Open platform; compatible with Valerus Video Management System.
 - 2) Compression: Smart Encoding; H.264/H.265; M-JPEG.
 - 3) LAN Interface: 10 Base-T/100 Base-TX, Unicast/Multicast.
 - 4) Video Channels: Triple streaming.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 5) Frame Rate: Up to 30 fps.
 - 6) Web Browser: Internet Explorer, Safari, Firefox, Google Chrome, Microsoft Edge.
 - 7) Users: Live viewing for up to 10 clients.
 - 8) Image Settings: Digital image effects defog, flip and mirror; configurable brightness, contrast, saturation, hue, sharpness; BLC; HLC; gamma correction; 3 DNR; motion detection; white balance, AGC; Electronic Shutter, automatic or manual; digital zoom; motion detection; privacy masks; motorized zoom and focus (lens); dynamic ROI.
 - 9) Intelligent Video Analytics: Tampering/Defocus, Intelligent Motion Detection, Intrusion Detection; Line Counter/Cross, Loitering, Object Left/Removed, Wrong Direction, Area Counting.
 - 10) Supported Protocols: IPv4/IPv6, TCP, HTTP, HTTPS, RTSP, RTCP, RTP, RTMP, SMTP, SNMP v1/2c/3, UPnP, TLS/TTLS, FTP, HLS, ICMP, IGMP, LDAP, NTP, DHCP, DNS, DDNS, UDP, QoS, ARP, PPPoE, Bonjour, ONVIF S/G/Q/T.
6. Basis of Design: V2360W Outdoor IP Panoramic Dome Cameras as manufactured by Vicon Industries:
- a. Certifications: CE, FCC Class A, IK10, IP67, UL, RoHS, ONVIF S/G/Q/T and NDAA/GSA/TSA compliant.
 - b. Features:
 - 1) Outdoor panoramic dome camera shall incorporate a fixed camera/lens combination.
 - 2) True WDR and Smart IR capability.
 - 3) Intelligent Video Analysis, motion and tampering/defocus.
 - 4) Mounting: Surface mountable.
 - c. Camera Parameters:
 - 1) Imaging Device: 1/1.7-inch.
 - 2) Maximum Resolution: 12 MP.
 - 3) Shutter Speed: 1/2 - 1/10,000 sec.
 - 4) Automatic Gain Control: On/Off selectable.
 - 5) Sensitivity: Color: 0.04 lux; Black and White: 0.03 (IR OFF), 0 lux (IR On).
 - 6) Digital Zoom: Dynamic ROI.
 - 7) Lens Adjustment: Fixed fisheye.
 - 8) Focal Length: 1.2 mm.
 - 9) Field of View: 195 degrees, 360 degree surround view.
 - 10) IR Distance: Smart IR; 49 ft (15 m) with 1 IR LED.
 - 11) Dual heater system.
 - d. Physical Parameters:
 - 1) Operating Temperature: Minus 40 to 122 degrees F (Minus 40 to 50 degrees C).
 - 2) Operating Humidity: Up to 90 percent relative, non-condensing.
 - 3) Application: Indoor or Outdoor.
 - 4) Construction: Aluminum alloy body; bracket: PC+ABS front case.
 - 5) Dimensions: 2.2 in. (57 mm) x 5 in. (150 mm) diameter.
 - 6) Weight: 2 (0.9 kg).
 - e. Electrical Parameters:
 - 1) Input Voltage: 24 VAC or PoE.
 - 2) Current: PoE: 0.52 A; 24 VAC: 1.1 A.
 - 3) Power Consumption IR On: 25 W.
 - 4) Connectors:
 - a) Power: 24 VAC terminal block.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- b) PoE: RJ-45.
- c) Video and Data: RJ-45.
- d) Audio In and Out: Screw terminal; built-in mic; audio level alarm alert.
- e) Slot for SD card.
- f) Reset button.
- g) Default button.
- 5) Radio Frequency Emission Rating: FCC Class A; CE.
- f. Network Parameters:
 - 1) Communications: Open platform; compatible with Valerus Video Management System.
 - 2) Compression: Smart Encoding; H.264/H.265; M-JPEG.
 - 3) LAN Interface: 10 Base-T/100 Base-TX, Unicast/Multicast.
 - 4) Video Channels: Triple streaming.
 - 5) Resolution: 4000x3000, 3000x3000, 2592x1944, 1944x1944, 048x1536, 1536x1536, 1280x960, 960x960, 800x600, 608x600, 640x480, 480x480, 230x240, 240x240.
 - 6) Frame Rate: Up to 30 fps.
 - 7) Web Browser: Internet Explorer, Safari, Firefox, Google Chrome, Microsoft Edge.
 - 8) Users: Live viewing for up to 10 clients.
 - 9) Image Settings: Digital image effects defog, flip; configurable brightness, contrast, saturation, hue, sharpness; BLC; HLC; gamma correction; 3 DNR; motion detection; white balance, AGC; Electronic Shutter, automatic or manual; digital zoom; motion detection; privacy masks; dynamic ROI.
 - 10) Intelligent Video Analytics: Tampering/Defocus, Motion.
 - 11) Supported Protocols: IPv4/IPv6, TCP, HTTP, HTTPS, RTSP, RTCP, RTP, RTMP, SMTP, SNMP v1/2c/3, UPnP, TLS/TTLs, FTP, HLS, ICMP, IGMP, LDAP, NTP, DHCP, DNS, DDNS, UDP, QoS, ARP, PPPoE, Bonjour, ONVIF S/G/Q/T.
 - 12) support phone number from the manufacturer. This no charge service shall be available to dealers and installers.
 - 13) Provided with an explicit 3-year manufacturer warranty.
- g. Outdoor IP Bullet Camera:
 - 1) Fixed camera/lens combination.
 - 2) Indoor/outdoor surface mounting.
 - 3) High-resolution day/night camera; true WDR and Smart IR/Adaptive IR capability and include an integral varifocal DC-iris lens.
 - 4) Motorized Lens: Allow for remote configuration of zoom and focus (motorized focus and zoom).
 - 5) Day/Night Operation: Achieved using a built-in IR-cut filter.
 - 6) Camera Position: Adjustable using the integral mount. Sunshield provided.
 - 7) Dual heater provided.
 - 8) Triple streaming video and support H.264/H.265 and M-JPEG compression.

2.4 VIDEO ANALYTICS

A. General:

1. All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer's system.
2. All systems and components shall have been thoroughly tested and proven in actual use.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3. All systems and components shall be provided with the availability of a toll free 24-hour immediate technical assistance for either the dealer/installer at no charge.
 4. All systems and components shall be provided with an explicit manufacturer warranty.
- B. Analytics Requirements:
1. The proposed video analytics solution shall meet all the requirements detailed in this A and E specification.
- C. General Analytics Requirements:
1. The requirements listed in this section apply to real-time detection, video search and business intelligence capabilities, unless stated otherwise.
- D. Architecture:
1. The software shall run on a COTS server or shall be available pre-installed on manufacturer certified servers.
 2. The system shall support processing video from specific Common Off the Shelf (COTS) IP cameras and video encoders.
 3. This architecture structure shall utilize a proxy (VAP) mechanism that pulls the video stream from the Valerus Video Management System (VMS) and performs the feature extraction on the server side.
 4. The solution shall be easily scalable: the customer shall be able to add servers to the network to enable analytics on an unlimited number of additional cameras (without downtime). Three types of servers shall be available: a dedicated analytics server, a combination analytics/VMS Application server and a dedicated VAP server. Each of these shall be available in desktop or rack-mount style.
 5. The solution shall support full server redundancy, i.e., automatic switchover to backup components if the primary components fail.
 6. The solution shall support customized assignment between cameras and analytics servers, according to the customer's needs (e.g. geographic restrictions, etc.).
- E. Bandwidth Consumption:
1. The solution shall transmit extracted feature data with an average of 150 Kbps between the camera and the server.
 2. The solution shall not send feature data when the analytics is not activated.
- F. Hardware and Software:
1. The solution shall run on computer networks using industry-standard equipment.
 2. The analytics software shall be compatible with COTS equipment and common operating systems, in particular, Windows Server 2008 R2 SP1 (64-bit), Windows Server 2012 and 2012 R2 (64-bit), Windows Server 2016, and Windows 10 (64-bit).
 3. The system shall have the ability to traverse both LAN and WAN network topologies.
 4. The solution shall use an industry standard database for indexing alerts and storing configuration data. Supported databases include MS SQL Server Express Edition (2014, bundled with SmartAnalytics), also 2012, 2016, MS SQL Server 2008 R2, 2012, 2014, 2016 (Standard and Enterprise Editions).
 5. The solution shall support "Merge" replication feature offered by MS SQL Servers.
- G. Performance:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1. The solution shall be capable of delivering analytics to large-scale deployments comprising thousands of video cameras.
 2. The solution shall be capable of detecting objects whose height is at least 5 percent of the Field of View (FOV).
 3. The system shall function in diverse environments such as low light, rain, snow and clouds without loss of performance or significant increase in false real-time detection or false search results.
 4. The system should automatically mask different types of repetitive movements that may otherwise cause false alerts.
 5. The system should further allow the operator to specify mask areas within or outside the detection area in which any activity should be ignored, for reducing false alerts. Further, the operator should be able to define mask areas such that if movement of objects of certain sizes is detected, then other selected analytics rules configured on this camera would be deactivated to avoid false alerts.
- H. Video Devices:
1. The solution shall be capable of analyzing video streams originating from IP video surveillance cameras including: fixed color/black-and-white cameras; dome cameras; panoramic cameras; thermal and infrared cameras.
 2. The solution shall be capable of analyzing digital, compressed video originating from analog video surveillance cameras that are connected via video servers/encoders.
- I. Configuration and Management:
1. The solution shall provide a single front-end application for all configuration operations.
 2. The solution shall allow specifying one or more VMS server(s) to integrate with. For each of the servers, the solution shall retrieve its camera list that will be presented to the user using thumbnail images. The operator will be able to select VMS cameras that should be managed via the VAP mechanism.
 3. The GUI shall enable the customer to configure frame rate usage in order to reduce network bandwidth consumption when viewing live video.
 4. The solution shall be capable of automatically learning the camera scene, to enable optimal analytics performance, including:
 - a. The geometry of the field of view in terms of the pixel-to-meter measurement, in different areas.
 - b. The camera orientation - angled or overhead.
 5. The solution shall allow configuring multiple sensors simultaneously.
 6. The solution shall display a reference image for each camera, to facilitate camera identification if there is no live video stream and to align the camera back to its original position if it is moved.
 7. The solution shall provide an events history that includes the event image and the ability to view the recording playback around the event time.
 8. The solution shall be capable of periodically purging accumulated data of various types based on age:
 - a. Detection events.
 - b. Statistics data (generated by business intelligence rules).
 - c. Analytics metadata.
 9. The solution shall include GUI to show current and past system notifications that represent the health of the solution's own software components.
 10. The solution shall generate system notifications for users' log-in and log-off times.
 11. The solution shall forward the system notifications to the Windows Event Log, so they can be tracked and monitored by third party tools.
 12. The solution shall allow 2 levels of user permissions. The lower level should

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

be limited to viewing data and the upper level should allow all operations. The solution's user management shall allow specifying Microsoft domain users and groups.

- J. Video Standards and Formats:
 - 1. The solution shall be capable of processing a variety of video resolutions, including: CIF, 4CIF, QVGA, VGA, 720P, 1080P, 3MP and 5MP.
 - 2. The solution shall be capable of processing a variety of compression standards, including: Motion JPEG, MPEG-4 and H.264.
 - 3. The solution shall be capable of processing a variety of video aspect ratios, including 4:3 and 16:9.

- K. Demo Capability:
 - 1. The solution shall feature the capability of importing video clips into the application for the purpose of testing, evaluating and demonstrating the quality of the analytics.

- L. Rule-Based Detection and Analysis Capabilities:
 - 1. The requirements listed in this section apply to rule-based detection and analysis.

- M. Configuration and Setup:
 - 1. The solution shall enable any combination of analytics rules to run on the same camera simultaneously, without limitations.
 - 2. The solution shall enable the operator to define multiple detection regions per camera.
 - 3. The solution shall provide the capability to activate, deactivate and apply a schedule on multiple analytics rules in bulk operation.
 - 4. The solution shall enable the operator to define analytics rules that will be activated when other rules and/or scheduled times are activated. Chaining rules will be without limitation; it will be possible for each rule to activate and deactivate an unlimited number of rules on a single video camera and/or across multiple cameras. It shall be possible to activate all rule types simultaneously.
 - 5. The solution shall enable the scheduling of analytics rules on a "weekly" recurring basis. The solution shall also allow scheduling for specific dates and times, via importing of an external calendar, such as the MS Outlook calendar.
 - 6. The solution shall provide operators the ability to configure rule filters based on target size, target speed, aspect ratio or distance of movement.
 - 7. The solution shall provide the capability to test the rule performance by leveraging historical metadata to which the rule conditions can be applied:
 - a. The user can specify the time period in the past to which the test should be applied.
 - b. It should be possible to run the test as soon as the analytics rule is defined.
 - c. Once running a test, the solution should display the recording snapshot at the event time and the detection overlays of the identified object.
 - d. The solution should allow the user to classify events as True or False.
 - e. Based on user classification, the solution should generate a score that provides a relative quality of the results.
 - f. The solution should allow saving past tests, showing the quality score for each test.
 - g. The user should be able to review past test runs and apply the rule settings that correspond to one of the tests back to the rule definition.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- N. Analytics Rules For Behavior Detection:
1. The solution shall offer a suite of analytics rules to provide automatic detection of a range of motion and non-motion behaviors of persons, objects and vehicles:
 - a. Person moving in area (alerts to movement of a person in a sterile zone).
 - b. Person crossing a line (alerts to a person crossing a virtual line / wrong direction of movement).
 - c. Crowding (alerts if the density (percent) of people in a user-defined area reaches a user-defined threshold for a user-defined length of time).
 - d. Person tailgating (alerts if a second person crosses a line within a user-defined time after the first person).
 - e. Loitering (alerts to persons sojourning for a user -defined length of time).
 - f. Occupancy (alerts if the number of people in a detection region exceeds a user-defined threshold).
 - g. Suspicious object (alerts if an object is added to a scene, meets the operator-defined size, and stays for longer than the operator-defined time).
 - h. Asset protection (alerts if a specific object is removed from an operator-defined region for longer than a defined time).
 - i. Vehicle moving in area (alerts to vehicle movement).
 - j. Vehicle crossing a line (alerts to a vehicle crossing a virtual line / wrong direction of movement).
 - k. Stopped vehicle (alerts to a vehicle that stops in a user-defined area for longer than a user-defined period of time).
 - l. Tailgating vehicle (alerts if a second vehicle crosses a line after the vehicle that crossed before, within a user-defined time).
 - m. Traffic congestion (alert if average vehicles speed is lower than a specified threshold for longer than predefined period).
- O. Tampering Detection:
1. The solution shall be capable of detecting tampering and video quality in cases of video loss, camera obscuring, camera moving, light saturation, low light and TCP/IP communication problems.
- P. Event Generation:
1. The solution shall provide real-time generation of events to alert operators to irregularities.
 2. The solution shall support simultaneous tracking of an unlimited number of targets within the detection regions and/or the cross lines.
 3. The solution shall enable event on non-detection, i.e., for an alarm to be generated when a rule does not perform detection within a predefined period of time.
- Q. Analytics Rules For Business Intelligence:
1. The solution shall offer analytics rules to provide business intelligence capabilities for persons and vehicles including but not limited to:
 - a. Count the number of persons moving directionally, i.e., crossing a virtual line/s that is user-defined in the camera's field of view. The solution shall optimize precise counting of targets by distinguishing individual targets in a cluster. If a cluster of 4 people crosses a line (for example), a count of 4 will occur rather than 1.
 - b. Count the number of vehicles moving directionally, i.e., crossing a virtual line/s that is user-defined in the camera's field of view.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- c. Calculate average person occupancy within an area.
 - d. Calculate average person density (crowding) within an area.
 2. Calculate average speed of vehicles passing within an area.
 3. The solution shall include built in statistics reporting capabilities as follows:
 - a. For counting people and vehicles, listing all counting events and the reported count at each time interval.
 - b. For counting people and vehicles, a report that compares multiple counters during a period of time.
 - c. For counting people and vehicles, a report that aggregates the results of multiple counters.
 - d. Person occupancy, density (crowding) and vehicle speed - reports that present the average values per hour or per day.
 - e. For counting people and vehicles, an extended Excel report can be generated that includes absolute and comparative views for each day, month and year.
 - f. Extended Excel reports indicated in (e) shall be producible offline, on the basis of a schedule, without requiring constant operator involvement.
 - g. For all event types, a report that contains the details of each event and a captured image of the event.
- R. Event Dispatcher:
 1. The solution shall enable the sending of real-time events to external applications such as designated video alarm monitoring software, email (SMTP) and SMS. The event notification includes the camera ID, event time and snapshot.
- S. Video Search and Analysis Capabilities:
 1. The requirements listed in this section apply to video search capabilities for recorded video of a surveillance system. The specifications below apply to a typical deployment of a surveillance system in which video is recorded by a Video Management System (VMS).
- T. Configuration And Setup:
 1. The solution shall not require the operator to apply any rule or behavior configuration in advance.
 2. The solution shall allow the operator to enable or disable generation of video indexing per sensor.
 3. The solution shall allow the operator to specify the maximum duration (in days) to store the video index per sensor. When the specified time limit is reached, the solution shall purge the oldest index data from the database.
 4. The solution shall allow the operator to delete all previously stored index data per sensor. For all the above three sensor operations, the solution shall provide the capability to configure multiple sensors via a single GUI operation.
 5. The solution shall offer a suite of search options in the range of motion and non-motion behaviors of persons, objects and vehicles (search targets):
 - a. Person moving for a specified time, in the entire FOV or in a specified AOI (area of interest).
 - b. Person crossing a line.
 - c. People crowding for a specified time, in the entire FOV or in a specified AOI (based on a user-defined crowd size percentage threshold).
 - d. Persons occupying for a specified time the entire FOV or a specified AOI (based on a user-defined occupancy threshold).
 - e. Vehicles that moved for a specified time, in the entire FOV or in a specified AOI.
 - f. Vehicle crossing a line.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- g. Vehicle that stopped for a specified time, in the entire FOV or in a specified AOI.
 - h. Object that was added for a specified time, in the entire FOV or in a specified AOI.
 - 6. The solution shall allow filtering based on target characteristics:
 - a. Vehicle size. The solution shall provide predefined presets for Small, Medium, Large and Any vehicle.
 - b. Object size. The solution shall provide predefined presets for Small, Medium, Large and Any object.
 - c. Target color. The solution shall provide a predefined palette of colors to choose from. It shall be possible to specify up to two colors to be matched. The solution shall enable searching for targets that match the specified color(s) or targets that don't match the specified color(s).
 - 7. The solution shall be capable of searching over various time range options:
 - a. Over the past N minutes, hours or days (e.g., over the past 3 hours; past 7 days).
 - b. From a start date and time to an end date and time.
 - c. Over a recurring time interval across a date interval (e.g., between 8-9 a.m., every day between Jan 1-10).
 - 8. The solution shall enable adjusting the search parameters tolerance to yield fewer or more search results (while decreasing or increasing the probability for true and false matches).
 - 9. The solution shall provide the capability to Search for Similar Targets. If a target is found, another search can be performed in the recorded video (generated from the same camera or any group of cameras) to find targets that are the same as or similar to the found target.
- U. Viewing Search Results Capabilities:
- 1. The solution shall provide a fundamental capability to display video playback for any search result around the time that the search target / behavior was found:
 - a. The solution shall continuously display a bounding box over the target (target tracking).
 - b. The solution shall display the video playback in an infinite loop.
 - c. The solution shall present a progress bar, including a graphic indication showing the time at which the search criteria were met.
 - d. The solution shall enable the user to Pause and Re-Play the video playback.
 - e. The solution shall enable the user to use the progress bar to navigate to any time position along the playback segment.
 - f. The solution shall be capable of zooming into the original video source so that users shall be able to optimally view tracked targets in video playback.
 - g. The solution shall feature playback windows of at least two possible sizes and with an aspect ratio that correlates to the original video recording, such as 4:3 or 16:9.
 - h. The solution shall feature video playback extracted from either the integrated VMS or from the video clip, depending on the deployment.
 - 2. The playback capability should be further incorporated with several viewing options as described below. The solution shall provide multiple options for viewing search results:
 - a. Event Thumbnails: After searching cameras, the solution shall be capable of displaying thumbnail results, each of which shows a found person, vehicle or object behavior. It shall be possible to play back the video of each thumbnail. The solution shall be capable of zooming into the original video source so that users shall be able to optimally view

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- tracked targets within the displayed thumbnail. The thumbnail will be extracted from either the integrated VMS or from the video clip, depending on the deployment.
- b. Statistics Report: The solution shall enable counting the search results and presenting the information as:
 - 1) Graphic statistics report by time intervals.
 - 2) Graphic statistics report by sensor (allowing comparison of search results across cameras).
 - 3) Graphic statistics report exported to PDF file.
 - 4) Raw counts exported to Microsoft Excel file.
 - c. Target Path/Location: After searching, the solution shall be capable of displaying all motion paths in a scene over the field of view reference image. For non-motion behaviors (such as suspicious object and stopped vehicle), the solution shall present the bounding rectangle in the location that the target was found. It shall be possible to immediately play back the video of each target path or target location.
 - d. Heat Map: After searching, the solution shall be capable of displaying results in a view that uses color coding to represent relative activity in different areas of the field of view, highlighting areas in which targets sojourned longest.
 - e. Video Summary: After searching, the solution shall be capable of displaying multiple search results in a single condensed, segmented clip. It shall be possible to easily navigate from one video segment to another as well as to directly navigate to any position in the condensed clip.
 - f. Site Map: The solution shall enable viewing search results on a graphic image representing a site map:
 - 1) The solution shall enable viewing Heat Map and Target Path on the site map.
 - 2) The solution shall be capable of presenting the results of searches on multiple cameras, on a single site map.
 - 3) The solution shall allow navigating to the video playback directly from the site map for a given cell (in Heat Map) or a given Path.
 - 4) The solution shall enable viewing a maximal size of the site map image showing the search results.
 - 5) The solution shall allow defining multiple site maps and associating them with a subset of cameras.
 - 6) Image files shall support the following formats: bmp, jpg, jpeg, gif and png.
 - 7) The solution shall provide a simple method to correlate between the camera coverage area and the site map graphic image.
- V. Process And Investigation Capabilities:
- 1. The solution shall provide the following process and investigation capabilities:
 - a. Save Search Query: Users shall be able to save a search query with a given name for later reuse.
 - b. Save Search Results: Users shall be able to save search results with snapshots of the detections and the results' identifying information (camera ID, time). Multiple results from a single search or from multiple searches can be saved under a single or multiple names (as required by the user) and can be retrieved as a reference later.
 - c. Export Clip: The solution shall enable users to export a search result to an .avi file, for a single result as well as for a complete video summary. The exported clip will include the target tracking display.

W. Performance:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1. The solution shall be capable of a query time average of 10-15 seconds per camera per 24 hours of recorded metadata, depending on how busy the scene has been during the search time interval and on the hardware configuration of the server.
- X. Client Access:
1. The solution shall be capable of handling concurrent GUI clients that access the solution and perform video search and analysis.

2.5 ELECTRONIC ACCESS CONTROL MANAGEMENT SYSTEM

- A. Basis or Design: Electronic Access Control Management system as manufactured by Vicon Industries.
- B. System Description:
1. Design Requirements: Shall provide products and systems that have been manufactured, fabricated and installed to the following criteria: Comply with IEEE 1100, NFPA 70, NFPA 72, NFPA 80, NFPA 101.
 2. System Capabilities:
 - a. Fully distributed processing, field devices are not dependent on server operations once programmed.
 - b. Control access to unlimited doors.
 - c. Control elevator access up to 64 floors per Cab.
 - d. Manage and control access for up to 100,000 credentials per controller.
 - e. Unlimited remote sites.
 - f. Configurable alert screen and email notifications.
 - g. Photo ID badging integration via SQL database
 - h. Readers, inputs and outputs expandable and/or modifiable.
 - i. Single software program controlled.
 - j. 50 Programmable Holidays per Holiday Group.
 - k. 50 Holiday Groups configurable.
 - l. Multi-site Management via Partitions.
 - m. No client software needed, client accesses via HTML5 browser.
 - n. Anti-passback capability.
 - o. Full integration and customization of all system components.
 - p. Online reconfiguration through system programming without hardware changes.
 3. Access Control Functions:
 - a. Validation of Credential based on Time of day, Day of week, Holiday scheduling, mode of Door, and ad-hock schedule.
 - b. Simultaneous controlled access with various reader technologies; Proximity, PIN number, Biometrics, Mag stripe, Barcode.
 - c. Automatic or manual retrieval of cardholder photographs.
 - d. First person in capability.
 - e. Access validation based on positive verification of Credential, PIN, or Credential/PIN combination, or dual credential with one credential being a supervisor credential.
 - f. Differentiates between valid credential presentation only, and valid credential presentation followed by entry (when using door position switch).
 4. Passwords:
 - a. Assignable.
 - b. Unlimited number of system Administrators.
 - c. Permissions of system Administrators are definable per Administrator.
 - d. Administrator actions/capabilities range from basic system monitoring to control of all system functions.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- e. Administrators can be linked and managed by LDAP systems.
 5. System Programming:
 - a. User-friendly, intuitive, and responsive HTML5 web client interface.
 - b. Single Page Application (SPA) architecture allows seamless browser transition between pages.
 6. Alert Messages:
 - a. Ability to monitor for specific events and make them spawn additional windows or email the event to the administrator.
 - b. Alert information displayed in text format on the notifications area, and highlighted based on severity of alert.
 - c. Video feed switching capabilities associated with alert via IP communication. (fully configurable).
 - d. Capability of E-Mailing alert events to administrators.
 7. System integration:
 - a. VMS integration: Vicon Valerus, ViconNet Digital Video Management system, Digital Watchdog DW Spectrum, exacq exacqVision, and Milestone Xprotect.
 - b. Microsoft Active Directory Integration via LDAP protocol.
 - c. CardPresso Photo badging software integration.
 - d. Alarm system integration via configurable dry contact output/input.
 - e. ASSA ABLOY Aperio hub integration.
 - f. Visitor Management:
 - 1) HID Easylobby SVM.
 - g. Integration to other systems possible via HTTP API.
- C. System Minimum Requirements:
1. Central Processing Unit Computer: Microsoft compatible Windows 7 or newer. 2 GHz or faster 32-bit (x86) or 64-bit (x64) processor. Two or more cores. 4 GB RAM for 32-bit and 6 GB RAM for 64-bit. DVI or HDMI monitor. 5 GB hard drive space required (Additional space required for database). Microsoft .Net Framework 4.5 Full. Microsoft SQL Server 2008 or SQL Server 2008 Express or higher.
- D. Basis or Design: One Door Controller: VAX-1D-REX-1/VAX-1D-1 as manufactured by Vicon Industries.
1. Supports 2 readers (IN and OUT configuration).
 2. Power input: IEEE 802.3af PoE standard provides up to 15.4 Watts.
 3. Processor: 32-bit microprocessor-based.
 4. Storage: 100,000 users, 50,000 events (onboard).
 5. Terminals: Quick disconnect terminal headers.
 6. Reader Communications: Wiegand Data1/Data0.
 7. Lock Power: Solid State 12 VDC at 500 mA / 24 VDC at 250 mA (with opt. converter).
 8. Auxiliary Power: 12 VDC at 450 mA max. (Used to power motion devices, Piezo's, etc.).
 9. Reader power: 12 VDC at 450 mA max. per port.
 10. Relay Outputs: 2X solid state relay 60 V (TVS circuit limits 24 V), 1A, fully configurable, no mechanical ports.
 11. Relay Output Devices: Fully configurable to work with the following devices:
 - a. Door strike.
 - b. Magnetic lock (use external relay or dry contact module).
 - c. Door opener.
 - d. External buzzer.
 - e. External alarm systems (arming/disarming).
 - f. Gates.
 - g. Auxiliary devices that will accept dry contact input.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- h. Man trap devices (door open or unlocked).
 12. Reader Formats: Magnetic stripe, Biometric, Bar code, and Wiegand up to 64 bit.
 13. Inputs: 4 Dry contact inputs, fully configurable including supervised or digital input setting.
 14. Input Functions Include:
 - a. Request to exit.
 - b. Door contact.
 - c. Door opener to enter (require card).
 - d. Door opener to exit.
 - e. External motion sensor.
 - f. Emergency alarm.
 - g. External alarm status (check if alarm system is armed).
 - h. Door prevent unlock (used with mantraps).
 - i. Auxiliary Input:
 - 1) Pulse selected output.
 - 2) Activate selected output.
 - 3) Deactivate selected output.
 - 4) Toggle selected output.
 - 5) Activate alarm interfaced.
 - 6) Disengage emergency alarm.
 - 7) Override doors with crisis levels.
 15. Networking: 10/100Mbps supporting Static or DHCP modes with 2 Ethernet status LEDs; on-board HTTP interface for diagnostics and remote IP configuration. Secured by configurable password and can be disabled; 256 bit AES encryption between panel and server (optional).
 16. Security: Hardware secured by configurable password.
 17. Tamper Sensor: Photo tamper sensor (configurable) (no moving parts).
 18. LED Indicator: 2 PoE power indicator, 2 Reader active indicators, 3 output indicators, 1 communication status and Door status and heartbeat LED beneath unit.
 19. 2 Line x 16 Ch LCD Display (contrast adjustable) with LED back light (brightness adjustable) used for on-board diagnostics and initial configuration such as IP address and communication modes.
 20. Diagnostics: on-board diagnostics shall include Reader test, output test, input test, ping with IP, ping with name, Debug mode, read only mode.
 21. Keyboard: Four user push buttons for data entry or output selection.
 22. Sound: On-board piezo buzzer (90 dB at 100 mm).
 23. Motion (optional): PIR motion sensor mounted on bottom of unit for authorizing exit without card read.
 24. Time: Keeps up to 1 month without power connection, No battery needed. Automatic DST switch.
 25. Operating Temperature: 32 to 122 degrees F (0 to 50 degrees C).
 26. Operating Humidity: 10 to 90 percent relative humidity, non-condensing.
 27. Expandable modular design.
 28. PCB Dimensions: 2.91 x 7.72 in (74 x 196 mm).
 29. Enclosure Dimensions (W x H x D): 10.2 x 3.4 x 2.3 in (286 x 875 x 59.3 mm).
 30. Enclosure Color: Black or White.
 31. Compliance: Panel is ETL Listed conforms to UL 294 Certified to CSA-C22.2 no.205.
- E. Basis of Design: Two Door Controller: VAX-2D-REX-1/VAX-2D-1 as manufactured by Vicon Industries.
1. Supports 2 readers (1 for each door).
 2. Power input: IEEE 802.3af PoE standard provides up to 15.4 Watts.
 3. Processor: 32-bit microprocessor-based.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

4. Storage: 100,000 users, 50,000 events (onboard).
5. Terminals: Quick disconnect terminal headers.
6. Reader Communications: Wiegand Data1/Data0.
7. Lock Power 1: Solid State wet relay 12 VDC at 500 mA / 24 VDC at 250 mA (with opt. Converter).
8. Lock Power 2: Solid State Relay, - 60 V (TVS circuit limits 24 V), 500 mA, fully configurable, no mechanical ports requires external lock power for second strike.
9. Auxiliary Power: 12 VDC at 450 mA max. (Used to power motion devices, Piezos, etc.).
10. Reader power: 12 VDC at 450 mA maximum shared across both reader port and Auxiliary 12VDC output.
11. Relay Outputs: 1x solid state relay - 60 V (TVS circuit limits 24V), 1 A, fully configurable, no mechanical parts; dry contact.
12. Reader Formats: Magnetic stripe, Biometric, Bar code, and Wiegand up to 64 bit.
13. Inputs: 4 Dry contact inputs, fully configurable including supervised or digital input setting.
14. Input Functions Include:
 - a. Request to exit.
 - b. Door contact.
 - c. Door opener to enter (require card).
 - d. Door opener to exit.
 - e. External motion sensor.
 - f. Emergency alarm.
 - g. External alarm status (check if alarm system is armed).
 - h. Door prevent unlock (used with mantraps).
 - i. Auxiliary Input:
 - 1) Pulse selected output.
 - 2) Activate selected output.
 - 3) Deactivate selected output.
 - 4) Toggle selected output.
 - 5) Activate alarm interfaced.
 - 6) Disengage emergency alarm.
 - 7) Override doors with crisis levels.
15. Networking: 10/100 Mbps supporting Static or DHCP modes with 2 Ethernet status LEDs; on board HTTP interface for diagnostics and remote IP configuration, secured by configurable password and can be disabled; 256 bit AES encryption between panel and server (optional).
16. Security: Hardware secured by configurable password.
17. Tamper Sensor: Photo tamper sensor (configurable) (no moving parts).
18. LED Indicator: 2 PoE power indicator, 2 Reader active indicators, 3 output indicators, 1 communication status and Door status and heartbeat LED beneath unit.
19. 2 Line x 16 Ch LCD Display (contrast adjustable) with LED back light (brightness adjustable) used for on-board diagnostics and initial configuration such as IP address and communication modes.
20. Diagnostics: on-board diagnostics shall include Reader test, output test, input test, ping with IP, ping with name, Debug mode, read only mode.
21. Keyboard: Four user push buttons for data entry or output selection.
22. Sound: On-board piezo buzzer (90dB at 100 mm).
23. Motion (optional): PIR motion sensor mounted on bottom of unit for authorizing exit without card read.
24. Time: Keeps up to 1 month without power connection, No battery needed. Automatic DST switch.
25. Operating Temperature: 0 degrees Celsius to 50 degrees Celsius (32 degrees

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

Fahrenheit to 122 degrees Fahrenheit).

26. Operating Humidity: 10 to 90 percent relative humidity, non-condensing.
27. Expandable modular design.
28. PCB Dimensions: 2.91 x 7.72 in (74 x 196 mm).
29. Enclosure Dimensions (W x H x D): 10.2 x 3.4 x 2.3 in (286 x 875 x 59.3 mm).
30. Enclosure Color: Black or white.
31. Compliance: Panel is ETL listed conforms to UL 294, certified to CSA-C22.2 no.205.

F. Basis of Design: Multi-Door Kits: VAX-MDK-2, VAX-MDK-4, VAX-MDK-6, or VAX-MDK-8 two, four, six or eight-door kit. Two-eight door access control panel of modular design mounted in steel vented and lockable enclosure. Ideal for retrofits. DC powered, communicates over TCP/IP and battery backup. Built in lock power. Connects to VAX software via TCP/IP. The kits consist of a master controller that distributes power and communication between 1-4 two door expansion modules that communicate to the master.

1. Model Options:
 - a. VAX-MDK-2:
 - 1) Two Door Kit mounted in steel vented and lockable enclosure.
 - 2) 2 x lock power output 12 VDC 500 mA.
 - 3) 4 x configurable Solid State Relay 24 VDC 1 A.
 - 4) 2 x Wiegand reader inputs.
 - 5) 6 x dry contact configurable inputs.
 - b. VAX-MDK-4:
 - 1) Four Door Kit mounted in steel vented and lockable enclosure.
 - 2) 4 x lock power output 12 VDC 500 mA.
 - 3) 8 x configurable Solid State Relay 24 VDC 1 A.
 - 4) 4 x Wiegand reader inputs.
 - 5) 12 x dry contact configurable inputs.
 - c. VAX-MDK-6:
 - 1) Six Door Kit mounted in steel vented and lockable enclosure.
 - 2) 6 x lock power output 12 VDC 500 mA.
 - 3) 12 x configurable Solid State Relay 24 VDC 1 A.
 - 4) 2 x Wiegand reader inputs.
 - 5) 18 x dry contact configurable inputs.
 - d. VAX-MDK-8:
 - 1) Eight Door Kit mounted in steel vented and lockable enclosure.
 - 2) 8 x lock power output 12 VDC 500 mA.
 - 3) 16 x configurable Solid State Relay 24 VDC 1 A.
 - 4) 8 x Wiegand reader inputs.
 - 5) 24 x dry contact configurable inputs.
2. Supports up to 8 Readers (1 for each door).
3. Power input: 1 x 12-13.5 VDC power input. Current rating based on connected peripherals. 5 A maximum.
4. Processor: 32-bit microprocessor-based.
5. Operation mode:
 - a. Requires server software for credential/schedule configuration.
 - b. Will operate stand-alone once programmed.
6. Storage:
 - a. Up to 100,000 users/cardholders per controller.
 - b. 50,000 event storage onboard.
7. Terminals: Quick disconnect terminal headers.
8. Reader Communications:
 - a. Up to 8 x Wiegand Data1/Data0, with optional LED and buzzer control.
 - b. LED Indicator: Up to 8 x Reader active indicators.
9. Lock Power:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- a. Up to 8 x Solid State Wet Relay 12 VDC at 500 mA.
 - b. LED Indicator: Up to 8 X Lock Power LED.
 - c. Advanced Power savings: Power can be reduced by 80 percent for continuous duty locksets.
10. Relay Outputs:
- a. Up to 16 X Solid State Relay 60 V (TVS circuit limits 24 V), 1 A.
 - b. Fully configurable, no mechanical parts.
 - c. Dry Contact.
 - d. LED Indicator: Up to 8 x output indicator.
11. Relay Output Devices: Fully configurable to work with the following devices:
- a. Door strike.
 - b. Magnetic Lock (use external relay or dry contact module).
 - c. Door opener.
 - d. External buzzer.
 - e. External alarm systems (arming/disarming).
 - f. Gates.
 - g. Aux devices that will accept dry contact input.
 - h. Man trap devices (door open or unlocked).
12. Inputs Up to 24 x Dry contact inputs, fully configurable including supervised or digital input setting.
13. Input Functions Include:
- a. Request to exit.
 - b. Door contact.
 - c. Door opener to enter (require card).
 - d. Door opener to exit.
 - e. External motion sensor.
 - f. Emergency alarm.
 - g. External alarm status (check if alarm system is armed).
 - h. Door prevent unlock (used with mantraps).
 - i. Aux input:
 - 1) Pulse selected output.
 - 2) Activate selected output.
 - 3) Deactivate selected output.
 - 4) Toggle selected output.
 - 5) Activate alarm interfaced.
 - 6) Disengage emergency alarm.
 - 7) Override doors with crisis levels.
14. Auxiliary Power: 12 VDC at 350 mA without readers. (Used to power motion devices, Piezo's, etc.) Current shared with two reader ports. 1 port per two door module.
15. Reader Power: 12 VDC at 350 mA max shared across both reader port and Auxiliary 12 VDC on each two door module.
16. Reader Formats: Magnetic stripe, Biometric, Bar code, and Wiegand format up to 64 bit.
17. Networking:
- a. 10/100 Mbps supporting Static or DHCP modes, 2 Ethernet status indicators
 - b. On board HTTP interface for diagnostics and remote IP configuration. Secured by configurable password and can be disabled.
 - c. LED Indicator: 2 x PoE power indicator.
 - d. 256 bit AES encryption between Panel and Server (configurable).
18. Security:
- a. Hardware secured by configurable password.
 - b. Hardware secured by locked steel enclosure.
19. Tamper Sensor: Photo tamper sensor (configurable) (no moving parts).
20. Display: 2 Line x 16 Ch LCD Display (contrast adjustable) with LED back light

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

(brightness adjustable) used for on-board diagnostics and initial configuration such as IP address and communication modes.

21. Keyboard: Four user push buttons for data entry or output selection.
22. Diagnostics: Several on board diagnostics available.
23. Sound: On-board piezo buzzer (90 dB at 100 mm).
24. Time: Keeps up to 1 month without power connection, No battery needed. Automatic DST switch.
25. Firmware: Controller firmware is remotely upgradable from server software for added functionality, features and patches.
26. Anti-Passback: Local anti-passback, independent of software.
27. Operating Temperature: 0 degrees Celsius to 50 degrees Celsius (32 degrees Fahrenheit to 122 degrees Fahrenheit).
28. Operating Humidity: 10 to 90 percent relative humidity, non-condensing.
29. Enclosure Dimensions (W x H x D): 11.625 x 17.25 x 3.625 in (295 x 438 x 92 mm).
30. Enclosure Color: Gray.
31. Compliance: Panel is ETL listed conforms to UL 294, certified to CSA-C22.2 no. 205.
32. Two-door expander board shall be available, VAX-EXP-2D.

G. Basis of Design: TROVE Multi-Door Controllers: VAX-TROVE-8DR, VAX-TROVE-16DR eight-or 16 door controllers and a VAX-TROVE 32I/O 32 I/O controller, all housed in an Altronix Trove enclosure with built-in eFlow power supply. Communicates over TCP/IP and battery backup. Built in lock power. Connects to VAX software via TCP/IP. The controllers consist of a master controller that distributes power and communication between two door expansion modules that communicate to the master.

1. Model Options:
 - a. VAX-TROVE-8DR:
 - 1) Eight Door Controller mounted in Altronix Trove lockable enclosure.
 - 2) 1x eFlow6NB power supply.
 - 3) 16 x Solid State Relays 30 VDC 1 A; 8 x lock relays 12 VDC, 500 mA.
 - 4) 8 x Wiegand reader inputs.
 - 5) 24 x supervised or digital inputs (door contact, exit button, external REX, etc.).
 - b. VAX-TROVE-16DR:
 - 1) Sixteen Door Controller mounted in Altronix Trove lockable enclosure.
 - 2) 1x eFlow102NB power supply.
 - 3) 32 x Solid State Relays 30 VDC 1 A; 16 x lock relays 12 VDC, 500 mA.
 - 4) 16 x Wiegand reader inputs.
 - 5) 48 x supervised or digital inputs(door contact, exit button, external REX, etc.).
 - c. VAX-TROVE 32I/O:
 - 1) 32 Input/Output controller mounted in Altronix Trove lockable enclosure.
 - 2) 1x eFlow6NB power supply.
 - 3) 32 x configurable output ports, TV circuit 30 V.
2. Supports up to 8/16 Readers (1 for each door).
3. Power input: 1x eFlow6NB power supply/1x eFlow102NB power supply (8 door controller and 32 I/O controller/16 door controller)
4. Processor: 32-bit microprocessor-based.
5. Operation mode:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- a. Requires server software for credential/schedule configuration.
- b. Will operate stand-alone once programmed.
6. Storage:
 - a. Up to 100,000 users/cardholders per controller.
 - b. 50,000 event storage onboard.
7. Terminals: Quick disconnect terminal headers.
8. Reader Communications on door controllers:
 - a. Up to 8 x/ 16 x Wiegand Data1/Data0, with optional LED and buzzer control.
 - b. LED Indicator: Up to 8 x/ 16 x Reader active indicators.
9. Lock Power on door controllers:
 - a. Up to 8 x/16 x Relays 12 VDC at 500 mA.
10. Relay Outputs:
 - a. Up to 16 x/32 x Solid State Relay 30 VDC 1 A limit per relay on door controllers; 32 configurable ports on I/O controller.
 - b. Fully configurable, no mechanical parts.
 - c. LED Indicator: Up to 24 x/48 x output indicators.
11. Relay Output Devices: Fully configurable to work with the following devices:
 - a. Door strike.
 - b. Magnetic Lock (use external relay or dry contact module).
 - c. Door opener.
 - d. External buzzer.
 - e. External alarm systems (arming/disarming).
 - f. Gates.
 - g. Aux devices that will accept dry contact input.
 - h. Man trap devices (door open or unlocked).
12. Inputs: Up to 24 x/48 Dry contact inputs on door controller, 32 dry contact inputs on I/O controller, fully configurable including supervised or digital input setting.
13. Input Functions Include:
 - a. Request to exit.
 - b. Door contact.
 - c. Door opener to enter (require card).
 - d. Door opener to exit.
 - e. External motion sensor.
 - f. Emergency alarm.
 - g. External alarm status (check if alarm system is armed).
 - h. Door prevent unlock (used with mantraps).
 - i. Aux input:
 - 1) Pulse selected output.
 - 2) Activate selected output.
 - 3) Deactivate selected output.
 - 4) Toggle selected output.
 - 5) Activate alarm interfaced.
 - 6) Disengage emergency alarm.
 - 7) Override doors with crisis levels.
14. Reader Formats: Magnetic stripe, Biometric, Bar code, and Wiegand format up to 64 bit.
15. Networking:
 - a. 10/100 Mbps supporting Static or DHCP modes, 2 Ethernet status indicators
 - b. On board HTTP interface for diagnostics and remote IP configuration. Secured by configurable password and can be disabled.
 - c. LED Indicator: 2 x PoE power indicator.
 - d. 256 bit AES encryption between Panel and Server (configurable).
16. Security:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- a. Hardware secured by configurable password.
 - b. Hardware secured by locked steel enclosure.
 17. Tamper Sensor: Photo tamper sensor (configurable) (no moving parts).
 18. Display: 2 Line x 16 Ch LCD Display (contrast adjustable) with LED back light (brightness adjustable) used for on-board diagnostics and initial configuration such as IP address and communication modes.
 19. Keyboard: Four user push buttons for data entry or output selection.
 20. Diagnostics: Several on board diagnostics available.
 21. Sound: On-board piezo buzzer (90 dB at 100 mm).
 22. Time: Keeps up to 1 month without power connection, No battery needed. Automatic DST switch.
 23. Firmware: Controller firmware is remotely upgradable from server software for added functionality, features and patches.
 24. Anti-Passback: Local anti-passback, independent of software.
 25. Operating Temperature: 0 degrees Celsius to 49 degrees Celsius (32 degrees Fahrenheit to 120 degrees Fahrenheit).
 26. Operating Humidity: 10 to 85 percent relative humidity, non-condensing.
 27. Enclosure Dimensions (W x H x D): 8 Door/I/O Controller: 14.5 x 18 x 4.62 in (368 x 457 x 117 mm); 16 Door Controller: 21.75 x 27.25 x 6.5 in. (546 x 692 x 165 mm).
 28. Enclosure Color: Gray.
 29. Compliance: Panel is ETL listed conforms to UL 294, certified to CSA-C22.2 no. 205.
 30. Two-door expander board shall be available, VAX-EXP-2D.
- H. Basis of Design: Elevator Master Panel: VAX-ELV-STR-1 as manufactured by Vicon Industries.
1. Supports 2 Readers (1 per cab).
 2. Power input: IEEE 802.3af PoE (Power over Ethernet) standard (15.4 W).
 3. Processor: Processor: 32-bit microprocessor.
 4. Storage: 50,000 users, 50,000 events (on board).
 5. Terminals: Quick disconnect terminal headers.
 6. Reader Communications: Wiegand Data1/Data0 with optional LED and buzzer control.
 7. Auxiliary Power: 12 VDC at 450 mA without readers; current shared with two reader ports. (Used to power Elevator Expander Boards).
 8. Reader power: 12 VDC at 450 mA maximum shared across both reader port and Auxiliary 12VDC output.
 9. Reader Formats: Magnetic stripe, Biometric, Bar code, and Wiegand up to 64 bit.
 10. Communications: On board RS485 via RS-485 module SE-X02 up to 8 Elevator Expander Board.
 11. Networking: 10/100Mbps supporting Static or DHCP modes with 2 Ethernet status LEDs; 256 bit AES encryption between panel and server (optional).
 12. Tamper Sensor: Photo tamper sensor (configurable) (no moving parts).
 13. LED Indicator: 2 PoE power indicator, 2 Reader active indicators, 1 communication status, heartbeat LED beneath unit.
 14. 2 Line x 16 Ch LCD Display (contrast adjustable) with LED back light (brightness adjustable) used for on-board diagnostics and initial configuration such as IP address and communication modes.
 15. Keyboard: Four user push buttons for data entry or output selection.
 16. Sound: On-board piezo buzzer (90dB at 100 mm).
 17. Time: Keeps up to 1 month without power connection, No battery needed. Automatic DST switch.
 18. Firmware remotely upgradeable from server software.
 19. Elevators: Ability to support up to 4 Cabs per master panel. Ability to support

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- up to 64 Floors per master panel (with 8 Expander Boards). Up to 2 readers.
Ability to support Button Sensing or Non-Button Sensing.
 - 20. Elevator Relays: Up to 64 Solid State Relay 30VDC, 500mA, normally open.
Dry contact. LED Indicator: output indicator.
 - 21. Elevator Time Zones: User: Ability to support 256 user time zones: 4 zones (9 boundaries) per day. Ability to support 50 user holiday time zone groups, each has 50 holidays, each user holiday time zone: 2 zones (5 boundaries) per day. Floor: Ability to support 64 (unlimited) floor time zones, 4 zones (9 boundaries) per day, Ability to support 8 floor holiday time zone groups, each has 50 holidays, each floor holiday time zone: 2 zones (5 boundaries) per day, Ability to support 64 one time run time zones (ad-hoc).
 - 22. Operating Temperature: 2 to 122 degrees F (0 to 50 degrees C).
 - 23. Expandable modular design.
 - 24. PCB Dimensions: 2.9 x 7.72 in (74 mm x 196 mm).
 - 25. Enclosure Dimensions (W x H x D): 11.41 x 17.41 x 2.95 in (290 x 435 x 75 mm).
 - 26. Enclosure Color: Gray can.
 - 27. Compliance: Panel is ETL Listed conforms to UL 294 Certified to CSA-C22.2 no.205.
- I. Basis of Design: IO-Master Panel: Included with VAX-IO-STR-2 as manufactured by Vicon Industries.
- 1. Power input: 12 VDC powered with external power supply.
 - 2. Processor: Processor: 32-bit microprocessor.
 - 3. Storage: 50,000 events (on board)
 - 4. Terminals: Quick disconnect terminal headers.
 - 5. Auxiliary Power: 12 VDC at 450mA. (Used to power expander board) Current shared with two reader ports.
 - 6. Communications: On board RS485 via RS-485 module for Expander Boards.
 - 7. Networking: 10/100Mbps supporting Static or DHCP modes with 2 Ethernet status LEDs; 256 bit AES encryption between panel and server (optional).
LED Indicator: 2 x power indicator
 - 8. Security: Hardware secured by configurable password.
 - 9. Tamper Sensor: Photo tamper sensor (configurable) (no moving parts).
 - 10. Display: 2 Line x 16 Character LCD Display with LED back light used for on-board diagnostics and initial configuration such as IP address and communication modes. Contrast adjustable. Brightness adjustable.
 - 11. Keyboard: Four user push buttons for data entry or output selection.
 - 12. Sound: On-board piezo buzzer (90dB at 10cm).
 - 13. Diagnostics: Several on board diagnostics available including the following:
Ping with IP: Ability to perform a basic network connectivity test by communicating with the server IP via ICMP protocol. Ping with Name: Ability to perform a basic network connectivity test by communicating to the server by resolving the name of the server via a Dynamic Name Service (DNS).
Debug mode: Optional debug mode that allows extra logging of communications and panel decisions. Read Only mode: Displays controller configuration and miscellaneous information: Panel Name, Panel ID, IP Address, Panel MAC Address, Panel Subnet Mask, Panel Gateway, Panel DNS, Communication mode, Server IP Address/Name, Server Port, Firmware Version, Network Name, DHCP Bound address, Time (UTC and Local), Connection Status.
 - 14. On-board Communication Configuration:
 - a. Ability to configure communication method to server (name or IP address).
 - b. Ability to configure name or IP address that the server can be reached.
 - c. Ability to configure network settings of controller, including: Static IP

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- address or DHCP. Controller IP Address, subnet mask, default gateway, DNS server.
 - d. Time: Keeps up to 1 month without power connection, No battery needed. Automatic DST switch.
 - e. Firmware: Controller firmware is remotely upgradable from server software for added functionality, features and patches.
 - f. IO-Boards:
 - 1) Ability to support up to 64 Inputs and Outputs per master panel (with 8 Expander Boards).
 - g. Input/Output Time Zones:
 - 1) Input: Ability to support 16 Input time zones: 2 zones (5 boundaries) per day. Ability to support 16 holiday groups, each has 50 holidays, each Input holiday time zone: 2 zones (5 boundaries) per day.
 - 2) Output: Ability to support 64 Output time zones, 5 zones (11 boundaries) per day. Ability to support 8 holiday groups, each has 50 holidays, each Output holiday time zone: 2 zones (5 boundaries) per day.
 - h. Input/Output Functions: Ability to place an Input on a schedule. Ability to assign an Input to a holiday group. Ability to place a detection time on an Input. Ability to assign an action to an Input. Input Actions: Do Nothing, Activate Selected Output, Deactivate Selected Output, Toggle Selected Output, Pulse Selected Output (high), Pulse Selected Output (low), Pulse Selected Output (opposite), Activate Multiple Outputs (up to 5), Deactivate Multiple Outputs (up to 5), Toggle Multiple Outputs (up to 5). Ability to place a delay on any Input Actions. Ability to place an action duration for pulses. Ability to configure an Input as Normally Closed. Ability to place an Output on a schedule. Ability to assign an Output to a holiday group. Ability to configure an Output as Normally Closed. Ability to configure an Output to not generate any events. Ability to protect an Output from Input Actions. Ability to configure an Output to be initially On.
 - i. Operating Temperature: 32 to 122 degrees F (0 to 50 degrees C).
 - j. Expandable modular design.
 - k. PCB Dimensions (W x H): 7.72 x 2.91 in (196 x 74 mm).
 - l. Enclosure Dimensions (W x H x D): 8.5 x 10.25 x 3.25 in (216 x 260 x 83.0 mm).
 - m. Enclosure Color: Gray can.
- J. Basis of Design: Elevator/IO Expander Board: VAX-IO-EXP8-PCB.
- 1. Processor: Processor: 32-bit microprocessor.
 - 2. Power Input: 12 VDC supplied by Elevator/IO Master Panel, no external power needed.
 - 3. Configuration: 8 DIP switches for inputting addressing and diagnostics.
 - 4. Communication: RS-485 (2-wire communication) Multidrop (Daisy Chain or Star) via SE-EX02 Module.
 - 5. Inputs: 8 x dry contact inputs. Fully configurable. LED Indicator: 1 x Input activity indicator.
 - 6. Outputs: 8 dry contact Solid State Relays. Fully configurable. Capable of switching up to 60V, 500mA limit. Other relay options available. LED Indicator: 8 x output status indicator. Field replaceable solid state relays.
 - 7. Tamper: Each IO panel has individual photo-tamper sensor. Fully configurable.
 - 8. Diagnostics: Input/Output test mode, activated through DIP switch configuration.
 - 9. Terminals: Quick disconnect terminal headers.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

10. IO-Board Management to Allow:
 - a. Inputs: Ability to apply a name to each Input. Ability to define a detection time until the input is considered active. Ability to place an Input on a schedule to only monitor during specific times. Ability to apply holiday schedules to an input for alternate schedules during holidays. Ability to assign an action to be performed when the input is activated. Actions: Do Nothing, Activate Selected Output, Deactivate Selected Output, Toggle Selected Output, Pulse Selected Output (high), Pulse Selected Output (low), Pulse Selected Output (opposite), Activate Multiple Outputs (up to 5), Deactivate Multiple Outputs (up to 5), Toggle Multiple Outputs (up to 5). Ability to place a delay on any Input Actions. Ability to place an action duration for pulses. Ability to configure an Input as Normally Closed.
 - b. Outputs: Ability to apply a name to each Output. Ability to place an Output on a schedule. Ability to apply holiday schedules to an Output for alternate schedules during holidays. Ability to configure an Output as Normally Closed. Ability to configure an Output to not generate any events. Ability to protect an Output from Input Actions. Ability to configure an Output to be initially On.

- K. Basis of Design: Mullion Mount Proximity Access Reader as manufactured by Vicon Industries.
 1. Dimensions: 1.7 x 3.2 x 0.7 inch (43 x 81 x 18 mm)
 2. Design: Weatherproof IP67.
 3. Characteristics: High reliability; consistent read range characteristics; low power consumption; vandal-resistant.
 4. Color: Black; white snap-on cover.
 5. Features: Multicolor LED indicator-red, green, amber, and off.
 6. Mounting: Mullion, including metal door and window frames, and flat surfaces.
 7. Communication Format: Wiegand ABA Track II.
 8. Frequency: 125 Khz excitation.
 9. Read Range: 5 inches (126 mm).
 10. Operating Temperature: Minus 40 to 149 degrees F (minus 40 to 65 degrees C).
 11. Current Draw: 30 mA typical, 75 mA peak at 12 VDC.
 12. Compliance: CSA, UL, FCC, CE, C-Tick.

- L. Basis of Design: High Security Proximity Single Gangbox Access Reader as manufactured by Vicon Industries
 1. Dimensions: 3 x 4.6 x 0.4 inches (76x117x10 mm).
 2. Design: Weatherproof IP67.
 3. Characteristics: High reliability; consistent read range characteristics; low power consumption.
 4. Colors: Black; white snap-on cover included.
 5. LEDs: Four-state standard: Red, Green, Amber, and Off.
 6. Audio: Beeper included standard.
 7. Mounting: Single gangbox and flat surfaces; may be mounted directly to metal.
 8. Communication format: Wiegand ABA Track II.
 9. Frequency: 125 KHz excitation.
 10. Read Range: up to 8 inch (202 mm).
 11. Operating Temperature: Minus 40 degrees F to 149 degrees F (Minus 40 degrees C to 65 degrees C).
 12. Current Draw: 35mA typical; 75 mA peak at 12 VDC.
 13. Compliance: FCC, ICC, CE, C-Tick, CSA, UL, ETL listed.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- M. Basis of Design: Keypad/Proximity Access Reader as manufactured by Vicon Industries.
1. Dimensions: 4.6 x 3 x 0.75 in (117 x 76 x 19 mm).
 2. Design: Weatherproof (IP67 rated).
 3. Characteristics: Uses non-mechanical capacitive technology (no moving parts), High reliability; consistent read range characteristics; low power consumption; vandal-resistant.
 4. Colors: Black; white snap-on cover included.
 5. LEDs: Multicolor LED indicator-red, green, amber, and off.
 6. Mounting: Metal or plastic-single gangbox or flat surfaces.
 7. Communication format: High security 40 bit, AWID, HID.
 8. Keypad output: Wiegand.
 9. Frequency: 125 KHz excitation.
 10. Read Range: Up to 7 inches (176 mm).
 11. Operating Temperature: Minus 40 to 149 degrees F (minus 40 to 65 degrees C).
 12. Current Draw: 70 mA typical, 110 mA peak at 12VDC.
 13. Compliance: FCC, ICC, CE, C-Tick, and ETL listed.
- N. Basis of Design: Clamshell Style Proximity Card as manufactured by Vicon Industries.
1. Size: 3.4 x 2.2 x 0.06 in (86 x 55 x 1.5 mm).
 2. Printing Surface Imaging: Use Glossy Adhesive Overlay for color dye sublimation printing of images and text or print directly on card.
 3. Frequency: 125 kHz excitation.
 4. Communication format: Wiegand 26 bit and ABA Track II magnetic stripe.
 5. Operating Temperature: Minus 35 to 122 degrees F (minus 37 to 50 degrees C).
 6. Slot Punch: Standard Vertical.
 7. Compliance: FCC, CE, ETL.
- O. Basis of Design: Image Technology Proximity Card as manufactured by Vicon Industries.
1. Size: 2.1 x 3.4 x 0.031 in (53 x 86 x 0.79 mm).
 2. Printing Surface Imaging: Appropriate for direct color dye sublimation printing of images and text.
 3. Frequency: 125 kHz excitation.
 4. Communication format: Wiegand 26 bit and ABA Track II magnetic stripe.
 5. Operating Temperature: Minus 35 to 122 degrees F (minus 37 to 50 degrees C).
 6. Slot Punch: Vertical and horizontal indicators.
 7. Compliance: FCC, CE, ETL.
- P. Basis of Design: Proximity Key Tag as manufactured by Vicon Industries.
1. Dimensions: 1.5 x 1.2 x 0.15 inches (36 x 30 x 3.8 mm).
 2. Frequency: 125 kHz excitation.
 3. Operation: Passive (no battery).
 4. Read Range: Up to 3.5 inches (88 mm).
 5. Material: ABS.
 6. Color: Light gray.
 7. Operating Temperature: Minus 35 to 122 degrees F (minus 37 to 50 degrees C).
 8. Slot Punch: Reinforced Brass eyelet easily fits on key ring.
 9. Communication format: Wiegand 26 bit and ABA Track II magnetic stripe.
 10. Compliance: FCC, CE, ETL.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- Q. Basis of Design: Mullion Mount High Security (MIFARE) Reader as manufactured by Vicon Industries.
1. Dimensions: 1.7 x 3.2 x 0.7 inches (43 x 81 x 18 mm).
 2. Design: Weatherproof IP67.
 3. Characteristics: High security reader with proven MIFARE contactless digital radio frequency identification technology.
 4. Communication format: Wiegand 26 bit and DESFire EV1 and EV2.
 5. Colors: Black snap-on cover.
 6. LED: Four state standard (red, green, amber and off).
 7. Read Range: Up to 1.5 in. (38 mm).
 8. Operating Temperature: Minus 40 to 149 degrees F (minus 40 to 65 degrees C).
 9. Compliance: FCC, ICC, CE
- R. Basis of Design: Single Gangbox Mount High Security (MIFARE) Reader as manufactured by Vicon Industries.
1. Dimensions: 3 x 4.6 x 0.4 inches (76 x 117 x 10 mm).
 2. Design: Weatherproof IP67.
 3. Characteristics: High security reader with proven MIFARE contactless digital radio frequency identification technology.
 4. Communication format: Wiegand 26 bit and DESFire EV1 and EV2.
 5. Colors: Black snap-on cover.
 6. LED: Four state standard (red, green, amber and off).
 7. Read Range: Up to 3 in. (76 mm).
 8. Operating Temperature: Minus 40 to 149 degrees F (minus 40 to 65 degrees C).
 9. Compliance: FCC, ICC, CE
- S. Basis of Design: High Security (MIFARE) Smartcards as manufactured by Vicon Industries.
1. Three types of smartcards, dye sublimation, clamshell and key fob.
 2. Dimensions: Dye Sublimation: 2.1 x 3.4 x 0.031 inches (53 x 86 x 0.79 mm); Clamshell: 2.2 x 3.4 x 0.06 inches (56 x 86 x 1.5 mm); Key fob: 1.2 x 1.5 x 0.15 inches (30 x 38 x 3.8 mm).
 3. Characteristics: High security smartcard with proven MIFARE contactless digital radio frequency identification technology.
 4. Communication format: Wiegand 26 bit, ABA Track II magnetic stripe (clock and data).
 5. Colors: Dye Sublimation: Glossy white; Clamshell: Off white; Key fob: Gray.
 6. LED: Four state standard (red, green, amber and off).
 7. Read Range: Dye Sublimation: Up to 2.5 in. (64 mm); Clamshell: Up to 3 in. (76 mm); Key fob: Up to 0.75 in. (19 mm).
 8. Operating Temperature: Minus 40 to 149 degrees F (minus 40 to 65 degrees C).
 9. Compliance: FCC, ICC, CE.
- T. Basis of Design: Mobile Contactless Smartcard Mullion Readers as manufactured by Vicon Industries
1. Two types of readers, upon presentation, up to 1.5-in. reading range, and long range, up to 15-ft reading range.
 2. Dimensions: 1.7 x 4.7 x 1.2 inches (43 x 119 x 30 mm).
 3. Technology: Contactless smartcard and Bluetooth Low Energy (BLE).
 4. Technologies Supported: Interoperable with CSN (may include ISO 14443, LEGIC Advant and Prime, MIFARE) and Sector (MIFARE and FIPS201), as well as other VAX mobile access credentials.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

5. Frequency: 13.56 MHz (contactless smartcard); 2.4 GHz (BLE).
 6. Communication format: Wiegand 26 bit, ABA Track II magnetic stripe (clock and data) or OSDP (Open Supervised Device Protocol).
 7. Voltage/Current: +8 - 14 VDC (linear power recommended)/ 40 mA typical, 195 mA peak @ 12 VDC.
 8. Cabling: 24 AWG minimum, multi-conductor stranded with overall foil shield.
 9. Audio Tone: Beeper included, standard.
 10. LED: Five state standard (blue, red, green, amber and off).
 11. Compliance: FCC, ICC, CE; IP67.
- U. Basis of Design: Mobile Access Smartcard Credentials as manufactured by Vicon Industries.
1. Five types of smartcards: one mobile credential stored on smartcard and three contactless credentials (all MIFARE DESFire EV2): composite high-security ISO, composite high-security ISO with HiCo magnetic stripe; high security clamshell and high security fob.
 2. Dimensions (contactless): ISO: 2.1 x 3.4 x 0.03 inches (54 x 86 x 0.76 mm); Clamshell: 2.1 x 3.4 x 0.07 inches (54 x 86 x 1.8 mm); Key fob: 1.9 x 1.5 x 0.28 inches (49 x 38 x 7 mm).
 3. Technology: Mobile: Bluetooth Low Energy (BLE). Contactless: Smartcard.
 4. Technologies Supported (contactless): MIFARE DESFire EV2.
 5. Frequency: Mobile: 2.4 GHz. Contactless: Excitation (13.56 MHz).
 6. Read Range: Mobile: Reader dependent (up to 1.5-in./up to 15-ft); Contactless: ISO/Clamshell - 2.25 in. (57 mm); Fob - up to 1 in. (25 mm).
 7. Communication format: Wiegand 26 bit and ABA Track II magnetic stripe (clock and data).
 8. Operation: Mobile: iPhone or Android smartphone; Contactless: Passive (no battery).
 9. Marking: Date code and ID.
 10. Imaging (Contactless): ISO: supports dye sublimation; Clamshell: glossy adhesive overlay for dye sublimation or print directly on card; Fob: N/A.
 11. Color (Contactless): ISO: glossy white; Clamshell: white; Fob: gray.
 12. Operating Temperature: ISO: Minus 31 to 122 degrees F (minus 35 to 50 degrees C); Clamshell/Fob: Minus 40 to 158 degrees F (minus 40 to 70 degrees C).
- V. Software Features and Functions:
1. Server Software:
 - a. Shall be installed on a standard PC running Microsoft Windows 7 or Higher or purchased via an embedded hardware server box.
 - b. 2GHz or faster 32-bit (x86) or 64-bit (x64) processor. Two or more cores.
 - c. 4GB RAM for 32-bit and 4GB RAM for 64-bit.
 - d. DVI or HDMI monitor.
 - e. 1GB hard drive space required (additional space required for database).
 - f. Microsoft .Net Framework 4.5 Full.
 - g. Shall support Microsoft SQL Server 2008, SQL Server 2008 Express, or later version.
 - h. Shall be 100 percent web based and can be accessed via any web enabled device including Cell Phones, Tablets, Laptops, PCs with any operating system etc. without the need for any additional plug-in's (i.e. no active x controls, Flash, etc.).
 - 1) Google Chrome (desktop and mobile).
 - 2) Microsoft Internet Explorer.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 3) Mozilla Firefox.
 - 4) Apple Safari (desktop and mobile)
 - 5) Other browsers that support HTML5 may function but are untested.
 - i. Web interface and controller communications shall be possible through WAN/LAN if network allows.
 - j. Software design shall be of a Single Page Application (SPA) architecture allowing seamless navigation between screens.
 - k. Shall have Responsive Web interface. Interface will automatically adjust to ensure an optimal experience based on device.
 - l. Shall have ability to Partition software for multisite all hosted from one location allowing site administrators only access to their site readers and cards or multiple sites.
 - m. Shall have functions that will be accessed via tool bar Icons, including Help prompts that will appear when the mouse pointer hovers over the selection button.
 - n. Shall be possible to install the server software in a virtualized environment.
 - o. Communication shall use SSL encryption with modern cryptography, utilizing TLS 1.2, and AES 256 GCM/DHE RSA as the key exchange mechanism.
 - p. Software shall advise when a software update is available and who to contact in order to upgrade.
 - q. Software shall utilize a smart installer, capable of the following functions:
 - 1) Analyze if installation prerequisites are met.
 - 2) If prerequisites are missing, installer will locate them on installation media or download from the internet.
 - 3) Automatically create SQL instance and database.
 - 4) Automatically assign database permissions and setup service users.
 - 5) Automatically add Windows Firewall exceptions for communication ports.
 - 6) Web server, controller communication and management interface can be configured on alternate ports.
 - 7) Installer is capable of upgrading the software.
 - 8) Ability to configure different communication ports when installing the software.
 - 9) Ability to configure web services to run as a different windows user.
 - r. Software shall have the capability to be run via command line for advanced troubleshooting.
 - s. Web interface shall utilize Gzip compression for reduced load times and bandwidth consumption.
 - t. Web interface shall utilize cache control for static files such as images, static text and cardholder images.
 - u. Software shall provide a unified interface for doors and elevators, including shared time schedules and access groups.
2. Administrator Control Capabilities:
- a. Shall provide an Administrator interface secured by encrypted password control and SSL communication from web client to server.
 - b. System shall support unlimited administrator accounts.
 - c. Shall provide for an Administrator that can either be a System-Admin or a Non-sys-admin with customizable permissions.
 - d. Ability to reset administrator passwords via email.
 - e. Administrator actions and changes shall be logged and visible to other

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- administrators via reporting tools.
 - f. Shall support Administrator Management which determines privileges, functions, and Partitions that can be accessed. Functions that cannot be accessed will not be visible. The following items are available:
 - 1) Manage Access Privilege Groups.
 - 2) Manage Cameras And Integration.
 - 3) Manage Door Holiday Groups.
 - 4) Manage Door Holiday TimeZones.
 - 5) Manage Door TimeZones.
 - 6) Manage Doors.
 - 7) Manage Elevators.
 - 8) Manage Floor Holiday Groups.
 - 9) Manage Floor Holiday TimeZones.
 - 10) Manage Floor TimeZones.
 - 11) Manage Holidays.
 - 12) Manage OneTimeRun TimeZones.
 - 13) Manage Panels.
 - 14) Manage Sites.
 - 15) Manage User Holiday Groups.
 - 16) Manage User Holiday TimeZones.
 - 17) Manage User TimeZones.
 - 18) Manage Users.
 - 19) Reporting Alerts.
 - 20) Reporting DoorActivity.
 - 21) Reporting FloorActivity.
 - 22) Reporting UserActivity.
 - 23) Reporting UserList.
 - 24) Special Permissions Override Door.
 - 25) Override Floor.
 - 26) Override Output.
 - 27) Update Panel.
 - 28) View Cameras.
 - 29) View Status.
 - g. System shall render functions that administrators do not have access to invisible and inaccessible.
 - h. Ability for administrators to configure personal settings the following functions:
 - 1) Customize which notifications are visible when viewing event monitoring.
 - 2) Choose which events should be treated as alerts.
 - 3) Choose which events will prompt an email being sent to the administrator.
 - 4) Choose if alerts will activate a sound in the web browser.
 - 5) Choose which notifications will spawn in-line camera view of associated devices.
 - i. Ability to integrate administrator authentication with LDAP systems.
3. VAX Database Segregation and Multi-Tenant Hosting Management Capabilities:
- a. System shall support the ability to host multiple VAX systems on a single software installation.
 - b. Each tenant shall have their own individual database.
 - c. System shall allow the following configuration when Multi-tenant mode is enabled:
 - 1) Ability to add new tenant.
 - 2) Ability to configure the database connection string for each tenant.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 3) Ability to define one or more DNS subdomains for each tenant which shall be used to access the tenants VAX database.
- 4) Ability to define which hardware controllers are associated to each tenant (MAC address).
- 5) Ability to define individual backup settings and backup schedules for each tenant.
- d. System shall support the ability to import an SSL certificate (including WildCard Certificates) with either the of the following file extensions:
 - 1) *.CER.
 - 2) *.PFX.
4. Site Management:
 - a. Labeling:
 - 1) Ability to name any created sites.
 - 2) Ability to create a description for each site.
 - 3) Ability to assign a Site to a Partition.
 - 4) Ability to designate a timezone that the site will reside in, used to automatically convert devices timezone to local time zone.
 - b. Areas:
 - 1) Ability to configure up to 254 areas in each site.
 - 2) Ability to apply a name to each area
 - 3) Ability to assign to a reader what area the reader grants access to.
 - 4) Ability to run muster report based on site and areas.
 - c. Anti-passback Configuration to allow:
 - 1) Local Timed anti-passback: Ability to control re-entry into an area, at a specific door, based on a definable time value.
 - 2) Reset: Allow the ability to reset the anti-passback on a per panel basis.
 - 3) Ability to configure soft or hard anti-passback.
 - 4) Ability to configure anti-passback to ignore cardholders with the Supervisor flag.
 - 5) Ability to configure anti-passback to ignore or take into consideration the opening of a door as a cardholder entering/exiting an area.
5. VAX Historical Reports:
 - a. Ability to execute various historical reports in the system and define which administrators can run which reports.
 - b. Ability to define a Start Time and Stop time for each report using intuitive slider bars or manually input time.
 - c. Ability to select a time zone (EST, UTC, etc) that the results of the report will be displayed in.
 - d. Ability to export any report into CSV or HTML format file for later viewing.
 - e. Ability to email reports automatically using script engine (ACE).
 - f. Historical information related to an elevator or door shall have a camera icon associated with the event that when clicked will bring up historical video for any cameras associated with that door/elevator at the specific time of the event if there are cameras associated with the device the event is related to.
 - g. Ability to execute the following historical reports:
 - 1) Administrator Log Report:
 - a) Ability to select one, some or all administrators to run the report against.
 - b) View administrator activity for the selected administrators, including changes to users, system settings, panel updates, the time of the change along with the previous

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- value of the field in some cases.
- c) Logged administrator changes shall include the new value of the change, and the old value of the change.
- 2) User Activity Report:
 - a) Ability to select one, some or all users/cardholders to run the report against.
 - b) View user activity for the selected users based on date criteria. Results will include all doors/floors the user has been granted/denied access to, along with which credential that was used.
- 3) Door Activity Report:
 - a) Ability to select one, some or all doors to run the report against.
 - b) View door/reader activity for the selected doors based on date criteria, including the time of the event, the device that spawned the event, a user/credential if the event involved a user and the message associated with the event.
- 4) Floor Activity Report:
 - a) Ability to select one, some or all elevator floors to run the report against.
 - b) View Floor activity for the selected floors based on date criteria, including the time of the event, the device that spawned the event, the Cab the floor is attached to, a user/credential if the event involved a user and the message associated with the event.
- 5) Input Activity Report:
 - a) Ability to select one or more Inputs attached to any IO-Panels or Door Panels in the system that was defined as an "Aux Input".
 - b) View Input activity for the selected Inputs based on date criteria, including the time of the event, the device that spawned the event, the controller the Input is attached to and the message associated with the event.
- 6) Output Activity Report:
 - a) Ability to select one or more Outputs attached to any IO-Panels or Door Panels in the system that was defined as an "Aux Output".
 - b) View Output activity for the selected Outputs based on date criteria, including the time of the event, the device that spawned the event, the controller the Output is attached to and the message associated with the event.
- 7) Muster Report:
 - a) Ability to select a site and areas to run the report against.
 - b) View cardholders that are in the selected areas based on the date criteria.
- 8) Notifications Report:
 - a) Ability to view all historical notifications/events based on date criteria.
- 9) User List Report:
 - a) Ability to generate a list of all cardholders in the system along with their user properties, credentials and which access groups they are a member of.
- 10) Alert Monitoring Report:
 - a) Ability to have a separate screen dedicated to monitoring live notifications.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- b) Ability to use global or temporary notification filtering options.
 - c) Ability to track which notifications the administrator has seen or missed.
 - d) Ability to auto select notifications as they come in
 - e) Ability to click on a notification and see more information about that specific notification. If a cardholder is attached to the event and has a picture; Picture will displayed as large as possible on the same screen.
- 11) Time Tracking Report:
- a) Ability to select one or more Entry Readers to run the report against.
 - b) Ability to select one or more Exit Readers to run the report against.
 - c) Ability to export an HTML or CSV output.
 - d) Report shall display the following:
 - 1) List of cardholders who have gone through any of the selected Entry or Exit readers.
 - 2) Entry and exit time each day (can have multiple entries and exits each day).
 - 3) Time between entry and exit.
 - 4) Display time of 0 if there was an exit without an entry or an entry without an exit on the same day.
 - 5) Total time between entry and exit between all days defined in the report parameters .
 - 6) Total time between entry and exit for all cardholders added together between all days defined in the report.
 - h. Ability to execute the following configuration reports:
 - 1) Access Privilege Group Configuration.
 - 2) Door Configuration.
 - 3) Elevator/Floor Configuration.
 - 4) Input Configuration.
 - 5) Output Configuration.
 - 6) Panel Network Configuration.
 - 7) Timezone Configuration.
6. VAX Notification and Alert Management:
- a. Software web interface shall provide an in-line notification area that statically follows the screen as the administrator navigates the software.
 - b. Notification area shall provide near real-time events as they are happening.
 - c. Ability to click on specific notifications and be linked to a page in the web interface specific to the event such as:
 - 1) Clicking an "unknown connection from panel with MAC address 4A5342343" will bring the administrator to the "Add panel" screen with the Mac address filled.
 - 2) Clicking an "Unknown user denied access with credential 33-45545" will bring the administrator to the "Add User" screen with the credential pre-populated.
 - 3) Clicking an "Access Denied" or "Access Granted" notification will bring the administrator to the "Edit User" page of the specific user.
 - d. Ability to configure which notifications show up in red (alerts).
 - e. Ability to configure if alerts will produce a warning sound in the web browser.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- f. Ability to configure which notifications/alerts will be emailed to the administrator.
 - g. Ability to pause real time events.
 - h. Ability to clear real time events that are currently on the screen.
 - i. Ability to configure which notifications spawn in-line camera view with associated cameras.
 - j. Ability to configure which notifications will send an email with information about the event to the administrator.
7. VAX Custom Script Engine (ACE):
- a. System shall support customizable script engine that can be described as:
 - 1) Action Control Engine.
 - 2) Server Side Script Engine.
 - 3) Global Linking.
 - 4) Rules Engine.
 - 5) Action scheduler .
 - b. Script engine shall consist of a script (Action Plan) and a definable trigger (Action Trigger) to execute the script.
 - c. Script (Action Plan) shall consist of one or more Actions chained together to accomplish a task.
 - d. Action Plans shall be executed via web browser button, HTTP API command or from a definable Action Trigger.
 - e. Action Plans shall have the following capabilities:
 - 1) Action Plan shall be assigned a unique name.
 - 2) Action Plan shall utilize easy to use drag and drop interface for creating a graphical easy to read script.
 - 3) Action Plan shall support unlimited combinations of Actions.
 - 4) Support over 40 different actions which can be chained together.
 - 5) Actions shall support conditional chain to allow a different set of Actions to occur if the previous Action in the chain succeeds or fails.
 - 6) Action Plans shall support customizable variables that can be pre-set or utilize variables from the trigger such as User Id, Door Id, Card number.
 - 7) Action Plans shall be capable of supporting arithmetic operations and comparisons between variables.
 - 8) Support communication with other systems with the following Actions:
 - a) HTTP Request Action.
 - b) SMS Send Action.
 - c) Email Send Action.
 - d) Notify Administrator.
 - f. Action Triggers shall have the following capabilities:
 - 1) Define which Partition the trigger is scoped to.
 - 2) Define if the trigger conditions are restricted to a specific sit.
 - 3) Define the type of trigger condition and trigger state.
 - 4) Define if the trigger condition can be met by a specific object or any object within the trigger type and state.
 - 5) Define time restrictions to limit what day of week and time of day the trigger conditions can be met.
 - 6) Define a time drift to allow trigger conditions to be met if the source of the trigger comes later than real time.
 - 7) Define which Action Plan will execute when the trigger conditions are met.
 - 8) Define how much logging the Action Plan will perform.
8. VAX Interactive Map Management:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- a. System shall support the ability to display and customize an interactive map.
 - b. System shall allow configuration of unlimited maps.
 - c. Floor plans shall be imported as .JPG, .BMP, .PNG or .GIF file which are commonly exported from CAD programs.
 - d. Configuration of a map shall include the following functionality:
 - 1) Ability to name each map.
 - 2) Ability to select a picture to import as the map.
 - 3) Ability to associate a map to a Partition and a Site.
 - 4) Ability to configure relationships between maps for navigational purposes (North, South, East, West, Up, Down).
 - 5) System shall utilize click and drag mechanics to easily place objects onto the map.
 - 6) Ability to place any of the following objects onto a map:
 - a) Doors.
 - b) Elevator Floors.
 - c) Inputs.
 - d) Outputs.
 - e) Areas.
 - f) Cameras
 - 7) Ability to draw an area on the map for the purpose of monitoring occupancy levels of an area.
 - e. Monitoring a map shall include the following functionality:
 - 1) Icons shall dynamically change based the following circumstances:
 - a) Door objects will change color based on schedule type (Card mode, PIN, Unlocked, etc.).
 - b) Door objects icon will change between a closed and open icon based on door contact state.
 - c) Input and Output icons shall change color based on schedule type
 - d) Input icons shall change based on input state (open or closed).
 - e) Elevator Floor icons shall change color based on schedule type.
 - 2) Ability to navigate between maps via named tabs on the top of the screen.
 - 3) Ability to navigate between maps that are related to each other (North, South, East, West, Up, Down).
 - 4) Contextual sidebar area will display information about the currently selected object:
 - a) Live camera view shall appear in the contextual sidebar if a selected object is a camera or has an associated camera.
 - b) Door schedule and status information shall appear in the contextual sidebar when a door is selected.
 - c) Names of cardholders estimated to be in an area shall appear in the contextual sidebar when an area is selected.
 - d) Ability to override schedules and outputs on selected object from contextual sidebar.
9. VAX Triple Swipe Actions:
- a. Ability to configure a reader and credential to activate one or more functions via swiping or presenting a credential 3 times in a row within a set span of time
 - b. Ability to configure a single triple swipe action per reader if using regular proximity type reader.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- c. Ability to configure which users/cardholders can execute triple swipe actions, including which users can disarm the alarm system.
 - d. Ability to configure up to 5 triple swipe actions at one reader if the reader has keypad input.
 - e. Ability to use any of 3 predefined triple swipe actions when using keypad input for a total of 8 actions.
 - 1) Override the door into card mode.
 - 2) Resume an overridden door.
 - 3) Resume any overridden outputs.
 - f. Ability to change the mode of a door via triple swipe action:
 - 1) Override Lockdown Mode
 - 2) Override Card mode
 - 3) Override PIN mode
 - 4) Override Card or PIN mode
 - 5) Override Card and PIN mode
 - 6) Override Unlock mode
 - 7) Override First Card In mode
 - 8) Override Toggle Lockdown Mode
 - 9) Override Toggle Card mode
 - 10) Override Toggle PIN mode
 - 11) Override Toggle Card or PIN mode
 - 12) Override Toggle Card and PIN mode
 - 13) Override Toggle Unlock mode
 - 14) Override Toggle First Card In mode
 - 15) Override Lockdown with Auto-resume
 - 16) Override Card mode with Auto-resume
 - 17) Override PIN mode with Auto-resume
 - 18) Override Card or PIN mode with Auto-resume
 - 19) Override Card and PIN mode with Auto-resume
 - 20) Override Unlock mode with Auto-resume
 - 21) Override First Card In mode with Auto-resume
 - 22) Cancel Override
 - g. Ability to toggle, activate, deactivate or pulse a relay via triple swipe action.
 - h. Ability to toggle, activate, deactivate or pulse an output connected to an external alarm system to arm or disarm an alarm.
10. VAX Crisis Levels (Emergency Lockdown):
- a. Ability to configure up to 16 Crisis levels (Code Red, Code yellow, Code Green, etc.) that can be used to quickly make global changes to the entire system in an emergency.
 - b. Ability to configure the name and door mode of each crisis level.
 - c. Ability to apply a crisis level to all doors in a particular site or a single door via web browser interface.
 - d. Ability to apply a crisis level to a panel via an Aux input function.
 - e. Ability to apply a security level to each user/cardholder. If a user/cardholder security level is equal or higher than the crisis level, the user/cardholder will be granted access based on the door mode and access privilege rules.
11. VAX Video Camera integration:
- a. Ability to integrate with 1 or more of the following Video Management Software (VMS) systems:
 - 1) ViconNet Digital Video Management system.
 - 2) Vicon Valerus.
 - 3) Digital Watchdog DW Spectrum.
 - 4) ExactQ ExactVision.
 - 5) Milestones Xprotect.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- b. Support to integrate with multiple instances of VMS systems across different communication mediums such as LAN/WAN.
 - c. Ability to synchronize individual cameras or groups of cameras from the VMS software.
 - d. Shall support real-time video monitoring displays:
 - 1) Up to 2 separate video streams simultaneously.
 - 2) View up to 16 cameras in each stream (if VMS supports matrix larger than 1 x 1).
 - 3) View in-line camera view, browser view or full window view.
 - e. Associate cameras with a door, elevator or both.
 - f. Associate a PTZ camera with a door based on a pre-set position.
 - g. Ability to configure specific events to spawn an inline camera view directly above the notifications/events area of the web interface.
 - h. Linking of video and events based on pre-set events provided by the access control software.
 - i. Historical events can spawn a video matrix to cameras based on the time of the event and associated cameras.
 - j. Administrator permissions specific to who can manage and make changes to the camera system.
12. VAX Visitor Management Integration:
- a. Ability to allow integration into VAX through the API from HID EasyLobby.
 - 1) EasyLobby 10.2.0 and requires integration module from HID (EL-ACI-VICON).
 - b. Visitor checked in are automatically enrolled into VAX with:
 - 1) First name, last name, expire date, start date, photo, credential, unique identifier, privileges.
 - c. Visitor checkouts automatically revoke permissions or delete the record in VAX (configurable).
 - d. Automatically assign permissions across multiple partitions using assigned Access Group suffix.
13. Administrator Control Capabilities:
- a. Shall provide an Administrator interface secured by encrypted password control and SSL communication from web client to server.
 - b. Shall provide for an Administrator that can either be a System-Admin or a Non-sys-admin with customizable permissions.
 - c. Shall support Administrator Management which determines privileges, functions, and Partitions that can be accessed. Functions that cannot be accessed will not be visible. The following items are available: Manage Access Privilege Groups, Manage Cameras And Integration, Manage Door Holiday Groups, Manage Door Holiday TimeZones, Manage Door TimeZones, Manage Doors, Manage Elevators, Manage Floor Holiday Groups, Manage Floor Holiday TimeZones, Manage Floor TimeZones, Manage Holidays, Manage OneTimeRun TimeZones, Manage Panels, Manage Sites, Manage User Holiday Groups, Manage User Holiday TimeZones, Manage User TimeZones, Manage Users, Reporting Alerts, Reporting DoorActivity, Reporting FloorActivity, Reporting UserActivity, Reporting UserList, Special Permissions Override Door, Override Floor, Override Output, Update Panel, View Cameras, View Status.
14. System Partitioning:
- a. System shall support unlimited partitions (with appropriate licensing), which logically separate the system into pieces.
 - b. Administrators can be given permissions to manage specific aspects of a partition or multiple partitions.
 - c. Administrators shall only see partitions or parts of partitions they are

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- d. explicitly given permission to manage.
 - e. Ability to assign user/cardholders to more than 1 partition, as long as the Administrator assigning access groups has permissions to manage cardholders within the desired partitions.
 - f. Administrators with limited permissions will not see the menus/icons for parts of the software they do not have permission to use.
 - g. Door and Elevator Panels shall be assigned to a single partition.
 - h. Holidays, schedules and Access groups shall not be shared between partitions.
 - i. Administrator shall not see events on devices they do not have permission to view/manage.
 - j. Custom Fields and Crisis Levels settings shall be shared between partitions.
15. Credential/Cardholder Management:
- a. Shall provide User/Cardholder management screen with unlimited number of users/cardholders (100,000 per controller).
 - b. Shall provide Simple cardholder enrollment, with all available cardholder options available on one screen.
 - c. Shall support assignment of Unlimited credentials to a single cardholder, including Cards, Pins, biometrics, etc.
 - d. Shall support assignment of additional user/cardholder attributes. Assign a Start/Stop date to a cardholder. Assign a security level for Crisis Level feature. Assign the cardholder as a Master user. Assign the cardholder as a Supervisor user. Assign the cardholder the permission to activate First Person In schedules. Assign the cardholder the ability to perform Triple Swipe Actions. Assign the cardholder the ability to disarm an external alarm system. Assign the cardholder the ability to open auto-openers without the use of a button.
 - e. Shall provide ability to view a list of all cardholders.
 - f. Shall provide capability of finding a specific card holder based on specified search criteria such as name or credentials.
 - g. Shall provide the ability to assign a photographic image for each cardholder, image can be uploaded from local device or taken in the web browser with an image device. (Chrome only).
 - h. Shall provide ability to assign to Unlimited Access Privilege Groups.
 - i. Shall provide ability to assign cardholder to Access Privilege Groups across different Partitions.
 - j. Shall provide ability to assign cardholder directly to a partition for later access assignment.
 - k. Shall provide ability to assign unlimited custom fields to a cardholder.
 - l. Shall provide ability to import large amounts of users/cardholders via CSV file.
 - m. Shall provide ability to assign cardholder to Access Privilege Groups across different Partitions.
 - n. Shall provide ability to assign cardholder directly to a Partition for later access assignment.
 - o. Shall provide ability to assign Unlimited custom fields to a cardholder.
 - p. Shall provide ability to import large amounts of users/cardholders via CSV file.
 - q. System shall optionally disallow creation of PIN numbers that are too similar to other PIN numbers automatically.
16. Access Privilege Groups:
- a. Shall support ability to create unlimited administrator definable/customizable Access Privilege Groups.
 - b. Shall support ability to apply any combination of door/time zone.
 - c. Shall support restriction/allowance of Cardholders movement through

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- identified doors, at specific times, including holiday schedule.
 - d. Cardholders can be assigned to multiple access groups for enhanced customization.
 - e. Software shall have built in validation to prevent conflicts of users being given different permissions for the same doors/floors.
 - f. Ability to search for readers, floors and users when creating or modifying Access Privilege Groups.
17. Time Zone Management:
- a. The system shall have separate sections for time zones for user access (User Time Zones), door access (Door Times Zones), as well as floor access (Floor Time Zones).
 - b. The system time zones shall be drag and drop graphics allowing for easy viewing, as well as eliminating the chance of programming error.
 - c. The system time zones shall be color coded to the mode of the span for easy viewing and eliminating the chance of programming error.
 - d. Shall have ability to provide a specific schedule name and description.
 - e. Ability to re-use time schedules across multiple devices.
 - f. Ability to replicate a schedule across multiple days via click and drag to weekdays, weekends, week.
 - g. Software shall create per-configured time schedules used in typical deployments
 - h. Door Time Zones (door schedule):
 - 1) Shall support an Unlimited amount of Door Time Zones.
 - 2) Shall support 20 unlock/lock times per day.
 - 3) Shall support 8 different Time Zone modes in any combination:
 - a) Ability to have Lockdown (no cards other than cards flagged as master will be granted access)
 - b) Ability to have Card Only (valid cards required to grant access).
 - c) Ability to have PIN Only (valid PINs required to grant access).
 - d) Ability to have Card or PIN (valid card or PIN required for access).
 - e) Ability to have Card and PIN (valid card and PIN required for access).
 - f) Ability to have Unlock (door is in public mode).
 - g) Ability to have "First Credential in" by card (door will not follow its public schedule until a card flagged with first card in feature is presented at the door during the public schedule).
 - h) Ability to have Dual Credentials (2 valid cards one flagged as supervisor required to grant access).
 - i. User Time Zone (user access schedule):
 - 1) Shall support up to 256 User Time Zone schedules the system will support.
 - 2) Shall support 8 Allowed/Not Allowed time spans per day.
 - 3) Shall support 2 different Time Zone modes in any combination:
 - a) Ability to have Allowed (user will be allowed through the door as long as the Door Time Zone is in a mode that accepts the type of credential being presented).
 - b) Ability to have Not Allowed (user will be denied access to the door).
 - j. Floor Time Zones (elevator floor schedule):
 - 1) Ability shall support Unlimited Floor Time zone schedules the system will support.
 - 2) Ability shall have 8 time spans per day.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 3) Shall support 3 different Time Zone modes in any combination:
 - a) Ability to have Card Only (valid cards required to grant access).
 - b) Ability to have Unlock (floor is in public mode).
 - c) Ability to have Lockdown (no cards other than cards flagged as master will be granted access).
 - k. Input Time Zones (Input schedule):
 - 1) Ability to support unlimited Input Time zone schedules the system will support.
 - 2) Ability to have up to 5 time spans per day.
 - 3) Support 2 different Time Zone modes in any combination:
 - a) Ability to have Monitor (Input will be monitored during this span).
 - b) Ability to have Not Monitored (Input changes will be ignored).
 - l. Output Time Zones (Output schedule):
 - 1) Ability to support unlimited Output Time zone schedules the system will support.
 - 2) Ability to have up to 11 time spans per day.
 - 3) Support 2 different Time Zone modes in any combination:
 - a) Ability to have On (Output relay will close during this span).
 - b) Ability to have OFF (Output relay will open during this span).
 - m. One Time Run Time Zones (elevator and doors):
 - 1) Ability to create one time event schedules that can change the state and mode of a door or elevator floor for a period of time, can also span multiple days.
18. Holiday Management to Allow:
- a. Ability to apply a specific schedule for groups of doors to follow when it is a holiday.
 - b. Ability to apply a specific user schedule for groups of users to follow during a holiday.
 - c. Ability to create a holiday with the following options: Date of the holidays. If the holiday is reoccurring annually. Name and description of the holiday. Which groups of doors will be affected by the holiday and what holiday time zone they will follow. Which groups of Access Privilege Groups will be affected by the holiday and what holiday time zone they will follow. Which groups of elevator floors will be affected by the holiday and what holiday time zone they will follow. Which groups of inputs and outputs will be affected by the holiday and what holiday time zone they will follow.
19. Door Management shall provide the following:
- a. Ability to apply a specific name and description to each door and reader.
 - b. Ability to apply a time zone to control when a specific door is to unlock/lock, accept cards, pins, etc.
 - c. Ability to apply a Holiday group to control how a specific door will behave on a Holiday.
 - d. Configure Door Held Open:
 - 1) Ability to disable Door Held Open alert.
 - 2) Ability to disable Held Open buzzer.
 - 3) Ability to configure how long a door can be held open before an alert is raised.
 - 4) Ability to configure if the held open alert/buzzer will stop once the door is closed.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- e. Configure Forced Open:
 - 1) Ability to disable Door Forced Open alert.
 - 2) Ability to disable Forced Open buzzer.
 - 3) Ability to configure if the Forced Open alert/buzzer will stop once the door is closed.
- f. Ability to configure an unlock delay.
- g. Ability to configure how long the door will be unlocked after a valid credential presentation.
- h. Ability to configure the controller to play a sound when the door opens.
- i. Automatic Door Operator Integration:
 - 1) Ability to enable/disable the use of an auto-opening device on a door.
 - 2) Ability to configure an unlock delay when using auto-opening device.
 - 3) Ability to configure the insecure side of the door to require a card read before auto-opener button will function.
 - 4) Ability to configure auto-opener to open with REX.
 - 5) Ability to configure auto-opener to open with motion.
- j. Reader Configuration:
 - 1) Ability to apply a name and description to a reader.
 - 2) Ability to enable/disable keypad use on a reader.
 - 3) Ability to configure how many seconds between PIN presses will pass before the credential becomes invalid.
 - 4) Ability to configure back to back reader interference interval.
 - 5) Ability to configure what area a reader is granting access to for use of tracking where users are in a building (used for muster and anti-passback).
 - 6) Ability to configure Triple Swipe actions.
- k. Local Anti-passback Configuration
 - 1) Ability to enable local anti-passback.
 - 2) Ability to monitor door contact for passage through a door.
 - 3) Ability to configure soft or hard anti-passback.
 - 4) Ability to configure a timeout period for anti-passback.
 - 5) Ability to exclude supervisor users from anti-passback limitations.
- l. Camera Association Configuration:
 - 1) Ability to create an association between a door and a camera(s).
 - 2) Ability to view associated cameras from the doors page.
 - 3) Ability to associate a predefined position to a camera if using PTZ camera.
- m. Door Schedule Override:
 - 1) Ability to deviate the state of the door from the normal schedule.
 - 2) Ability to override a door until explicitly resuming the normal schedule.
 - 3) Ability to override the state of a door and instruct the controller to resume the normal schedule once the door is scheduled to change state. The door will resume normal schedule after that.
 - 4) Ability to override a door for a specified period of time (5 minutes or more).
 - 5) Ability to resume a door to its normal schedule regardless of override method.
 - 6) Ability to override a door through the following method:
 - a) Override door from the software web interface.
 - b) Override door via triple swipe action at reader.
 - c) Override door via auxiliary input action.
 - d) Override door via Crisis Levels feature.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 7) Ability to pulse a door to unlock from any page in the software web interface.
20. Elevator management shall provide the following:
 - a. Ability to manage up to 64 floors per elevator cab per Elevator Master Panel.
 - b. Ability to apply a specific name and description to each cab, reader and floor.
 - c. Ability to manage up to 4 cab per Elevator Master Panel.
 - d. Ability to configure if an individual cab is using button sensing elevator technology.
 - e. Ability to apply a time zone to control when a specific Floor is to unlock/lock, accept cards.
 - f. Ability to apply a Holiday group to control how a specific floor will behave on a Holiday.
 - g. Ability to generate floor to output map for wiring and diagnostic purposes.
 - h. Ability to assign readers to 2 cabs.
 - i. Ability to configure up to 4 cabs on schedules without readers.
 - j. Floor Override:
 - 1) Ability to deviate the state of a floor from the normal schedule.
 - 2) Ability to override a floor until explicitly resuming the normal schedule.
 - 3) Ability to override the state of a floor and instruct the controller to resume the normal schedule once the floor is scheduled to change state. The floor will resume normal schedule after that.
 - 4) Ability to resume a floor to its normal schedule regardless of override method.
 - 5) Ability to override a door through the following methods:
 - a) Override floor from the software web interface.
 - b) Override floor using the API
 - k. Override floor using the Action Control Engine (ACE).
 21. Panel management shall provide the following:
 - a. Ability to apply a specific name and description to each door/elevator panel.
 - b. Ability to assign a panel to a specific partition.
 - c. Ability to configure a password code for accessing the panel LCD interface and panel web interface.
 - d. Ability to disable/enable the web interface of the panel for remotely configuring IP settings.
 - e. Ability to configure the panel connection mode as static IP or DHCP.
 - f. Ability to configure the LCD screen on the panel, brightness and on time.
 - g. Ability to configure how long a forced open buzzer lasts.
 - h. Ability to configure the panel tamper sensor sensitivity and disable/enable.
 - i. Ability to configure how the integrated motion behaves, along with sensitivity options.
 - j. Panel Inputs and outputs are 100 percent configurable, all inputs/outputs can be configured as normally open or normally closed, supervised, events enabled/disabled.
 - k. Ability to configure Inputs as any of the following functions: Request to Exit, Door Contact, Door Opener to exit, Motion Sensor, Emergency alarm, External Alarm Status, Door Opener to Enter, Man Trap Input. Aux Input action: Toggle/Activate/Pulse selected output. Toggle/Activate/Pulse alarm interface. Override doors with Crisis Level. Play Sound.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- l. Ability to configure Outputs/Relays as any of the following functions: Door Strike, Door Opener, External Buzzer, Alarm Interface, Aux Output, Secondary Door Strike, Door Unlocked or Open.
 - m. Ability to place panel into debug mode for diagnostics, troubleshooting and additional logging.
 - n. Ability to view in real time the following information:
 - 1) Real time door contact status (open or closed).
 - 2) Real time if the door is in an overridden state.
 - 3) Real time mode of the door (card mode, unlocked).
 - o. Ability to unload an update to an individual panel.
 - p. Ability to request a panel show its currently known time.
 - q. Ability to reset anti-passback locations of users on a specific panel.
 - r. Ability to request a panel to disconnect from the server for a period of time.
 - s. Ability to manually place a panel into firmware update mode.
 - t. Output Override:
 - 1) Ability to deviate the state of an output from the normal state (open or closed).
 - 2) Ability to override an output until explicitly resuming to its normal state.
 - 3) Ability to resume an output to its normal state regardless of override method.
 - 4) Ability to override an output through the following methods:
 - a) Override output from the software web interface.
 - b) Override output via triple swipe action.
 - c) Override output via aux input function.
 - d) Override output from API or script engine (ACE).
22. Microsoft Active Directory (AD) Integration via LDAP protocol:
- a. Ability to obtain read only directory information from LDAP provider.
 - b. Ability to synchronize AD Users based on selected AD Security Groups.
 - c. Ability to choose which AD Security Groups AD Users will be synchronized from.
 - d. Ability to configure AD Security Groups as Access Privilege Groups.
 - e. Ability to give access to Doors/Floors based on AD Security Group membership.
 - f. Ability to synchronize the following AD User information: First Name and last name, User Expiry Date: Expired Users will have access rights to Doors/Floors removed. User Status (enabled/disabled): Disabled Users will have access rights to Doors/Floors removed. AD Group membership.
 - g. Ability to synchronize credentials (Card/FOB/PIN) via AD User Attribute Fields.
 - h. Ability to synchronize credentials in the following manners: Wiegand Credential from Single AD Attribute Field. Wiegand Credential from 2 individual fields with Fixed Site Code. Wiegand Credential from three Individual Fields. PIN from single field.
 - i. Ability to synchronize AD User Attributes as Custom Fields.
 - j. Ability to configure how often Protector.Net checks the LDAP provider for changes (1 to 60 minutes).
 - k. Ability to automatically disable Users who have been deleted or disabled in Active Directory without panel update required.
 - l. Ability to filter AD groups by root OU.
23. VAX Data Management:
- a. Software shall provide the ability to perform automatic database backup to a location selected by the administrator.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- b. Ability to backup user profile pictures along with database backup.
 - c. Backup locations shall include:
 - 1) Shared network drive.
 - 2) External USB drive.
 - 3) Folder on local hard drive.
 - d. Ability to compress database backups for better space utilization.
 - e. Ability to encrypt a backup with a definable password.
 - f. Software shall provide the capability to manually back up the database to a selected location.
 - g. Ability to automatically remove backups older than a defined period of days in the backup directory.
 - h. Availability of a database restore utility that can be performed via web browser.
 - i. Ability to stop/start/restart the web service through management web interface.
 - j. Software shall include system tray application that shows status of web service, and provides control to stop/start the web service.
 - k. Ability to remotely change network settings on remote server hosting the web service.
 - l. Ability to purge old alerts/notifications based on data retention period.
24. VAX Software Registration Management:
- a. Software registration directly through dealer or the manufacturer.
 - b. Ability to manage and view the following licensing information from web interface:
 - 1) View current license package.
 - 2) View expiry date of license.
 - 3) View license features and limitations.
 - c. Software shall provide 30 day warning prior to software license expiration.
 - d. Software shall provide 10 day grace period after software license expiration if no administrator has logged in since the license expired.
 - e. Software shall provide life safety features in the event that the license is expired and the grace period is over.
25. Assa Abloy Aperio Integration:
- a. Software shall provide unified management of Aperio devices.
 - b. Ability to communicate with up to 8 Aperio wireless locks per Aperio controller.
 - c. Ability to store 100,000 users, bypasses Aperio 2,000 user limitation.
 - d. Cabinet or door locks supported.
 - e. Ability to share time schedules between regular door controllers and Aperio controllers.
26. Software Navigation and Contextual Help:
- a. Offer contextual help file by hovering over fields, check boxes, drop-down menus.
 - b. Ability to place objects into list format (such as panels, doors, user) for conducting comparisons between objects.
 - c. Ability to edit attributes of objects from the list view.
 - d. Software shall offer comprehensive documentation can be accessed through web interface or accessed via start menu shortcut on host web server.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared. If substrate

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved submittals.

3.4 PROTECTION

- A. Protect installed products until completion of project. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

**SECTION 280290
IP VIDEO VISITATION SYSTEM
ALTERNATE NO. 2**

PART 1 - GENERAL

1.01 SUMMARY.

- A. Provide network switches, web cameras, monitors, detention grade visitation equipment cabinets, power supplies, thin client computers, detention grade handsets and USB audio adapters, and other equipment as required to install a Video Visitation System to facilitate a completely function system as shown on the drawings or as specified herein.
- B. Related Sections:
 - 1. Section 260000 Electrical
 - 2. Section 280000 Security Electronics, General

1.02 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)

1.03 WORK INCLUDED

- A. Provide network switches, web cameras, monitors, detention grade visitation equipment cabinets, power supplies, thin client computers, detention grade handsets and USB audio adapters, and other equipment as required to install a Video Visitation System to facilitate a completely function system as shown on the drawings or as specified herein.

1.04 APPROVALS

- A. General
 - 1. Submittals shall be made in accordance with the General Provisions (Division 28) of these specifications.
- B. Specific Requirements:
 - 1. Submit catalog cuts for all equipment and devices being furnished under this Section.
 - 2. Submit a complete Video Visitation System riser diagram. Diagram shall include labeling of each station and the corresponding Ethernet switch point for termination, interconnecting wiring of all components including but not limited to cameras, monitors, codecs and power supplies.

1.05 QUALIFICATIONS OF MANUFACTURERS

- A. Must have a minimum of ten (10) years experience developing, implementing, installing and operating cloud hosted visitation management solutions utilizing cloud hosted internet accessed software as a service (SaaS).
- B. System service and maintenance is paramount for this application. Manufacturer must supply three (3) facility references for currently operating visitation systems located within 100 miles of Dawson County, GA. Provide name and phone number for administrative contact at each reference facility.
- C. A listed Pre-Approved ESC must use one of the following acceptable manufacturers and that chosen manufacturer must meet the requirements of this section:
 - 1. iWebVisit.com
 - 2. Securus
 - 3. GTL
- D. Utilizing a pre-approved manufacturer listed above does not negate the responsibility of the ESC and the manufacturer to meet all requirements of this specification section.

1.06 SYSTEM DESCRIPTION AND FUNCTIONAL REQUIREMENTS:

- A. The Video Visitation system shall consist of wall mounted inmate and visitor terminals connected to a dedicated Internet circuit provided by the County through their normal ISP provider. 1 Gbps Ethernet network between devices shall be provided as a part of the work of this section.
- B. Provide access to a cloud hosted video visitation platform accessed via dedicated broadband internet connection.
- C. Prior to system “go live” the system manufacturer/operator shall enter into an operations/hosting agreement with the County for access to the SaaS Visitation Management Platform. Access to the SaaS Video Visitation System shall be provided at no cost to the Sheriff’s Office/County.
- D. There shall be a minimum fee charged to visitors for remote visit sessions. This fee shall be charged and collected by the system operator/manufacturer. If so desired by the Sheriff’s Office, the manufacturer shall agree to add, collect, and distribute an “administration fee” to be paid to the Sheriff’s Office. This additional amount shall be limited to a maximum of \$1.50 per 15 minute remote session.
- E. On-Site visits shall be scheduled, processed, and recorded at no charge to the public users or the Sheriff’s Office/County.
- F. Manufacturer/Operator shall provide system oversight that utilizes US Based “live operators” to randomly monitor visits for quality. (no exceptions)
- G. The system shall allow administrator “stealth view” visitation monitoring of normal visit sessions. The system shall allow for up to eight (8) administrators/investigators/customer care agents to stealth view any normal visit session simultaneously from any location. (This excludes any professional visit sessions).
- H. Professional visits shall not be recorded nor shall they be monitorable by staff or customer care agents. The system shall automatically prevent the monitoring and/or recording of any session scheduled by or for any pre-approved professional/confidential visitor.
- I. The Video Visitation System provided will facilitate and allow app-less browser based visitation sessions and conferences from a wide range of devices including Apple Computers, LINUX and Windows Computers, Apple iPhones and iPads using iOS as well as Andriod Mobile Phones and Tablets using the Andriod OS.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- J. The Video Visitation System shall include the ability to allow administrators with an internet connection and the proper credentials the ability to manage the visitation system from remote locations as allowed by the Sheriff's Office.
- K. The Video Visitation System shall include the ability to allow visitors to schedule both on-site and remote video visit sessions from the system's publicly hosted website.
- L. The integrated system shall allow professional and normal (friends and family) visitors to schedule and manage standard on-site in person and through glass visit sessions as allowed by the facility. The system shall retain detailed records of all types of visit sessions in the inmate's visit history records.
- M. The video visitation system application shall reside on redundant geographically disparate cloud server configurations hosted by Amazon Web Services (AWS), Google Cloud or Windows AZURE. Data centers that are privately owned and operated by the system provider will not be acceptable for this application.
- N. System must provide the ability for an administrator to communicate to session participants via "live chat" messages on-screen. These messages shall be viewable to all participants in a visit session. These "live chat" messages shall appear on the screens of remote visitors, on-site (visit lobby) visitors and on the inmate terminal monitors.
- O. The system shall provide the ability for up to eight (8) visitor participants per visit session. These visitors can be in multiple geographic locations on separate devices.
- P. The system shall provide session alerts with auto email and selectable triggers by inmate, by visitor, by combination and by waiver code usage.
- Q. The system shall provide an integrated inmate and visitor notes section with "hover view" and display indicator on the Daily Visitation Report and the Interactive Controller Dashboard.
- R. The system must include inmate programs scheduling, tracking and reporting.
- S. The system must allow customizable informational messages to be displayed on the dayroom terminals. These informational messages can be set to alternate on the display screens along with the visit session schedule.
- T. System must allow visit session length to be adjusted by an administrator prior to the beginning of a visit session and while the visit session is in progress.
- U. The system shall provide an Integrated Programs Creation and Management functions.
- V. The system will be provided with a fully integrated ID scanner for rapid system enrollment.
- W. The system shall allow authorized users to set custom alerts notifying the user via email when a particular inmate or visitor has scheduled a visit session.
- X. The system shall provide automatic generation and distribution of waiver and discount codes based on system actions. In the event of a cancellation for an approved reason the system shall generate and deliver via email, a waiver code to be used by the visitor to reschedule the cancelled visit.
- Y. The system shall provide an audit trail history for Confidentiality Granting, Visitation Blocking, Visit Monitoring, Recording Access and Custom Alert History.
- Z. Terminals shall be configured using a FOG server application to provide consistency and rapid deployment across the entire installation.
- AA. Web-based scheduling system shall automatically send a confirmation email to the Visitor when a visit is scheduled, cancelled or modified.
- BB. The system must have a countdown clock which will be displayed constantly from the beginning of the visit until the visit ends. The countdown clock must provide visual indication that the session is nearing completion.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- CC. The system shall provide different levels of functionality to users based on their assigned privileges. The system must be capable of setting up a minimum of 10 different user groups based on individual functionality.
- DD. Each user will require a unique username and password and this will dictate their level of functionality.
- EE. The system must be able to provide the following restrictions:
1. Restrict specific Visitors or Inmates from visitations.
 2. Restrict a specific Visitor from Inmate (s).
 3. Restrict a specific Inmate from Visitor (s).
- FF. System shall create a unique Visit ID number for each visit for reporting and tracking.
1. Provides an audit trail of all activity for a specific visit (i.e. who scheduled, added visitor, modified or cancelled).
- GG. The Video Visitation System shall be capable of accepting a file for interface to the JMS providing inmate name, booking ID and Housing Location. File shall be provided by the Sheriff's Office and configured to automatically upload to the Video Visitation System no less frequently than once every 30 minutes.
1. The Video Visitation System shall assign the Inmate's "jacket" number (from the JMS data file) as the unique Inmate Identifier used by the Video Visitation System.
- HH. Provide the ability to retrieve management reports including the following:
1. Visitation Blocks
 2. Import History
 3. Import Log
 4. Confidential Approval Report
 5. Custom Alerts Report
 6. Waiver Code Report
 7. Confidentiality Granting Historical Report
 8. Custom Alert Historical Report
 9. Programs Report and Programs Listing Screen
- II. The system shall provide users the following functionality:
1. Real-time viewing of the audio and video for all active sessions.
 2. User shall be able to interrupt the visit.
 3. User shall be able to cancel the visit.
 4. User shall have the ability to move a current in progress visit to another terminal location if so desired.
 5. User shall be able to extend the duration of a visit after it has started.
 6. User shall be able to send a message to appear on both the inmate and visitor screens.
- JJ. The system shall have and integrated visit routing rules overview page where administrators can quickly access terminal specific routing rules for a particular housing block, dayroom or other housing area.
- KK. The system shall include a fully integrated terminal maintenance section where terminals can be activated and deactivated and where all maintenance records are stored for each terminal in the system.
1. Each time a terminal is activated and deactivated for maintenance purposes shall be noted in the terminal maintenance record for the particular terminal.
 2. Any corrective measures and/or repairs to a specific terminal shall be recorded in the terminal maintenance records for that specific terminal so those records can be access for future reference by maintenance and customer care personnel.
- LL. The system shall provide video and audio recording of all non-professional visitation sessions. The recording system shall provide the following functionality:

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1. A visitation session recording must compose the sessions into a single file containing the following: Inmate Video and Audio, Visitor Video and Audio, Inmate and Visitor names, Session start date and time, and a countdown timer showing the remaining time in the visit during playback.
2. The system shall store all recorded visits in the approved cloud environment for a predetermined duration which must be selectable between 30 and 365 days.
3. Authorized users shall be able to search for and download for archiving, specific visitation sessions by Inmate, Visitor (or both) and time.
4. Authorized users shall be able to retrieve and view visitation recordings from any computer with and internet connection provided the user has the proper permissions.
5. Recordings should be viewable using a current standard browser without the need to install any additional software or hardware.
6. System shall incorporate an audit trail to track users that have viewed and downloaded recordings.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Except as otherwise specified, herein, or in the General Conditions, the equipment and materials of this Section shall be products of the following listed manufacturers, subject to compliance with the specification requirements and provided each manufacturer meets all requirements of the Quality Assurance Section of this specification.
- B. VISITATION ENCLOSURE
 1. Outside dimensions: (not to exceed) 18" x 24" x 6".
 2. Solid front face with openings for monitor and camera.
 3. Includes 3/8" polycarbonate protective viewing panel in front of monitor and camera.
 4. Enclosure shall be wall mounted with a minimum of six lag bolt locations and shall have openings for two single-gang boxes in the rear.
- C. The Stations shall consist of Inmate and Visitor Station's including as a minimum the following components:
 1. Detention grade wall mounted steel enclosure (detailed above)
 2. 17" Minimum DELL LCD Display
 3. 720p color web camera
 4. Detention grade audio handset and audio adapter
 5. Station shall be available in either 120VAC or 24VDC
 6. Thin Client CPU Equal to DELL 5070 Series Running LINUX OS (No Exceptions)
- D. GB ETHERNET SWITCHES (Qty as Req'd)
 1. Provide one or more Ethernet Switches for the video visitation network. Provide adequate number of switches and ports to accommodate the total number of visitation stations, application server, recording server, storage device and administration stations in the video visitation network. Provide 24 port 10/100/1000 BASE-TZ fast Ethernet managed stackable rack-mountable switches with 2 gigabit ports. Approved manufacturers are Netgear, Cisco or HP, no substitutions.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- 3.02 EXAMINATION
 - A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
 - B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.
- 3.03 PREPARATION
 - A. The ESC shall provide, install and test equipment and software as required to provide the functions of the system as dictated by the drawings and Specifications.
 - B. The ESC shall provide equipment cabinets for installation of the control equipment and cable terminations to the equipment.
 - C. All equipment related to the system shall be factory tested before shipment.
- 3.04 INSTALLATION
 - A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
 - B. Install in accordance with manufacturer's handling and installation instructions.
 - C. Install in accordance with all local and pertaining codes and regulations.
 - D. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
 - E. Equipment shall be ready to use condition at end of installation.
 - F. Energize equipment in accordance with manufacturer's instructions.
- 3.05 PROTECTION AND CLEANING
 - A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
 - B. Touch up, repair, or replace damaged components before Substantial Completion.
 - C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
 - D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.
- 3.06 TRAINING
 - A. The system manufacturer/operator in conjunction with the Division 28 Subcontractor shall provide complete training in the use of the system. This training shall be available by the manufacturer/operator on an on-going basis as required to keep facility staff trained in the operation and administration of the system.
- 3.07 WARRANTY
 - A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of two (2) year from the date of substantial completion.

END OF SECTION 280290

**SECTION 280400
WATCH TOUR SYSTEM**

PART 1 - GENERAL

1.01 SUMMARY.

- A. Provide Watch Tour System equipment as specified herein and as shown on the schedules and drawings. Installing contractor shall receive, place, connect, and mount all equipment specified in this Section per the manufacturer's instructions. Installing contractor shall furnish all hardware, wire, connectors, and other necessary items as required for a complete and functional Watch Tour System.
- B. Related Sections:
 - 1. Electrical
 - 2. Security Electronics, General
 - 3. Graphic Control Panels
 - 4. Touch Screen System
 - 5. Programmable Logic Controller

1.02 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)

1.03 WORK INCLUDED

- A. Included under this Section of the work shall be the furnishing, installation, connection and testing of the complete Watch Tour System including, but not limited to, watch tour stations and printers.
- B. Watchtour system is existing. Replace all existing stations with new. Integrate with the new touchscreen locking control system.
- C. Major Sub-systems include:
 - 1. Programmable Logic Controllers (PLC's).
 - 2. Touch Screen Control Stations.

1.04 APPROVALS

- A. General
 - 1. Submittals shall be made in accordance with the General Provisions (Section 280000) of these specifications.
- B. Specific Requirements:
 - 1. Submit catalog cuts for all equipment and devices being furnished under this Section.
 - 2. Submit plan drawings showing location and mounting of each watch tour station.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

1.05 DESCRIPTION

- A. The functions as described in the Touch Screen System shall be affected by the inputs from the individual watch tour stations.
- B. The PLC shall be the basis of control for the watch tour station inputs.
- C. Watch tour functions and activities shall be printed to the system alarm printer.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Except as otherwise specified, herein, or in the General Conditions, the equipment and materials of this Section shall be products of the following listed manufacturers, subject to compliance with the specification requirements and provided each manufacturer meets all requirements of the Quality Assurance Section of this specification.
- B. Watch Tour Stations:
 - 1. Shall be operated by a momentary contact key switch.
 - 2. Shall have an 11 GA. Stainless faceplate mounted to a single gang rough-in box.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.

3.03 PREPARATION

- A. Division 28 Subcontractor shall develop custom software as required to effect the functions of the system as dictated by the drawings and Specifications.
- B. Division 28 Subcontractor shall provide equipment cabinets for installation of the control equipment and cable terminations to the equipment.
- C. All equipment related to the system shall be factory tested before shipment.

3.04 INSTALLATION

- A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
- B. Install in accordance with manufacturer's handling and installation instructions.
- C. Install in accordance with all local and pertaining codes and regulations.
- D. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
- E. Equipment shall be ready to use condition at end of installation.
- F. Energize equipment in accordance with manufacturer's instructions.

3.05 PROTECTION AND CLEANING

- A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- B. Touch up, repair, or replace damaged components before Substantial Completion.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
- D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.

3.06 WARRANTY

- A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of two (2) year from the date of substantial completion.

END OF SECTION 280400

**SECTION 28 05 08
GROUNDING AND BONDING**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes grounding of electrical systems and equipment. Requirements specified in this Section may be supplemented by requirements of other Sections.

1.2 SUBMITTALS

- A. Product Data: For ground rods.
- B. Field quality-control test reports.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled under UL 467 as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Apache Grounding/Erico Inc.
2. Boggs, Inc.
3. Chance/Hubbell.
4. Copperweld Corp.
5. Dossert Corp.
6. Erico Inc.; Electrical Products Group.
7. Framatome Connectors/Burndy Electrical.
8. Galvan Industries, Inc.
9. Harger Lightning Protection, Inc.
10. Hastings Fiber Glass Products, Inc.
11. Heary Brothers Lightning Protection Co.
12. Kearney/Cooper Power Systems.
13. Korns, C. C. Co.; Division of Robroy Industries.
14. Lightning Master Corp.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

15. Raco, Inc.
16. Robbins Lightning, Inc.
17. Superior Grounding Systems, Inc.
18. Thomas & Betts, Electrical.

2.2 GROUNDING CONDUCTORS

- A. For insulated conductors, comply with Division 16 Section "Conductors and Cables."
- B. Equipment Grounding Conductors: Insulated with green-colored insulation.
- C. Isolated Ground Conductors: Insulated with green-colored insulation with yellow stripe. On feeders with isolated ground, use colored tape, alternating bands of green and yellow tape to provide a minimum of three bands of green and two bands of yellow.
- D. Grounding Electrode Conductors: Stranded cable.
- E. Underground Conductors: Bare, tinned, stranded, unless otherwise indicated.
- F. Bare, Solid-Copper Conductors: ASTM B 3.
- G. Assembly of Bare, Stranded-Copper Conductors: ASTM B 8.
- H. Bare, Tinned-Copper Conductors: ASTM B 33.
- I. Copper Bonding Conductor: No. 4 or No. 6 AWG, stranded copper conductor.
- J. Copper Bonding Jumper: Bare copper tape, braided bare copper conductors, terminated with copper ferrules; 1-5/8 inches (42 mm) wide and 1/16 inch (1.5 mm) thick.
- K. Grounding Bus: Bare, annealed copper bars of rectangular cross section, with insulated spacer.
- N. Connectors: Comply with IEEE 837 and UL 467; listed for use for specific types, sizes, and combinations of conductors and connected items. Bolted type.

2.3 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel.
 1. Size: 3/4 by 8'0".

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use only copper conductors for both insulated and bare grounding conductors in direct contact with earth, concrete, masonry, crushed stone, and similar materials.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- B. In raceways, use insulated equipment grounding conductors.
- C. Exothermic-Welded Connections: Use for connections to structural steel and for underground connections.
- D. Grounding Bus: Install in electrical and telephone equipment rooms, in rooms housing service equipment, and elsewhere as indicated.
 - 1. Use insulated spacer; space 1 inch (25.4 mm) from wall and support from wall 6 inches (150 mm) above finished floor, unless otherwise indicated.
 - 2. At doors, route the bus up to the top of the door frame, across the top of the doorway, and down to the indicated height above the floor.
- E. Underground Grounding Conductors: Use copper conductor, No. 2/0 AWG minimum. Bury at least 24 inches (600 mm) below grade or bury 12 inches (300 mm) above duct bank when installed as part of the duct bank.
- F. Equipment Grounding Conductors: Comply with NFPA 70, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 are indicated.
 - 1. Install insulated equipment grounding conductors in feeders and branch circuits.
 - 2. Computer Outlet Circuits: Install insulated equipment grounding conductor in branch-circuit runs from computer-area power panels or power-distribution units.
 - 3. Isolated Grounding Receptacle Circuits: Install an insulated equipment grounding conductor connected to the receptacle grounding terminal. Isolate grounding conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service, unless otherwise indicated.
 - 4. Isolated Equipment Enclosure Circuits: For designated equipment supplied by a branch circuit or feeder, isolate equipment enclosure from supply raceway with a nonmetallic raceway fitting listed for the purpose. Install fitting where raceway enters enclosure, and install an insulated equipment grounding conductor. Isolate equipment grounding conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service, unless otherwise indicated.
 - 5. Nonmetallic Raceways: Install an equipment grounding conductor in nonmetallic raceways unless they are designated for telephone or data cables.
 - 6. Air-Duct Equipment Circuits: Install an insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air cleaners and heaters. Bond conductor to each unit and to air duct.
 - 7. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install an insulated equipment grounding conductor to each electric water heater, heat-tracing, and antifrost heating cable. Bond conductor to heater units, piping, connected equipment, and components.
 - 8. Signal and Communication Systems: For telephone, alarm, voice and data, and other communication systems, provide No. 4 AWG minimum insulated grounding

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.

- a. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-2-by-12-inch (6.4-by-50-by-300-mm) grounding bus.
 - b. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.
- G. Metal Frame Grounding for Buildings: Drive a ground rod at the base of every corner column and at intermediate exterior columns at distances not more than 60 feet (18 m) apart. Connect rod to column with an underground grounding conductor. Use tinned-copper conductor not less than No. 2/0 AWG for underground conductor, and bury 18 inches (450 mm) below grade, minimum.
- H. Ground Rods: Install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes.
1. Drive ground rods until tops are 2 inches (50 mm) below finished floor or final grade, unless otherwise indicated.
 2. Interconnect ground rods with grounding electrode conductors. Use exothermic welds, except as otherwise indicated. Make connections without exposing steel or damaging copper coating.
- I. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- J. Bonding Straps and Jumpers: Install so vibration by equipment mounted on vibration isolation hangers or supports is not transmitted to rigidly mounted equipment. Use exothermic-welded connectors for outdoor locations, unless a disconnect-type connection is required; then, use a bolted clamp. Bond straps directly to the basic structure taking care not to penetrate any adjacent parts. Install straps only in locations accessible for maintenance.
- K. Metal Water Service Pipe: Provide insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes by grounding clamp connectors. Where a dielectric main water fitting is installed, connect grounding conductor to street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
- L. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with grounding clamp connectors.
- M. Bond interior metal piping systems and metal air ducts to equipment grounding conductors of associated pumps, fans, blowers, electric heaters, and air cleaners. Use braided-type bonding straps.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- N. Bond each aboveground portion of gas piping system upstream from equipment shutoff valve.
- O. Connections: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
 - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer to order of galvanic series.
 - 2. Make connections with clean, bare metal at points of contact.
 - 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
 - 4. Make aluminum-to-galvanized steel connections with tin-plated copper jumpers and mechanical clamps.
 - 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
 - 6. Exothermic-Welded Connections: Comply with manufacturer's written instructions. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.
 - 7. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure-type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.
 - 8. Noncontact Metal Raceway Terminations: If metallic raceways terminate at metal housings without mechanical and electrical connection to housing, terminate each conduit with a grounding bushing. Connect grounding bushings with a bare grounding conductor to grounding bus or terminal in housing. Bond electrically noncontinuous conduits at entrances and exits with grounding bushings and bare grounding conductors, unless otherwise indicated.
 - 9. Tighten screws and bolts for grounding and bonding connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.
 - 10. Compression-Type Connections: Use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on grounding conductor.
 - 11. Moisture Protection: If insulated grounding conductors are connected to ground rods or grounding buses, insulate entire area of connection and seal against moisture penetration of insulation and cable.

3.2 FIELD QUALITY CONTROL

- A. Testing: Perform the following field quality-control testing:
 - 1. After installing grounding system but before permanent electrical circuitry has been energized, test for compliance with requirements.
 - 2. Test completed grounding system at each location where a maximum ground-resistance level is indicated and at service disconnect enclosure grounding

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

terminal. Measure ground resistance not less than two full days after the last trace of precipitation, and without the soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance. Perform tests, by the fall-of-potential method according to IEEE 81. If more than 25 ohms provide additional work to get to 25 ohms.

3. Provide drawings locating each ground rod, ground rod assembly, and other grounding electrodes. Identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results. Nominal maximum values are as follows:
 - a. Equipment Rated 500 kVA and Less: 10 ohms.
 - b. Equipment Rated 500 to 1000 kVA: 5 ohms.
 - c. Equipment Rated More Than 1000 kVA: 3 ohms.

END OF SECTION

SECTION 280650 - ALTERNATE

METAL DETECTION SYSTEM & PACKAGE SCREENING DEVICES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Applicable requirements of the General Conditions and Special Conditions/Requirements shall be considered a part of this section and shall have the same force and effect as if printed herein full.
- B. The work included under this section of the specifications consists of the installation of a complete system of conduits, outlet boxes, terminal backboards and terminal cabinets for the installation of a complete telephone conduit system. Provide all labor, materials, equipment and supervision to install a complete telephone conduit system.
- C. The metal detection system shall be installed where indicated on the drawings. Each system shall consist of arch assembly, control console and interconnecting wiring. The electronic circuitry shall provide 'maximum security' level of detection providing a system capable of detecting small amounts of metal and weapons.

1.02 ACCEPTABLE MANUFACTURERS

- A. Products that comply with the specifications of the following manufacturers are acceptable:
 - 1. S-RAY SCAN 6040i or equal.

1.03 SYSTEM OPERATION

- A. The system shall be designed to detect metal by using pulsed magnetic fields to excite transient eddy currents in metal objects, and to sense and process secondary signals during the on and/or off time of the excitation pulses. Alarm levels shall be over a broad range.
- B. Advanced signal processing shall be performed by the unit in order to achieve the highest possible sensitivity and discrimination in locations having potential problems with environmental, electrical and mechanical noise sources.

PART 2 - PRODUCTS

2.01 SENSOR

- A. General: The supplier shall furnish and install all material for a complete and operating Metal Detection System which is designed to detect any electrically conductive metal by means of a periodically pulsed magnetic field producing transient eddy currents in the metal objects being detected.
 - 1. The metal detector system shall be capable of detecting any passing metal object of various sizes ranging from as small as a pen knife or hacksaw blade to a large weapon such as a hand gun.
 - 2. The system shall be programmable to provide either straight forward detection of metal objects on a mass basis or discrimination of selected bulky items (weapons, tools, etc.) against a background of scattered metal (keys, coins, etc.).

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

3. Seventeen high performance programs optimized to detect a wide range of weapons. Each program shall have six selectable operating frequencies and nine filter selections for inhibiting false alarms created by external interference's. The filter selection also shall provide adjustment for variations in object speed.
- B. Construction: The electronic components contained in the metal detector's electronic console shall be solid state with integrated circuits and other components of high quality, and shall have the following features:
 1. The signal processing circuitry shall provide separate frequencies for adjacent units to prevent mutual interference thus allowing identical units to be located in close proximity, the minimum spacing shall be 20 inches.
 2. The console front panel shall be equipped with visual indicators led's, spaced and colored or otherwise coded so as to be easily discernible by the operator.
 3. The console shall contain an audible alarm system inaccessible from the exterior, with an audio volume control accessible to the operator and ranging from 0 to maximum output.
 4. The Alarm Sensitivity control shall be accessible using an access code, changeable by switches located within the unit and shall be variable throughout the range as specified.
 5. The console shall have relay outputs which can be used interface to other electronic equipment, provide an audible or visual signal for a duration of approximately one second, or operate other remote functions. The output contacts shall be rated for 2 amp maximum at 24 vdc or 120 vac, resistive.
 6. All screws, attaching devices and processor controls shall be inaccessible from the exterior of the locked cabinet.
 7. Signal and power cable shall be provided between coil assembly and electronic console. All cable connectors shall be factory installed, and all cables shall be terminated in standard mating plug connectors.
 8. Archway shall not occupy more than 4.8 square feet nor weigh more than 101 pounds. The unit shall not exceed 34.3 inches wide and 85.9 inches tall.
- C. Operation: The Metal Detection System shall operate at 120VAC, 50 or 60 Hz, and it shall be capable of operating in the temperature range of -10 degrees C. to +55 degree C., and humidity range up to 95% relative humidity non-condensing. Maximum power consumption shall be 50VA. Once the threshold sensitivity is set at the desired level, the minimum size of objects to be detected is determined. When a metal object causes an alarm, a red lamp shall light up on the front panel of the console and the audible alarm will be energized at the level selected. After an alarm, the detector will automatically reset itself in approximately one second.
- D. Sensor coils shall be encapsulated in panels with a Formica finish which form the passageway arch.
- E. Where passageway arch is not free standing, coordinate installation of system with mechanics of other trades to assure correct installation of equipment and full accessibility as required for maintenance.

2.02 CONSOLE

- A. Console shall be constructed of heavy-gauge aluminum installed where indicated on the drawings. Controls shall be installed in key-locking cabinet designed for full access to all circuitry. Circuit controls and assembly screws shall be accessible only from inside the locked cabinet. One red alarm lamp, one green standby/normal lamp and an audio volume control for the internal audible alarm unit shall be located on the front panel of the

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

console.

B. An alarm tamper switch shall be provided for the control console. A separate and distinguishing audible alarm shall be provided for the alarm and tamper conditions. A tamper acknowledge button shall also be provided to silence the alarm.

2.03 PACKAGE SCREENING SYSTEM

- A. Provide an X-ray screening system where indicated on the drawings for the inspection of packages by staff personnel. The equipment shall comply with the requirements of U.S. Bureau of Radiological Health Performance Standards.
- B. The equipment shall be free standing, direct viewing type with compartment size of not less than 14" high, 14" wide, 21" deep. Compartment shall be accessed through a single door to allow unit to be placed against a wall, access to the rear of unit for package insertion. Parcel viewing area shall be 17" x 22". X-ray head shall be oriented vertically and shall be cooled with sealed oil system. Equipment requiring external cooling is not acceptable.
- C. Acceptable manufactures shall be:
 - 1. S-RAY SCAN 6040i or equal.

PART 3 - EXECUTION

3.01 WIRING

- A. All wiring between metal detector passageway arch and control console shall be installed in concealed metallic raceway in accordance with the applicable sections of these specifications. All wiring shall be shielded pair cables furnished with the metal detector system.
- B. All wiring shall be installed in conduit in accordance with the electrical specifications.

3.02 SENSOR

- A. Freestand the sensors where indicated on the drawings.

3.03 SURGE PROTECTION

- A. All cables and conductors which serve as control, sensor or data conductors shall have surge protection devices installed at each end that complies with the surge protection specifications herein.

END OF SECTION

SECTION 280710
UNINTERRUPTIBLE POWER SYSTEM (UPS)

PART 1 - GENERAL

1.01 SUMMARY.

- A. Provide UPS equipment as specified herein and as shown on the schedules and drawings. Installing contractor shall receive, place, connect, and mount all equipment specified in this Section per the manufacturer's instructions. Installing contractor shall furnish all hardware, wire, connectors, and other necessary items as required for a complete and functional UPS system.
- B. Related Sections:
 - 1. Electrical
 - 2. Security Electronics, General
 - 3. Touch Screen System
 - 4. Programmable Logic Controller
 - 5. Intercommunications System
 - 6. IP CCTV

1.02 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)

1.03 WORK INCLUDED

- A. Furnish all materials and services as required to provide back up UPS power to the Division 28 systems.

1.04 APPROVALS

- A. General
 - 1. Submittals shall be made in accordance with the General Provisions (Section 280000) of these specifications.
- B. Specific Requirements:
 - 1. Submit catalog cuts for all equipment and devices being furnished under this Section.
 - 2. Load summary for each UPS panel. Load summary shall identify the actual measured loads or calculated loads for each specific load. Loads shall be based on equipment to be furnished and installed.

Dawson County Law Enforcement Center/Jail and Government Center
Security Systems Upgrades - Project #367-20

1.05 DESCRIPTION

- A. The primary function of the uninterruptible power system (UPS) is to ensure that critical security electronics and communications systems elements remain operational and without errors caused by power line disturbances or interruptions.
- B. All doors and gates, except vehicle gate operators, shall be powered from the UPS distribution system. This does not include power to door locks. All other Division 28 equipment shall be powered from the UPS power source. This includes but is not limited to, PLC and relay equipment, intercom equipment, CCTV equipment, including camera power, control room equipment including monitors, keypads, computers, graphic control panels and video visitation equipment.
- C. Each UPS system shall include conductors, make-before-break bypass switch, UPS unit, batteries and power distribution panel. Conductors shall be sized compatible with the unit furnished. Unit shall be sized for the connected load, plus a 20% reserve. Batteries shall be sized for 10 minutes of run time at 100% loading.
- D. Distribution Panels: Division 28 shall furnish the UPS Distribution Panels for installation by the Division 16 Electrical Contractors for each UPS system required by the project. Division 16 contractor shall extend conduits and circuits to equipments requiring UPS power. Division 28 contractor shall provide electrical power distribution drawings for location of UPS power receptacles and junction boxes and to identify the UPS power source from which the load is supplied. UPS load summaries shall include all UPS loads.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. UPS System:
 - 1. Each UPS unit shall be sized as described herein.
 - 2. Supply voltage to the UPS shall be either 120 or 208 volt, single phase, 60 Hz. The ESC shall provide and install dry- type transformers for 208 volt single phase supplies to create the conversion to the required 240 UPS input.
 - 3. The ESC shall provide over-current protection per the NEC.
 - 4. Each UPS shall be equipped with a make-before-break external by-pass switch with AC disconnect.
 - 5. Output voltage shall be 120V, single phase, 60Hz.
 - 6. UPS alarm output shall be provided to interface with the alarm reporting system as described in Section 280110 Graphic Control Panels and/or 280120 Touch Screen System. UPS alarms for power transfer to the UPS system shall not report to Master Control as an alarm for conditions where the transfer to UPS power is less than one (1) minute.
 - 7. Units shall equipped with sealed batteries.
 - 8. UPS systems shall be Liebert UPStation S Series, Best Ferrups or approved equal.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

3.02 EXAMINATION

Dawson County Law Enforcement Center/Jail and Government Center
Security Systems Upgrades - Project #367-20

- A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.

3.03 INSTALLATION

- A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
- B. Install in accordance with manufacturer's handling and installation instructions.
- C. Install in accordance with all local and pertaining codes and regulations.
- D. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
- E. Equipment shall be ready to use condition at end of installation.
- F. Energize equipment in accordance with manufacturer's instructions.

3.04 PROTECTION AND CLEANING

- A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- B. Touch up, repair, or replace damaged components before Substantial Completion.
- C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
- D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.

3.05 WARRANTY

- A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of two (2) year from the date of substantial completion.

END OF SECTION 280710

SECTION 280740
ACCESS CONTROL SYSTEM

PART 1 - GENERAL

1.01 SUMMARY.

- A. Provide Card Access Control equipment as specified herein and as shown on the schedules and drawings. Installing contractor shall receive, place, connect, and mount all equipment specified in this Section per the manufacturer's instructions. Installing contractor shall furnish all hardware, wire, connectors, and other necessary items as required for a complete and functional Card Access Control system.
- B. Related Sections:
 - 1. Electrical
 - 2. Low Voltage
 - 3. Security Electronics, General
 - 4. Graphic Control Panels

1.02 REFERENCES.

- A. The General Conditions, Supplementary Conditions, and Division 1 Specifications shall apply to all work of this section.
- B. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- C. Underwriter's Laboratories (UL)
 - 1. UL 508 Industrial Control Equipment
 - 2. NEC National Electrical Code (latest edition)

Dawson County Law Enforcement Center/Jail and Government Center
Security Systems Upgrades - Project #367-20

1.03 WORK INCLUDED

- A. The ESC shall furnish labor, equipment, and materials for the Access Control system including but not limited to:
 - 1. Wiring.
 - 2. Equipment cabinets.
 - 3. Card reader data gathering panels, readers, system software, access control host computer and system programming.
- B. This Section consists of furnishing and installing a card access system as part of the Security Monitoring and Control System to include the following:
 - 1. File Server
 - 2. Remote Interfaces and Processors
 - 3. Enrollment Terminal/Photo ID System
 - 4. Administrative Terminal
 - 5. Card Readers
 - 6. Keypads
 - 7. Logging Printer
- C. The Access Control system shall be integrated with the Touchscreen Locking Control System.
- D. The Access Control System software shall be provided by the IP Camera manufacturer. See the IP Camera specifications for further requirements.
- E. Test all existing card readers. Replace with new as required. Duplicate existing card readers.

1.04 APPROVALS

- A. General
 - 1. Submittals shall be made in accordance with the General Provisions (Section 280000) of these specifications.
- B. Specific Requirements:
 - 1. Submit catalog cuts for all equipment and devices being furnished under this Section.
 - 2. Submit a complete Access Control System riser diagram. Diagram shall include labeling of each reader and its corresponding head end equipment connection point and interconnecting wiring of all components.
 - 3. Submit plan drawings showing location and mounting of each card reader.

1.05 DESCRIPTION

- A. The card access system shall provide a means to control and monitor access at specified doors throughout the facility.
- B. Each system shall consist of proximity-type card sensor devices, status input devices, output control devices, control processor(s), interface modules, file server, remote terminals, printers, software and programming.
- C. An enrollment terminal for programming the card access system security functions shall be provided for the system. No other terminal shall be capable of entering or modifying the card access system. The enrollment station shall be capable of having a color photo ID badging system as an integral component.
- D. The software shall run on a Microsoft Windows (latest version) operating system.
- E. The software shall be user programmable.
- F. System shall be equipped for expansion to remote sites by the addition of an interface card and modem.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Acceptable Manufacturers:
 - 1. Vicon Industries
 - 2. Avigilon
 - 3. Hanwah
- B. Scope:
 - 1. This specification outlines the requirements for a single local controller up to a centrally controlled distributed processing and centrally programmed monitored access control system capable of running on an industry standard computer with the manufacturers priority software.
- C. Computer Hardware Requirements:
 - 1. The computer shall be configured at a minimum in a following manner.
 - 2. Furnish and commission a centrally located host computer and software as described following.
 - a. IBM PC100%compatible Quad Core 3.2 GHz
 - b. 16gb of RAM
 - c. 500 GB Hard Drive
 - d. DVD +/- RW Optical Drive
 - e. 25" LCD Color Display
 - f. Printer port and line printer for event printing
 - g. Two RS232 and one RS485 serial communication ports
 - h. Microsoft compatible bus mouse
 - i. Surge protector
 - j. Uninterruptable Power Supply
- D. Computer Software Requirements:
 - 1. The computer shall include the following software.
 - a. Microsoft® Windows Server® 2008 (R1 or R2); Microsoft® Windows® 7 Professional; or Microsoft® Windows Server® 2003
 - b. PremiSys Pro or approved equal.
- E. Computer Software Features:
 - 1. The following features shall be provided for from the computer.
 - a. The system shall use a server computer that communicates with a client computer or computers. It shall be possible to install the system software so that one computer functions as server and client.
 - b. The system controllers shall confirm receipt of all commands from the PC to ensure that no system transactions are lost.
 - c. The communications between the host and connected controllers shall be continuously monitored with the host initiating all message exchange sequences. Supervision of system input points shall be provided by the controller. Failure or fault of data connections between the controller(s) and server(s) shall be indicated on the system display on a User Interface PC.
 - d. The system shall allow data to be entered to stipulate dates for the following parameters: card-activation dates, card-deactivation dates, vacation-start dates and vacation-end dates.
 - e. It shall be possible in the software to designate a cardholder as exempt from area tracking for antipassback purposes. In addition, cardholders' records can include settings that allow them to benefit from extended time at doors and readers as specified under the Americans with Disabilities Act (ADA).

Dawson County Law Enforcement Center/Jail and Government Center
Security Systems Upgrades - Project #367-20

- f. The system shall provide the means to assign the same settings to all cards for the following fields: activation and inactivation dates; vacation start and end dates; use count settings to be used with use limits as outlined elsewhere in this specification; antipassback settings to be used with antipassback as outlined elsewhere in this specification; ADA (Americans with Disabilities Act) timing settings; access groups as outlined elsewhere in this specification; user levels as outlined elsewhere in this specification. Systems incapable of creating large blocks of cards with such time-saving card-creation capability shall be deemed unacceptable.
- g. It shall be possible as well for users to update blocks of existing cards to add new data to them or to edit or delete the data that is already there. The means of accomplishing this block update process shall be essentially identical to that used to add blocks of cards. However, the software shall allow the user to use cardholder searches (described elsewhere in this specification) for defining the block of cards to update. The search criteria can be any values stored in the database of cardholder information, including the card numbers. All card parameters and attributes that are used to create individual cards or blocks of cards shall be available for selection for modification in the block update module.
- h. It shall be possible to establish up to 32 access groups per cardholder per controller that designate the permissible readers that cardholders may use and the time zones, or schedules, during which they may be used.
- i. Through the use of the access groups, it shall be possible to define elevator operation for normal business hours, operation after hours, on weekends and during special events.
- j. The software shall permit the configuration and use of several forms of antipassback, all under the basic classifications of:
 - 1) Reader-based antipassback, which shall prevent the same card from being used at the same reader within a defined space of time. If a card is presented more than once before the defined time has elapsed, presenting the card shall not permit access to be granted.
 - 2) Area-based antipassback, which shall allow "tracking" of entries into and exits out of defined areas. These area designations shall correspond to an area reference and shall be assigned to door configurations in the software. The door shall have a defined area in which it is located and a defined area into which the door leads. "Hard" antipassback rules shall prevent the user from moving between areas without using the card reader. "Soft" rules shall permit access when those rules are violated, while recording the antipassback violation as a transaction.
- k. There shall be no limit on the number of time zones and holidays defined in the system other than limits imposed by the amounts of memory allocated and used in controllers in the system.
- l. The software shall allow the configuration of multiple card formats to allow the use of badges with different site/facility codes and/or different data lengths. The maximum value for a facility code shall be 32 bits.
- m. It shall be possible to establish in the software up to 256 user levels, which shall then be capable of being assignable to individual cards.
- n. The system shall allow the configuration and use of duress codes. Duress codes shall consist of modifying current card numbers in such a way as to make them unique to each cardholder and recognizable system-wide. A duress code that is the same for all cardholders in a system shall be deemed unacceptable.

Dawson County Law Enforcement Center/Jail and Government Center
Security Systems Upgrades - Project #367-20

- o. The system shall provide the means to display a cardholder photo on the system-monitoring screen when the cardholder presents a card at a system reader.
 - p. The software shall be capable of permitting readers to support the following basic reader access modes: unlimited access; exit only, no entrance access; disabled; access on valid facility code alone; access on valid card number alone; access on valid PIN code alone; access on valid PIN code AND card number; access on valid PIN code OR card number.
 - q. The system shall accommodate access control at elevators by establishing the floor or floors to which a cardholder may have access from an elevator car. The User shall be able to define within the software which reader or readers are for use inside elevator cars. It shall be possible to select from two elevator configurations for implementation in the software: one that does not provide feedback to the system on the cardholder's floor selection ("Type 1"), and the other that does ("Type 2").
 - r. The software shall provide the user with the capability to configure, customize and generate reports of system transactions, hardware and access-setting configurations, cardholders, etc.
 - s. It shall be possible to output generated reports to a local or network printer or in any of the following ways (output file types in parentheses): Microsoft® Excel spreadsheets (.xls), Adobe® PDFs (.pdf), Microsoft® Word documents (.doc), Crystal Report files (.rpt), or Rich Text files (.rtf) openable by most word processors.
 - t. The software shall provide the user with the capability to schedule archiving of transactions, backups of the system and cardholder databases, imports of data from external data sources, one-time door lock and unlock events, and e-mailing certain system reports.
 - u. The system shall support an unlimited number of graphic files used as maps.
 - v. The access control system shall allow the use of fingerprints for access control.
 - w. Programming of users and system configuration information across multiple systems.
 - x. Password protected, multilevel operator programming capabilities
 - y. Issue of commands to any controller from the computer, like momentarily unlocking a door.
 - z. Storage to hard disk of all event transactions.
 - aa. User customizable reports generated from stored event transactions
 - bb. User, door and alarm input English text names appear on screen, printer and reports.
 - cc. Host operator action logging to disk.
 - dd. Customizable event and report print.
- F. Identification Badging Software
- 1. The badging software shall provide "ready-made" screen layouts that contain all controls needed for basic system function such as viewing cardholder records and entering cardholder data.
 - 2. The system additionally shall allow users to create an unlimited number of user-defined screen designs that shall accommodate cardholder data fields.
 - 3. Text boxes, or edit controls, shall be used for capturing variable information for a cardholder and allow the user to add, edit, or delete information within the edit field. The user shall be able to associate fields within the cardholder database to any selected edit field in the screen design.

Dawson County Law Enforcement Center/Jail and Government Center
Security Systems Upgrades - Project #367-20

4. The system shall provide a photo control that when placed on a screen design allows a cardholder photo to be displayed on a screen design.
 5. The system shall provide a means for incorporating the use of a digital camera for the purpose of capturing photos of cardholders so as to integrate the photo as part of the cardholder's record in the database.
 6. The system shall support TWAIN, WIA, and WEBCAM devices for photo capture.
 7. The user shall be able to assign any available printer to a card design to be used as the default printer for that card design.
- G. Host Computer to Controller Communication Protocols:
1. Communications between the computer and the controller shall be accomplished utilizing a standard 10/100 TCIP connection.
- H. Maximum System Wide Capacities:
1. The software shall support a maximum of 254 channels per system and a maximum of 8 controllers per channel.
- I. PRODUCTS
1. IP Controller:
 - a. There shall be three primary types of controllers, access control, alarm monitoring and relay control.
 - b. The IP Controller shall be of a distributed database design and provide access control, alarm monitoring and time zone control for both access to and egress from selected areas.
 - c. Two-way communications between the controller and the host computer shall be via a primary Ethernet 10/100Base-T interface or the optional serial RS-232 or RS-485 ports.
 - d. The IP Controller shall be connectable to a variety of system I/O boards which include reader boards, input boards and output boards, as well as multiplexer boards.
- J. Standby Battery:
1. The controller shall have an internal standby battery that is capable of running the system during AC power interruption which shall be automatically recharged by a charging circuit incorporated into the controller board.
- K. Two Reader Board
1. The Two-Reader board shall be connected to a system controller and act as an interface between this controller and any of a variety of readers that can read ABA-formatted data or Wiegand®-formatted data from smart cards, proximity cards, magnetic-stripe cards, bar-coded cards or cards possessing a combination of these technologies. The board shall also be capable of supporting tri-stated LED control and buzzer control.
 2. The Two-Reader board shall communicate to a controller via a two-wire RS-485 interface, which shall allow multi-drop communication on a single bus of up to 4,000 feet (1,200 m).
 3. The Two-Reader board shall provide sensor monitoring via its eight (8) supervised inputs, which can be used as door-position inputs, request-to-exit inputs and for other purposes.
 4. Held-open times – the time during which a door may be held open without generating a system alarm – for inputs on the board assigned as door-position points shall be software-selectable in two-second increments between 2 and 65,534 seconds.

Dawson County Law Enforcement Center/Jail and Government Center
Security Systems Upgrades - Project #367-20

5. The Two-Reader board shall also provide six Form-C, non-inductive contact relays with ratings of 5 A at 28 VDC for optional use in controlling door locks, alarm signals or other devices.
 6. It shall be possible via the system software to link any relay on the Two-Reader board to cause an action on any other relay on the same board or on any other board wired to the same controller and to select the action that the linked relay will take when the triggering relay is activated.
- L. Input Board
1. The Input Board shall be connected to a system controller and provide sensor monitoring and output control via its 16 supervised inputs.
 2. The Input Board shall also provide two Form-C contact relays for optional use in controlling door strikes or other devices.
 3. It shall be possible via the system software to link any input or relay on the Input Board to cause an action on any other relay in the system and to select the action that a linked relay will take when the triggering input or relay is activated.
 4. The Input Board shall communicate to a controller via a two-wire RS-485 interface, which shall allow multi-drop communication on a single bus of up to 4,000 feet (1,200 m).
- M. Output Board
1. The Output Board shall be connected to a system controller and provide output control via 16 Form-C, noninductive relays with ratings of 5 A at 28 VDC.
 2. Control of the relays shall be software-assignable to be triggered by a reading device, cardholder, time zone and/or other system actions.
 3. It shall be possible via the system software to link any relay on the Output Board to cause an action on any other relay in the system and to select the action that a linked relay will take when the triggering input or relay is activated.
 4. The Output Board shall communicate to a controller via a two-wire RS-485 interface, which shall allow multi-drop communication on a single bus of up to 4,000 feet (1,200 m).
- N. Eight-Channel MUX Board
1. The eight-channel MUX board shall allow a single communication port to be expanded to eight two-wire RS-485 channels, thus facilitating star wiring topology when needed. The two-wire RS-485 interface shall allow multi-drop communication on a single bus of up to 4,000 feet (1,200 m).
- O. READERS:
1. The controller shall accept all of the reader technologies concurrently.
 - a. Biometrics Fingerprint
 - b. Proximity
 2. The readers can be used for access control, alarm management and or/relay control and shall be capable of being used in combined operation with keypad and any other reader technology to operate as a dual technology reader where two valid ID's are required.
 3. Proximity Card Readers:
 - a. The controller shall be capable of using proximity card readers that output a standard Wiegand data format. The readers can have a short or long read range and be unidirectional or bi-directional.
 - b. Unit shall be a HID 5355
 4. Proximity Cards:
 - a. Thin, flexible polyvinyl chloride (PVC) laminate.
 - b. Nominal size 2.125" x 3.370" x 0.030"

Dawson County Law Enforcement Center/Jail and Government Center
Security Systems Upgrades - Project #367-20

- c. Support formats up to 85 bits
- d. Accepts either a horizontal or vertical slot punch.
- e. Furnish 50 cards with this project.
- f. Cards shall be HID 1386 or approved equal

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data; including product technical bulletins, product catalog, installation instructions, submittal sketches or drawings, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that related conditions, including equipment that has been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. All devices connected to equipment specified in this section shall bear the UL, cUL, or CSA label and comply with all applicable National Electrical Code (NEC) standards.

3.03 PREPARATION

- A. Division 28 Subcontractor shall develop custom software as required to effect the functions of the system as dictated by the drawings and Specifications.
- B. Division 28 Subcontractor shall provide equipment cabinets for installation of the control equipment and cable terminations to the equipment.
- C. All equipment related to the system shall be factory tested before shipment.

3.04 INSTALLATION

- A. Contractor shall furnish all equipment, labor, system setup, and other services necessary for the proper installation of the products/system as indicated on the drawings and specified herein.
- B. Install in accordance with manufacturer's handling and installation instructions.
- C. Install in accordance with all local and pertaining codes and regulations.
- D. All equipment and systems shall be installed by the ESC. Subcontracting of equipment installation shall not be permitted.
- E. Equipment shall be ready to use condition at end of installation.
- F. Energize equipment in accordance with manufacturer's instructions.

3.05 PROTECTION AND CLEANING

- A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- B. Touch up, repair, or replace damaged components before Substantial Completion.
- C. Remove temporary tags, coverings, and construction debris from interior and exterior surfaces of equipment. Remove construction debris from equipment area and dispose of debris.
- D. Clean integral air filters, heatsinks, grills, and fans before Substantial Completion and Commissioning Services.

3.06 WARRANTY

- A. The ESC shall provide a single source warranty for all supplied equipment specified in this section to be free of defects in material and workmanship for a period of one (1) year from the date of substantial completion.

END OF SECTION 280740

SECTION 28 08 00
SURGE PROTECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Applicable requirements of the General Conditions and Special Conditions/Requirements shall be considered a part of this section and shall have the same force and effect as if specified herein.
- B. The work included under this section consists of the installation i.e., labor, materials, supervision to install, calibrate, adjust and check-out the total Lightning/Surge Protection System.
- C. The system shall be in accordance with ANSI/IEEE Standards C62, 41-1980 and C62, 45-1987.
- D. All A/C surge protection devices shall have the lowest surge voltage rating per UL1449-1991 that is consistent with line levels.
- E. Submit complete shop drawings on equipment and installation.

1.02 ACCEPTABLE MANUFACTURERS

- A. Ditek, Clearwater, FL
- B. Transtector, Idaho

1.03 WARRANTY

- A. Product shall be warranted for a period of not less than five (5) years.

PART 2 - PRODUCTS

2.01 LOCKING CONTROL CIRCUITS

- A. Primary suppression modules shall be composed of pure silicon avalanche diodes only.
- B. Silicon avalanche diodes shall be bi-polar and bi-directional, incorporate no switching components and meet the following requirements:
 - 1. Silicon avalanche diodes shall be of grade A +/- 5%.
 - 2. Silicon Avalanche diode manufacturer shall be product list 19500, DESC & JANS certified.
- C. Shall have an initial clamping voltage suitable to the application and shall not exceed 200% of the peak signal voltage rating for the device.
- D. Shall have a peak clamping voltage suitable to the application and shall not exceed 300% of the peak signal voltage rating for the device.
- E. Shall be selected as required for the particular data frequency and signal level characteristics of the application.
- F. Total system response time not to exceed 5 nanoseconds.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

2.02 DATA AND SIGNAL

- A. Primary suppression modules shall be composed of pure silicon avalanche diodes only.
- B. Shall have a surge life of at least 10 operations for 10,000 amp, 8 x 20 microsecond wave.
- C. Shall have an initial clamping voltage suitable to the application and shall not exceed 200% of the peak signal voltage rating for the device.
- D. Shall have an peak clamping voltage suitable to the application and shall not exceed 300% of the peak signal voltage rating for the device.
- E. Shall be selected as required for the particular data frequency and signal level characteristics of the application.
- F. Total system response time not to exceed 5 nanoseconds.

2.03 COMMUNICATION LINES

- A. Shall incorporate silicon avalanche diode devices as the primary protection means with the following characteristics:
 - 1. Up to 150v signal line voltage
 - 2. 200v peak clamping voltage
- B. Total system response time not to exceed 5 nanoseconds.

PART 3 EXECUTION

3.01 GROUNDING

- A. All equipment shall be grounded in accordance with the NEC, these specifications and drawings, and the equipment suppliers recommendations.
- B. Power ground systems and signal ground system shall remain physically separated throughout the facility.
- C. Each equipment cabinet shall be bonded directly to a driven signal ground rod system, and grouped cabinets shall be bonded together and connected to a single point on the driven signal ground rod system.
- D. Cable shields shall be grounded at one end only. Grounding shall be at the low level end of the signal line.

3.02 SURGE PROTECTION

- A. All metallic data, communications, video, and sensor lines entering or leaving a building shall be protected with surge protection devices.
- B. Grounding of protection devices shall be in accordance with the manufacturers recommendations and/or as described in these specifications.
- C. All signal line protective devices shall be located at the terminal point nearest the cable interface with the exterior cable plant. Devices shall be mounted to the back panel of the cabinet.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- D. Verify power panel boards for locking equipment have panel board protectors.
- E. Where locking equipment is fed from a panel board not protected by a panel board protector, provide a branch circuit protector installed at the panel board.

3.03 GROUND RESISTANCE MEASUREMENT

- A. Each signal ground system D.C. resistance shall be measured between any point on the signal ground bus and the earth ground.
- B. An instrument designed specifically to measure the resistance of a point to each earth ground shall be used. The security contractor shall measure ground resistance in accordance with the procedure as outlined by the test equipment manufacturer. Instrument shall be biddle earth resistance test instrument.

END OF SECTION

SECTION 28 09 00
WIRING METHODS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section of the specifications requires the complete installation of all raceway systems for the Electronic Security systems. Conductors used for electronic signal transmission are specified with the specific equipment or systems in other sections of this division of the specifications.
- B. The work shall consist of the installation of a complete wiring and conduit system for the Electronic Security system of insulated conductors installed in a raceway system.
- C. Conductor sizes for wiring specified or indicated on the drawings are based on copper conductors; **aluminum conductors are not acceptable.**
- D. Location of all components of the Electronic Security systems indicated on the drawings are approximate unless specific dimensions are shown. Components shall be located for proper use of the device with consideration given to other equipment to be installed in the immediate vicinity.
- E. Material provided under this section of the specifications shall be new and shall be manufactured and tested in accordance with the following standards.
 - 1. NEMA - WC-5-1973 Thermoplastic Insulated Wires
 - 2. NEMA - TC-2 Schedule 40 PVC
 - 3. UL.6 - Rigid Galvanized Steel Conduit
 - 4. UL.797 - Electrical Metallic Tubing
 - 5. UL.1 - Flexible Steel Conduit
 - 6. ANSI - C-33.80 1971 Thermoplastic Insulated Wires
 - 7. ANSI - C-80-1 Rigid Galvanized Steel Conduit
 - 8. ANSI - C-80-3 Electrical Metallic Tubing

1.02 WIRING SYSTEMS

- A. Power wiring for motor operated solenoid operated lock sets operating at 120 volts shall be No.14 THWN or XHHW. Motor operated and solenoid operated lock sets operating at 24 volts AC or DC shall be connected with No. 16 MTW conductors. Power wiring for electric operated, motor driven, sliding gates and doors shall be provided under Division 16 - Electrical.
- B. All wiring for status pilot lamps shall be class one signalling circuits as defined by Article 725 of the National Electrical Code, 1981 Edition. All conductors shall be No. 16 MTW and shall be installed in common raceways and equipment enclosures with other conductors for locking devices within limitations defined by Article 725-15 of the National Electrical Code.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- C. All wiring systems shall be stranded copper conductors.
- D. All wiring systems shall be color coded. White or grey conductors are used only for neutral conductors and green only for grounding conductors.
- E. All conductors within junction boxes, pull boxes and equipment enclosures shall be grouped and laced with nylon tie straps with identification tab, in individual sets serving individual lock sets or operating mechanisms. Conductor groups shall be identified on the strap tab with respect to room or operator served.
- F. Locking system conductors shall not be spliced; conductors shall be continuous between lock sets and/or operators and termination point.
- G. All underground and underslab conductors shall be rated for direct burial.
- H. The Contractor shall prepare a "full size" drawing showing all components located inside the locking relay cabinet. The drawing shall be on malar with indelible ink medium. It shall be mounted on foam board and mounted using a wooden frame on the electronic room wall. It shall show wiring (identifying colors), fuses, relays (cells numbers or otherwise), status, commons, group functions, power supplies, etc. It shall be submitted to the engineer for approval near the completion of the project. All field changes must be reflected on this drawing.

1.03 CONDUIT SYSTEMS

- A. Raceway system within secured areas, i.e., areas accessible to inmates shall be concealed unless specifically indicated on the drawings or specified herein to the contrary.
- B. Refer to Division 16, "Conduit and Raceways" for specific conduit requirements.

1.04 JUNCTION BOXES

- A. Junction boxes and pull boxes required for the installation of the locking system wiring must be installed to be fully accessible as required by the National Electrical Code.
- B. Junction boxes and pull boxes shall not be installed in areas normally accessible to inmates.
- C. Where junction or pull boxes area installed outdoors, boxes shall be cast metal type with conduit hubs as required, flush mounted, checkerboard type cover held in place with brass screws and full neoprene gasket. Box shall be classified as NEMA-4 watertight. Box shall be set in concrete with concrete dimensions exceeding box dimensions by not less than three inches on all sides and bottom.

1.05 PULL BOXES AND JUNCTION BOXES

- A. Pull boxes and junction boxes shall be installed where indicated on the drawings and

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

where required to facilitate the installation of conductors.

- B. Pull boxes and junction boxes shall be installed to be fully accessible as required by the National Code.
- C. All pull boxes and junction boxes installed in interior spaces shall be constructed of code gauge galvanized sheet steel of the dimensions required by Article 370-18 of the National Electrical Code.
- D. Pull boxes and junction boxes installed exposed to the weather shall be cast metal boxes and blank cover gasket with hubs as required by the number and position of conduits entering each box.

1.06 AUXILIARY RELAYS

- A. Auxiliary relays shall be provided where necessary to interface systems specified in this Division of the specifications, i.e., lighting circuit, television circuits, solenoid valve, etc.
 - 1. Auxiliary relays shall be general purpose, glass enclosed socket type with 24V/120V control coil, unless other voltage is indicated. Relays shall be rated for continuous duty. Operating voltage range shall not be less than +10% - -15% of nominal voltage. All relays shall be provided with manual override operator. Contact arrangement shall be four pole double throw for each relay. Number of relays required to obtain control sequence indicated on control wiring diagram shall be provided. When required relay function exceeds three pole contact arrangement, one contact of initial relay shall be used to control coil of second relay. Sockets with screw type terminals rated at ten amps shall be provided for each relay.

1.07 AUXILIARY CABINETS

- A. Auxiliary cabinets shall be provided where necessary to house auxiliary control system component such as power supplies, control power transformers and auxiliary relays.
- B. Auxiliary cabinets shall be surface mounted constructed of code gauge steel, and finished on all surface with rust inhibiting prime coat and two coats of flat medium grey enamel paint. Panel shall contain hinged door and flush mounted lock and latch. Panel depth shall not exceed 5-3/4 inches.
- C. All wiring within auxiliary cabinet shall be grouped and laced with nylon tie straps, and terminated on identified terminal blocks. Wiring shall comply with the "WIRING SYSTEMS" section of these specifications. All conductors shall be terminated with crimp type lugs on both sets of terminal blocks.

1.08 LABELING REQUIREMENTS

- A. Labeling shall be done in accordance with the recommendations made in the ANSI/TIA-606-A document, manufacturer's recommendations and best industry practices.

Dawson County Law Enforcement Center/Jail and Government Center
RFP #377-21 Construction Services – Comprehensive Security Upgrade

- B. All spaces, pathways, outlets, cables, termination hardware, grounding system and equipment shall be labeled with machine-generated labels.
- C. All labels shall be clear with black text.
- D. All cables shall be labeled with machine generated, wrap around labels.
- E. A total of three (3) labels per horizontal cable are required at the following intervals:
6" from outlet; 18" from outlet' 12" from termination block/patch panel.
- F. Labeling scheme shall be alphanumeric.

END OF SECTION

271619 PATCH CORDS & WORK STATION CORDS

272133 WIRELESS ACCESS

ELECTRONIC SECURITY

SECTION NUMBER

SECTION NAME

280000 GENERAL - ELECTRONIC SECURITY

280100 SCOPE OF WORK - SECURITY

280120 TOUCHSCREEN LOCKING CONTROLS

280140 PROGRAMMABLE LOGIC CONTROLLERS

280150 ELECTRONIC RELAY SYSTEM

280200 INTERCOM SYSTEM

280210 CELL MONITORING & INMATE ALARM

280290 VIDEO VISITATION - ALTERNATE

280280 CCTV IP CAMERAS, ACCESS CONTROL

280400 WATCH TOUR

280508 GROUNDING & BONDING

280650 METAL DETECTORS AND PACKAGE SCREENERS -
ADD ALTERNATE 2

280710 UPS

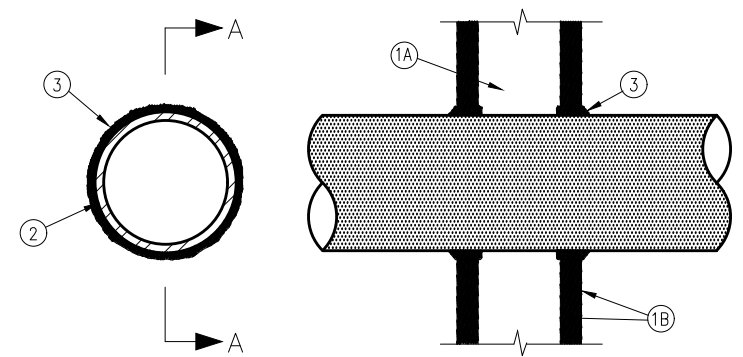
280800 SURGE PROTECTION

280900 WIRING METHODS

SYSTEM WL1001

(FORMERLY SYSTEM NO. 147)

F RATINGS- 1, 2, 3, and 4 hr. (see items 2 and 3)
 T RATINGS- 0, 1, 2, 3, and 4 Hr. (See Item 3)
 L Rating At Ambient - less than 1 CFM/sq. ft.
 L Rating At 400 F - less than 1 CFM/sq. ft.



SECTION A-A

- Wall Assembly - The 1, 2, 3 or 4 hr. fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing may consist of either wood studs (max 2 hr. fire rated assemblies) or steel channel studs. Wood studs to consist of nom. 2 by 4 in. lumber spaced 16 in. OC with nom. 2 by 4 in. lumber end plates and cross braced. Steel studs to be min. 3-5/8 in. wide by 1-3/8 in. deep channels spaced max. 24 in. OC.
 - Wallboard, Gypsum* - Nom 1/2 or 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max. diam. of opening is 13-1/2 in.
- Conduit - 4 in. diam. (or smaller) multi-conductor cable. Cable to be installed near center of stud cavity width and to be rigidly supported on both sides of wall assembly.
- Fill, Void or Cavity Material* - Caulk - Caulk fill material installed to completely fill annular space between cable and gypsum wallboard and with a min. 1/4 in. diam. bead of caulk applied to cable at its egress from the wall. Caulk installed symmetrically on both sides of wall assembly. The hourly F rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly F rating of the firestop system is dependent upon the type or size of the conduit and the hourly fire rating of the wall assembly in which it is installed.

Max. Cable Diam. in.	Annular Space, in.	F Rating, Hr.	T Rating, Hr.
1	0 to 3/16	1 or 2	1 or 2
2	3/8 to 1/2	3 or 4	3 or 4
3	1/2 to 3/4	3 or 4	3 or 4
4	0 to 1-1/2#	1 or 2	0

#0 to 1-1/2 in. annular space applies only when Type CP-25 WB+ caulk is used and only when the min. thickness of the gypsum wallboard is 5/8 in. for 1 hr. rated walls and 1-1/4 in. for 2 hr. rated walls.
 Minnesota Mining & Mfg. Co. - CP 25WB+
 Bearing the UL Classification Marking

1 CABLE PENETRATION AT RATED WALL

ES0.1 SCALE: NONE

TYPICAL DEVICE NOTES FOR LOCKING CONTROL and INTERCOM

- ALL DEVICES SHOWN ARE EXISTING UNLESS OTHERWISE NOTED. FIELD VERIFY EXISTANCE AND LOCATION. IF THE DEVICE IS EXISTING, TIE INTO THE NEW SYSTEM. IF THERE IS A DEVICE SHOWN ON THE DRAWINGS BUT NOT THERE, DO NOT PROVIDE THAT DEVICE ON THE NEW TOUCHSCREEN GRAPHICS.
- WHERE THERE IS AN EXISTING DEVICE ON THE PROJECT THAT IS NOT SHOWN ON THE DRAWINGS THEN TIE THIS DEVICE INTO THE NEW LOCKING CONTROL SYSTEM. FIELD VERIFY ALL CONTROL DEVICES.
- WHERE AN EXISTING LOCK IS FOUND TO BE NON-OPERATIONAL, NOTIFY THE OWNER IMMEDIATELY IN WRITING.
- TEST ALL EXISTING DEVICES PRIOR TO REMOVAL OF EXISTING HEADEND EQUIPMENT. IF AN EXISTING DEVICE IS FOUND TO BE NON-OPERATIONAL, NOTIFY THE OWNER AND ENGINEER IN WRITING IMMEDIATELY.
- EXISTING LOCKING CONTROL WIRING SHALL BE REUSED. THE EXISTING WIRING SHALL BE TESTED AND TERMINATED. IF ANY WIRING HAS BEEN FOUND TO BE NON-FUNCTIONAL, NOTIFY THE OWNER IN WRITING.
- NO SYSTEM PER PHASE OR PER HOUSING UNIT SHALL BE DE-ENERGIZED WITHOUT PRIOR WRITTEN REQUEST AT LEAST 72 HOURS IN ADVANCE AND WRITTEN APPROVAL FROM THE OWNER.

TYPICAL TOUCHSCREEN NOTES

- REPLACE ALL LOCKING CONTROL SHOWN ON THE DRAWINGS AND LOCATED ON SITE. FIELD VERIFY ALL PANELS TO BE REPLACED. SEE PHASING REQUIREMENTS IN THE SCOPE OF WORK.
- CONTROLLED DOORS, MONITORED DOORS SHOWN ON THESE DRAWINGS WERE DERIVED FROM EXISTING DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL CONTROLLED DEVICES. AT MINIMUM DUPLICATE EACH EXISTING PANEL FUNCTIONS INTO THE NEW CONTROLS. NEW TOUCHSCREEN FUNCTIONS ARE REQUIRED.
- PROVIDE SHOP DRAWINGS FOR REVIEW/APPROVAL BY THE OWNER AND CONSULTANT. DO NOT MANUFACTURE ANY LOCKING TOUCH SCREEN CONTROL PANELS UNTIL A PANEL REVIEW MEETING HAS BEEN EXECUTED. THE MEETING SHALL BE HELD AT THE PROJECT SITE OR THE OWNERS OFFICE.
- PROVIDE ROOM NAMES AND DOORS NUMBER ON ALL PANEL GRAPHICS. COORDINATE WITH THE OWNER ON SITE FOR DOOR AND ROOM NAME NOMENCLATURE AND COLOR GRAPHICS..
- FIELD VERIFY ALL EXISTING MILLWORK DIMENSIONS SO THAT THE NEW TOUCHSCREEN UNITS WILL HAVE ADEQUATE SPACE FOR MONITOR, KEYBOARD, MOUSE, ETC. FIELD VERIFY UNDERNEATH ALL MILLWORK SO THAT THERE IS ADEQUATE SPACE FOR THE TOUCHSCREEN PC, UPS POWER SUPPLIES, SECURITY EQUIPMENT CABINETS, ETC.
- COORDINATE EXACT LOCATION OF EACH PANEL IN EACH CONTROL ROOM BEFORE MANUFACTURING. ANY PANEL GRAPHICS THAT IS NOT ORIENTED CORRECTLY SHALL BE REJECTED AND REPLACED AT CONTRACTORS EXPENSE. FIELD VERIFY GRAPHIC ORIENTATION.
- WHERE THE UPS UNIT AND THE TOUCHSCREEN PC ARE REQUIRED TO BE INSTALLED UNDER THE CONTROL ROOM MILLWORK, THEN PROVIDE PROTECTIVE, LOCKABLE CAGE TO INSTALL THE UPS, PC, ETC. CAGE SHALL BE HEAVY DUTY, TOTAL WEBBING FOR AIR FLOW AND LOCKABLE. PROVIDE CUT SHEETS FOR APPROVAL.

NOTES FOR LOCKING CONTROL SYSTEM

- ALL DEVICES SHOWN ARE EXISTING AND ARE TO REMAIN AND SHALL BE REUSED UNLESS OTHERWISE NOTED. IF AN EXISTING DEVICE IS FOUND NOT WORKING, OR OTHER ISSUES, THESE DEVICES SHALL BE REPORTED TO THE OWNER IMMEDIATELY IN WRITING. THE OWNER WILL SERVICE THIS DEVICE. FIELD VERIFY ALL EXISTING DEVICES.
- DUPLICATE ALL INTERLOCK SCHEMES FOR ALL SALLYPORTS AND ANY OTHER AREAS.
- ALL EXISTING WIRING FOR ALL EXISTING SYSTEMS SHALL BE TESTED. PROVIDE A WRITTEN LIST OF EACH EXISTING DEVICE TESTED AND RESULTS.
- ALL EXISTING LOCKS & DOOR POSITION SWITCHES SHALL BE TESTED FOR OPERATION. PROVIDE A WRITTEN LIST OF ALL LOCKS AND DOOR POSITION SWITCHES THAT ARE NOT IN WORKING ORDER, TURN WRITTEN LIST OVER TO THE OWNER.
- FIELD VERIFY ALL CONTROLLED DEVICES, ELECTRIC LOCKS, SECURITY & COMMERCIAL DOOR POSITION SWITCHES, INTERCOMS, CAMERAS, DURESS, ETC. DUPLICATE ALL THE EXISTING TOUCHSCREEN CONTROLS ON THE NEW TOUCHSCREEN LOCKING CONTROL SYSTEM, INCLUDING BUT NOT LIMITED TO TELEPHONES, TELEVISION, WATCHTOUR, DOMESTIC WATER, INMATE CELL WATER, INMATE CELL LIGHTING, DAYROOM LIGHTING, ETC.
- LOCKING DEVICES SHOWN WERE TAKEN FROM ORIGINAL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL CONTROLLED DEVICES, ALL LOCATIONS..
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL REFLECTING ALL EXISTING CONTROLLED DEVICES.
- ALL EXISTING DEVICES SHALL BE CONTROLLED BY MASTER CONTROL AND BY THE LOCATION THEY ARE CURRENTLY BEING CONTROLLED FROM. DUPLICATE ALL EXISTING CONTROL FUNCTIONS.
- PROVIDE IN THE BASE BID 10% ADDITIONAL EXISTING DEVICES, PER SYSTEM TO BE ADDED TO THE OVERALL I/O INPUT COUNT. IF NOT USED, THE ADDITIONAL I/O SHALL BECOME SPARE FOR THE RESPECTIVE SYSTEMS.

SECURITY LEGEND NOTES:

- S1 EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS.
- S2 UNLESS NOTED, MOUNTING HEIGHT DIMENSIONS ARE TO THE BOTTOM OF THE DEVICE OR OUTLET ABOVE GRADE OR FINISHED FLOOR.
- S3 GENERAL - ALL SYMBOLS INDICATED IN THE LEGEND MAY NOT NECESSARILY BE USED ON THE PLANS.
- S4 CONNECT POWER DIRECTLY TO THE EQUIPMENT DESIGNED TO RECEIVE DIRECT CONNECTION. PROVIDE RECEPTACLE COMPATIBLE WITH EQUIPMENT DESIGNED FOR PLUG-IN POWER CONNECTION. PROVIDE AND INSTALL WIRE AND CONDUIT TO PANELBOARD DESIGNATED.
- S5 HOMERUN TO LOCKING CONTROL PANEL RELAY TERMINAL CABINET. IF RELAY TERMINAL CABINET IS REMOTE FROM LOCKING CONTROL PANEL, ROUTE HOMERUN TO THE SECURITY EQUIPMENT CABINET FOR RESPECTIVE AREA.

GENERAL NOTES:

- G1 FIELD VERIFY AND COORDINATE THE EXACT LOCATION OF ALL EXISTING ELECTRICAL POWER PANELS THAT POWER SECURITY EQUIPMENT.
- G2 EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS
- G3 CONTRACTOR SHALL SIZE CONDUIT BASED ON N.E.C. AND WIRING MANUFACTURER USED AND ON COMBINATION OF CIRCUITS IN CONDUIT. CONDUIT SIZE SHOWN ON DRAWINGS IS MINIMUM SIZE.
- G4 MINIMUM SIZE CONDUIT, ALL SYSTEMS 3/4", UNLESS OTHERWISE NOTED.
- G5 ALL CONDUIT SHALL BE CONCEALED WITHIN THE CEILING, SLAB OR WALLS. NO EXPOSED/SURFACE CONDUIT IS ACCEPTABLE. CONDUIT MAY BE EXPOSED IN THE SECURITY EQUIPMENT ROOM ONLY. IF SURFACE MOUNTED CONDUITS ARE REQUIRED, POST WALL & CEILING CONSTRUCTION, THEN RIGID CONDUIT ONLY, SURFACE TYPE JUNCTION BOXES, (NO RECESSED BOXES) AND STRAPPED EVERY SIX (6").
- G6 MOUNT ALL DEVICES IN HANDICAP AREAS IN ACCORDANCE WITH ADA STANDARDS. SEE ARCHITECTURALS FOR LOCATIONS. 'H' INDICATES HANDICAP, MOUNT DEVICE AT 48" AFF.
- G7 ALL SECURITY EQUIPMENT MOUNTED IN ANY INMATE AREA SHALL BE SECURE WITH STAINLESS STEEL TORX HEAD CENTER PIN SECURITY SCREWS.

EXISTING CONDITIONS NOTES:

- EX-1 THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXACT DIMENSIONS OF ALL CONDUIT AND WIRE FOR THE DIVISION 17000 WORK. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS FOR ALL HOMERUNS TO THE NEW AND EXISTING EQUIPMENT.
- EX-2 THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF CONDUITS. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE RESTORED TO THE ORIGINAL CONDITION AT NO COST TO THE OWNER.
- EX-3 THE CONTRACTOR SHALL TURN OVER TO THE OWNER ALL EXISTING SECURITY EQUIPMENT THAT IS TO BE REMOVED AND REPLACED.

EXISTING HARDWARE:

- A. THE EXISTING DOOR POSITION SWITCHES ON ALL CONTROLLED DOORS ARE BRINK 201030.
- B. THE EXISTING CORRIDOR LOCKS ARE MOTORIZED WIDE JAMB LOCKS.
- C. THE EXISTING CELL DOORS ARE SLIDING DEVICES.

NOTES FOR INTERCOM SYSTEM

- ALL DEVICES SHOWN ARE EXISTING AND ARE TO REMAIN AND SHALL BE REUSED UNLESS OTHERWISE NOTED. IF AN EXISTING DEVICE IS FOUND NOT WORKING, OR OTHER ISSUES, THESE DEVICES SHALL BE REPORTED TO THE OWNER IMMEDIATELY IN WRITING. THE OWNER WILL SERVICE THIS DEVICE. FIELD VERIFY ALL EXISTING DEVICES.
- ALL EXISTING INTERCOM MASTERS, AMPLIFIERS, HEADEND EQUIPMENT SHALL BE NEW. ALL EXISTING WIRING SHALL BE RE-USED.
- ALL EXISTING WIRING FOR ALL EXISTING SYSTEMS SHALL BE TESTED. PROVIDE A WRITTEN LIST OF EACH EXISTING DEVICE TESTED AND RESULTS.
- ALL EXISTING INTERCOMS, SPEAKERS, INTERCOM MASTERS, ETC. SHALL BE TESTED FOR OPERATION. PROVIDE A WRITTEN LIST OF ALL DEVICES THAT ARE NOT IN WORKING ORDER, TURN WRITTEN LIST OVER TO THE OWNER.
- DUPLICATE ALL INTERCOM CONTROLS ON THE NEW TOUCHSCREEN LOCKING CONTROL SYSTEM PANELS.
- INTERCOM DEVICES SHOWN WERE TAKEN FROM ORIGINAL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL CONTROLLED DEVICES, ALL LOCATIONS..
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL REFLECTING ALL EXISTING CONTROLLED DEVICES.
- ALL EXISTING DEVICES SHALL BE CONTROLLED BY MASTER CONTROL AND BY THE LOCATION THEY ARE CURRENTLY BEING CONTROLLED FROM. DUPLICATE ALL EXISTING CONTROL FUNCTIONS.
- PROVIDE IN THE BASE BID 10% ADDITIONAL EXISTING DEVICES, PER SYSTEM TO BE ADDED TO THE OVERALL I/O INPUT COUNT. IF NOT USED, THE ADDITIONAL I/O SHALL BECOME SPARE FOR THE RESPECTIVE SYSTEMS.

NOTES FOR ACCESS CONTROL SYSTEM

- ALL ACCESS CONTROL CARD READERS, HEADEND EQUIPMENT, OPERATING SOFTWARE SHALL BE NEW. IF AN EXISTING DEVICE IS FOUND NOT WORKING, OR OTHER ISSUES, THESE DEVICES SHALL BE REPORTED TO THE OWNER IMMEDIATELY IN WRITING. THE OWNER WILL SERVICE THIS DEVICE. FIELD VERIFY ALL EXISTING DEVICES.
- ALL EXISTING WIRING FOR ALL EXISTING SYSTEMS SHALL BE TESTED. PROVIDE A WRITTEN LIST OF EACH EXISTING DEVICE TESTED AND RESULTS.
- DUPLICATE ALL ACCESS CONTROLS ON THE NEW TOUCHSCREEN LOCKING CONTROL SYSTEM PANELS.
- ACCESS CONTROL DEVICES SHOWN WERE TAKEN FROM ORIGINAL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL CONTROLLED DEVICES, ALL LOCATIONS..
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL REFLECTING ALL EXISTING CONTROLLED DEVICES.
- ALL EXISTING DEVICES SHALL BE CONTROLLED BY MASTER CONTROL AND BY THE LOCATION THEY ARE CURRENTLY BEING CONTROLLED FROM. DUPLICATE ALL EXISTING CONTROL FUNCTIONS.
- PROVIDE IN THE BASE BID 10% ADDITIONAL EXISTING DEVICES, PER SYSTEM TO BE ADDED TO THE OVERALL I/O INPUT COUNT. IF NOT USED, THE ADDITIONAL I/O SHALL BECOME SPARE FOR THE RESPECTIVE SYSTEMS.

RACEWAY AND CIRCUITING SYSTEM		
SYMBOL	DESCRIPTION	MTG. HEIGHT NOTE S-2
⊙	JUNCTION BOX. SEE FLOOR PLANS FOR EXACT SIZE.	
⊙s	FLOOR MOUNTED JUNCTION BOX. "S" = SURFACE, "R" = RECESSED.	
⊕	GROUND MOUNTED PULL BOX.	
—	RACEWAY INSTALLED CONCEALED IN WALL AND \ OR ABOVE CEILING.	
—	RACEWAY INSTALLED CONCEALED IN SLAB OR BELOW GRADE.	
—	RACEWAY INSTALLED EXPOSED.	
—	CONDUIT UP \ CONDUIT DOWN	
⊕	GROUND. #6 AWG TO 8"-0" COPPERWELD GROUND ROD	
⊕	SURGE PROTECTION DEVICE	

LOCKING CONTROL SYSTEM		
SYMBOL	DESCRIPTION	MTG. HEIGHT NOTE S-2
⊕	ELECTRIC OPERATED HARDWARE INCLUDING POSITION SWITCHES AND/OR LIMIT SWITCHES.	
⊙	DOOR POSITION SWITCH.	
⊕	INDICATES INTERLOCKING. ONLY ONE DOOR INCLUDED IN ANY SINGLE INTERLOCKING SCHEME MAY BE OPENED OR UNLOCKED AT A TIME.	
⊕	CALL-IN PUSHBUTTON SWITCH DEVICE.	
⊕	TOUCHSCREEN LOCKING CONTROL PANEL WITH PC AND UPS BELOW MILLWORK	
⊕	DURESS STATION - "UC"-UNDER COUNTER - "W" WALL MOUNTED. ALL NEW DURESS SWITCHES SHALL BE RED MUSHROOM HEAD WITH KEY RESET	

INTERCOM CONTROL SYSTEM		
SYMBOL	DESCRIPTION	MTG. HEIGHT NOTE S-2
⊕	INTERCOM MASTER. PROVIDE ONE PER TOUCHSCREEN UNIT. THIS INTERCOM MASTER IS FOR COMMUNICATIONS BETWEEN EVERY CONTROL ROOM & CENTRAL CONTROL ROOM.	
⊕	INTERCOM STATION	

CLOSED CIRCUIT TELEVISION		
SYMBOL	DESCRIPTION	MTG. HEIGHT NOTE S-2
⊕	EXISTING CLOSED CIRCUIT TELEVISION CAMERA. NUMBER LEGEND BELOW INDICATES CAMERA NUMBER. SEE CCTV CAMERA SCHEDULE AND SPECIFICATIONS	
⊕	NEW INTERIOR OR EXTERIOR SMOKED DOME IP CLOSED CIRCUIT CAMERA. CAMERA SHALL BE MULTI-SENSOR LENSES, HI-RESOLUTION. PROVIDE NEW WIRE, CONDUIT, ETC. NUMBER OF TRIANGLES INDICATE NUMBER OF LENSES REQUIRED EACH CAMERA.	
⊕	DIRECTIONAL ARROWS INDICATE THE EXISTING CAMERAS ARE PAN, TILT ZOOM. INDICATE PAN, TILT AND ZOOM.	
N	INDICATES NEW CAMERA. PROVIDE NEW WIRE, CONDUIT, J-BOXES, ETC. INDICATE PAN, TILT AND ZOOM.	
XAB	EXISTING CAMERA TO BE ABANDON, WIRE, CONDUIT, J-BOXES TO REMAIN. PROVIDE COVER PLATE TO MATCH EXISTING CEILING AND/OR WALL.	
XRP	EXISTING CAMERA TO BE REPLACED. WIRE TO BE REPLACED, RE-USE CONDUIT JUNCTION BOXES, ETC.	
MOVE	INDICATES THAT THE EXISTING CAMERA SHALL BE MOVED TO A NEW LOCATION THAT IS NEAR. PROVIDE NEW WIRE, EXTEND CONDUITS FROM EXISTING CAMERA TO NEW CAMERA.	
⊕	HEAVY DUTY HIGH SECURITY CORNER MOUNT IP CAMERA AND HOUSING. TO BE MOUNTED IN INMATE CELLS.	
⊕	WHERE BOTH CAMERA SYMBOLS ARE SHOWN REPLACE EXISTING CAMERA WITH NEW CAMERA WITH MULTI-SENSOR LENSES. NUMBER OF TRIANGLES INDICATE NUMBER OF LENSES REQUIRED EACH CAMERA.	
⊕	NEW MOTORIZED PAN TILT ZOOM CAMERA WITH 5mp LENS. WITH WEATHER PROOF EXTERIOR MOUNT	

COMMUNICATIONS SYSTEM		
SYMBOL	DESCRIPTION	MTG. HEIGHT NOTE S-2
⊕	MASTER COMMUNICATION STATION AND MONITORING EQUIPMENT. SEE ONE LINE DIAGRAM FOR INTERCONNECTION OF MASTER TO MASTER REQUIREMENTS.	
⊕	INTERCOM STAFF STATION WITH CALL ORIENTATION. "F" INDICATED MOUNTED IN FRAME. COORDINATE INSTALLATION WITH THE HOLLOW METAL MANUFACTURER.	48"
⊕	CEILING MOUNTED SOUND SYSTEM SPEAKER. SEE NOTE G-3.	
⊕	WALL MOUNTED HORN, MOUNT 12" BELOW CEILING UNLESS OTHERWISE NOTED. "WP" INDICATES WEATHERPROOF.	
⊕	PUBLIC ADDRESS MASTER	
⊕	WALL MOUNTED SPEAKER. MOUNT 12" BELOW CEILING.	
⊕	CEILING MOUNTED TWO WAY HANDS FREE INTERCOM. CALL FROM CENTRAL ONLY.	
⊕	ADMINISTRATIVE INTERCOM SYSTEM	

ACCESS CONTROL SYSTEM		
SYMBOL	DESCRIPTION	MTG. HEIGHT
⊕	ELECTRIC OPERATED MAGNETIC LOCK(S) INCLUDING POSITION SWITCHES AND \ OR LIMIT SWITCHES. BY OTHERS.	
⊕	ELECTRIC OPERATED ELECTRIC STRIKE INCLUDING POSITION SWITCHES AND \ OR LIMIT SWITCHES. BY OTHERS.	
⊙	DOOR POSITION INDICATOR	
⊕	INFRARED SENSORS	
⊕	EXIT REQUEST PUSHBUTTON	
⊕	KEY SWITCH FOR LOCAL UNLOCK	
⊕	HID PROXIMITY CARD READER	

NOTES FOR CCTV SYSTEM

- ALL CAMERAS SHALL BE NEW. THERE ARE EXISTING CAMERAS AND NEW CAMERA LOCATIONS. FOR NEW CAMERAS, PROVIDE NEW CONDUIT, WIRE, CAMERA HOUSING, ETC. FOR EXISTING CAMERAS, PROVIDE NEW CAMERAS AND NEW WIRE. RE-USE CONDUIT, JUNCTION BOXES, ETC.
- DUPLICATE ALL NEW AND EXISTING CAMERA CONTROLS ON THE NEW TOUCHSCREEN LOCKING CONTROL SYSTEM.
- ALL EXISTING WIRING FOR ALL EXISTING SYSTEMS SHALL BE TESTED. PROVIDE A WRITTEN LIST OF EACH EXISTING DEVICE TESTED AND RESULTS.
- THE CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS FOR NEW AND EXISTING CAMERAS AND COORDINATE THE FIELD OF VIEW REQUIRED FOR EACH CAMERA WITH THE OWNER.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL REFLECTING ALL EXISTING AND NEW CAMERAS.
- PROVIDE IN THE BASE BID 10% ADDITIONAL EXISTING DEVICES, PER SYSTEM TO BE ADDED TO THE OVERALL I/O INPUT COUNT. IF NOT USED, THE ADDITIONAL I/O SHALL BECOME SPARE FOR THE RESPECTIVE SYSTEMS.

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE LLC. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
25 Justice Way - Suite 2223 - Dawsonville, GA 30534
Project #367-20 - Security Systems Upgrades



JULY 20, 2021

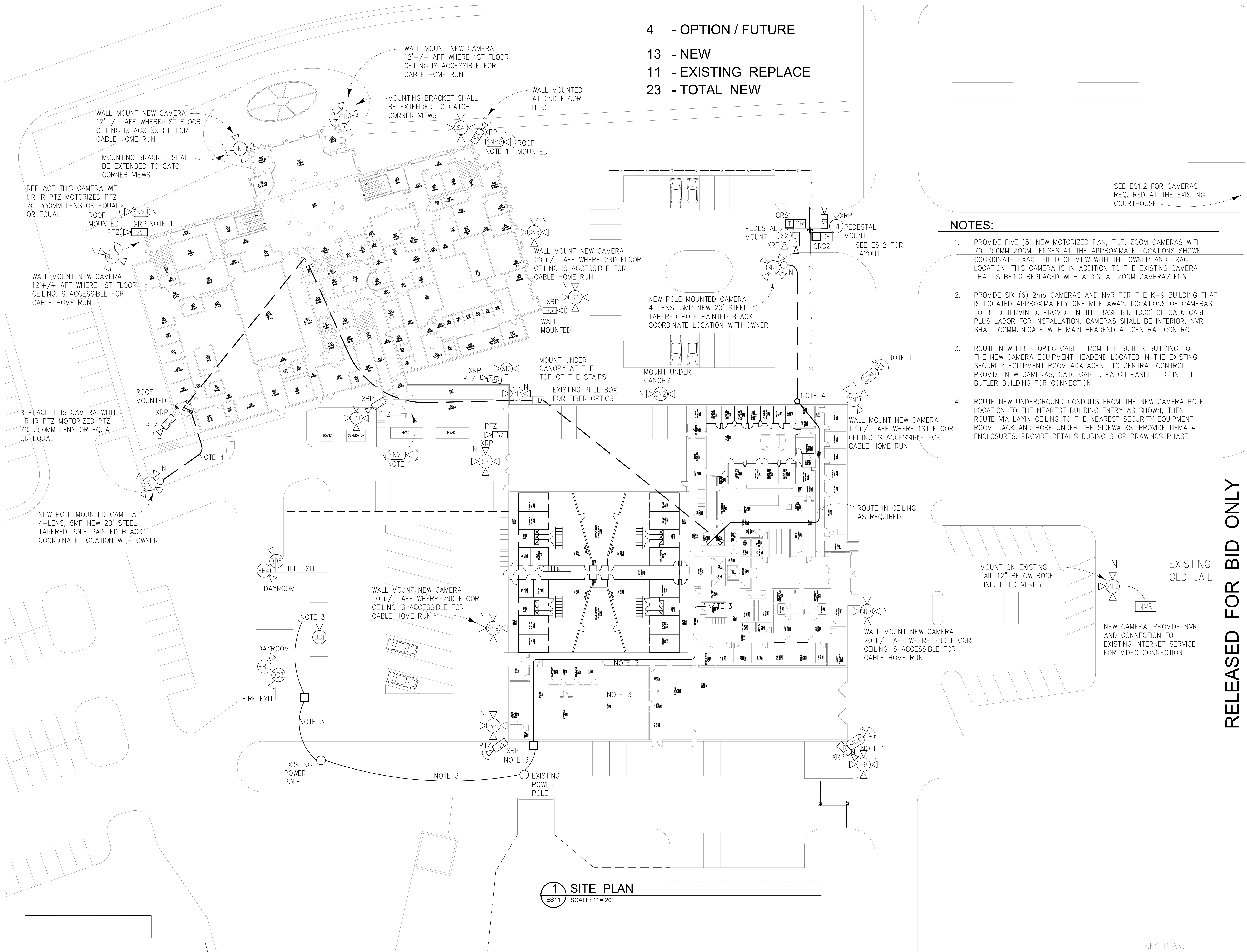
date:
JULY 20, 2021
 BID SET ONLY

LEGEND & GENERAL NOTES - LOCKING & CAMERA SYSTEM REPLACEMENT

ES0.1

RELEASED FOR BID ONLY

4 - OPTION / FUTURE
 13 - NEW
 11 - EXISTING REPLACE
 23 - TOTAL NEW



NOTES:

1. PROVIDE FIVE (5) NEW MOTORIZED PAN, TILT, ZOOM CAMERAS WITH 70-350MM ZOOM LENSES AT THE APPROXIMATE LOCATIONS SHOWN. COORDINATE EXACT FIELD OF VIEW WITH THE OWNER AND EXACT LOCATION. THIS CAMERA IS IN ADDITION TO THE EXISTING CAMERA THAT IS BEING REPLACED WITH A DIGITAL ZOOM CAMERA/LENS.
2. PROVIDE SIX (6) 2MP CAMERAS AND NVR FOR THE K-9 BUILDING THAT IS LOCATED APPROXIMATELY ONE MILE AWAY. LOCATIONS OF CAMERAS TO BE DETERMINED. PROVIDE IN THE BASE BID 1000' OF CAT6 CABLE PLUS LABOR FOR INSTALLATION. CAMERAS SHALL BE INTERIOR, NVR SHALL COMMUNICATE WITH MAIN HEADEND AT CENTRAL CONTROL.
3. ROUTE NEW FIBER OPTIC CABLE FROM THE BUTLER BUILDING TO THE NEW CAMERA EQUIPMENT HEADEND LOCATED IN THE EXISTING SECURITY EQUIPMENT ROOM ADJACENT TO CENTRAL CONTROL. PROVIDE NEW CAMERAS, CAT6 CABLE, PATCH PANEL, ETC IN THE BUTLER BUILDING FOR CONNECTION.
4. ROUTE NEW UNDERGROUND CONDUITS FROM THE NEW CAMERA POLE LOCATION TO THE NEAREST BUILDING ENTRY AS SHOWN, THEN ROUTE VIA LAYIN CEILING TO THE NEAREST SECURITY EQUIPMENT ROOM. JACK AND BORE UNDER THE SIDEWALKS, PROVIDE NEMA 4 ENCLOSURES. PROVIDE DETAILS DURING SHOP DRAWINGS PHASE.

RELEASED FOR BID ONLY

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

GEORGIA PROFESSIONAL ENGINEER
 MICHAEL D. HOSKINS
 JULY 20, 2021

date:
 JULY 20, 2021
 BID SET ONLY

OVERALL SITE PLAN
 JAIL/LEC/COURTHOUSE
 SECURITY SYSTEMS
 UPGRADES

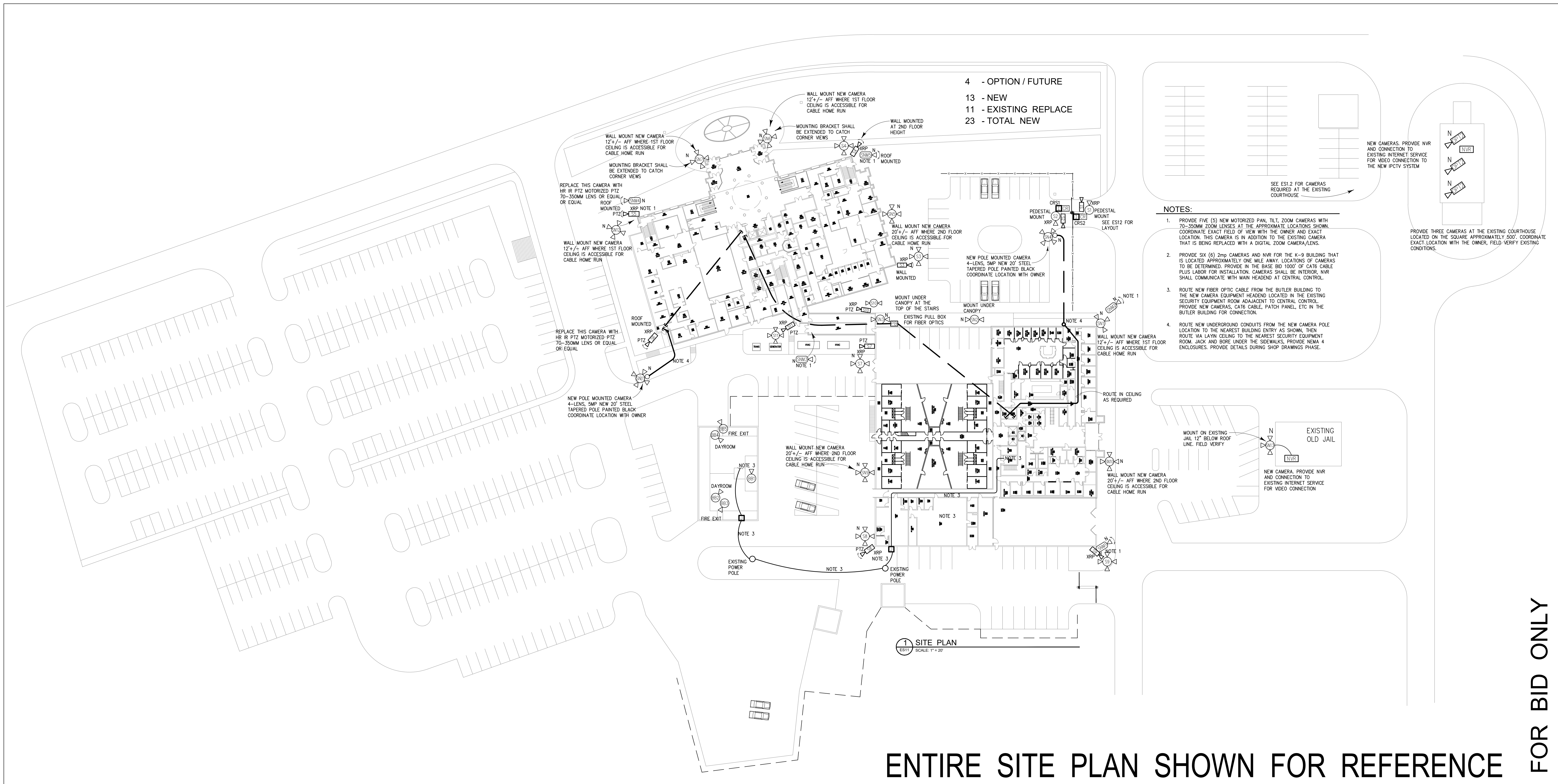
ES1.1

1 SITE PLAN
 ES11 SCALE: 1" = 20'

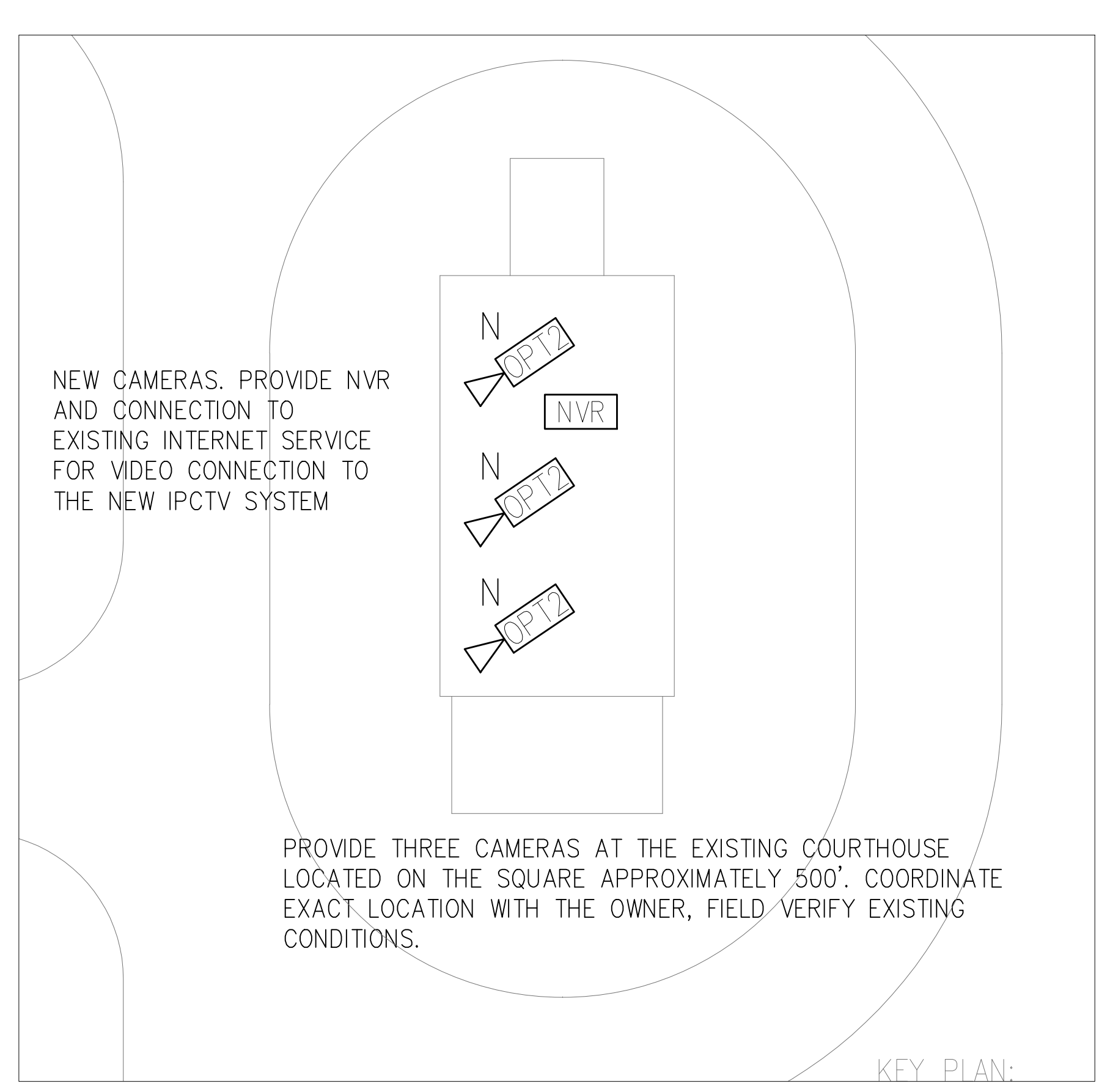
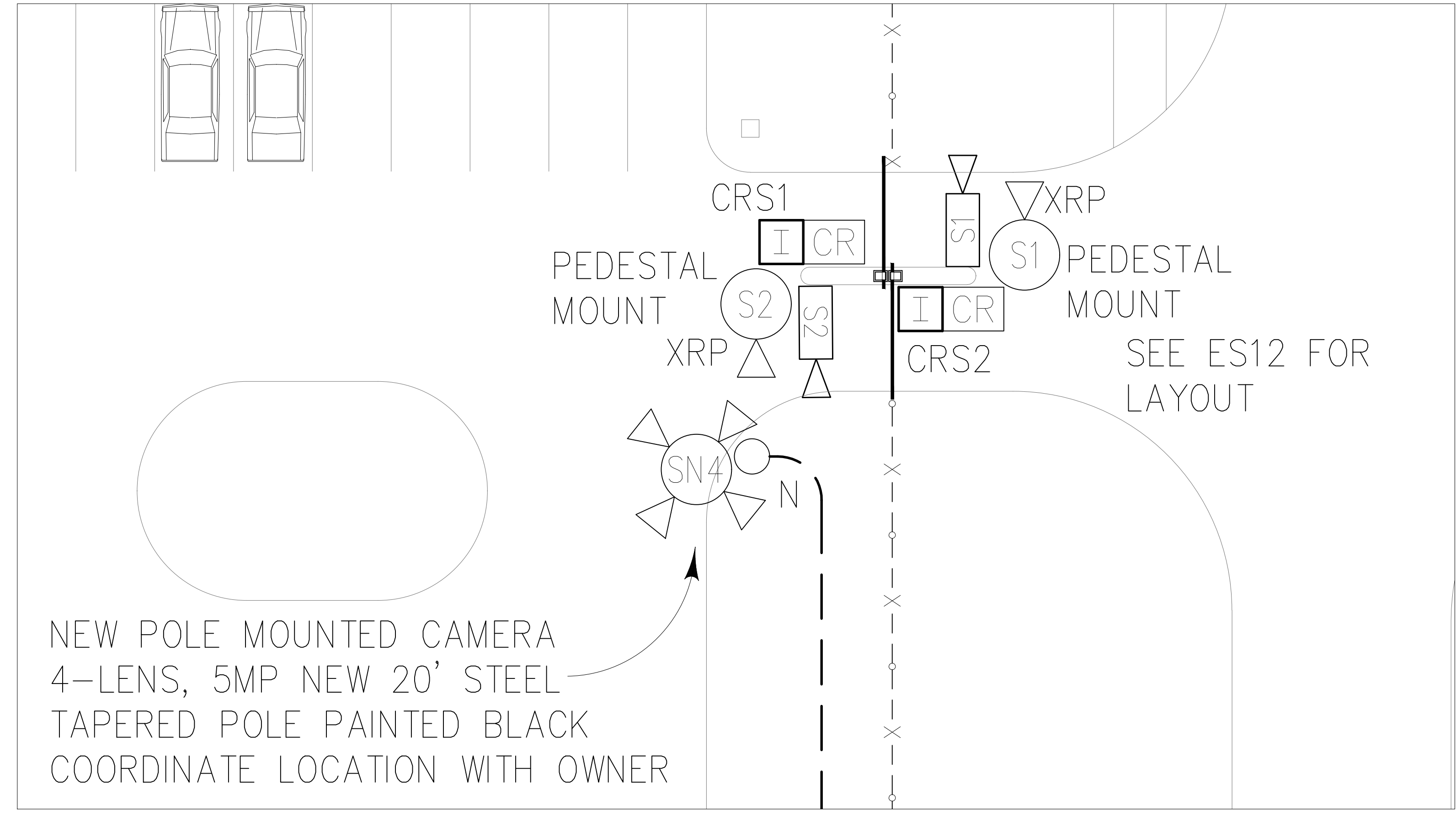
KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com



ENTIRE SITE PLAN SHOWN FOR REFERENCE



RELEASED FOR BID ONLY

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

GEORGIA PROFESSIONAL ENGINEER
 Matthew D. Hoskins
 JULY 20, 2021

date:
 JULY 20, 2021
 BID SET ONLY

OVERALL SITE PLAN
 JAIL/LEC/COURTHOUSE
 SECURITY SYSTEMS
 UPGRADES

ES1.2

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



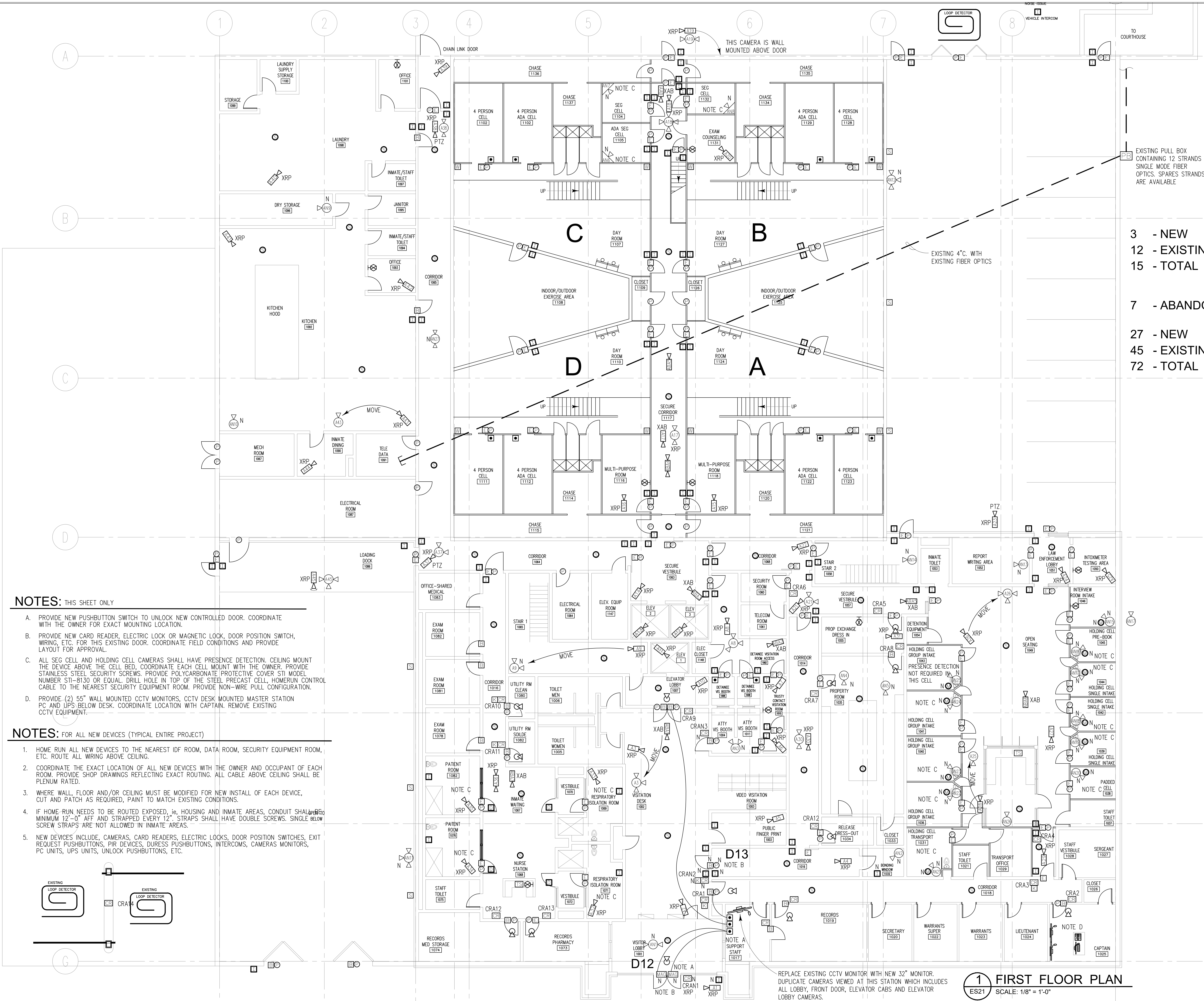
JULY 20, 2021

date:
JULY 20, 2021
 BID SET ONLY

FIRST FLOOR PLAN
 JAIL AND LEC
 SECURITY SYSTEMS
 UPGRADES

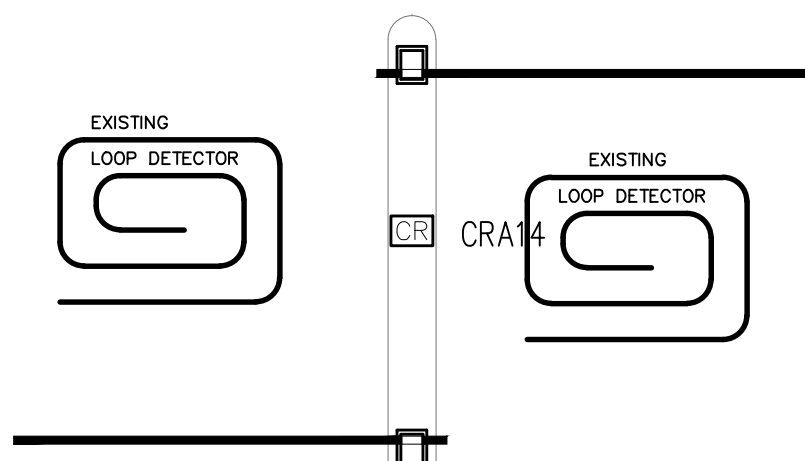
ES2.1

RELEASED FOR BID ONLY



- NOTES: THIS SHEET ONLY**
- PROVIDE NEW PUSHBUTTON SWITCH TO UNLOCK NEW CONTROLLED DOOR. COORDINATE WITH THE OWNER FOR EXACT MOUNTING LOCATION.
 - PROVIDE NEW CARD READER, ELECTRIC LOCK OR MAGNETIC LOCK, DOOR POSITION SWITCH, WIRING, ETC. FOR THIS EXISTING DOOR. COORDINATE FIELD CONDITIONS AND PROVIDE LAYOUT FOR APPROVAL.
 - ALL SEG CELL AND HOLDING CELL CAMERAS SHALL HAVE PRESENCE DETECTION. CEILING MOUNT THE DEVICE ABOVE THE CELL BED, COORDINATE EACH CELL MOUNT WITH THE OWNER. PROVIDE STAINLESS STEEL SECURITY SCREWS. PROVIDE POLYCARBONATE PROTECTIVE COVER STI MODEL NUMBER STI-8130 OR EQUAL. DRILL HOLE IN TOP OF THE STEEL PRECAST CELL, HOMERUN CONTROL CABLE TO THE NEAREST SECURITY EQUIPMENT ROOM. PROVIDE NON-WIRE PULL CONFIGURATION.
 - PROVIDE (2) 55" WALL MOUNTED CCTV MONITORS, CCTV DESK MOUNTED MASTER STATION PC AND UPS BELOW DESK. COORDINATE LOCATION WITH CAPTAIN. REMOVE EXISTING CCTV EQUIPMENT.

- NOTES: FOR ALL NEW DEVICES (TYPICAL ENTIRE PROJECT)**
- HOME RUN ALL NEW DEVICES TO THE NEAREST IDF ROOM, DATA ROOM, SECURITY EQUIPMENT ROOM, ETC. ROUTE ALL WIRING ABOVE CEILING.
 - COORDINATE THE EXACT LOCATION OF ALL NEW DEVICES WITH THE OWNER AND OCCUPANT OF EACH ROOM. PROVIDE SHOP DRAWINGS REFLECTING EXACT ROUTING. ALL CABLE ABOVE CEILING SHALL BE PLENUM RATED.
 - WHERE WALL, FLOOR AND/OR CEILING MUST BE MODIFIED FOR NEW INSTALL OF EACH DEVICE, CUT AND PATCH AS REQUIRED, PAINT TO MATCH EXISTING CONDITIONS.
 - IF HOME-RUN NEEDS TO BE ROUTED EXPOSED, 1/2" HOUSING AND INMATE AREAS, CONDUIT SHALL BE MINIMUM 12"-0" AFF AND STRAPPED EVERY 12". STRAPS SHALL HAVE DOUBLE SCREWS. SINGLE BELOW SCREW STRAPS ARE NOT ALLOWED IN INMATE AREAS.
 - NEW DEVICES INCLUDE, CAMERAS, CARD READERS, ELECTRIC LOCKS, DOOR POSITION SWITCHES, EXIT REQUEST PUSHBUTTONS, PIR DEVICES, DURESS PUSHBUTTONS, INTERCOMS, CAMERAS MONITORS, PC UNITS, UPS UNITS, UNLOCK PUSHBUTTONS, ETC.



1 FIRST FLOOR PLAN
 ES21 SCALE: 1/8" = 1'-0"

REPLACE EXISTING CCTV MONITOR WITH NEW 32" MONITOR. DUPLICATE CAMERAS VIEWED AT THIS STATION WHICH INCLUDES ALL LOBBY, FRONT DOOR, ELEVATOR CABS AND ELEVATOR LOBBY CAMERAS.

KEY PLAN:

revisions:

TANNER HOSKINS
ENGINEERING
CONSULTANTS, LLC

ELECTRONIC SECURITY
SYSTEMS, ELECTRICAL,
LOW VOLTAGE &
SECURITY HARDWARE
3447 Lake Seminole Place
Buford, Georgia 30519
tanner@tannerhoskins.com
678-656-8832 mobile
www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE
PROPERTY OF THE COMPANY TANNER HOSKINS
CONSULTANTS, LLC.
THESE DRAWINGS SHALL NOT BE REPRODUCED
PUBLISHED OR USED IN ANY WAY WITHOUT
WRITTEN PERMISSION AND CREDIT FROM THCLLC.
© Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail &
Government Center Comprehensive Security System Upgrade
25 Justice Way - Suite 2223 - Dawsonville, GA 30534
Project #367-20 - Security Systems Upgrades



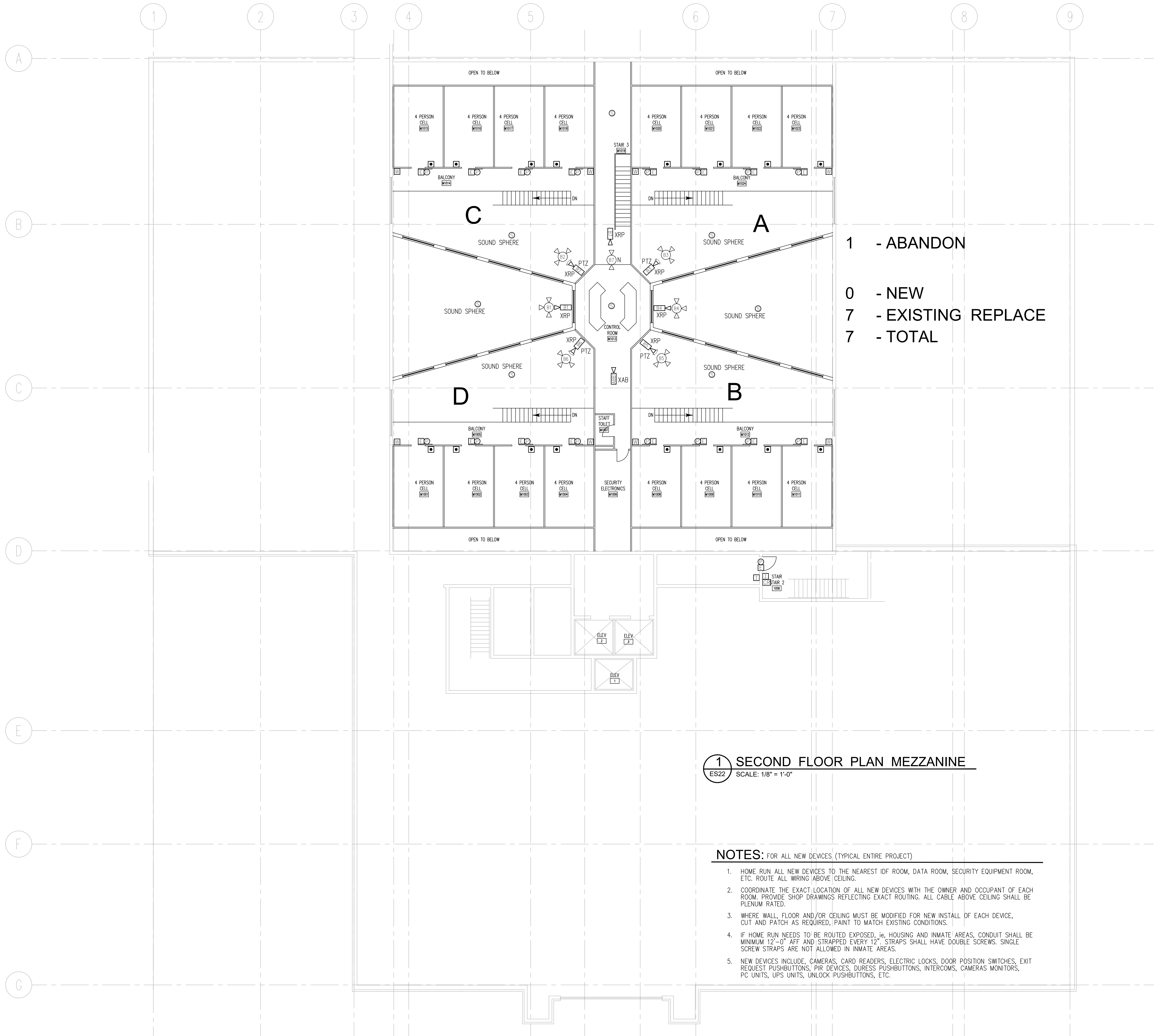
JULY 20, 2021

date:
JULY 20, 2021
BID SET ONLY

SECOND FLOOR PLAN
MEZZANINE JAIL AND LEC
SECURITY SYSTEMS
UPGRADES

ES2.2

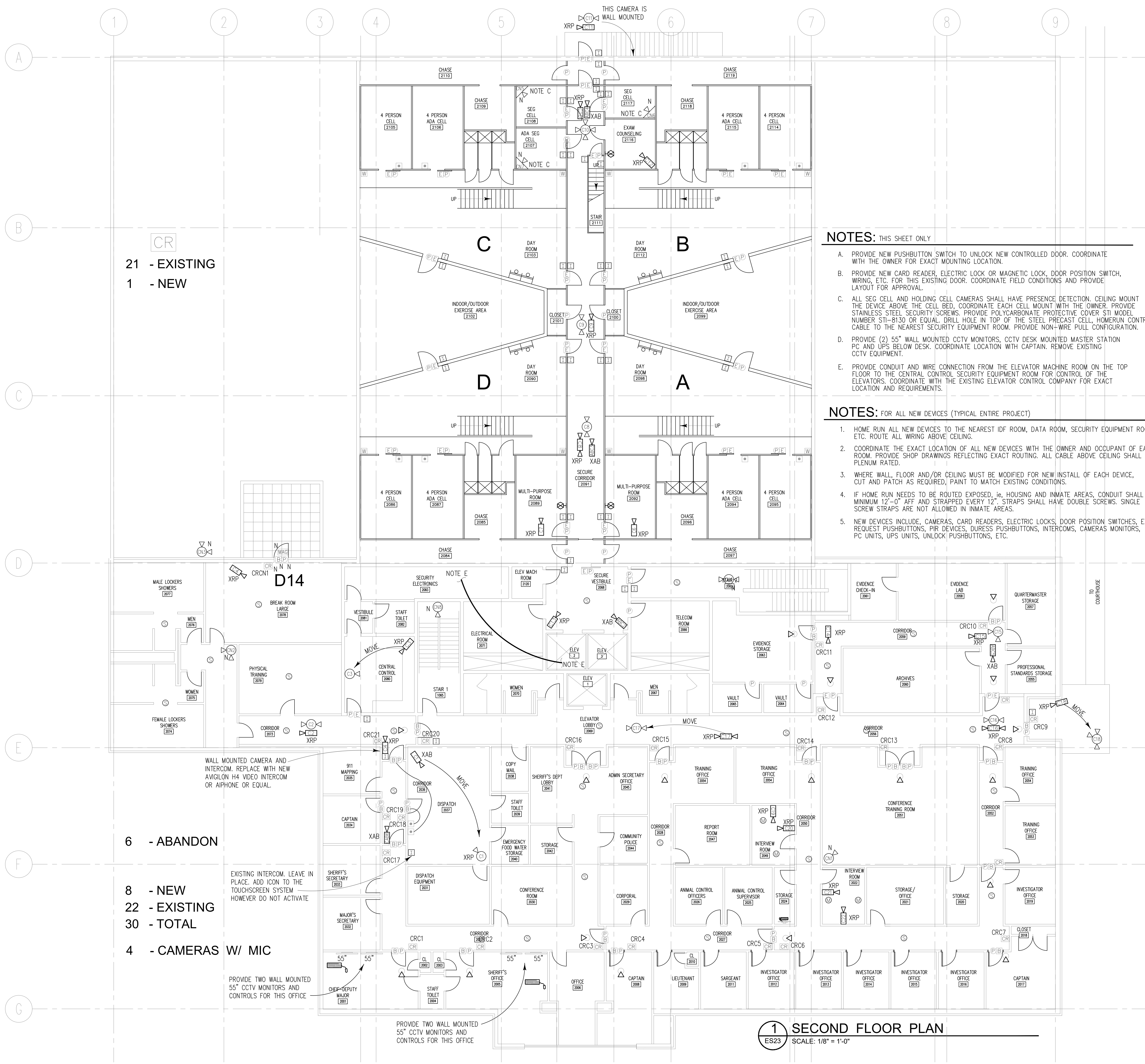
RELEASED FOR BID ONLY



KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com



CR
 21 - EXISTING
 1 - NEW

6 - ABANDON
8 - NEW
22 - EXISTING
30 - TOTAL
4 - CAMERAS W/ MIC

- NOTES: THIS SHEET ONLY**
- PROVIDE NEW PUSHBUTTON SWITCH TO UNLOCK NEW CONTROLLED DOOR. COORDINATE WITH THE OWNER FOR EXACT MOUNTING LOCATION.
 - PROVIDE NEW CARD READER, ELECTRIC LOCK OR MAGNETIC LOCK, DOOR POSITION SWITCH, WIRING, ETC. FOR THIS EXISTING DOOR. COORDINATE FIELD CONDITIONS AND PROVIDE LAYOUT FOR APPROVAL.
 - ALL SEC CELL AND HOLDING CELL CAMERAS SHALL HAVE PRESENCE DETECTION. CEILING MOUNT THE DEVICE ABOVE THE CELL BED, COORDINATE EACH CELL MOUNT WITH THE OWNER. PROVIDE STAINLESS STEEL SECURITY SCREWS. PROVIDE POLYCARBONATE PROTECTIVE COVER STI MODEL NUMBER STI-8130 OR EQUAL. DRILL HOLE IN TOP OF THE STEEL PRECAST CELL, HOMERUN CONTROL CABLE TO THE NEAREST SECURITY EQUIPMENT ROOM. PROVIDE NON-WIRE PULL CONFIGURATION.
 - PROVIDE (2) 55" WALL MOUNTED CCTV MONITORS, CCTV DESK MOUNTED MASTER STATION PC AND UPS BELOW DESK. COORDINATE LOCATION WITH CAPTAIN. REMOVE EXISTING CCTV EQUIPMENT.
 - PROVIDE CONDUIT AND WIRE CONNECTION FROM THE ELEVATOR MACHINE ROOM ON THE TOP FLOOR TO THE CENTRAL CONTROL SECURITY EQUIPMENT ROOM FOR CONTROL OF THE ELEVATORS. COORDINATE WITH THE EXISTING ELEVATOR CONTROL COMPANY FOR EXACT LOCATION AND REQUIREMENTS.

- NOTES: FOR ALL NEW DEVICES (TYPICAL ENTIRE PROJECT)**
- HOME RUN ALL NEW DEVICES TO THE NEAREST IDF ROOM, DATA ROOM, SECURITY EQUIPMENT ROOM, ETC. ROUTE ALL WIRING ABOVE CEILING.
 - COORDINATE THE EXACT LOCATION OF ALL NEW DEVICES WITH THE OWNER AND OCCUPANT OF EACH ROOM. PROVIDE SHOP DRAWINGS REFLECTING EXACT ROUTING. ALL CABLE ABOVE CEILING SHALL BE PLENUM RATED.
 - WHERE WALL, FLOOR AND/OR CEILING MUST BE MODIFIED FOR NEW INSTALL OF EACH DEVICE, CUT AND PATCH AS REQUIRED, PAINT TO MATCH EXISTING CONDITIONS.
 - IF HOME RUN NEEDS TO BE ROUTED EXPOSED, ie. HOUSING AND INMATE AREAS, CONDUIT SHALL BE MINIMUM 12"-0" AFF AND STRAPPED EVERY 12". STRAPS SHALL HAVE DOUBLE SCREWS. SINGLE SCREW STRAPS ARE NOT ALLOWED IN INMATE AREAS.
 - NEW DEVICES INCLUDE, CAMERAS, CARD READERS, ELECTRIC LOCKS, DOOR POSITION SWITCHES, EXIT REQUEST PUSHBUTTONS, PIR DEVICES, DURESS PUSHBUTTONS, INTERCOMS, CAMERAS MONITORS, PC UNITS, UPS UNITS, UNLOCK PUSHBUTTONS, ETC.

RELEASED FOR BID ONLY

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



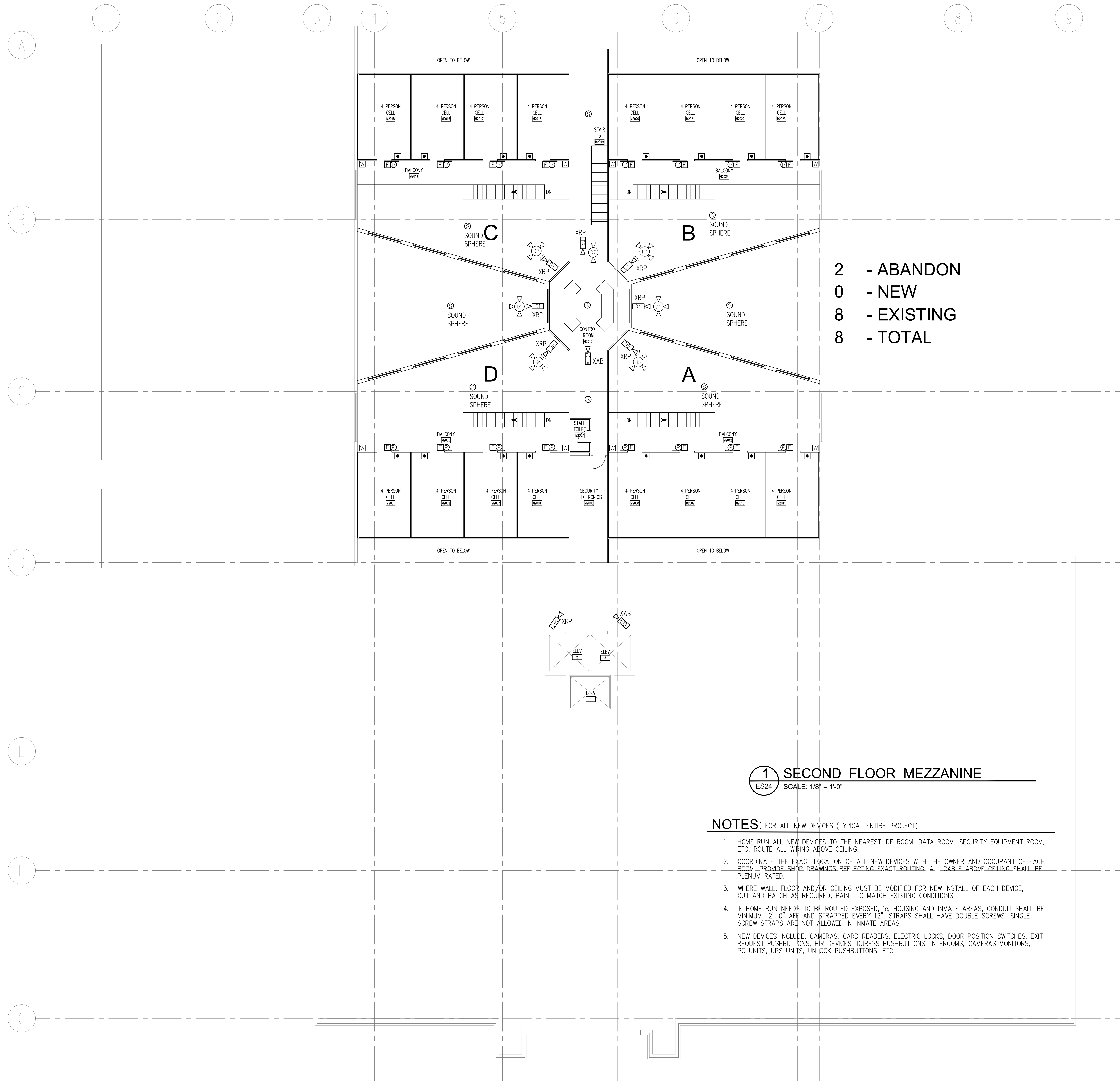
date:
JULY 20, 2021
 BID SET ONLY

SECOND FLOOR PLAN
 JAIL AND LEC
 SECURITY SYSTEMS
 UPGRADE

ES2.3

1 SECOND FLOOR PLAN
 ES23 SCALE: 1/8" = 1'-0"

KEY PLAN:



2 - ABANDON
 0 - NEW
 8 - EXISTING
 8 - TOTAL

1 SECOND FLOOR MEZZANINE
 ES24 SCALE: 1/8" = 1'-0"

NOTES: FOR ALL NEW DEVICES (TYPICAL ENTIRE PROJECT)

- HOME RUN ALL NEW DEVICES TO THE NEAREST IDF ROOM, DATA ROOM, SECURITY EQUIPMENT ROOM, ETC. ROUTE ALL WIRING ABOVE CEILING.
- COORDINATE THE EXACT LOCATION OF ALL NEW DEVICES WITH THE OWNER AND OCCUPANT OF EACH ROOM. PROVIDE SHOP DRAWINGS REFLECTING EXACT ROUTING. ALL CABLE ABOVE CEILING SHALL BE PLENUM RATED.
- WHERE WALL, FLOOR AND/OR CEILING MUST BE MODIFIED FOR NEW INSTALL OF EACH DEVICE, CUT AND PATCH AS REQUIRED, PAINT TO MATCH EXISTING CONDITIONS.
- IF HOME RUN NEEDS TO BE ROUTED EXPOSED, ie. HOUSING AND INMATE AREAS, CONDUIT SHALL BE MINIMUM 12'-0" AFF AND STRAPPED EVERY 12". STRAPS SHALL HAVE DOUBLE SCREWS. SINGLE SCREW STRAPS ARE NOT ALLOWED IN INMATE AREAS.
- NEW DEVICES INCLUDE, CAMERAS, CARD READERS, ELECTRIC LOCKS, DOOR POSITION SWITCHES, EXIT REQUEST PUSHBUTTONS, PIR DEVICES, DURESS PUSHBUTTONS, INTERCOMS, CAMERAS MONITORS, PC UNITS, UPS UNITS, UNLOCK PUSHBUTTONS, ETC.

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-656-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

RELEASED FOR BID ONLY



JULY 20, 2021

date:
 JULY 20, 2021
 BID SET ONLY

SECOND FLOOR PLAN
 MEZZANINE JAIL AND LEC
 SECURITY SYSTEMS
 UPGRADES

ES2.4

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC

ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

RELEASED FOR BID ONLY

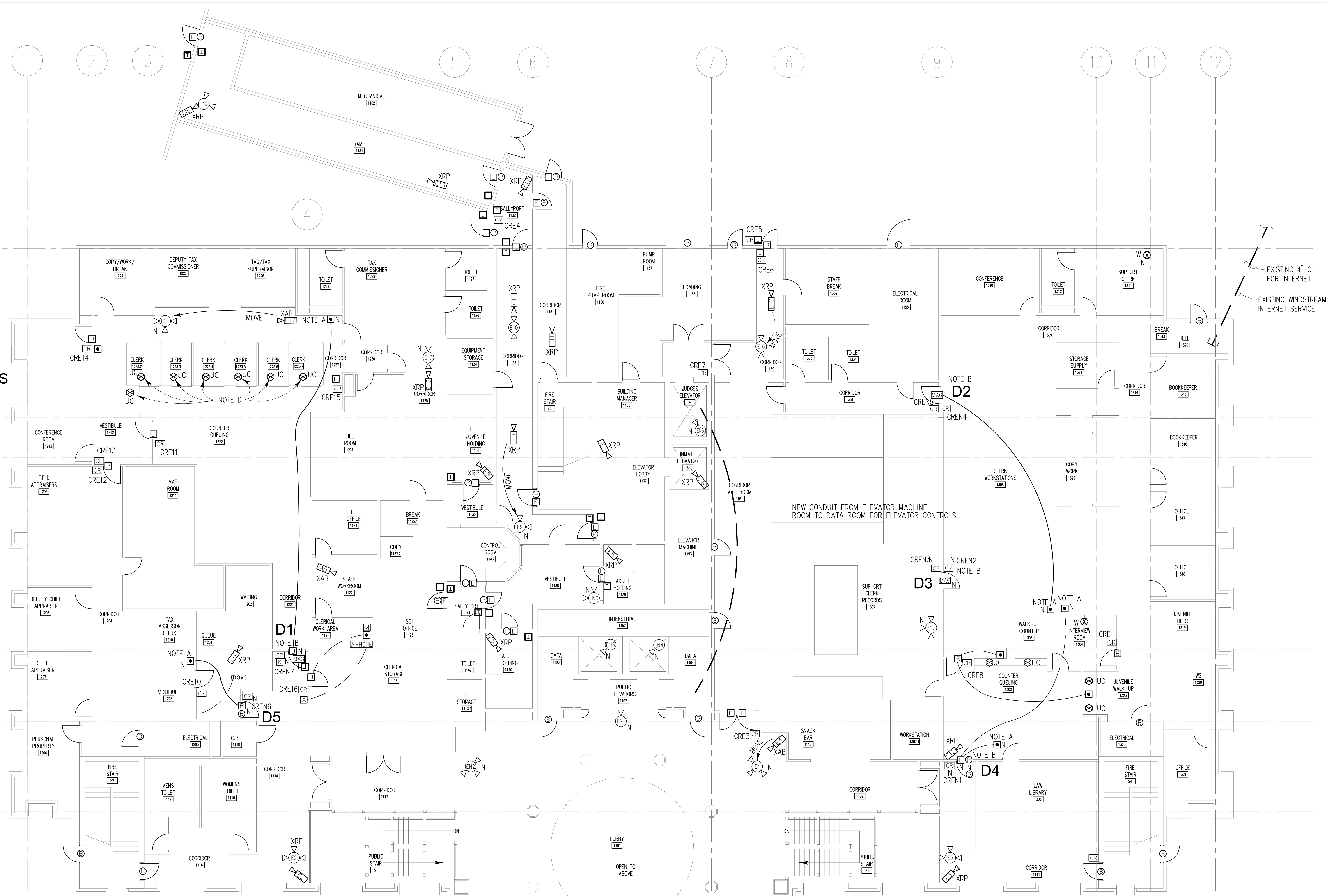


JULY 20, 2021

date:
JULY 20, 2021
 BID SET ONLY

COURTHOUSE FIRST FLOOR PLAN SECURITY SYSTEMS UPGRADES

ES2.5



- 2 - ABANDON
 - 3 - NEW ELEVATOR CABS
 - 6 - NEW
 - 19 - EXISTING
 - 25 - TOTAL
-
- 7 - NEW
 - 16 - EXISTING
 - 23 - TOTAL

1 FIRST FLOOR PLAN COURTHOUSE
 ES25 SCALE: 1/8" = 1'-0"

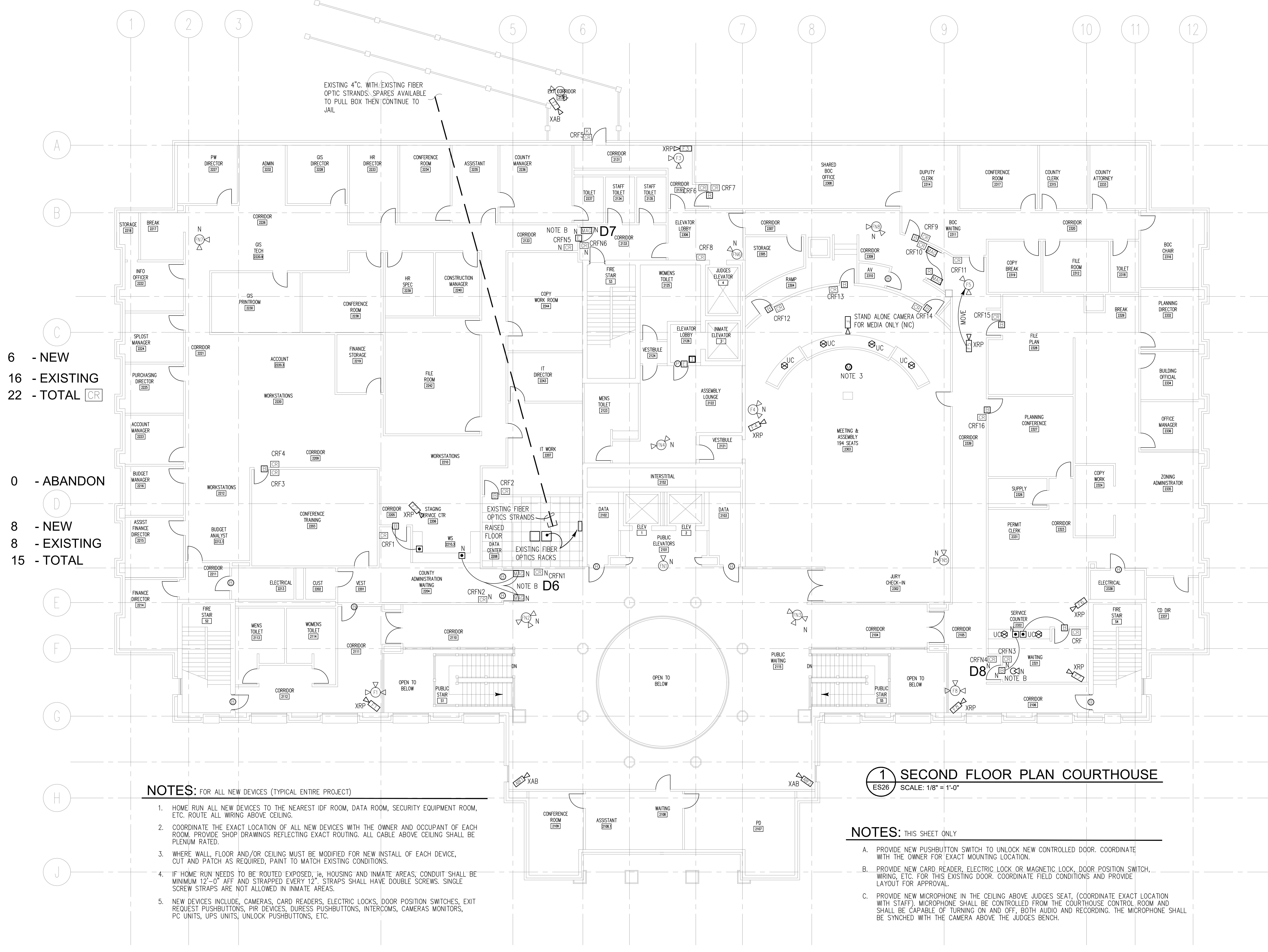
- NOTES:** FOR ALL NEW DEVICES (TYPICAL ENTIRE PROJECT)
- HOME RUN ALL NEW DEVICES TO THE NEAREST IDF ROOM, DATA ROOM, SECURITY EQUIPMENT ROOM, ETC. ROUTE ALL WIRING ABOVE CEILING.
 - COORDINATE THE EXACT LOCATION OF ALL NEW DEVICES WITH THE OWNER AND OCCUPANT OF EACH ROOM. PROVIDE SHOP DRAWINGS REFLECTING EXACT ROUTING. ALL CABLE ABOVE CEILING SHALL BE PLENUM RATED.
 - WHERE WALL, FLOOR AND/OR CEILING MUST BE MODIFIED FOR NEW INSTALL OF EACH DEVICE, CUT AND PATCH AS REQUIRED; PAINT TO MATCH EXISTING CONDITIONS.
 - IF HOME RUN NEEDS TO BE ROUTED EXPOSED, i.e. HOUSING AND INMATE AREAS, CONDUIT SHALL BE MINIMUM 12"-0" AFF AND STRAPPED EVERY 12". STRAPS SHALL HAVE DOUBLE SCREWS. SINGLE SCREW STRAPS ARE NOT ALLOWED IN INMATE AREAS.
 - NEW DEVICES INCLUDE, CAMERAS, CARD READERS, ELECTRIC LOCKS, DOOR POSITION SWITCHES, EXIT REQUEST PUSHBUTTONS, PIR DEVICES, DURESS PUSHBUTTONS, INTERCOMS, CAMERAS MONITORS, PC UNITS, UPS UNITS, UNLOCK PUSHBUTTONS, ETC.

- NOTES:** THIS SHEET ONLY
- PROVIDE NEW PUSHBUTTON SWITCH TO UNLOCK NEW CONTROLLED DOOR. COORDINATE WITH THE OWNER FOR EXACT MOUNTING LOCATION.
 - PROVIDE NEW CARD READER, ELECTRIC LOCK OR MAGNETIC LOCK, DOOR POSITION SWITCH, WIRING, ETC. FOR THIS EXISTING DOOR. COORDINATE FIELD CONDITIONS AND PROVIDE LAYOUT FOR APPROVAL.
 - PROVIDE REMOTE SECONDARY EMERGENCY PUSHBUTTON TO LOCK DOOR DOWN. COORDINATE LOCATION WITH THE OWNER.
 - EXISTING SENSTAR DURESS SYSTEM. REPLACE ENTIRE SYSTEM WITH NEW DURESS SYSTEM THAT TIES INTO THE TOUCHSCREEN LOCKING AND CARD ACCESS CONTROL SYSTEM. PROVIDE RED MUSHROOM HEAD PUSHBUTTON MOMENTARY ACTION WITH KEY RESET AT EACH DESK. COORDINATE MOUNTING LOCATION.

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com



- 6 - NEW
 - 16 - EXISTING
 - 22 - TOTAL CR
-
- 0 - ABANDON
 - 8 - NEW
 - 8 - EXISTING
 - 15 - TOTAL

NOTES: FOR ALL NEW DEVICES (TYPICAL ENTIRE PROJECT)

1. HOME RUN ALL NEW DEVICES TO THE NEAREST IDF ROOM, DATA ROOM, SECURITY EQUIPMENT ROOM, ETC. ROUTE ALL WIRING ABOVE CEILING.
2. COORDINATE THE EXACT LOCATION OF ALL NEW DEVICES WITH THE OWNER AND OCCUPANT OF EACH ROOM. PROVIDE SHOP DRAWINGS REFLECTING EXACT ROUTING. ALL CABLE ABOVE CEILING SHALL BE PLENUM RATED.
3. WHERE WALL, FLOOR AND/OR CEILING MUST BE MODIFIED FOR NEW INSTALL OF EACH DEVICE, CUT AND PATCH AS REQUIRED, PAINT TO MATCH EXISTING CONDITIONS.
4. IF HOME RUN NEEDS TO BE ROUTED EXPOSED, IN HOUSING AND INMATE AREAS, CONDUIT SHALL BE MINIMUM 1/2" AFF AND STRAPPED EVERY 12". STRAPS SHALL HAVE DOUBLE SCREWS. SINGLE SCREW STRAPS ARE NOT ALLOWED IN INMATE AREAS.
5. NEW DEVICES INCLUDE, CAMERAS, CARD READERS, ELECTRIC LOCKS, DOOR POSITION SWITCHES, EXIT REQUEST PUSHBUTTONS, PIR DEVICES, DURESS PUSHBUTTONS, INTERCOMS, CAMERAS MONITORS, PC UNITS, UPS UNITS, UNLOCK PUSHBUTTONS, ETC.

1 SECOND FLOOR PLAN COURTHOUSE
 ES26 SCALE: 1/8" = 1'-0"

- NOTES:** THIS SHEET ONLY
- A. PROVIDE NEW PUSHBUTTON SWITCH TO UNLOCK NEW CONTROLLED DOOR. COORDINATE WITH THE OWNER FOR EXACT MOUNTING LOCATION.
 - B. PROVIDE NEW CARD READER, ELECTRIC LOCK OR MAGNETIC LOCK, DOOR POSITION SWITCH, WIRING, ETC. FOR THIS EXISTING DOOR. COORDINATE FIELD CONDITIONS AND PROVIDE LAYOUT FOR APPROVAL.
 - C. PROVIDE NEW MICROPHONE IN THE CEILING ABOVE JUDGES SEAT. (COORDINATE EXACT LOCATION WITH STAFF). MICROPHONE SHALL BE CONTROLLED FROM THE COURTHOUSE CONTROL ROOM AND SHALL BE CAPABLE OF TURNING ON AND OFF, BOTH AUDIO AND RECORDING. THE MICROPHONE SHALL BE SYNCHED WITH THE CAMERA ABOVE THE JUDGES BENCH.

RELEASED FOR BID ONLY

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



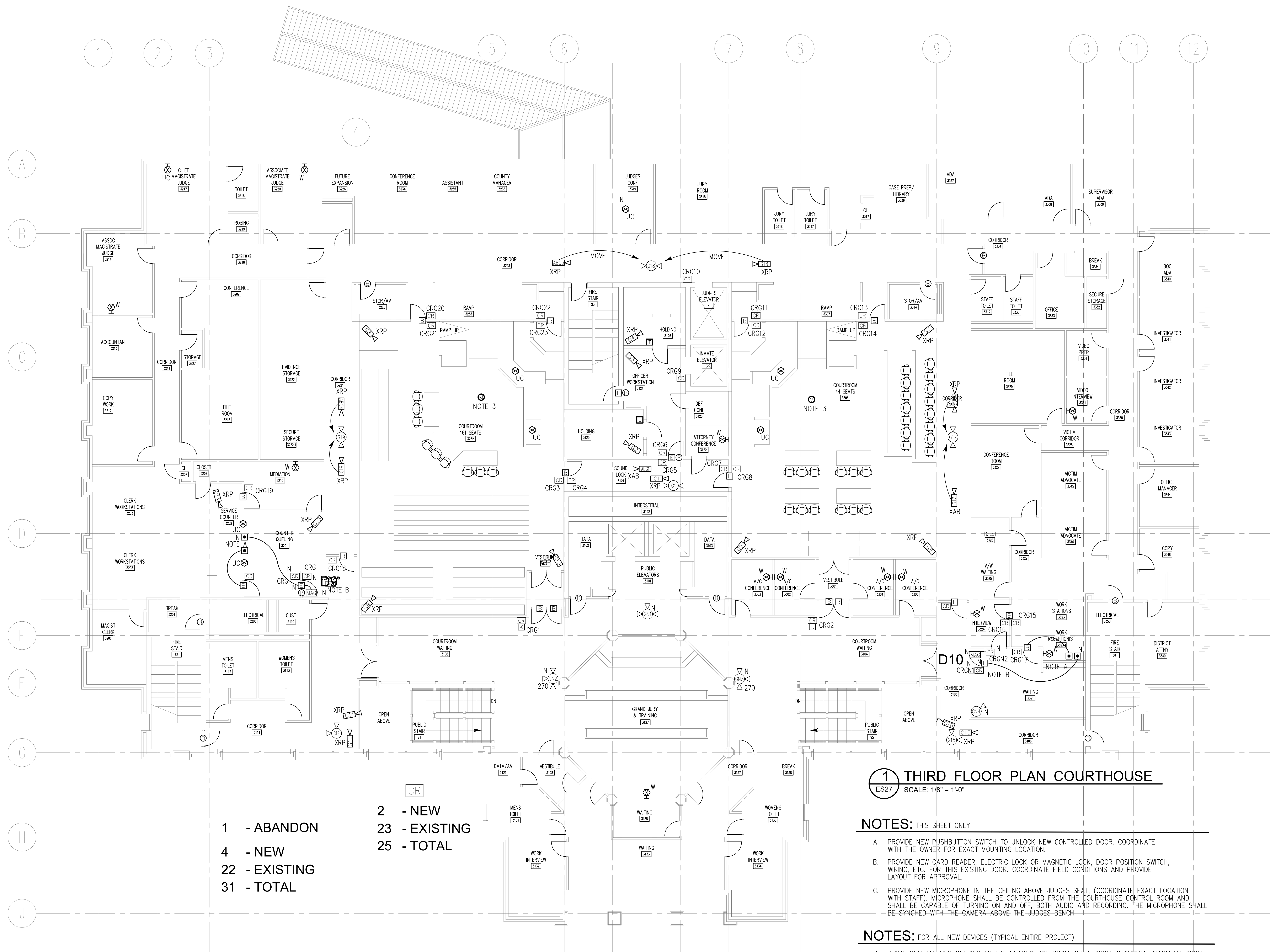
JULY 20, 2021

date:
JULY 20, 2021
 BID SET ONLY

COURTHOUSE SECOND FLOOR PLAN SECURITY SYSTEMS UPGRADES

ES2.6

KEY PLAN:



1	- ABANDON	23	- NEW
4	- NEW	25	- EXISTING
22	- EXISTING	31	- TOTAL

1 THIRD FLOOR PLAN COURTHOUSE
ES27 SCALE: 1/8" = 1'-0"

- NOTES:** THIS SHEET ONLY
- PROVIDE NEW PUSHBUTTON SWITCH TO UNLOCK NEW CONTROLLED DOOR. COORDINATE WITH THE OWNER FOR EXACT MOUNTING LOCATION.
 - PROVIDE NEW CARD READER, ELECTRIC LOCK OR MAGNETIC LOCK, DOOR POSITION SWITCH, WIRING, ETC. FOR THIS EXISTING DOOR. COORDINATE FIELD CONDITIONS AND PROVIDE LAYOUT FOR APPROVAL.
 - PROVIDE NEW MICROPHONE IN THE CEILING ABOVE JUDGES SEAT. (COORDINATE EXACT LOCATION WITH STAFF). MICROPHONE SHALL BE CONTROLLED FROM THE COURTHOUSE CONTROL ROOM AND SHALL BE CAPABLE OF TURNING ON AND OFF, BOTH AUDIO AND RECORDING. THE MICROPHONE SHALL BE SYNCHED WITH THE CAMERA ABOVE THE JUDGES BENCH.

- NOTES:** FOR ALL NEW DEVICES (TYPICAL ENTIRE PROJECT)
- HOME RUN ALL NEW DEVICES TO THE NEAREST IDF ROOM, DATA ROOM, SECURITY EQUIPMENT ROOM, ETC. ROUTE ALL WIRING ABOVE CEILING.
 - COORDINATE THE EXACT LOCATION OF ALL NEW DEVICES WITH THE OWNER AND OCCUPANT OF EACH ROOM. PROVIDE SHOP DRAWINGS REFLECTING EXACT ROUTING. ALL CABLE ABOVE CEILING SHALL BE PLENUM RATED.
 - WHERE WALL, FLOOR AND/OR CEILING MUST BE MODIFIED FOR NEW INSTALL OF EACH DEVICE, CUT AND PATCH AS REQUIRED. PAINT TO MATCH EXISTING CONDITIONS.
 - IF HOME RUN NEEDS TO BE ROUTED EXPOSED, i.e. HOUSING AND INMATE AREAS, CONDUIT SHALL BE MINIMUM 1/2"-0" AFF AND STRAPPED EVERY 12". STRAPS SHALL HAVE DOUBLE SCREWS. SINGLE SCREW STRAPS ARE NOT ALLOWED IN INMATE AREAS.
 - NEW DEVICES INCLUDE, CAMERAS, CARD READERS, ELECTRIC LOCKS, DOOR POSITION SWITCHES, EXIT REQUEST PUSHBUTTONS, PIR DEVICES, DURESS PUSHBUTTONS, INTERCOMS, CAMERAS MONITORS, PC UNITS, UPS UNITS, UNLOCK PUSHBUTTONS, ETC.

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
3447 Lake Seminole Place
Buford, Georgia 30519
tanner@tannerhoskins.com
678-856-8832 mobile
www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
25 Justice Way - Suite 2223 - Dawsonville, GA 30534
Project #367-20 - Security Systems Upgrades

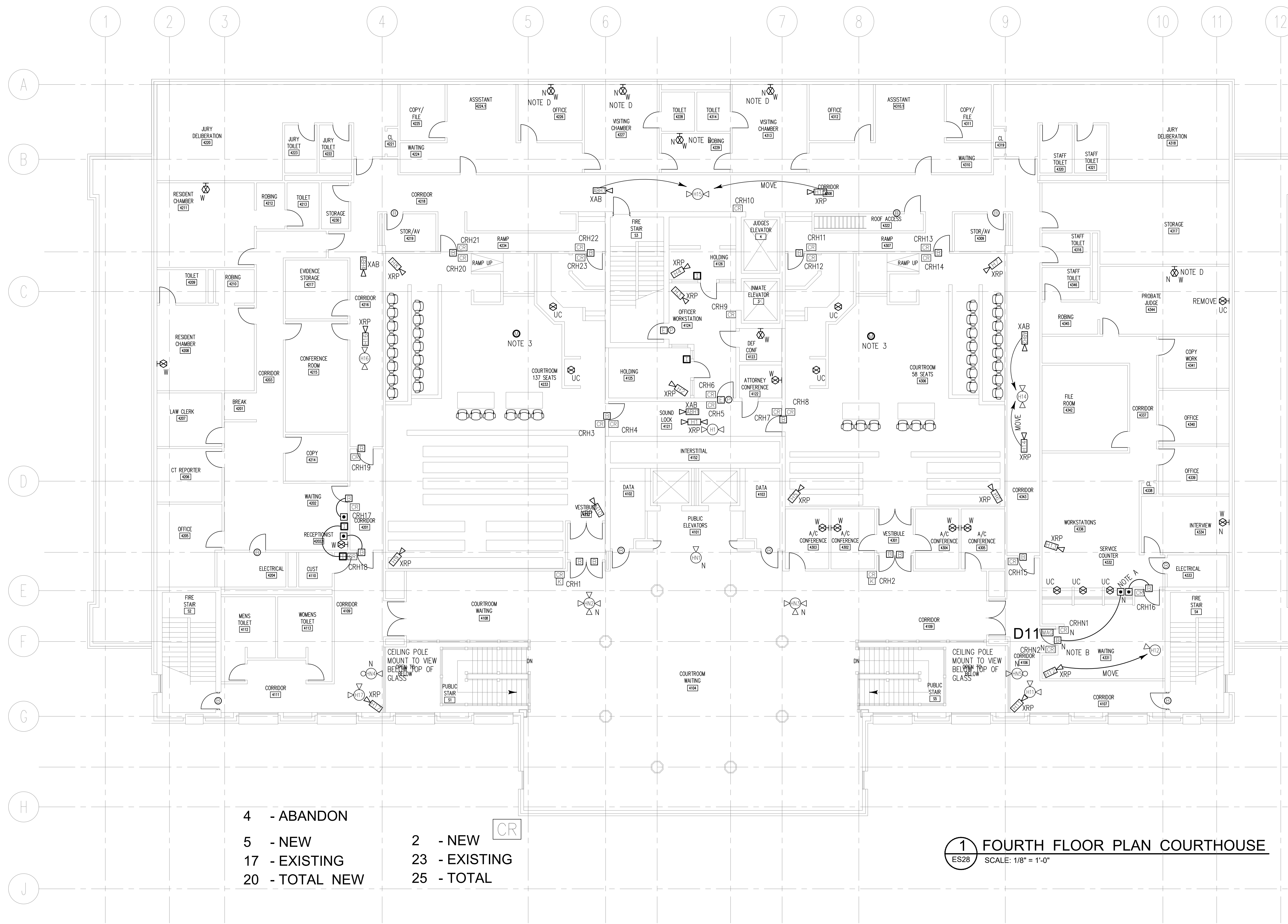
RELEASED FOR BID ONLY



JULY 20, 2021
date:
JULY 20, 2021
BID SET ONLY

COURTHOUSE THIRD FLOOR PLAN SECURITY SYSTEMS UPGRADES

ES2.7



- | | |
|----------------|---------------|
| 4 - ABANDON | 2 - NEW |
| 5 - NEW | 23 - EXISTING |
| 17 - EXISTING | 25 - TOTAL |
| 20 - TOTAL NEW | |

1 FOURTH FLOOR PLAN COURTHOUSE
ES28 SCALE: 1/8" = 1'-0"

- NOTES:** FOR ALL NEW DEVICES (TYPICAL ENTIRE PROJECT)
- HOME RUN ALL NEW DEVICES TO THE NEAREST IDF ROOM, DATA ROOM, SECURITY EQUIPMENT ROOM, ETC. ROUTE ALL WIRING ABOVE CEILING.
 - COORDINATE THE EXACT LOCATION OF ALL NEW DEVICES WITH THE OWNER AND OCCUPANT OF EACH ROOM. PROVIDE SHOP DRAWINGS REFLECTING EXACT ROUTING. ALL CABLE ABOVE CEILING SHALL BE PLENUM RATED.
 - WHERE WALL, FLOOR AND/OR CEILING MUST BE MODIFIED FOR NEW INSTALL OF EACH DEVICE, CUT AND PATCH AS REQUIRED, PAINT TO MATCH EXISTING CONDITIONS.
 - IF HOME RUN NEEDS TO BE ROUTED EXPOSED, ie, HOUSING AND INMATE AREAS, CONDUIT SHALL BE MINIMUM 1/2"-0" AFF AND STRAPPED EVERY 12". STRAPS SHALL HAVE DOUBLE SCREWS. SINGLE SCREW STRAPS ARE NOT ALLOWED IN INMATE AREAS.
 - NEW DEVICES INCLUDE, CAMERAS, CARD READERS, ELECTRIC LOCKS, DOOR POSITION SWITCHES, EXIT REQUEST PUSHBUTTONS, PIR DEVICES, DURESS PUSHBUTTONS, INTERCOMS, CAMERAS MONITORS, PC UNITS, UPS UNITS, UNLOCK PUSHBUTTONS, ETC.

- NOTES:** THIS SHEET ONLY
- PROVIDE NEW PUSHBUTTON SWITCH TO UNLOCK NEW CONTROLLED DOOR. COORDINATE WITH THE OWNER FOR EXACT MOUNTING LOCATION.
 - PROVIDE NEW CARD READER, ELECTRIC LOCK OR MAGNETIC LOCK, DOOR POSITION SWITCH, WIRING, ETC. FOR THIS EXISTING DOOR. COORDINATE FIELD CONDITIONS AND PROVIDE LAYOUT FOR APPROVAL.
 - PROVIDE NEW MICROPHONE IN THE CEILING ABOVE JUDGES SEAT, (COORDINATE EXACT LOCATION WITH STAFF). MICROPHONE SHALL BE CONTROLLED FROM THE COURTHOUSE CONTROL ROOM AND SHALL BE CAPABLE OF TURNING ON AND OFF, BOTH AUDIO AND RECORDING. THE MICROPHONE SHALL BE SYNCHED WITH THE CAMERA LOCATED ABOVE THE JUDGES BENCH.
 - COORDINATE LOCATION WITH EACH OCCUPANT OF EACH OFFICE ON EXACT MOUNTING LOCATION. HOME RUN TO NEAREST IDF ROOM AND ACCESS CONTROL HEADEND EQUIPMENT.

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
3447 Lake Seminole Place
Buford, Georgia 30519
tanner@tannerhoskins.com
678-856-8832 mobile
www.tannerhoskins.com

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
25 Justice Way - Suite 2223 - Dawsonville, GA 30534
Project #367-20 - Security Systems Upgrades

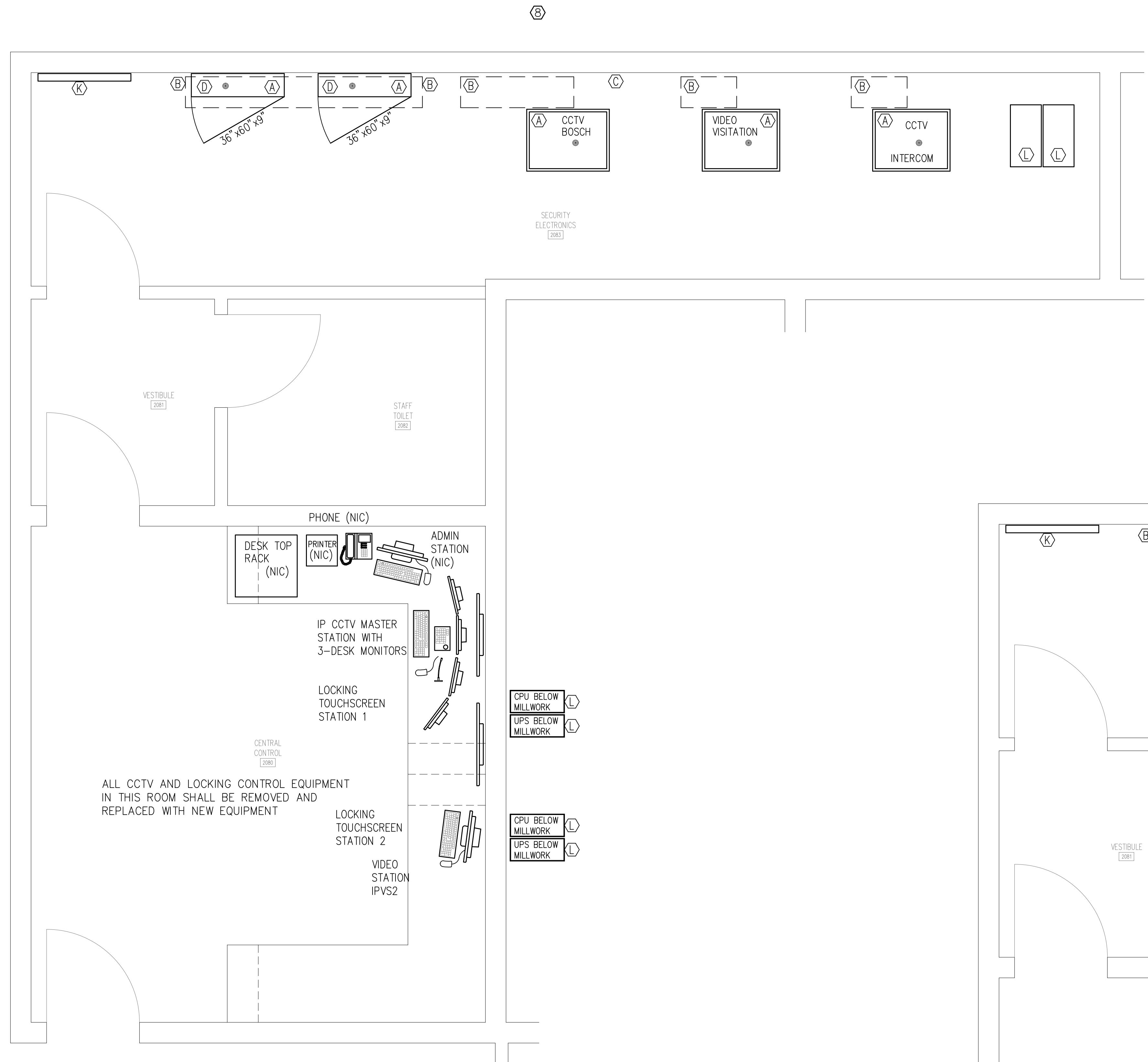
RELEASED FOR BID ONLY



JULY 20, 2021
date:
JULY 20, 2021
BID SET ONLY

COURTHOUSE FOURTH FLOOR PLAN SECURITY SYSTEMS UPGRADES

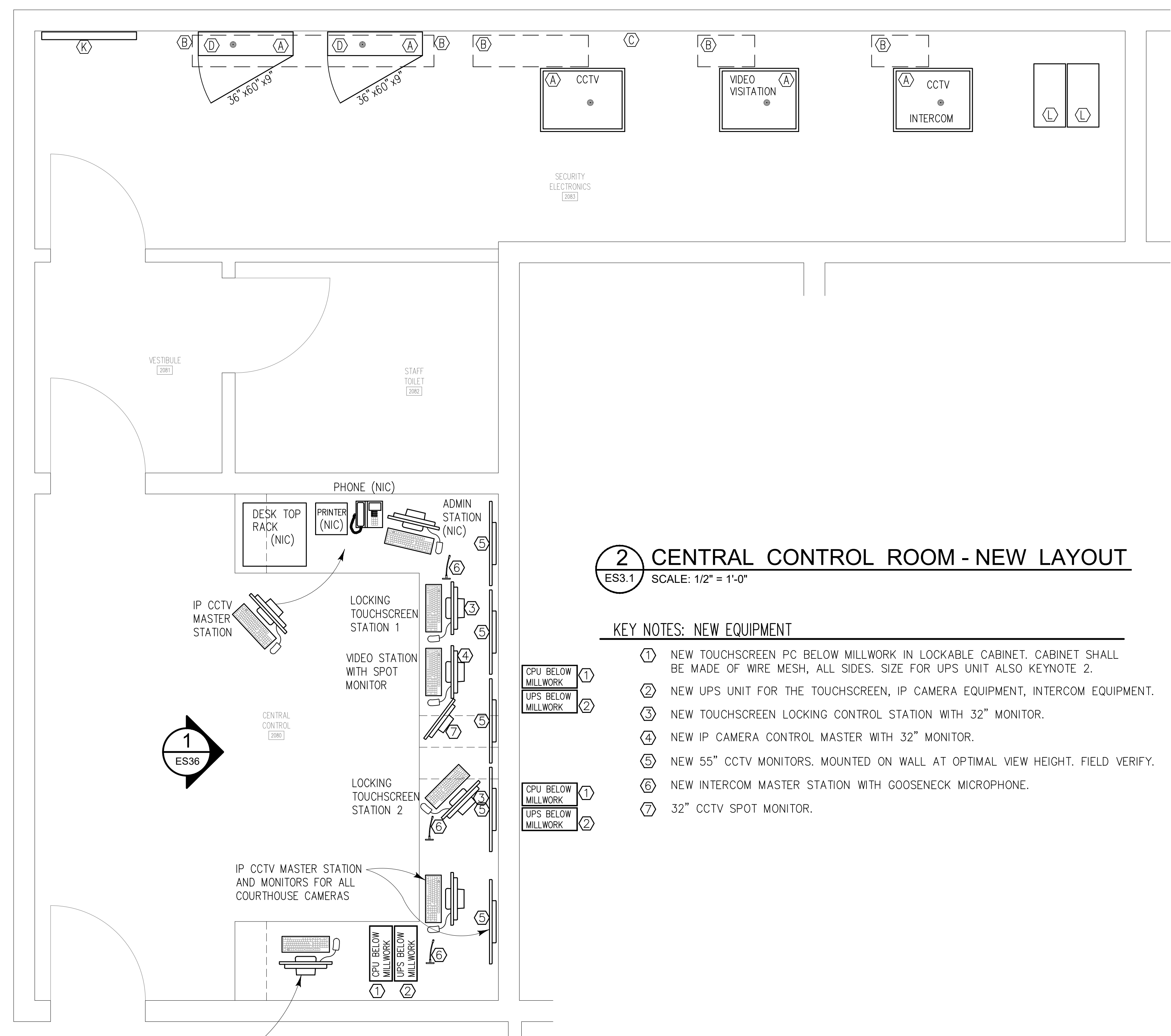
ES2.8



1 CENTRAL CONTROL ROOM - EXISTING
ES3.1 SCALE: 1/2" = 1'-0"

KEY NOTES: EXISTING EQUIPMENT

- (A) EXISTING ENCLOSURES TO BE RE-USED. ALL INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, TERMINATIONS & POWER SUPPLIES, HEAD END EQUIPMENT ETC. TO BE REMOVED & REPLACED WITH NEW.
- (B) EXISTING WIRE TROUGH AND WIRING ABOVE AND BELOW TO REMAIN.
- (C) EXISTING POWER SUPPLIES TO BE REPLACED WITH NEW.
- (D) EXISTING LOCKING CONTROLS TO BE REMOVED AND REPLACED.
- (E) EXISTING ACCESS CONTROL PANELS TO BE REMOVED AND REPLACED. TWO PANELS ABOVE AND BELOW.
- (F) EXISTING FIBER OPTIC PANEL TO REMAIN. CONNECTS TO THE JAIL. SEE SITE PLAN.
- (G) EXISTING CCTV RACK WITH EQUIPMENT TO BE REPLACED. RACK & CAT6 CABLE SHALL BE RE-USED. COAX CABLE TO BE REPLACED. ALL CCTV EQUIPMENT SHALL BE NEW.
- (H) EXISTING INTERCOM RACK WITH EQUIPMENT TO BE REPLACED. RACK AND WIRE SHALL BE RE-USED. ALL CCTV EQUIPMENT SHALL BE NEW.
- (J) (5) 12"x24"x16" UPS UNITS STACKED
- (K) EXISTING MATV HEADEND EQUIPMENT FOR HOUSING UNIT. LOCATED AT THE TOP OF THE WALL UNDER LAY-IN CEILING.
- (L) EXISTING UPS & BATTERY RACKS TO BE REMOVED AND REPLACED BY OTHERS. COORDINATE DOWN TIME OF SECURITY SYSTEMS WITH THE UPS CONTRACTOR.



2 CENTRAL CONTROL ROOM - NEW LAYOUT
ES3.1 SCALE: 1/2" = 1'-0"

KEY NOTES: NEW EQUIPMENT

- 1 NEW TOUCHSCREEN PC BELOW MILLWORK IN LOCKABLE CABINET. CABINET SHALL BE MADE OF WIRE MESH, ALL SIDES. SIZE FOR UPS UNIT ALSO KEYNOTE 2.
- 2 NEW UPS UNIT FOR THE TOUCHSCREEN, IP CAMERA EQUIPMENT, INTERCOM EQUIPMENT.
- 3 NEW TOUCHSCREEN LOCKING CONTROL STATION WITH 32" MONITOR.
- 4 NEW IP CAMERA CONTROL MASTER WITH 32" MONITOR.
- 5 NEW 55" CCTV MONITORS. MOUNTED ON WALL AT OPTIMAL VIEW HEIGHT. FIELD VERIFY.
- 6 NEW INTERCOM MASTER STATION WITH GOOSENECK MICROPHONE.
- 7 32" CCTV SPOT MONITOR.

RELEASED FOR BID ONLY

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
3447 Lake Seminole Place
Buford, Georgia 30519
tanner@tannerhoskins.com
678-856-8832 mobile
www.tannerhoskins.com

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

JULY 20, 2021

date:
JULY 20, 2021
BID SET ONLY

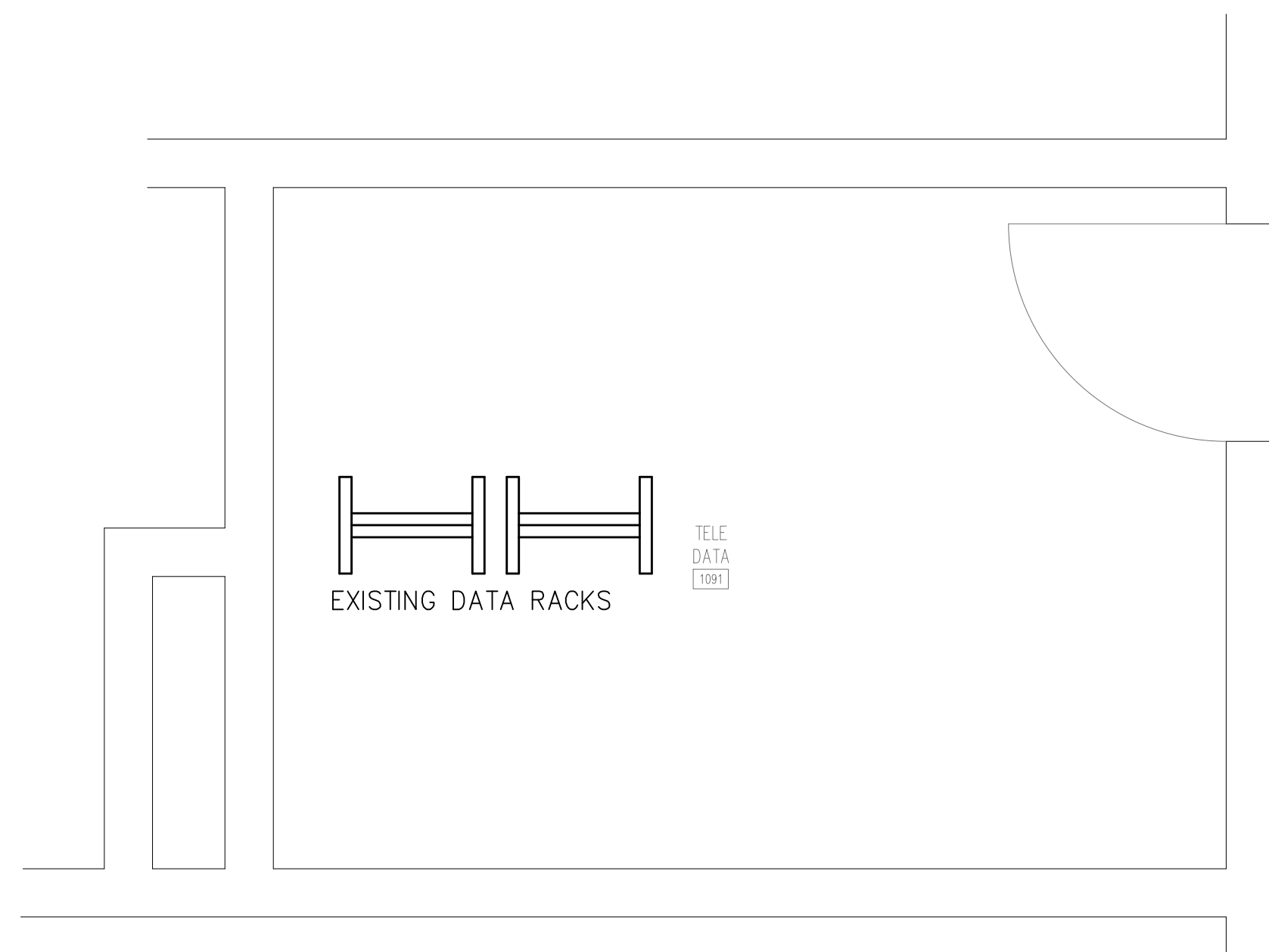
CONTROL ROOMS AND EQUIPMENT ROOM LAYOUTS - SECURITY SYSTEMS UPGRADES

ES3.1

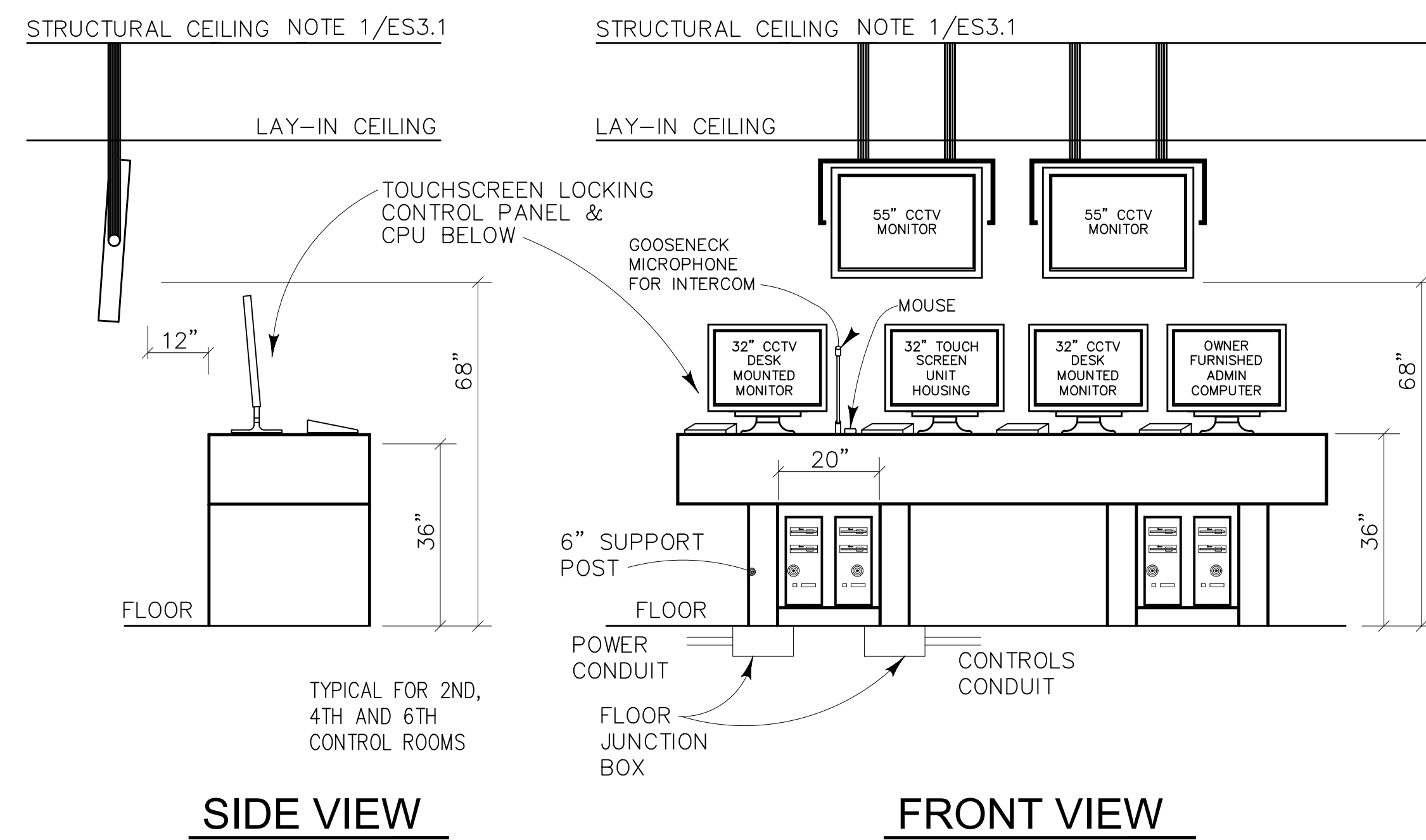
KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place Buford, Georgia 30519
 tanner@tannerhoskins.com 678-856-8832 mobile www.tannerhoskins.com

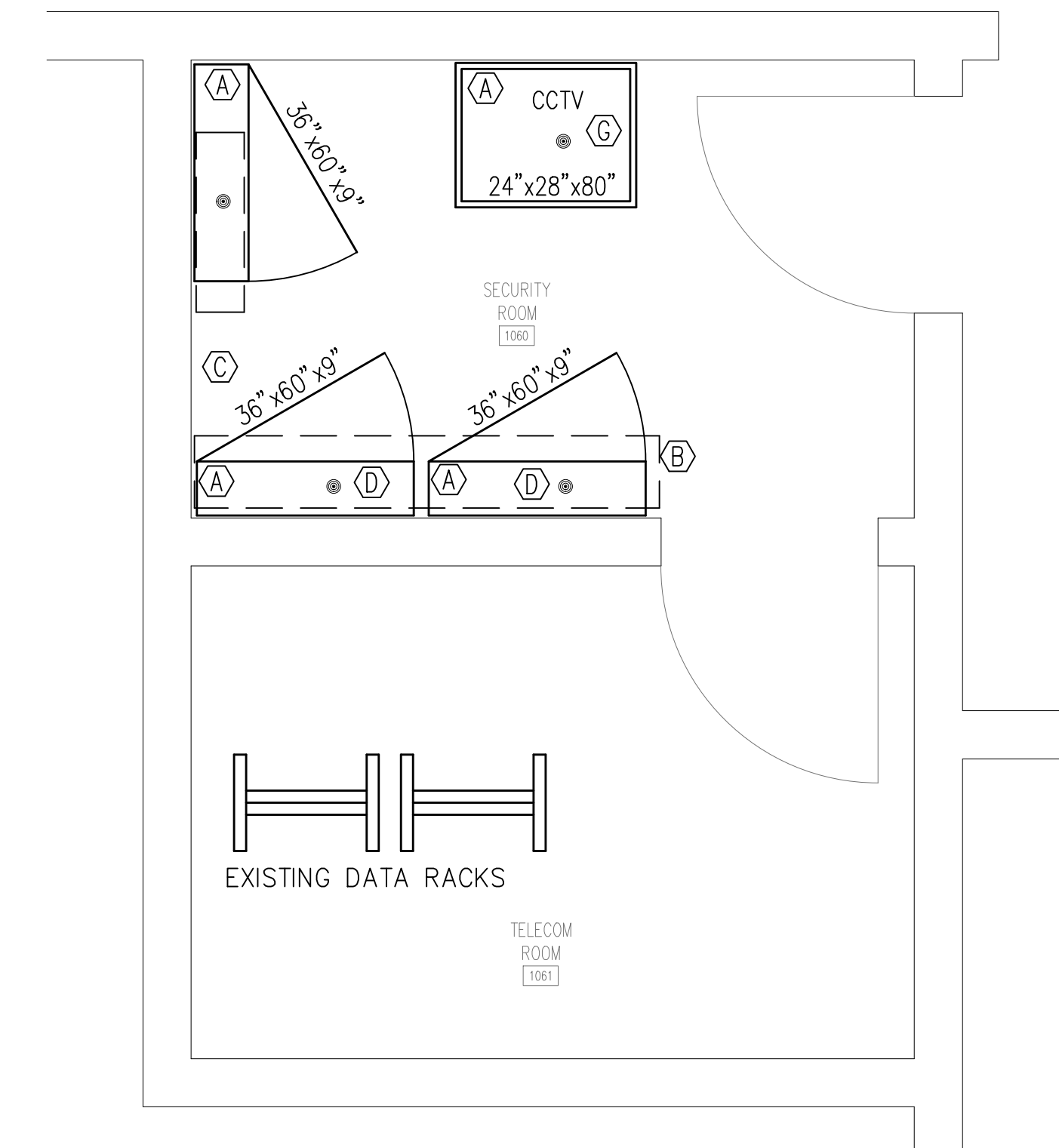


8 EXISTING TELECOM ROOM
 ES32 SCALE: 1/2" = 1'-0"



6 CEILING CCTV MONITOR LOCATION
 ES32 SCALE: 1/2" = 1'-0"

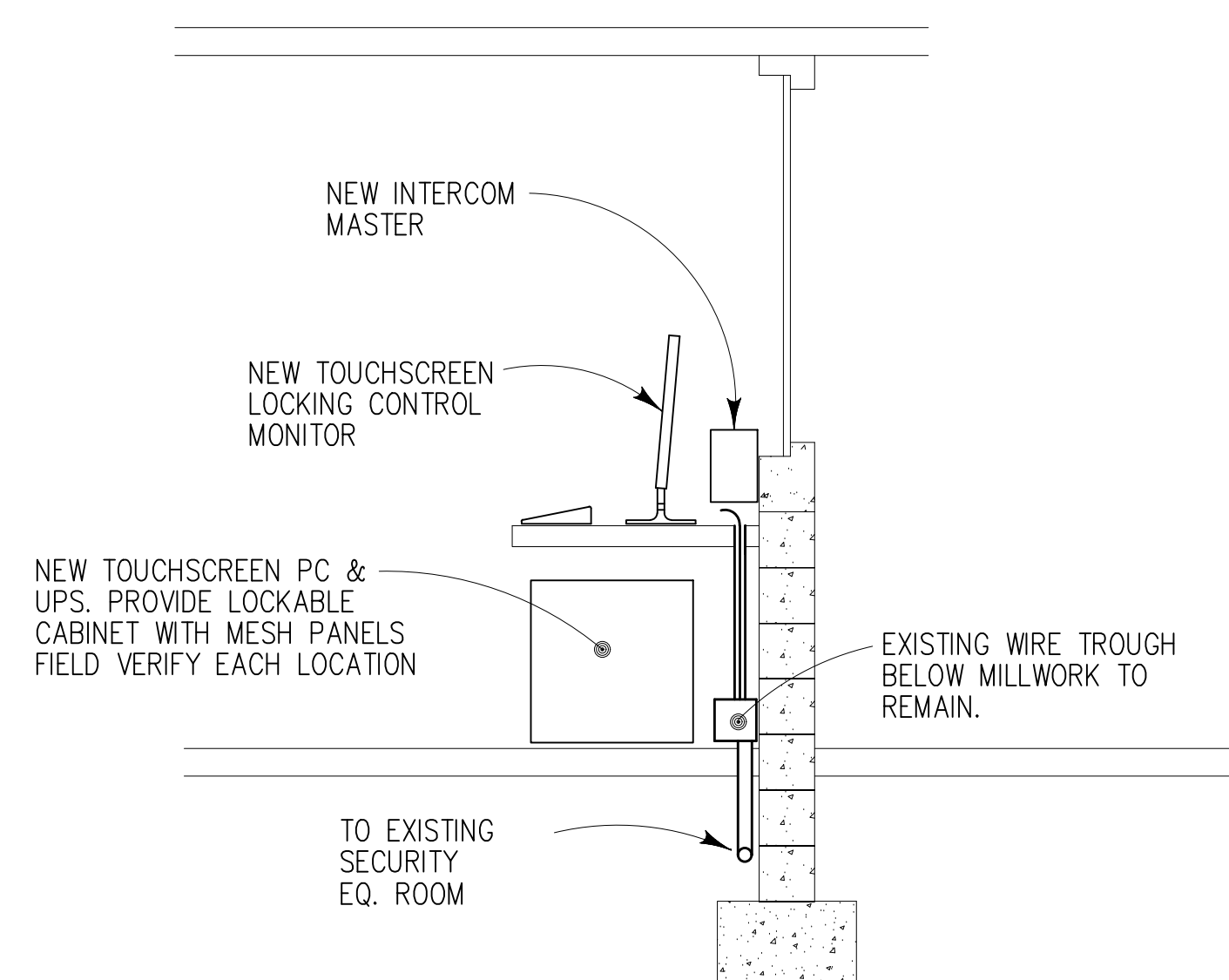
- NOTES:**
- CCTV MOUNTING BRACKETS SHALL BE SUPPORTED FROM THE STRUCTURAL CEILING ONLY. SUPPORT FROM SUSPENDED CEILING IS NOT ACCEPTABLE
 - CEILING MOUNTED MONITORS SHALL BE VERTICALLY ADJUSTABLE. CENTER OF MONITOR SHALL BE AT 68" AFF. MONITORS SHALL BE DIRECTLY ABOVE PEDESTAL, AND BACK OF LOCKING PANEL. SEE DETAIL THIS SHEET.
 - ROUTE ALL CABLES FOR THE PEDESTAL IN THE 6" STRUCTURAL SUPPORT TUBES.



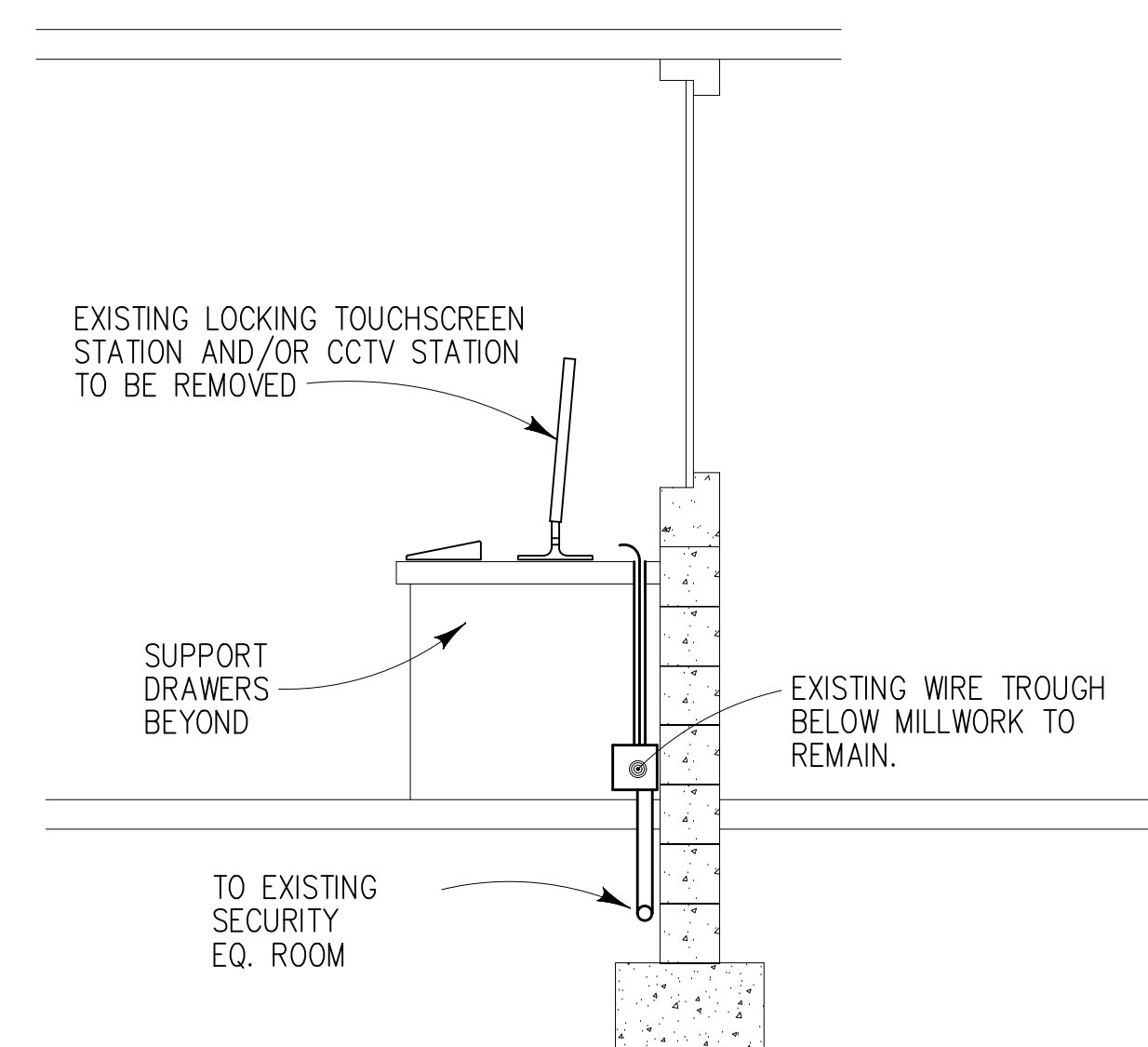
5 SECURITY ROOM 1060
 ES32 SCALE: 1/2" = 1'-0"

- KEY NOTES: SECURITY EQUIPMENT ROOMS**
- (A) EXISTING ENCLOSURES TO BE RE-USED. ALL INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, TERMINATIONS & POWER SUPPLIES, HEAD END EQUIPMENT ETC. TO BE REMOVED & REPLACED WITH NEW.
 - (B) EXISTING WIRE TROUGH AND WIRING ABOVE AND BELOW TO REMAIN.
 - (C) EXISTING POWER SUPPLIES TO BE REPLACED WITH NEW.
 - (D) EXISTING LOCKING CONTROLS TO BE REMOVED AND REPLACED.
 - (E) EXISTING ACCESS CONTROL PANELS TO BE REMOVED AND REPLACED. TWO PANELS ABOVE AND BELOW.
 - (F) EXISTING FIBER OPTIC PANEL TO REMAIN. CONNECTS TO THE JAIL. SEE SITE PLAN.
 - (G) EXISTING CCTV RACK WITH EQUIPMENT TO BE REPLACED. RACK & CAT6 CABLE SHALL BE RE-USED. COAX CABLE TO BE REPLACED. ALL CCTV EQUIPMENT SHALL BE NEW.
 - (H) EXISTING INTERCOM RACK WITH EQUIPMENT TO BE REPLACED. RACK AND WIRE SHALL BE RE-USED. ALL CCTV EQUIPMENT SHALL BE NEW.

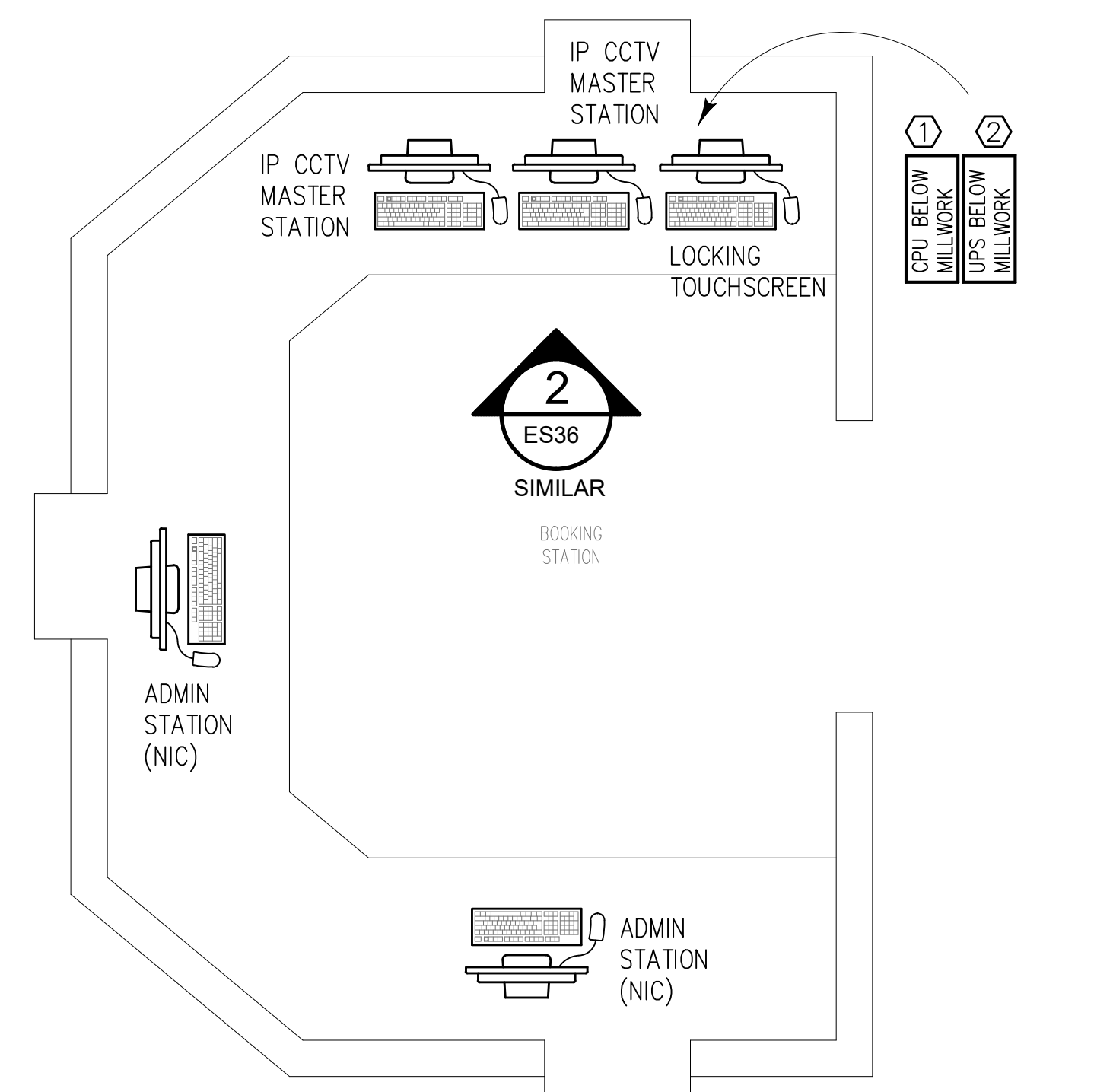
7 FRONT RECEPTION - NEW LAYOUT
 ES32 SCALE: 1/2" = 1'-0"



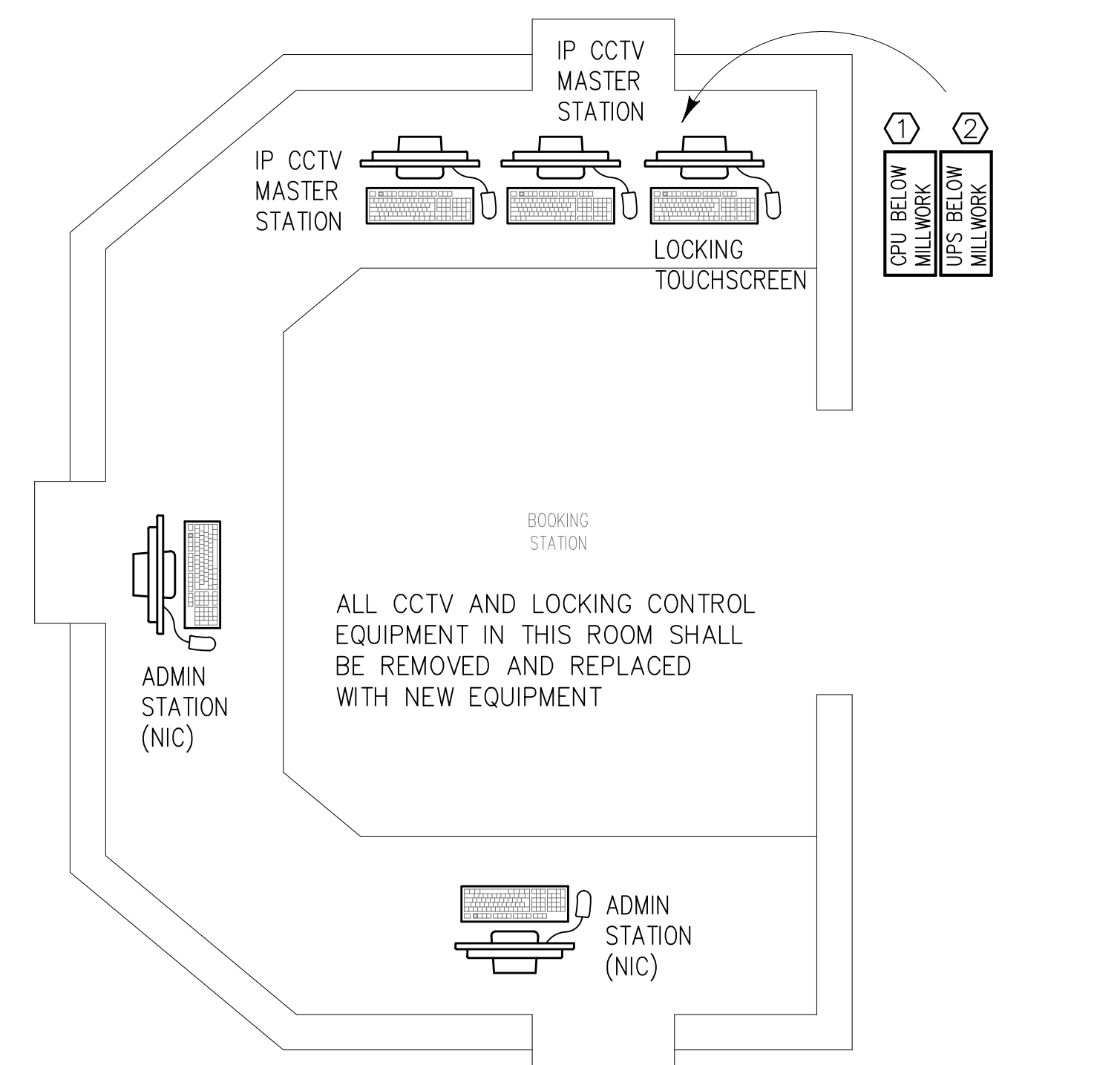
4 SECTION THRU MILLWORK - TYPICAL
 ES32 SCALE: 1/2" = 1'-0"



3 SECTION THRU MILLWORK - TYPICAL
 ES32 SCALE: 1/2" = 1'-0"



2 BOOKING STATION - NEW LAYOUT
 ES32 SCALE: 1/2" = 1'-0"



1 BOOKING STATION - EXISTING LAYOUT
 ES32 SCALE: 1/2" = 1'-0"

KEY PLAN:

RELEASED FOR BID ONLY

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



JULY 20, 2021

date:
JULY 20, 2021
 BID SET ONLY

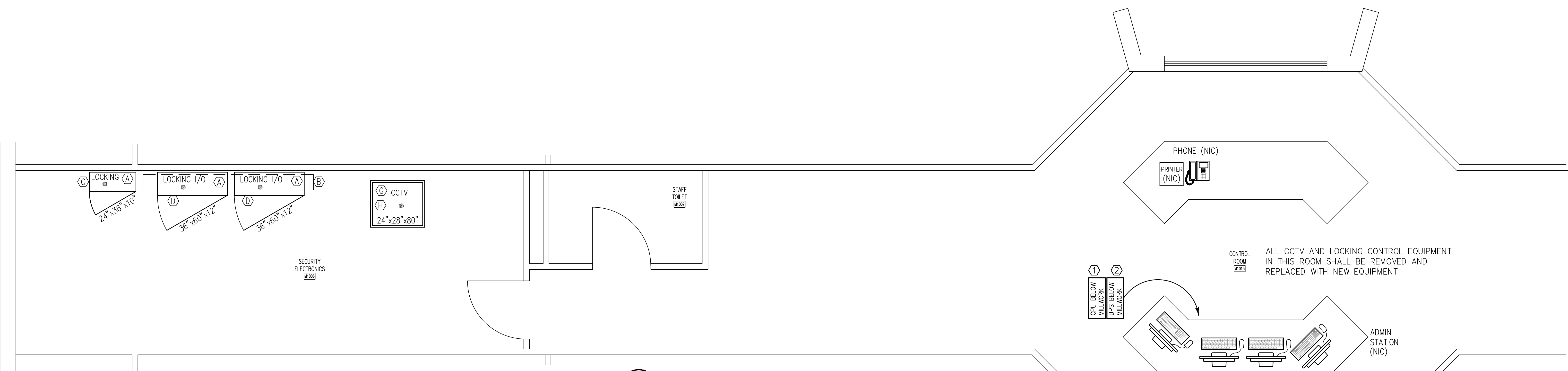
CONTROL ROOMS AND EQUIPMENT ROOM LAYOUTS - SECURITY SYSTEMS UPGRADES

ES3.2

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

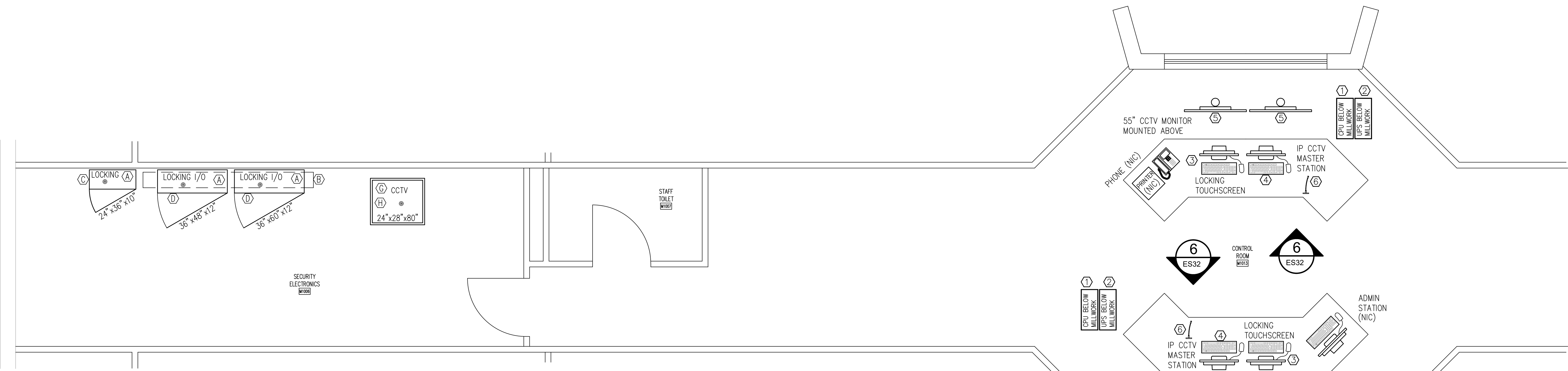
THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY TANNER HOSKINS CONSULTANTS, LLC.



2 HOUSING CONTROL ROOM - EXISTING
 ES33 SCALE: 1/2" = 1'-0"
 TYPICAL FOR HOUSING 1ST FLOOR & 2ND FLOOR

KEY NOTES: SECURITY EQUIPMENT ROOMS

- (A) EXISTING ENCLOSURES TO BE RE-USED. ALL INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, TERMINATIONS & POWER SUPPLIES, HEAD END EQUIPMENT ETC. TO BE REMOVED & REPLACED WITH NEW.
- (B) EXISTING WIRE TROUGH AND WIRING ABOVE AND BELOW TO REMAIN.
- (C) EXISTING POWER SUPPLIES TO BE REPLACED WITH NEW.
- (D) EXISTING LOCKING CONTROLS TO BE REMOVED AND REPLACED.
- (E) NOT USED.
- (F) NOT USED.
- (G) EXISTING CCTV RACK WITH EQUIPMENT TO BE REPLACED. RACK & CAT6 CABLE SHALL BE RE-USED. COAX CABLE TO BE REPLACED. ALL CCTV EQUIPMENT SHALL BE NEW.
- (H) EXISTING INTERCOM RACK WITH EQUIPMENT TO BE REPLACED. RACK AND WIRE SHALL BE RE-USED. ALL CCTV EQUIPMENT SHALL BE NEW.



1 HOUSING CONTROL ROOM - NEW
 ES32 SCALE: 1/2" = 1'-0"
 TYPICAL FOR HOUSING 1ST FLOOR & 2ND FLOOR

KEY NOTES: NEW EQUIPMENT

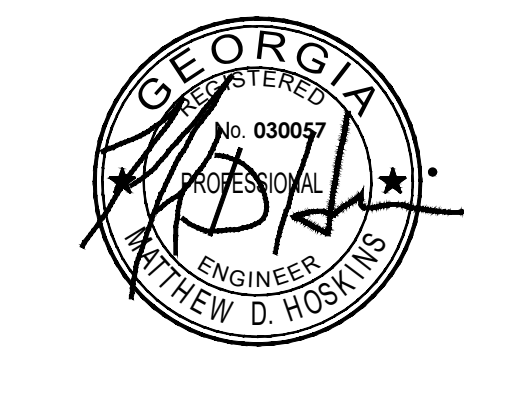
- ① NEW TOUCHSCREEN PC BELOW MILLWORK IN LOCKABLE CABINET. CABINET SHALL BE MADE OF WIRE MESH, ALL SIDES. SIZE FOR UPS UNIT ALSO KEYNOTE 2.
- ② NEW UPS UNIT FOR THE TOUCHSCREEN, IP CAMERA EQUIPMENT, INTERCOM EQUIPMENT.
- ③ NEW TOUCHSCREEN LOCKING CONTROL STATION WITH 32" MONITOR.
- ④ NEW IP CAMERA CONTROL MASTER WITH 32" MONITOR.
- ⑤ NEW 55" CCTV MONITORS. CEILING MOUNT AT OPTIMAL VIEW HEIGHT. FIELD VERIFY.
- ⑥ NEW INTERCOM MASTER STATION WITH GOOSENECK MICROPHONE.
- ⑦ 32" CCTV SPOT MONITOR.

KEY NOTES: SECURITY EQUIPMENT ROOMS

- (A) EXISTING ENCLOSURES TO BE RE-USED. ALL INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, TERMINATIONS & POWER SUPPLIES, HEAD END EQUIPMENT ETC. TO BE REMOVED & REPLACED WITH NEW.
- (B) EXISTING WIRE TROUGH AND WIRING ABOVE AND BELOW TO REMAIN.
- (C) EXISTING POWER SUPPLIES TO BE REPLACED WITH NEW.
- (D) EXISTING LOCKING CONTROLS TO BE REMOVED AND REPLACED.
- (E) NOT USED.
- (F) NOT USED.
- (G) EXISTING CCTV RACK WITH EQUIPMENT TO BE REPLACED. RACK & CAT6 CABLE SHALL BE RE-USED. COAX CABLE TO BE REPLACED. ALL CCTV EQUIPMENT SHALL BE NEW.
- (H) EXISTING INTERCOM RACK WITH EQUIPMENT TO BE REPLACED. RACK AND WIRE SHALL BE RE-USED. ALL CCTV EQUIPMENT SHALL BE NEW.

RELEASED FOR BID ONLY

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



date:
JULY 20, 2021
 BID SET ONLY

CONTROL ROOMS AND EQUIPMENT ROOM LAYOUTS - SECURITY SYSTEMS UPGRADES

ES3.3

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

RELEASED FOR BID ONLY



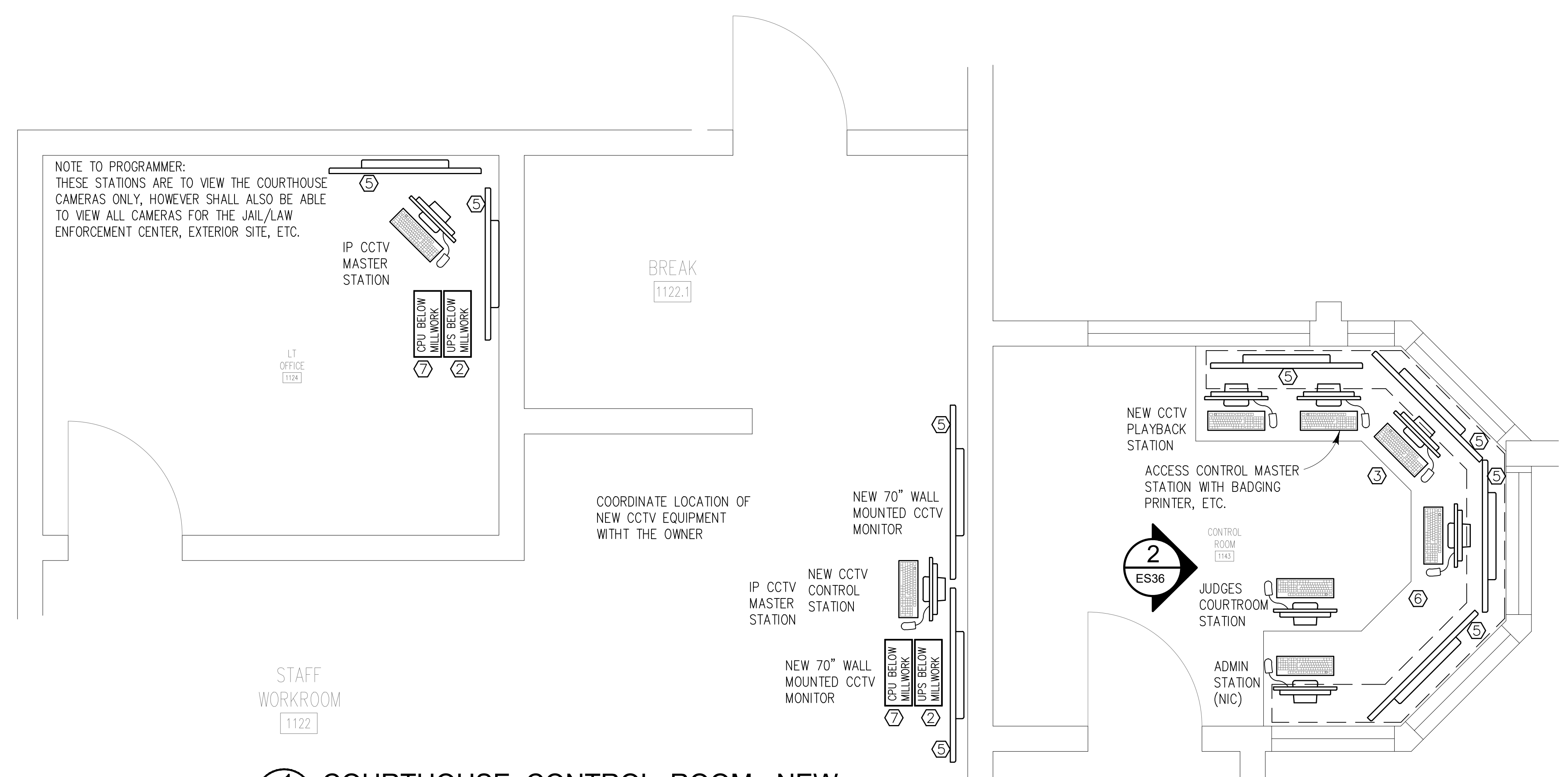
JULY 20, 2021

date:
 JULY 20, 2021
 BID SET ONLY

CONTROL ROOMS AND EQUIPMENT ROOM LAYOUTS - SECURITY SYSTEMS UPGRADES

ES3.4

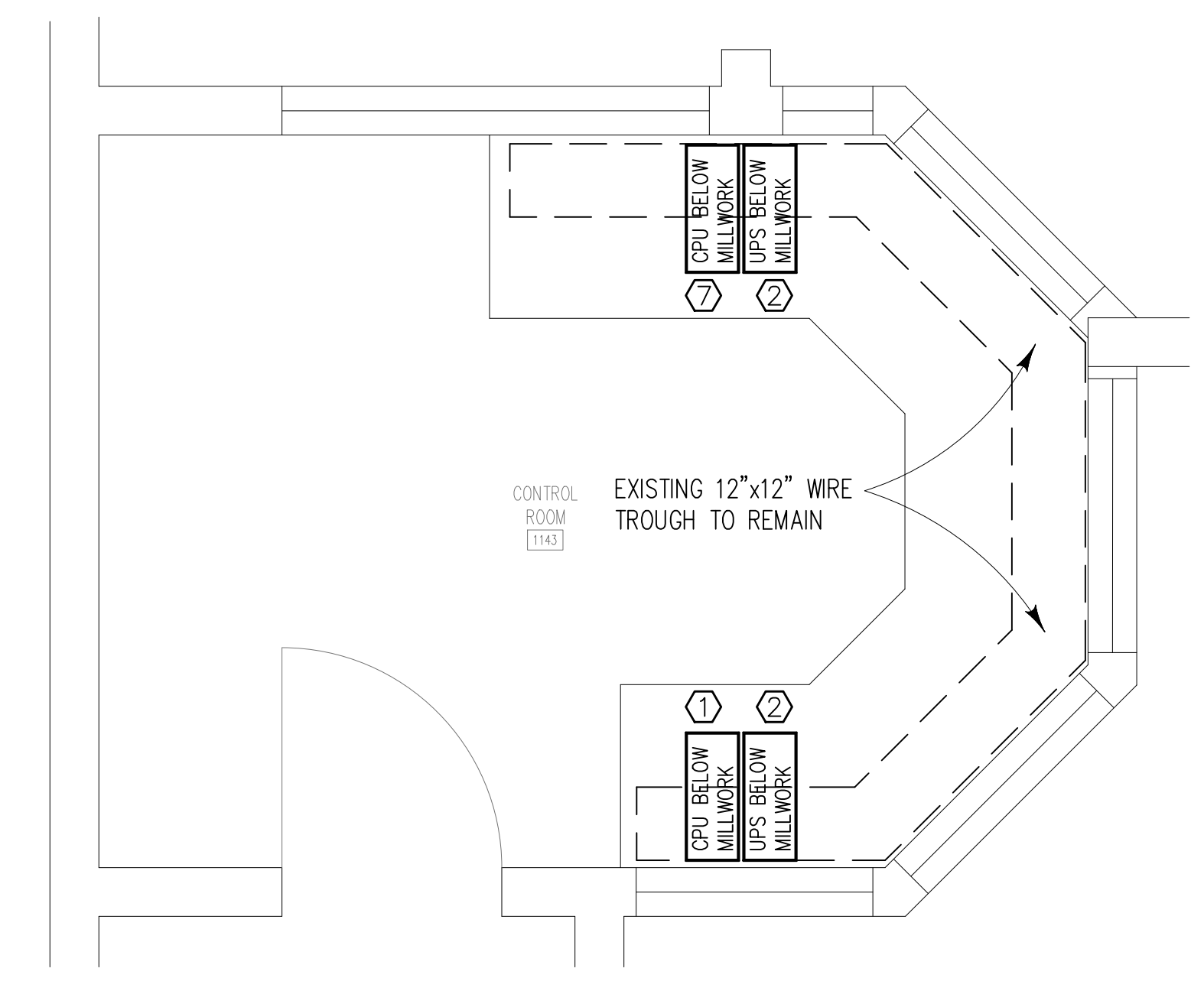
KEY PLAN:



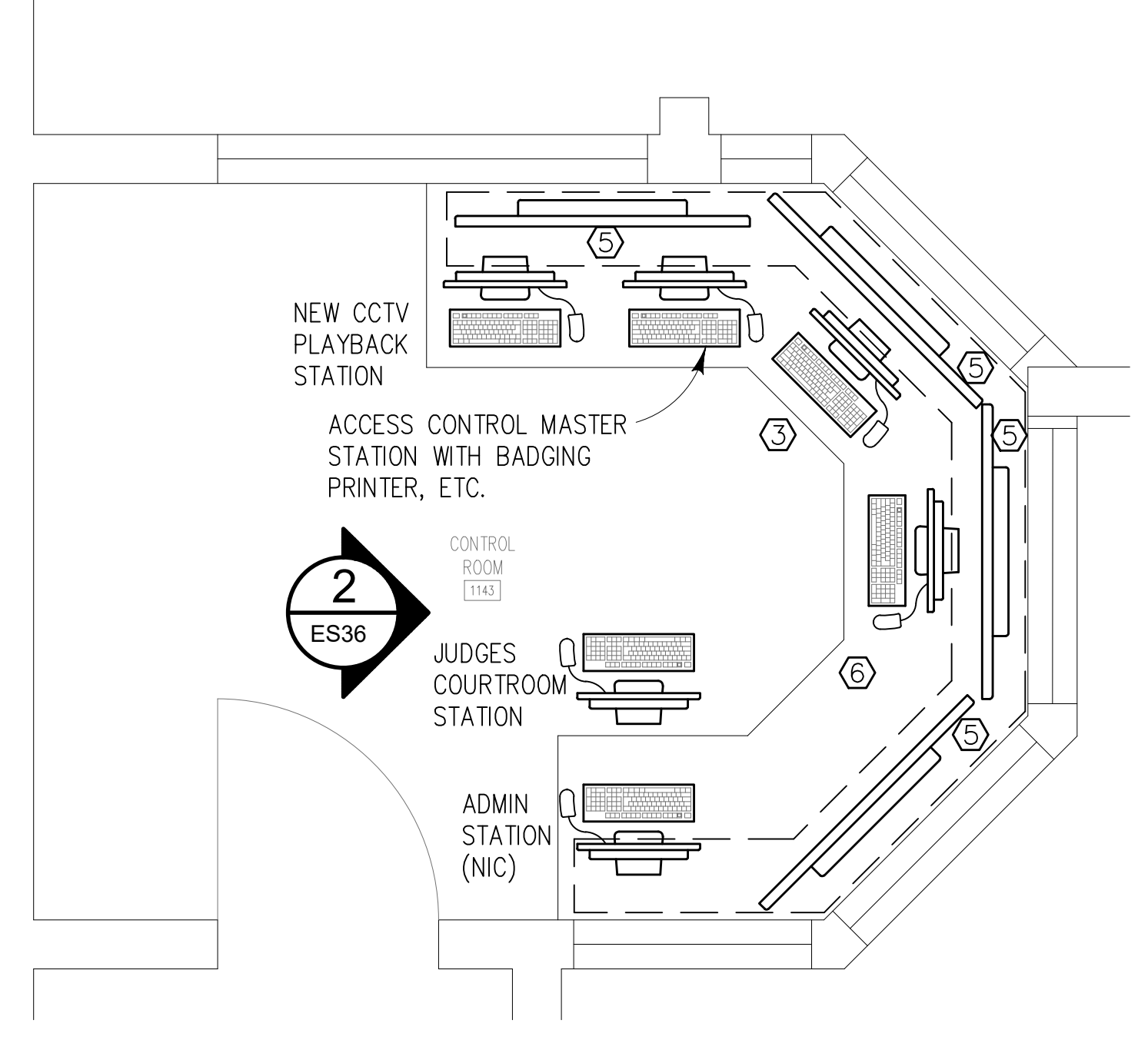
1 COURTHOUSE CONTROL ROOM - NEW
 ES34 SCALE: 1/2" = 1'-0"

KEY NOTES: NEW EQUIPMENT

- ① NEW TOUCHSCREEN PC BELOW MILLWORK IN LOCKABLE CABINET. CABINET SHALL BE MADE OF WIRE MESH, ALL SIDES. SIZE FOR UPS UNIT ALSO KEYNOTE 2.
- ② NEW UPS UNIT FOR THE TOUCHSCREEN, IP CAMERA EQUIPMENT, INTERCOM EQUIPMENT.
- ③ NEW TOUCHSCREEN LOCKING CONTROL STATION WITH 32" MONITOR.
- ④ NEW IP CAMERA CONTROL MASTER WITH 32" MONITOR.
- ⑤ NEW 55" CCTV MONITORS. MOUNTED ON WALL AT OPTIMAL VIEW HEIGHT. FIELD VERIFY.
- ⑥ NEW INTERCOM MASTER STATION WITH GOOSENECK MICROPHONE.
- ⑦ 32" CCTV SPOT MONITOR.



3 COURTHOUSE CONTROL ROOM - BELOW MILLWORK
 ES34 SCALE: 1/2" = 1'-0"



2 COURTHOUSE CONTROL ROOM - EXISTING
 ES34 SCALE: 1/2" = 1'-0"

KEY NOTES: EXISTING EQUIPMENT

- (A) EXISTING ENCLOSURES TO BE RE-USED. ALL INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, TERMINATIONS & POWER SUPPLIES, HEAD END EQUIPMENT ETC. TO BE REMOVED & REPLACED WITH NEW.
- (B) EXISTING WIRE TROUGH AND WIRING ABOVE AND BELOW TO REMAIN.
- (C) EXISTING POWER SUPPLIES TO BE REPLACED WITH NEW.
- (D) EXISTING LOCKING CONTROLS TO BE REMOVED AND REPLACED.
- (E) EXISTING ACCESS CONTROL PANELS TO BE REMOVED AND REPLACED. TWO PANELS ABOVE AND BELOW.
- (F) EXISTING FIBER OPTIC PANEL TO REMAIN. CONNECTS TO THE JAIL. SEE SITE PLAN.
- (G) EXISTING CCTV RACK WITH EQUIPMENT TO BE REPLACED. RACK & CAT6 CABLE SHALL BE RE-USED. COAX CABLE TO BE REPLACED. ALL CCTV EQUIPMENT SHALL BE NEW.
- (H) EXISTING INTERCOM RACK WITH EQUIPMENT TO BE REPLACED. RACK AND WIRE SHALL BE RE-USED. ALL CCTV EQUIPMENT SHALL BE NEW.
- (J) (5) 12"x24"x16" UPS UNITS STACKED
- (K) EXISTING MATV HEADEND EQUIPMENT FOR HOUSING UNIT. LOCATED AT THE TOP OF THE WALL UNDER LAY-IN CEILING.
- (L) EXISTING UPS & BATTERY RACKS TO BE REMOVED AND REPLACED. PROVIDE NEW UPS AND BATTERY RACKS DEDICATED FOR THE NEW SECURITY CONTROL SYSTEMS.

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC

ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE

3447 Lake Seminole Place
Buford, Georgia 30519
tanner@tannerhoskins.com
678-856-8832 mobile
www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
25 Justice Way - Suite 2223 - Dawsonville, GA 30534
Project #367-20 - Security Systems Upgrades

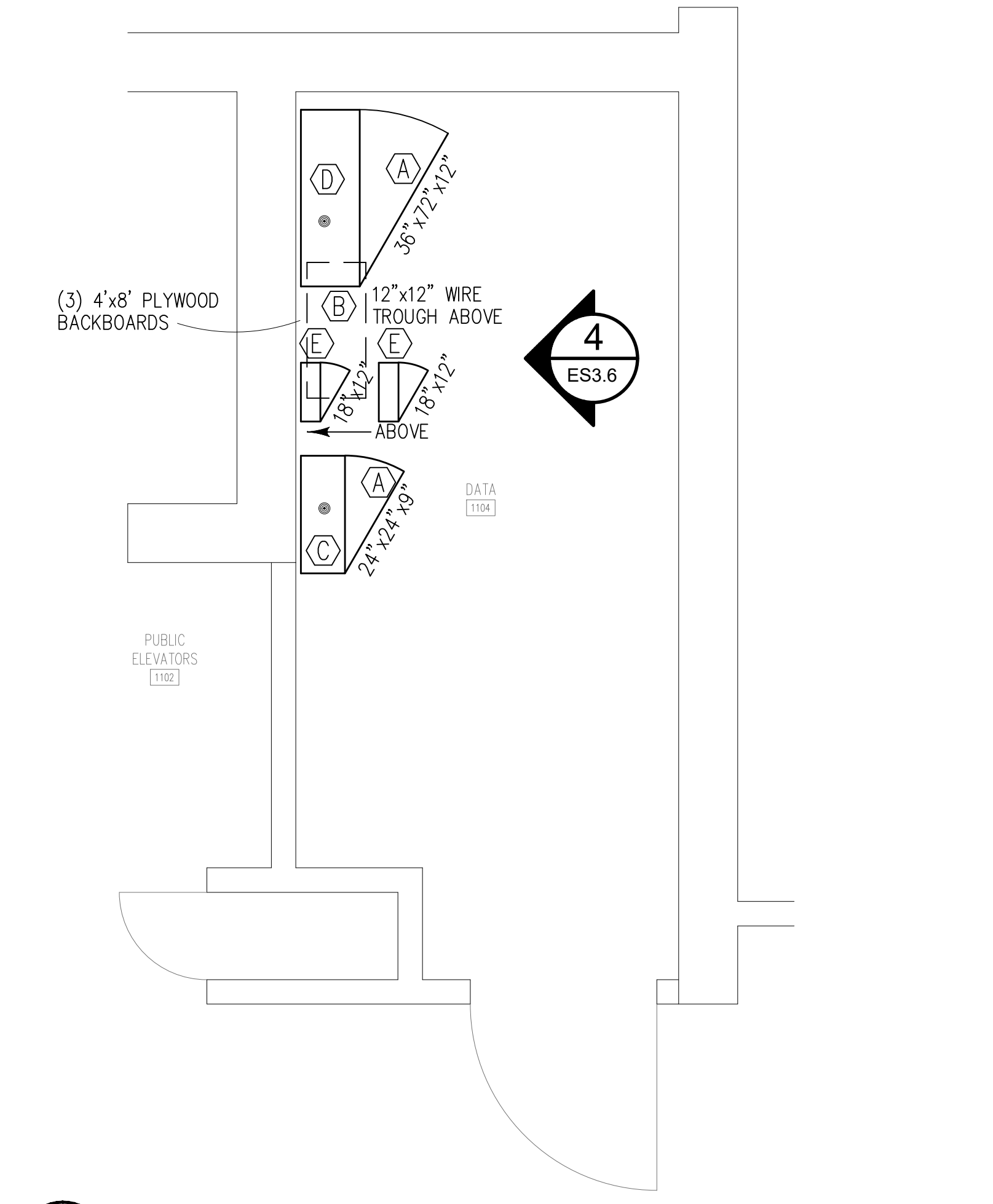
GEORGIA REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. HOSKINS
JULY 20, 2021

date:
JULY 20, 2021
BID SET ONLY

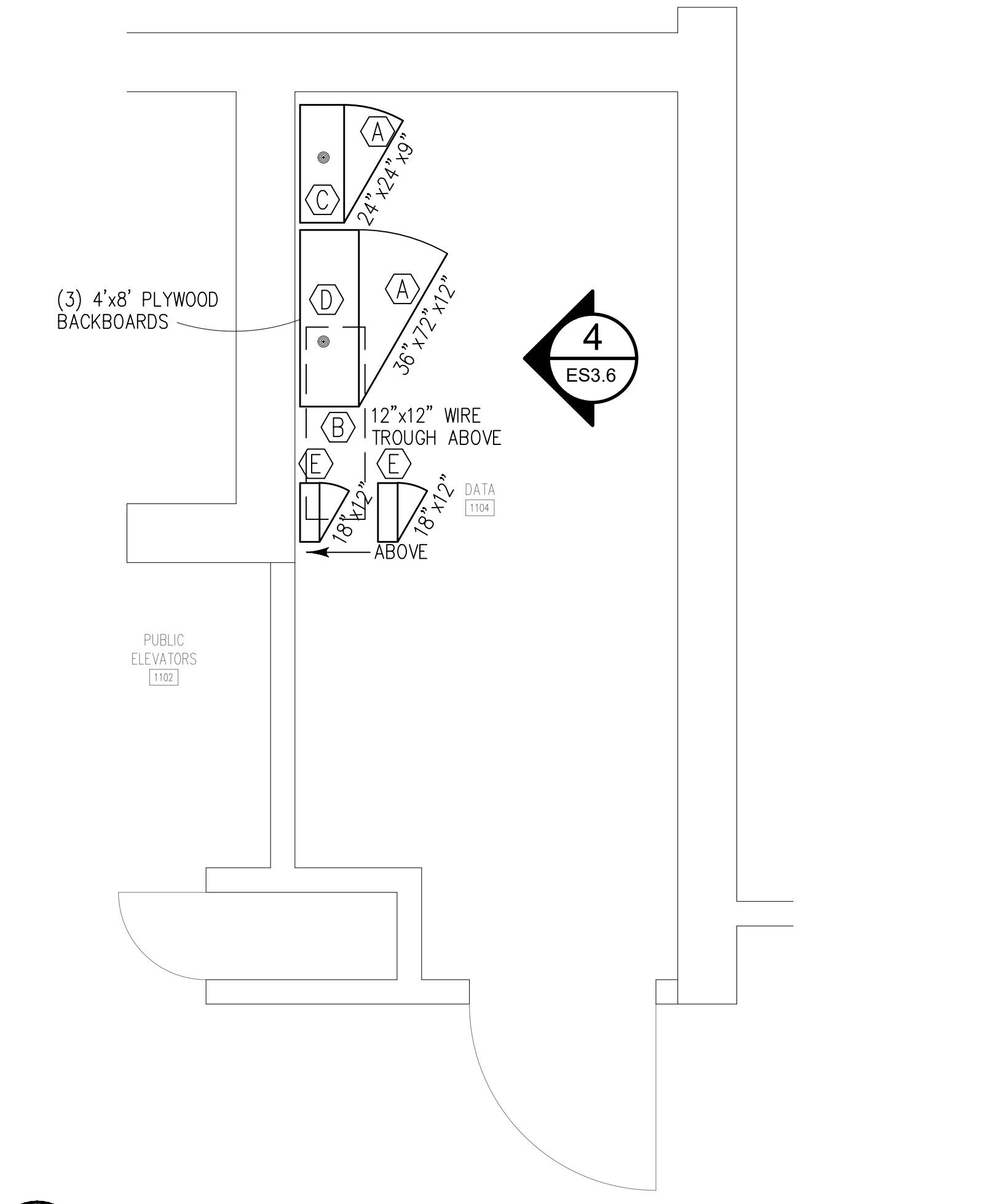
CONTROL ROOMS AND EQUIPMENT ROOM LAYOUTS - SECURITY SYSTEMS UPGRADES

ES3.5

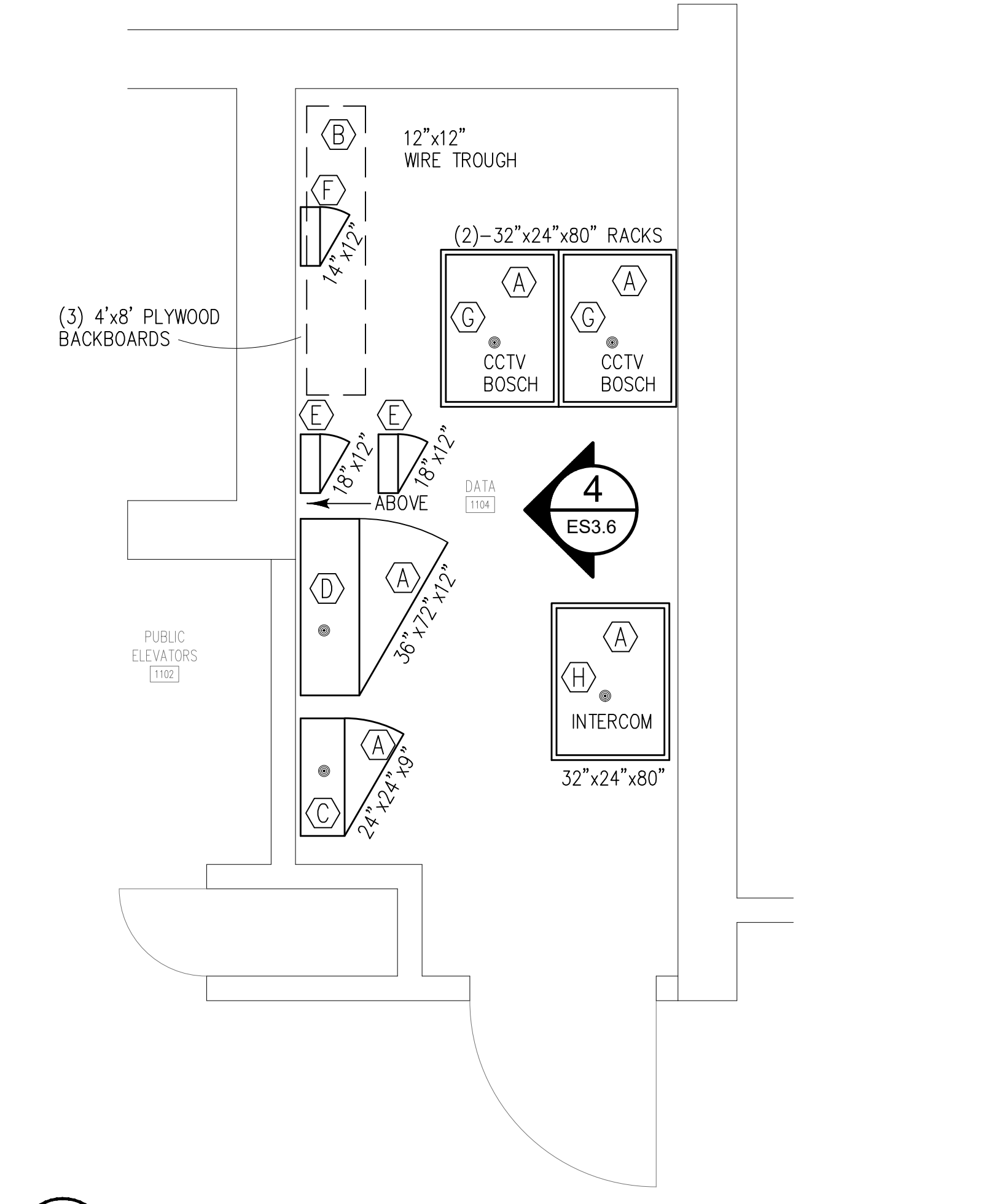
RELEASED FOR BID ONLY



3 COURTHOUSE DATA ROOM - 3RD FLOOR
ES35 SCALE: 1/2" = 1'-0"

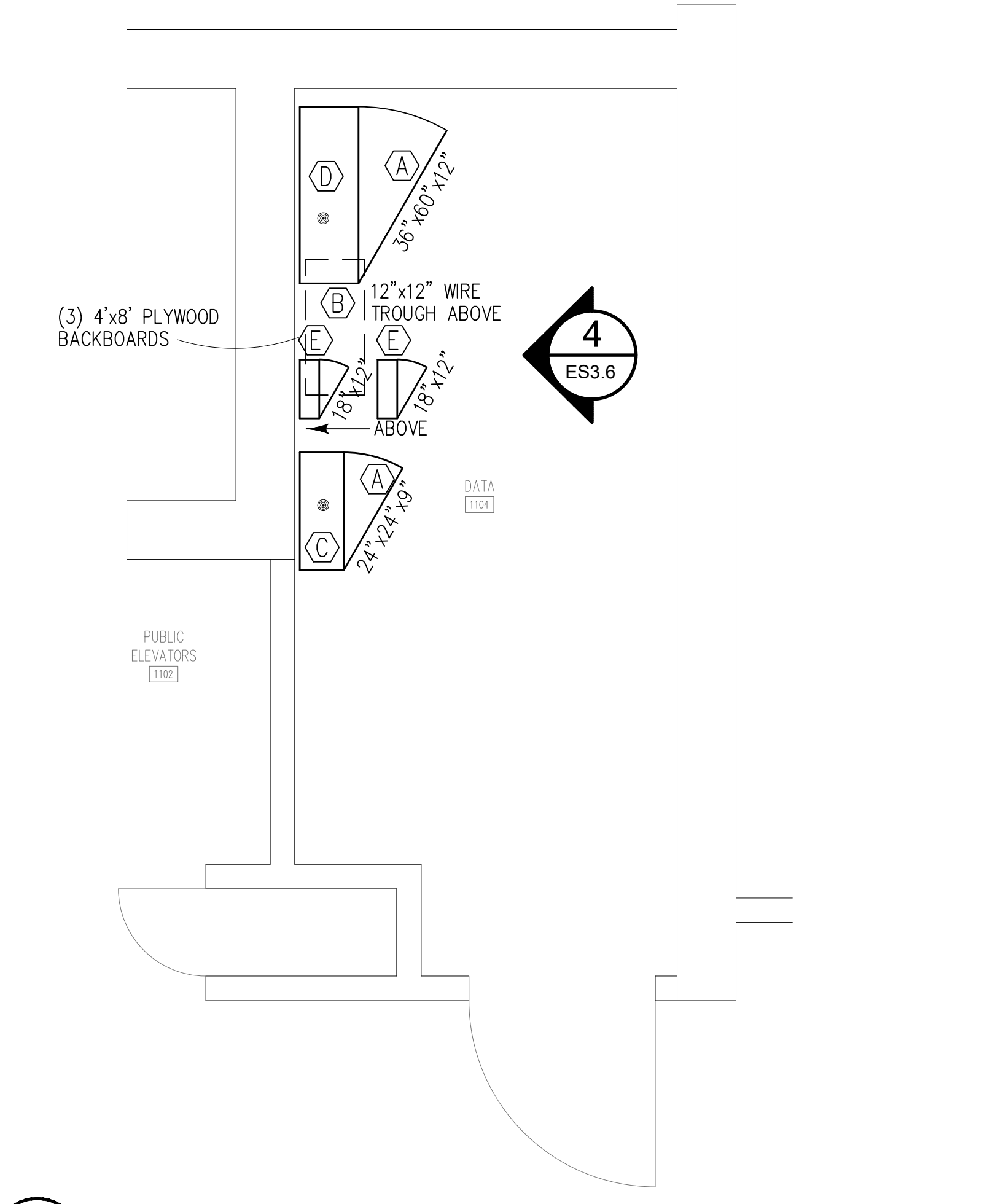


4 COURTHOUSE DATA ROOM - 4TH FLOOR
ES35 SCALE: 1/2" = 1'-0"



1 COURTHOUSE DATA ROOM - 1ST FLOOR
ES35 SCALE: 1/2" = 1'-0"

NOTES:
(A) THIS DATA ROOM IS THE FIRST FLOOR LAYOUT. SECOND, THIRD AND FOURTH FLOORS ARE SIMILAR AND TYPICAL. THE EQUIPMENT IN THE UPPER FLOORS MAY BE IN A DIFFERENT LOCATION.



2 COURTHOUSE DATA ROOM - 2ND FLOOR
ES35 SCALE: 1/2" = 1'-0"

- KEY NOTES: DATA SECURITY EQUIPMENT ROOMS**
- (A) EXISTING ENCLOSURES TO BE RE-USED. ALL INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, TERMINATIONS & POWER SUPPLIES, HEAD END EQUIPMENT ETC. TO BE REMOVED & REPLACED WITH NEW.
 - (B) EXISTING WIRE TROUGH AND WIRING ABOVE AND BELOW TO REMAIN.
 - (C) EXISTING POWER SUPPLIES TO BE REPLACED WITH NEW.
 - (D) EXISTING LOCKING CONTROLS TO BE REMOVED AND REPLACED.
 - (E) EXISTING ACCESS CONTROL PANELS TO BE REMOVED AND REPLACED. TWO PANELS ABOVE AND BELOW.
 - (F) EXISTING FIBER OPTIC PANEL TO REMAIN. CONNECTS TO THE JAIL. SEE SITE PLAN.
 - (G) EXISTING CCTV RACK WITH EQUIPMENT TO BE REPLACED. RACK & CAT6 CABLE SHALL BE RE-USED. COAX CABLE TO BE REPLACED. ALL CCTV EQUIPMENT SHALL BE NEW.
 - (H) EXISTING INTERCOM RACK WITH EQUIPMENT TO BE REPLACED. RACK AND WIRE SHALL BE RE-USED. ALL CCTV EQUIPMENT SHALL BE NEW.
 - (I) LOCKING CONTROL DATA CONVERTERS TO BE REMOVED AND REPLACED.
 - (K) LOCKING CONTROL DOOR CONTROLS TO BE REMOVED AND REPLACED.
 - (L) LOCKING CONTROL INTERCOM CONTROLS TO BE REMOVED AND REPLACED.

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC


ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE

3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade

25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

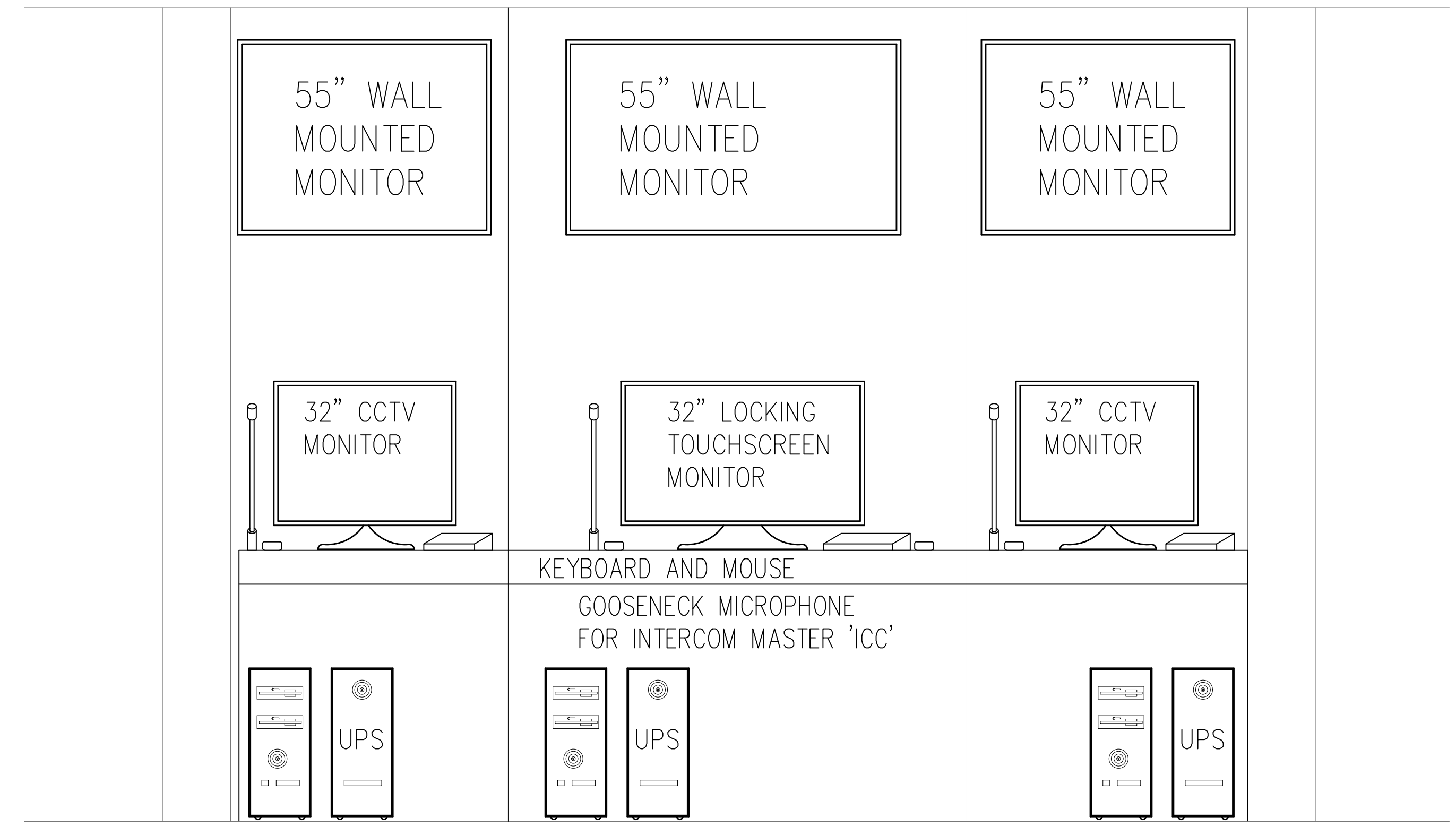


JULY 20, 2021

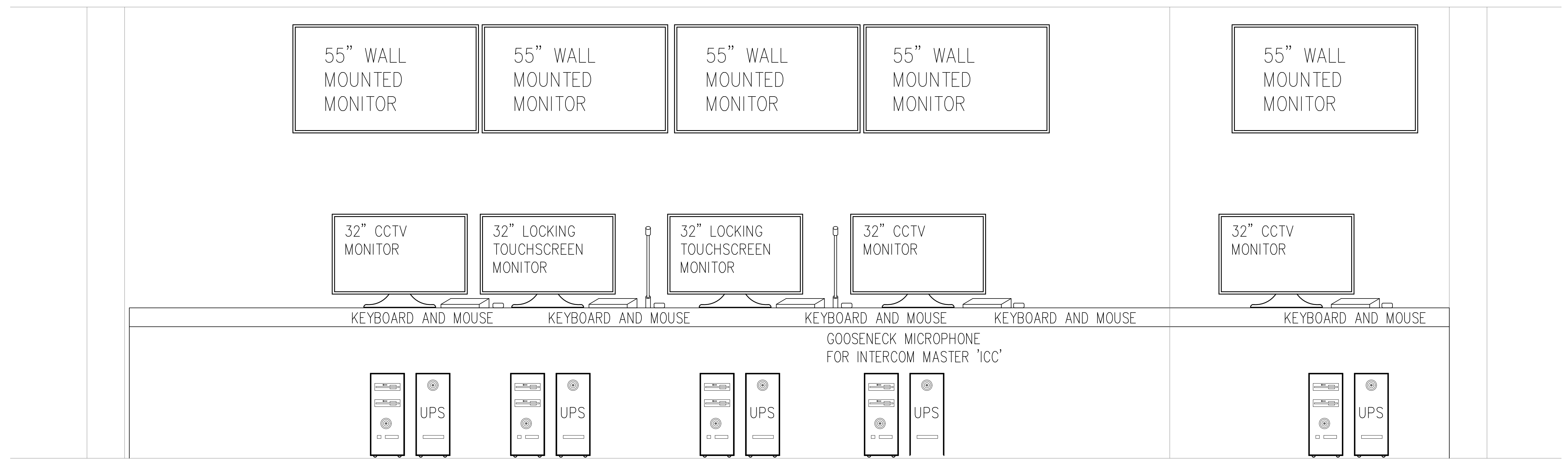
date:
JULY 20, 2021
 BID SET ONLY

CONTROL ROOMS AND EQUIPMENT ROOM LAYOUTS - SECURITY SYSTEMS UPGRADES

ES3.6



2 COURTHOUSE CONTROL ROOM ELEVATION
 ES36 SCALE: 1" = 1'-0"



1 CENTRAL CONTROL ROOM ELEVATION
 ES36 SCALE: 1" = 1'-0"

THIS STATION IS DEDICATED FOR COURTHOUSE CAMERA MONITORING

KEY PLAN:

RELEASED FOR BID ONLY

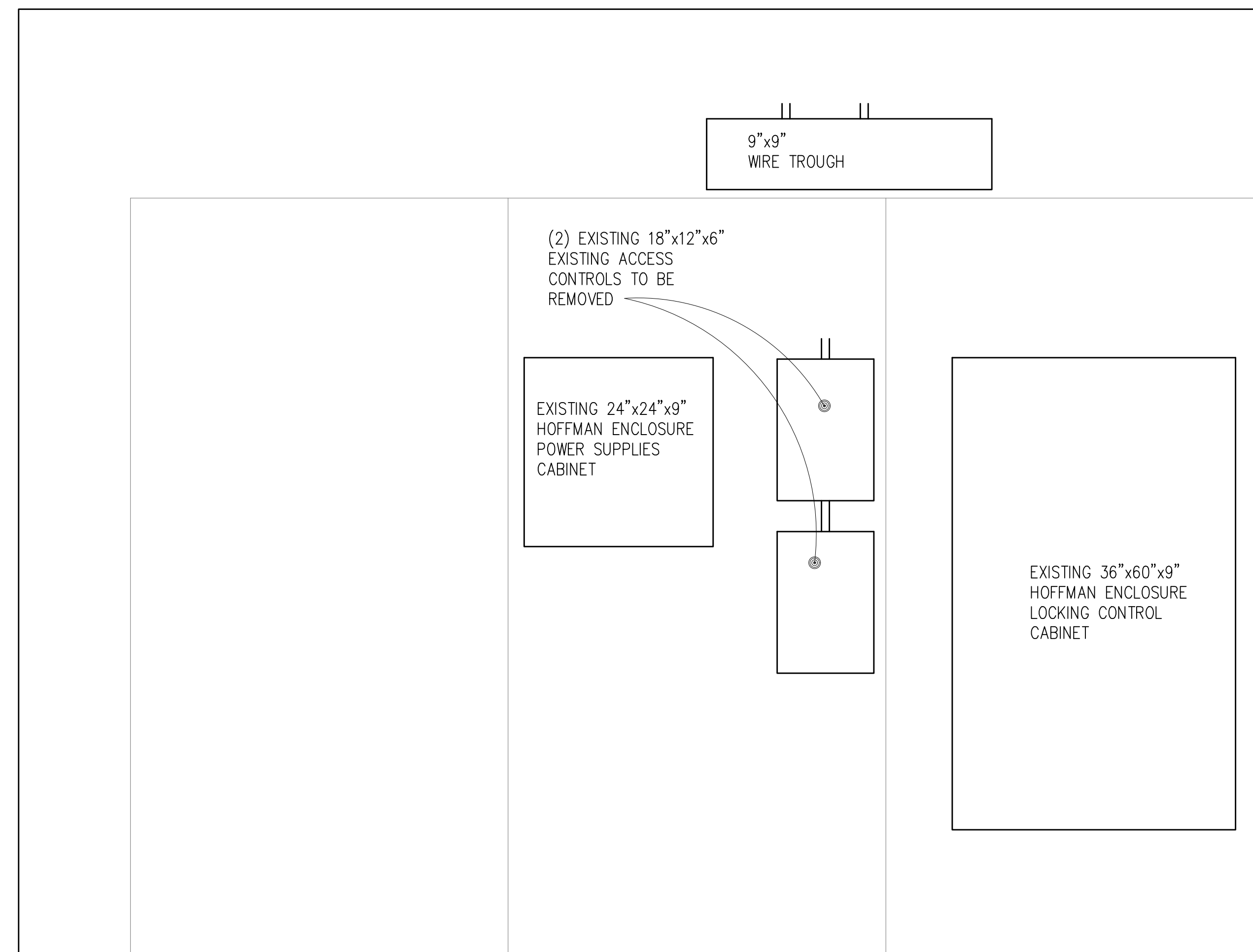
revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC

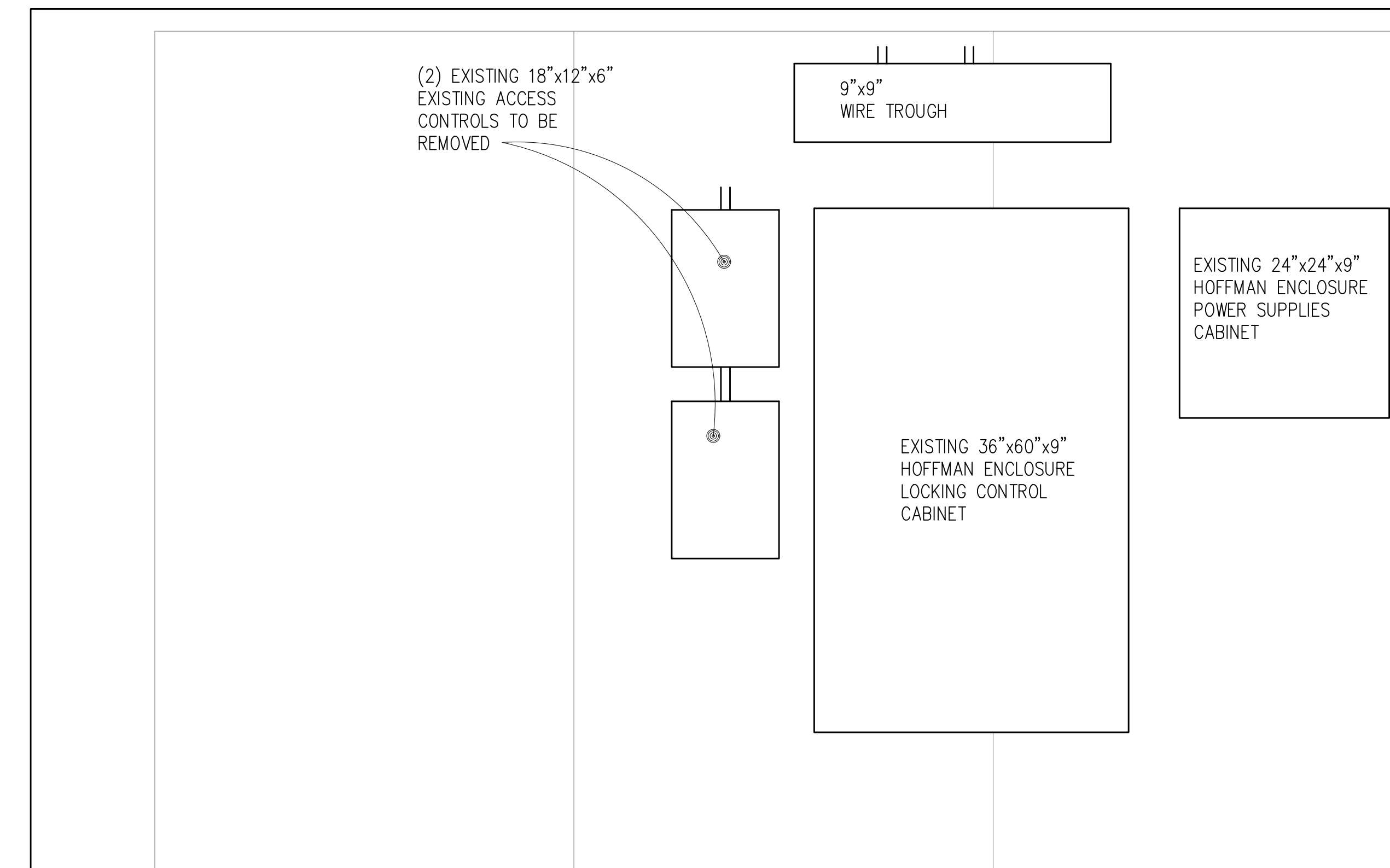
ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE

3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

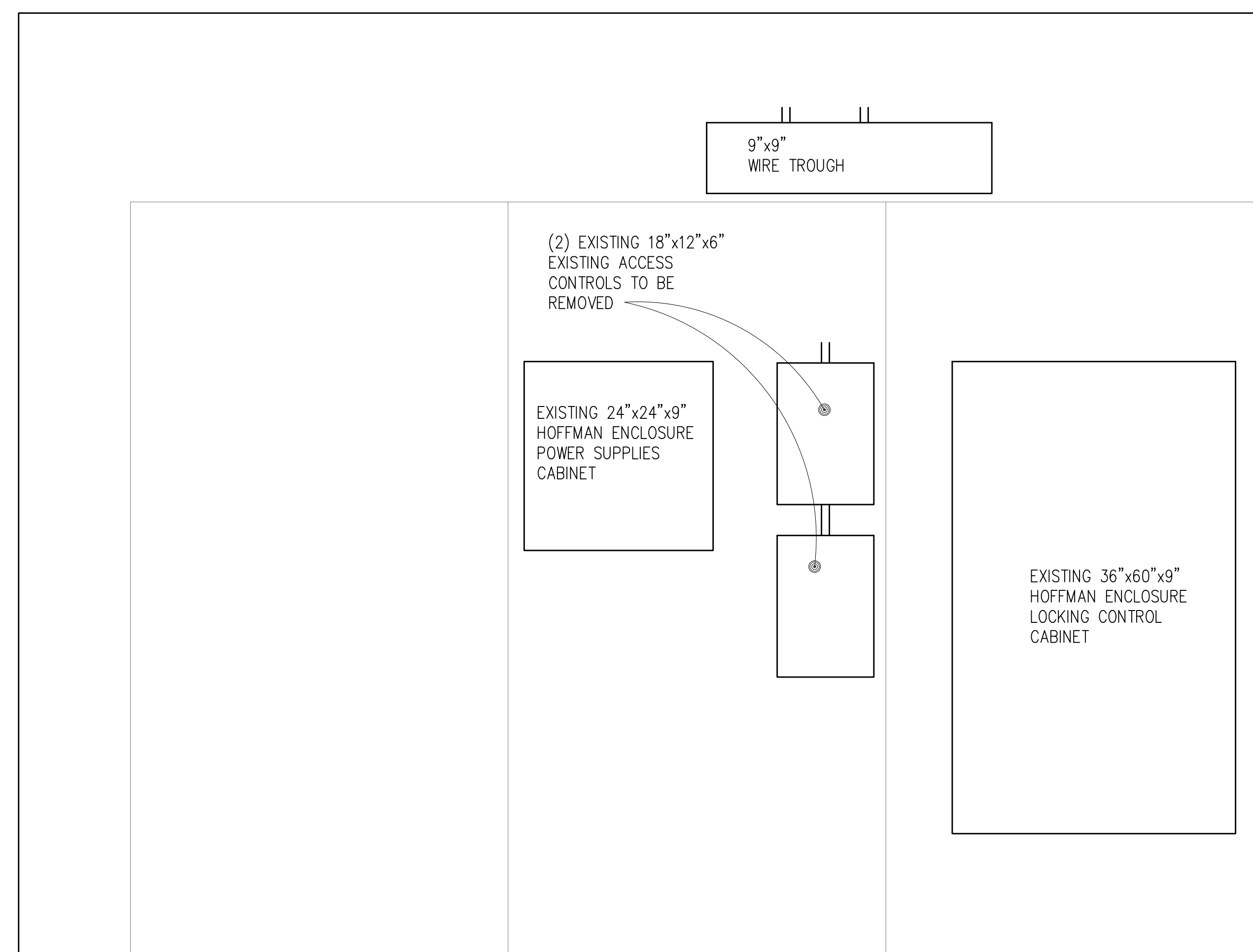
THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC



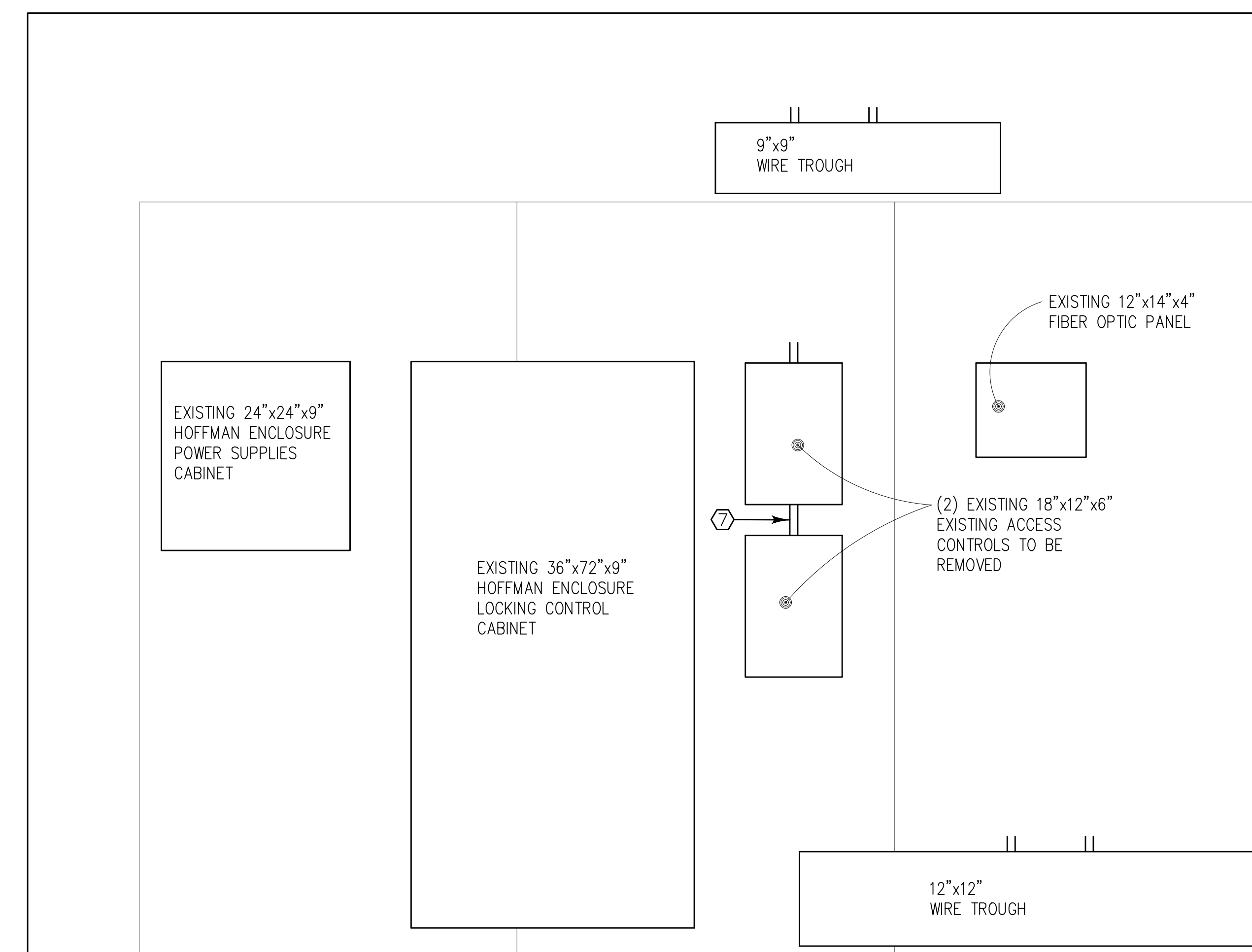
3 ELEVATION DATA ROOM - 3RD FLOOR COURTHOUSE
 ES37 SCALE: 1" = 1'-0"



2 ELEVATION DATA ROOM - 4TH FLOOR COURTHOUSE
 ES37 SCALE: 1" = 1'-0"



2 ELEVATION DATA ROOM - 2ND FLOOR COURTHOUSE
 ES37 SCALE: 1" = 1'-0"



1 ELEVATION DATA ROOM - 1ST FLOOR COURTHOUSE
 ES37 SCALE: 1" = 1'-0"

RELEASED FOR BID ONLY

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



JULY 20, 2021

date:
 JULY 20, 2021
 BID SET ONLY

CONTROL ROOMS AND EQUIPMENT ROOM LAYOUTS - SECURITY SYSTEMS UPGRADES

ES3.7

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC

ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE

3447 Lake Seminole Place
Buford, Georgia 30519
tanner@tannerhoskins.com
678-656-8832 mobile
www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade

25 Justice Way - Suite 2223 - Dawsonville, GA 30534

Project #367-20 - Security Systems Upgrades

RELEASED FOR BID ONLY



JULY 20, 2021

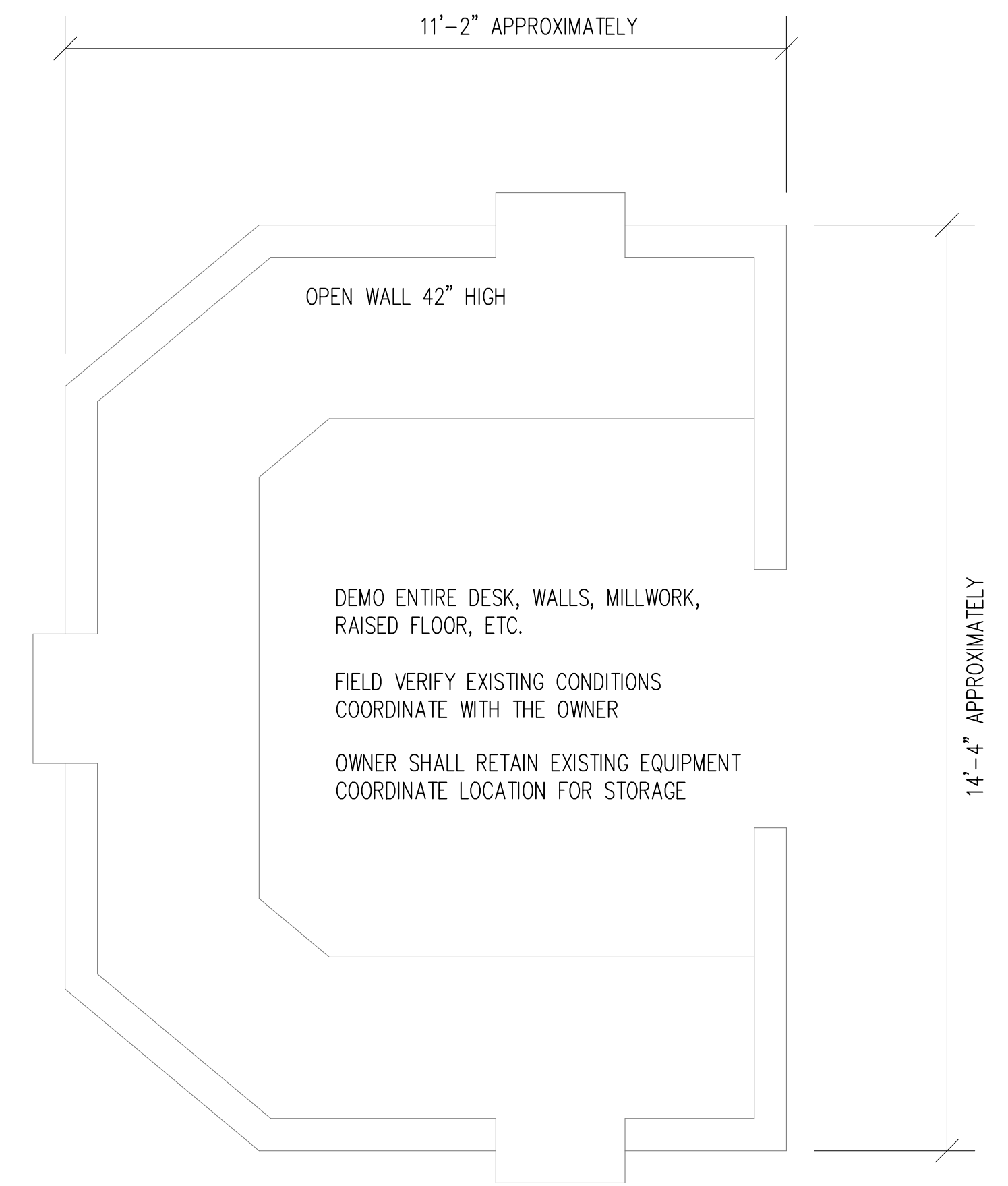
date:
JULY 20, 2021
BID SET ONLY

ALTERNATE NEW INTAKE BOOKING CONTROL ROOM SECURITY SYSTEMS UPGRADES

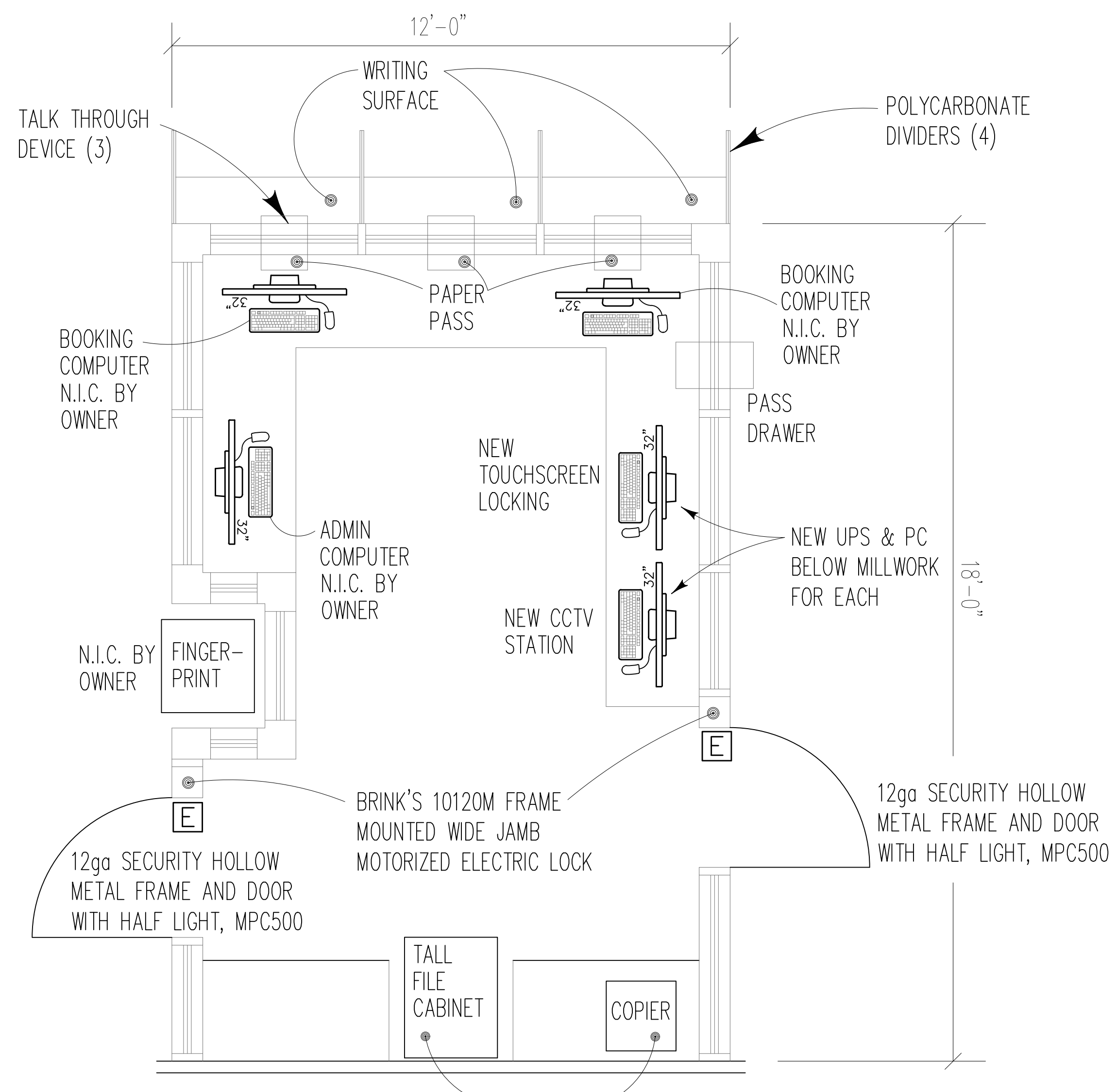
ES3.8

NOTES:

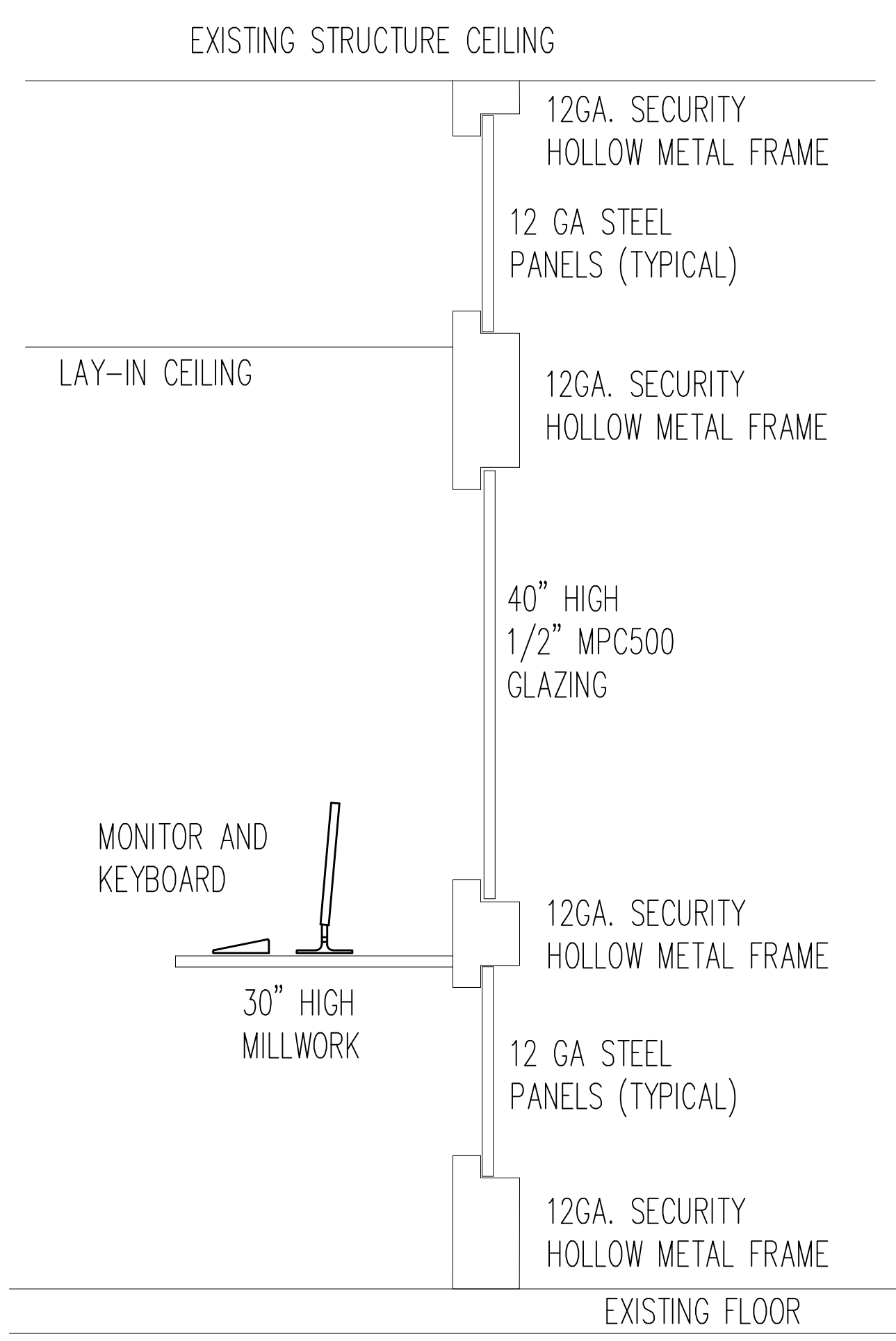
1. ALL HOLLOW METAL SHALL BE 12GA STEEL. EXACT LOCATION.
2. PROVIDE NEW MILLWORK, MILLWORK SHALL BE CABINET GRADE PLYWOOD WITH LAMINATE TOP. APPROXIMATELY 28 LINEAR FOOT OF MILLWORK, 30" HIGH, 30" DEEP WITH SUPPORTING DRAWERS. PROVIDE TWO (2) SETS OF DRAWERS WITH THREE (3) DRAWERS EACH. DRAWERS 24" WIDE. PROVIDE PAPER PASS THRU AT EACH WRITING STATION.
3. PROVIDE NEW VTC FLOORING. MATCH EXISTING. ADMINISTRATIVE AREA.
4. PROVIDE NEW POWER AND LIGHTING. PROVIDE 12 NEW 20AMP CIRCUITS. REUSE EXISTING. PROVIDE 4 NEW 2X4 LED LAY-IN FIXTURES AND 8 NEW LED DIMMABLE RECESSED DOWN LIGHTS.
5. PROVIDE NEW 1/2 MPC500 POLYCARBONATE GLASS FOR THE ENTIRE CONTROL ROOM AND HALF LIGHT DOORS. THE NEW CONTROL ROOM SHALL HAVE 306 DEGREES OF GLASS VIEW.
6. PROVIDE NEW 1.5 TON MISUBITCHI AC UNIT FOR THE CONTROL ROOM, THE UNIT SHALL HAVE ITS OWN THERMOSTAT CONTROL. UNIT SHALL BE MOUNTED ABOVE CEILING. COORDINATE EXISTING DUCTWORK, MOVE AS REQUIRED OR PROVIDE FOR TRANSITION THROUGH THE NEW CONTROL ROOM WALLS.
8. PROVIDE THREE (3) TALK-THROUGH COMMUNICATORS FOR EACH OFFICERS WRITING BOOTH. COMMUNICATORS
9. PROVIDE THREE (3) NEW OFFICER WRITING SURFACES 36" AFF FOR STANDING POSITION. PROVIDE FOUR (4) NEW 1/2" POLYCARBONATE SOUND DIVIDERS.
10. PROVIDE THREE (3) NEW PAPER PASS UNITS AT EACH OFFICER WRITING STATION. PAPER PASSES SHALL BE TYPICAL CORRECTIONS RATED.
11. PROVIDE SHOP DRAWINGS FOR REVIEW FOR ALL EQUIPMENT REQUIRED FOR THE INSTALLATION OF THIS NEW INTAKE BOOKING CONTROL ROOM.



1 EXISTING BOOKING CONTROL STATION
ES38 SCALE: 1/2" = 1'-0"



2 NEW BOOKING CONTROL ROOM
ES38 SCALE: 1/2" = 1'-0"



3 TYPICAL WALL SECTION
ES38 SCALE: 1" = 1'-0"

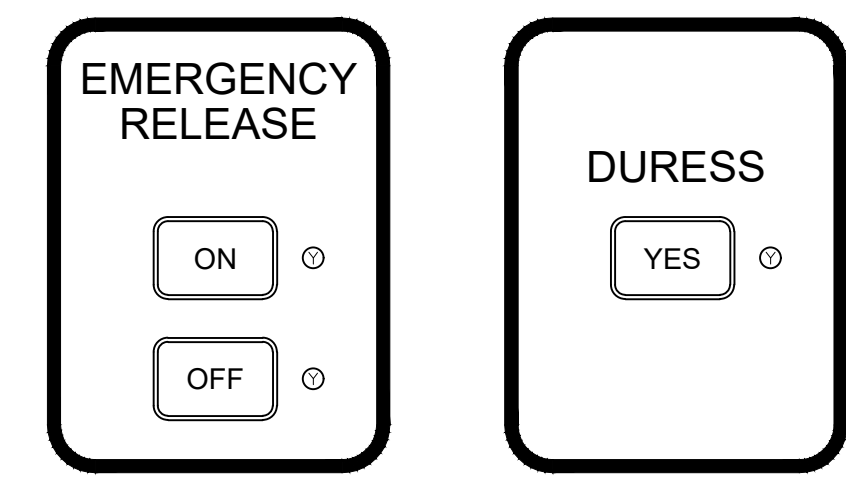
ALTERNATE NO. ONE

KEY PLAN:

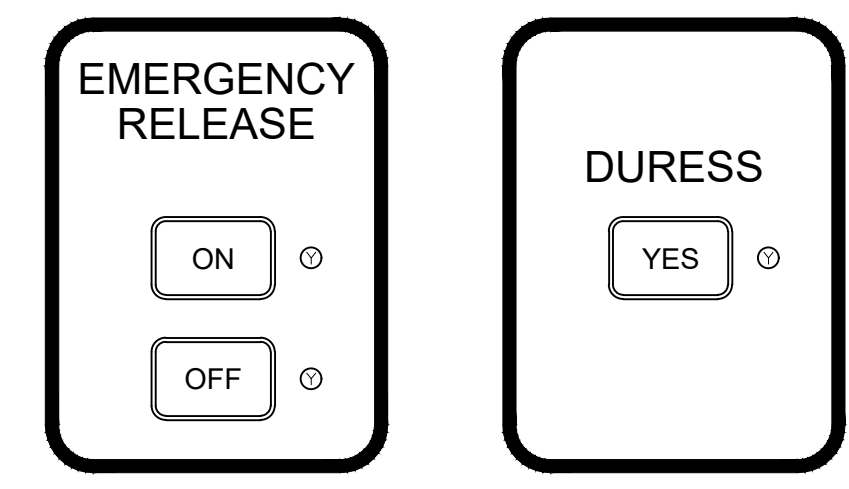
revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY. © Tanner Hoskins Consultants, LLC

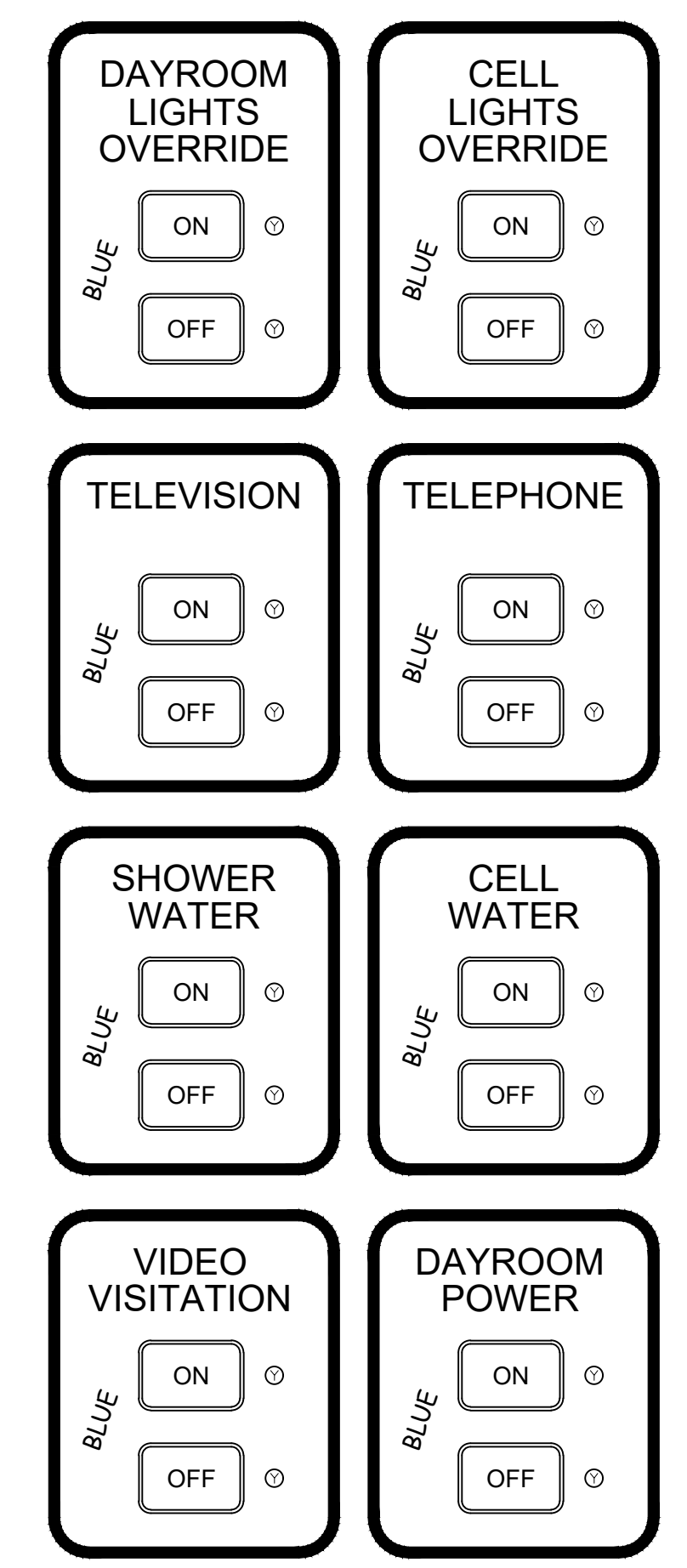


DAYROOM C

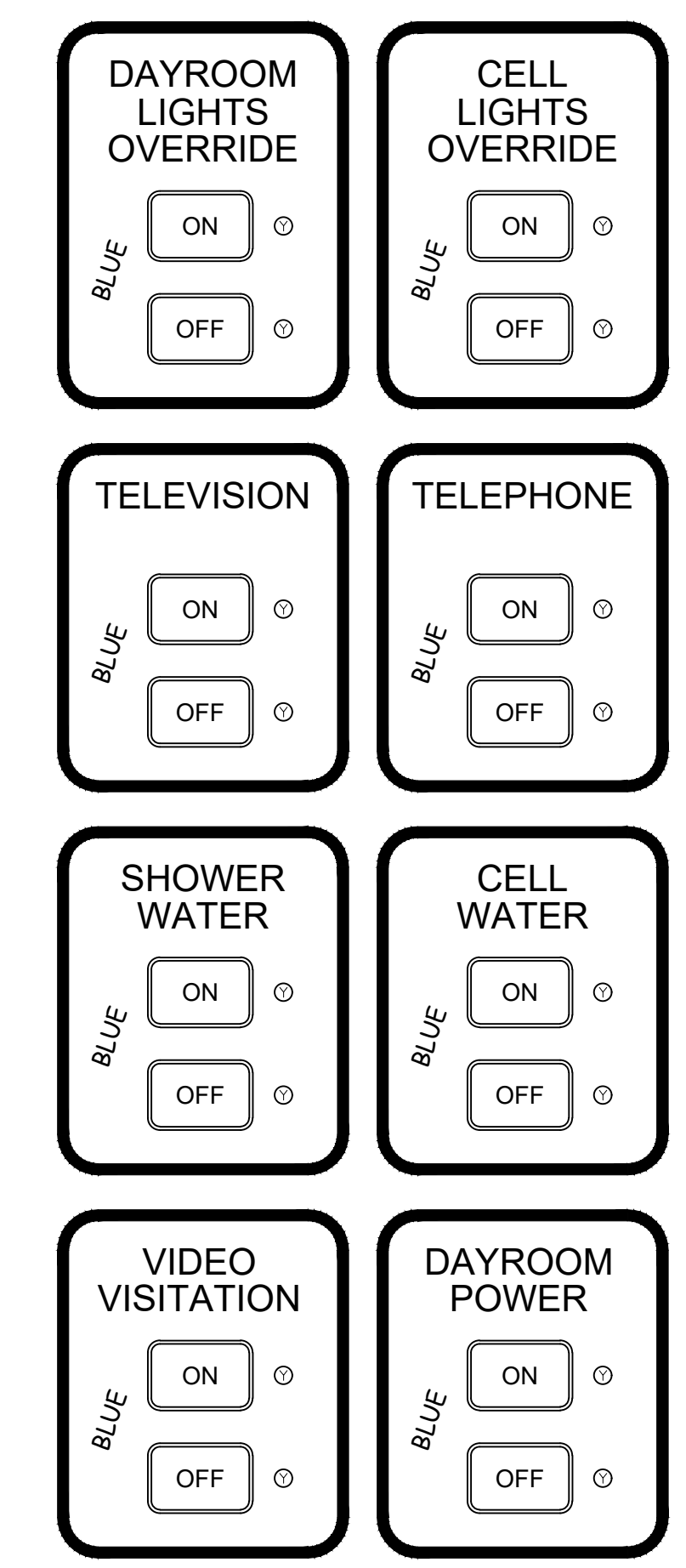


DAYROOM B

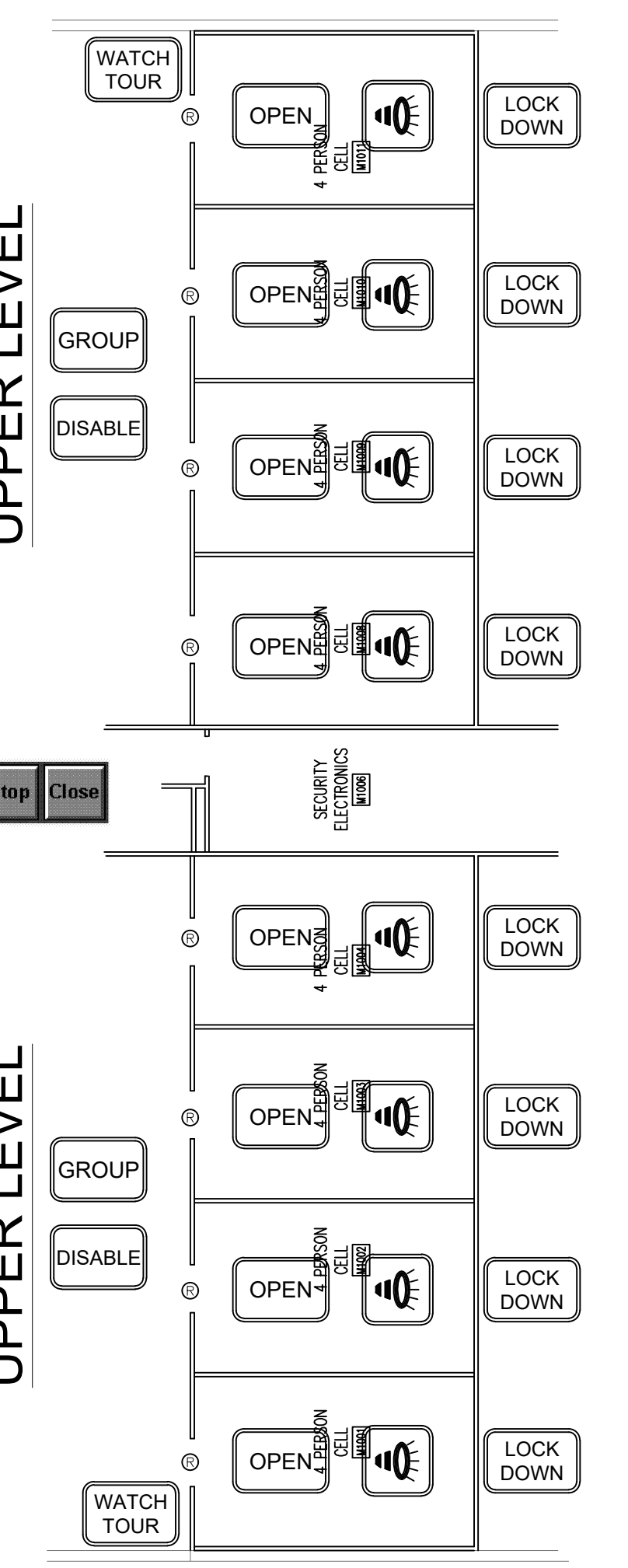
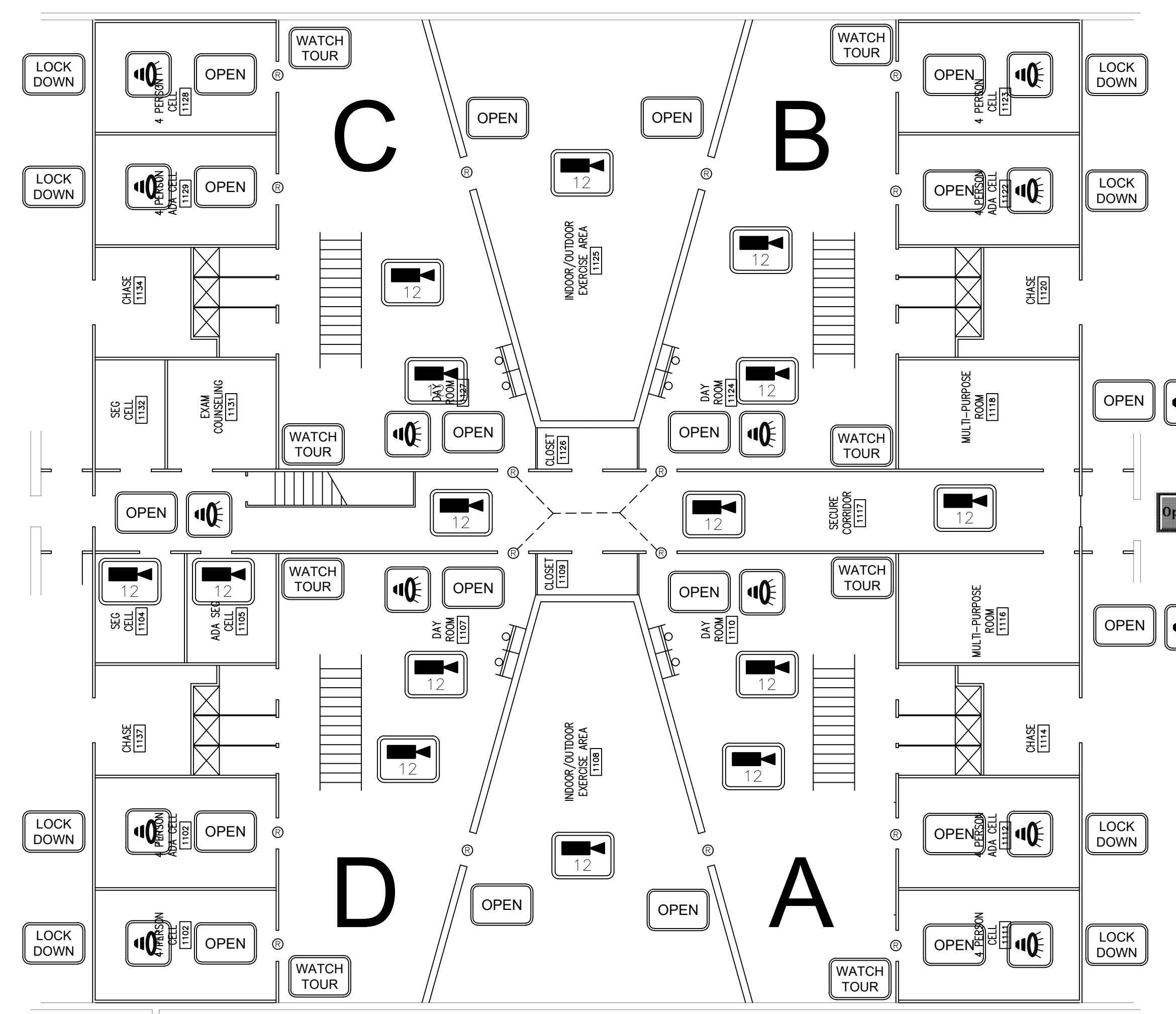
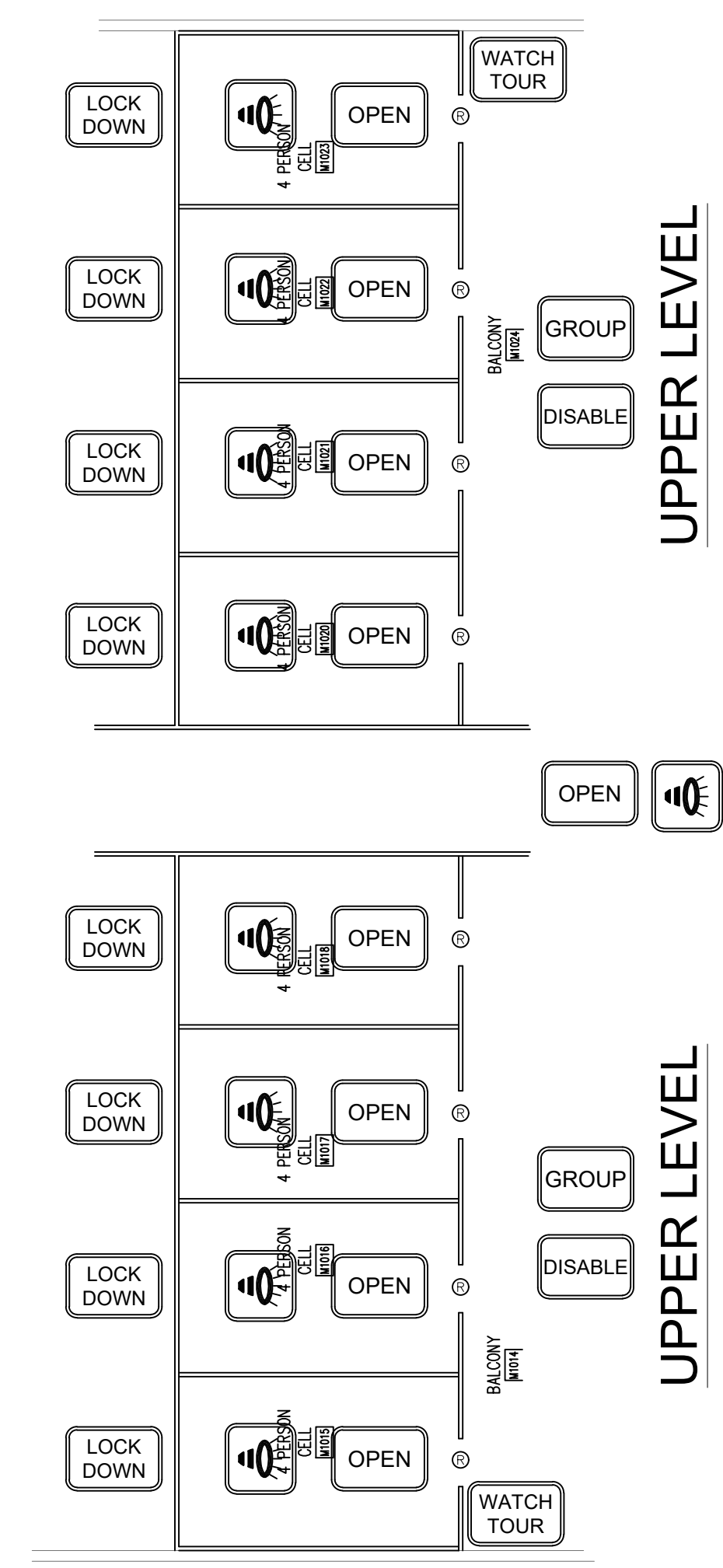
ALL SLIDER DOORS REQUIRE AN "OPEN" "STOP" "CLOSE" (TYPICAL)
 THE AUDIO/CALL-IN OFF SHALL HAVE AN ADJUSTABLE "TIME OUT" FEATURE (TYPICAL)



DAYROOM C

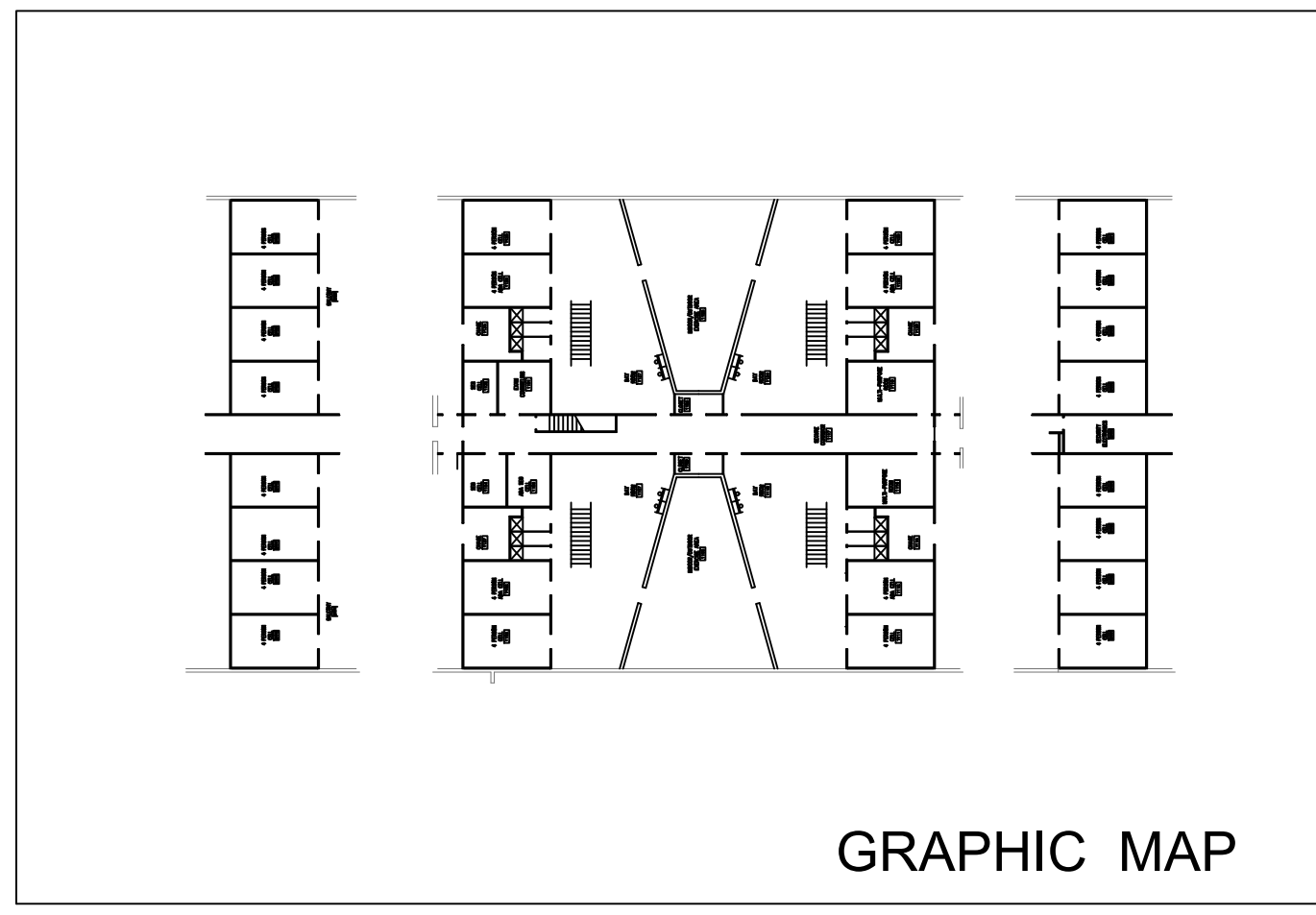


DAYROOM A



THESE ICONS SHOWN ARE TYPICAL FOR ALL DAYROOMS & SHALL APPEAR UPON SELECTION OF ANY DAYROOM. TYPICAL

THESE ICONS SHOWN ARE TYPICAL FOR ALL DAYROOMS & SHALL APPEAR UPON SELECTION OF ANY DAYROOM. TYPICAL



GRAPHIC MAP

ALARM QUE

ALARM	FIRE EGRESS DOOR UNLOCKED
USER	UNLOCKED DOOR 123
USER	ACTIVATED CAMERA 56

1 HOUSING LOCKING CONTROL PANEL GRAPHIC

ES4.1 SCALE: FULL SIZE

NOTES:

- THE DRAWING SHOWN IS A TYPICAL CONTROL GRAPHIC FOR A TOUCHSCREEN LOCKING SYSTEM. SEE SPECIFICATIONS FOR COMPLETE REQUIREMENTS OF TOUCHSCREEN GRAPHIC, PUSHBUTTONS, CONTROL ICONS, ETC. CONTRACTOR SHALL SUBMIT ALL CONTROL GRAPHICS FOR REVIEW AND APPROVAL AS PART OF THE SHOP DRAWING SUBMITTAL.
- DPLICATE ALL EXISTING GRAPHIC CONTROLS INCLUDING ALL UTILITY CONTROLS. TYPICAL FOR ALL NEW TOUCHSCREEN LOCKING CONTROL PANELS.

RELEASED FOR BID ONLY

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



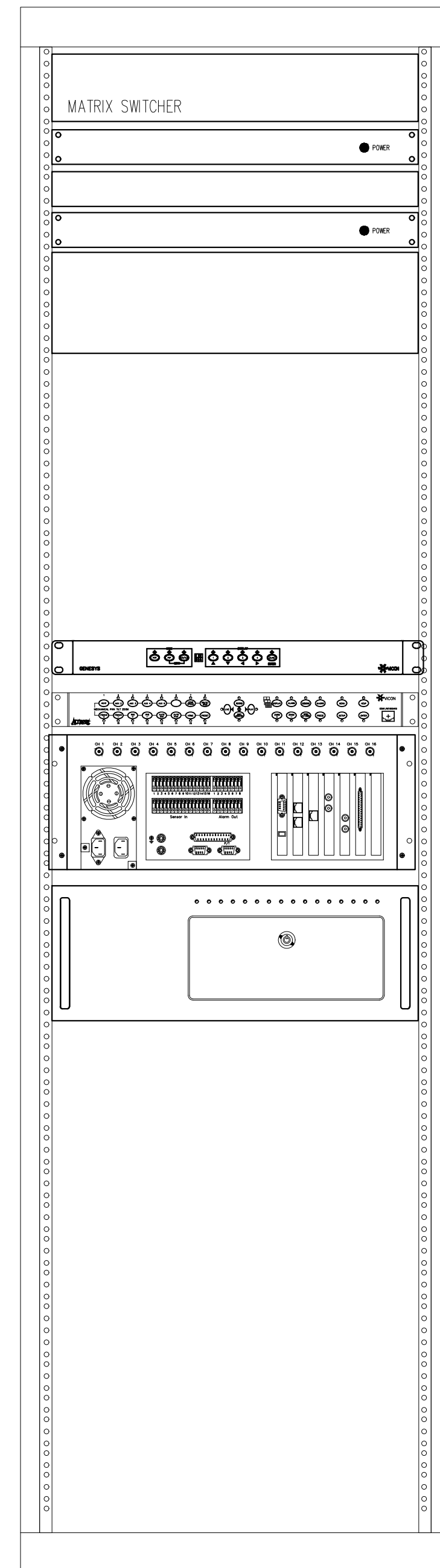
JULY 20, 2021

date:
 JULY 20, 2021
 BID SET ONLY

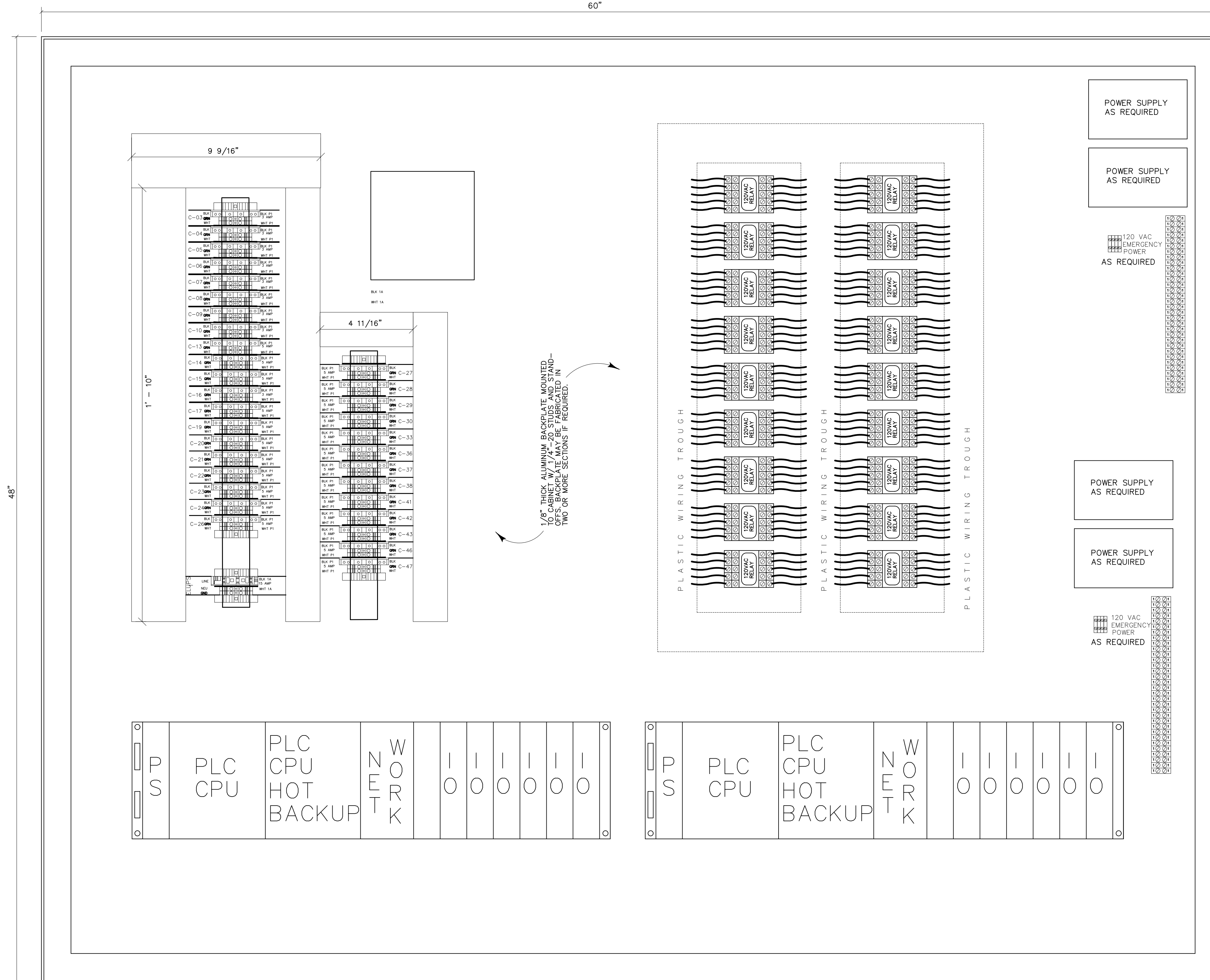
TYPICAL TOUCHSCREEN GRAPHIC PANEL SECURITY

ES4.1

KEY PLAN:



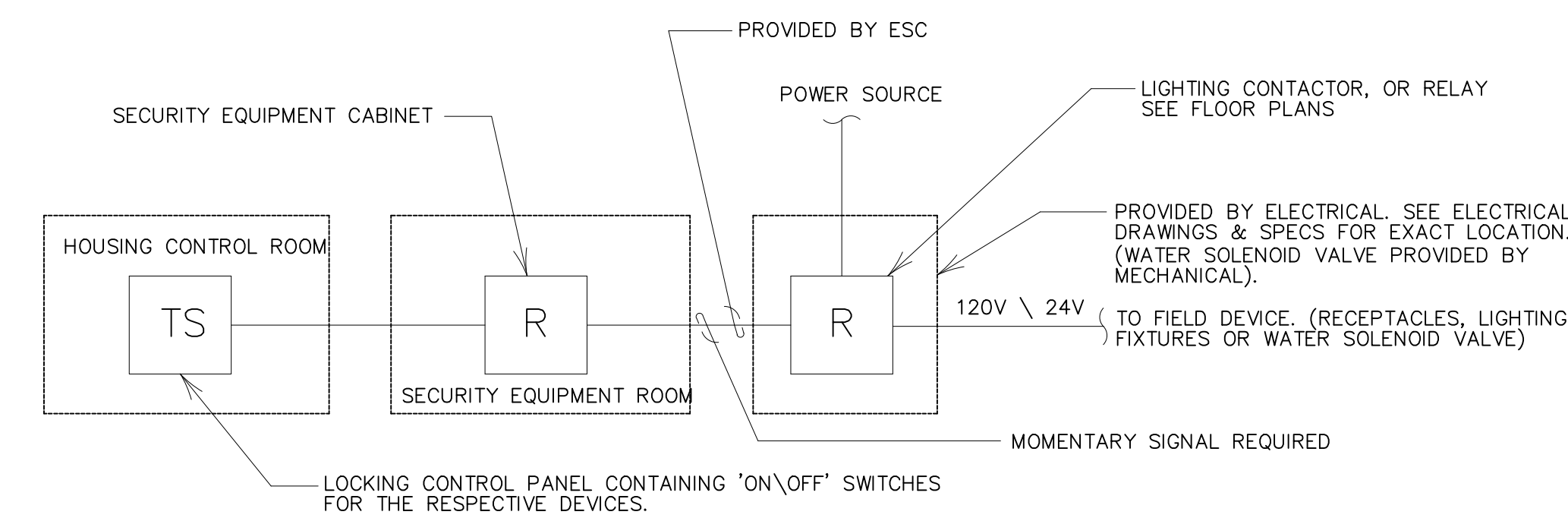
5 TYPICAL CCTV CABINET
ES42 SCALE: 1" = 3"



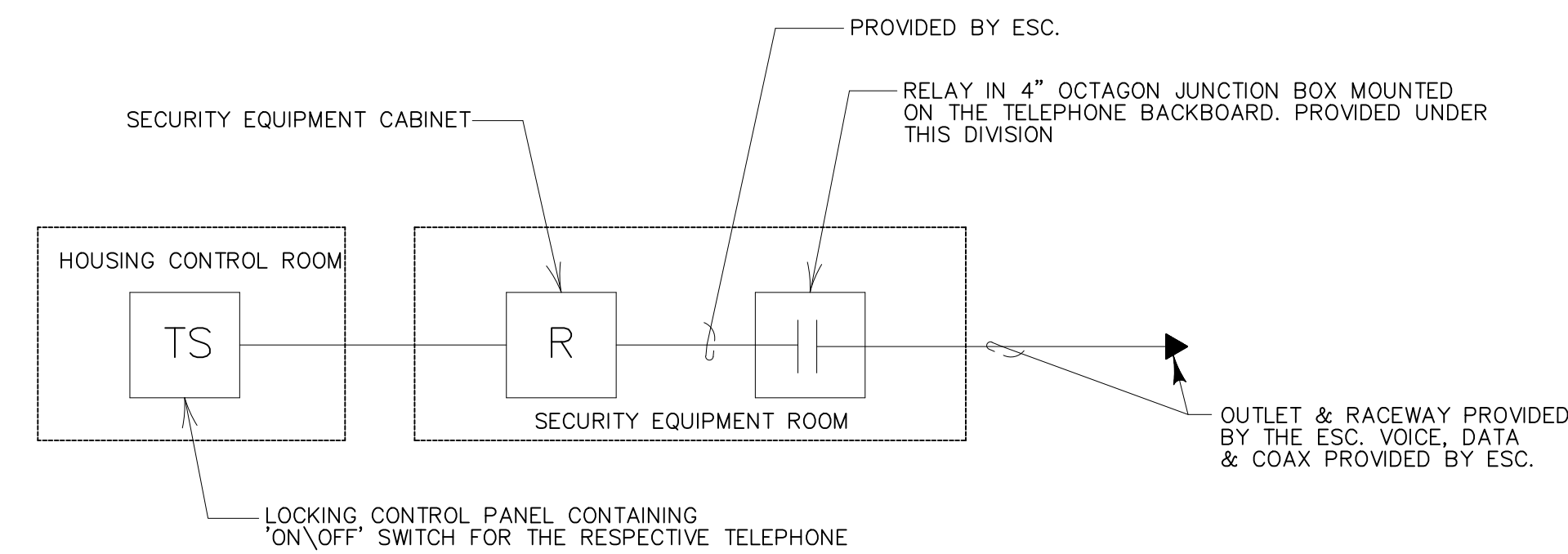
1 TYPICAL LOCKING CONTROL RELAY CABINET
ES42 SCALE: 1" = 3"

NOTES:

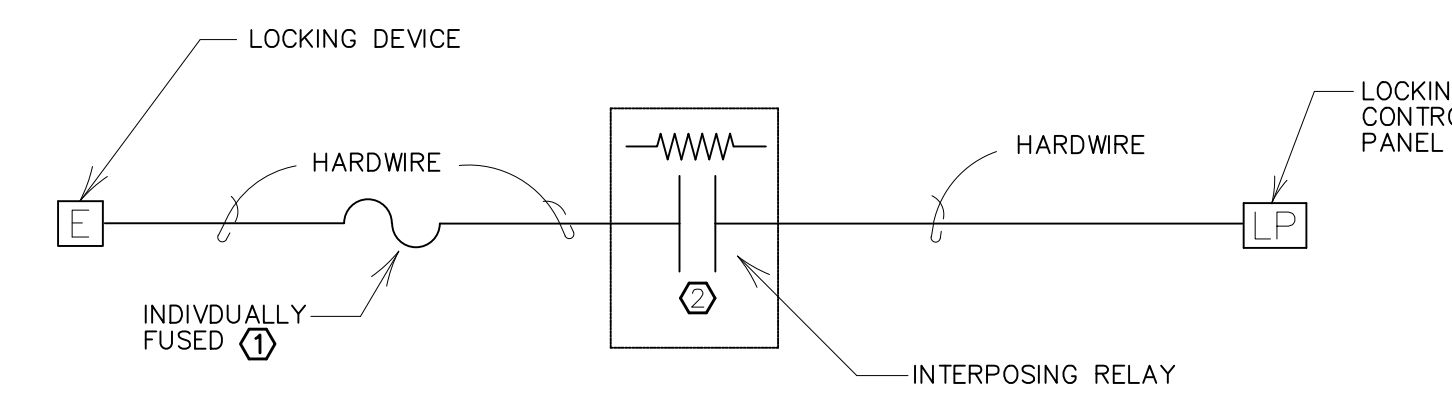
1. MOUNT CABINET IN THE SECURITY EQUIPMENT ROOM AS REQUIRED.
2. ALL WIRING SHALL HAVE LABELS AT BOTH TERMINATING ENDS, IN THIS CABINET & IN THE FIELD.
3. MAGNECRAFT CLASS 76 COIL 24VDC, 10 AMP CONTACTS WITH HOLD DOWN CLIP, SPST.
4. THIS DRAWING IS A GENERAL LAYOUT OF THE LOCKING CONTROL SYSTEM HEADEND. THE CONTRACTOR SHOULD USE THIS AS A GUIDELINE WHEN BUILDING THE ENTIRE LOCKING CONTROL SYSTEM. THE CONTRACTOR SHALL PROVIDE A DETAILED LAYOUT OF THE LOCKING CABINET AND WIRING DIAGRAMS WITH SHOP DRAWINGS.



4 TYPICAL DEVICE CONTROL ONE LINE DIAGRAM
ES42 SCALE: NONE



3 INMATE TELEPHONE CONTROL ONE LINE DIAGRAM
ES42 SCALE: NONE



2 TYPICAL LOCKING SCHEMATIC
ES42 SCALE: NONE

KEYNOTES:

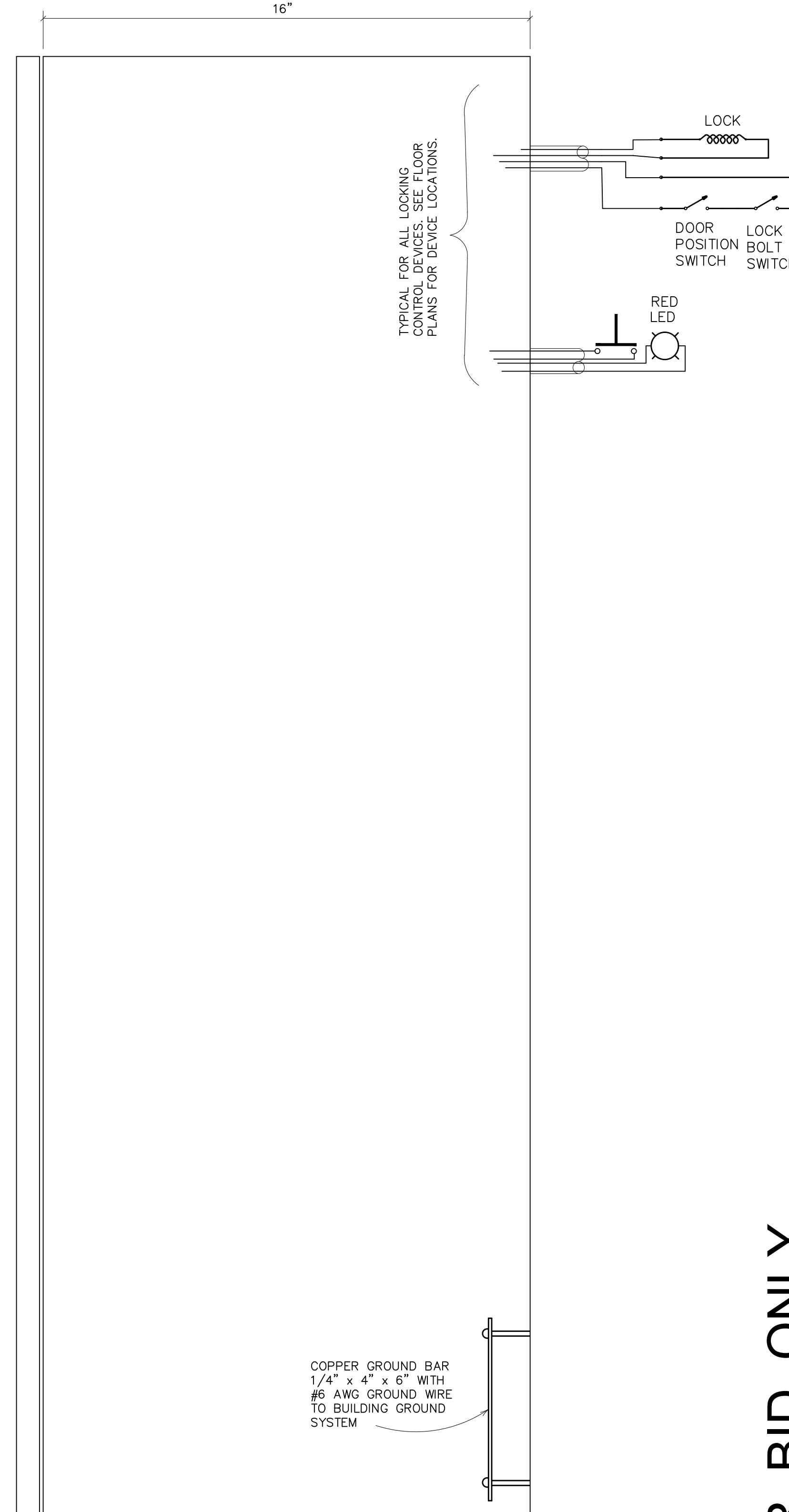
1. EACH LOCKING CIRCUIT SHALL BE INDIVIDUALLY FUSED. SIZE FUSE IN ACCORDANCE WITH LOCK MANUFACTURER RECOMMENDATIONS.
2. EACH LOCKING CIRCUIT SHALL HAVE AN INTERPOSING RELAY.

NOTES:

- (TYPICAL ALL LOCKING CABINETS)
1. ALL WIRING SHALL BE GROUPED AND PLACED IN PLASTIC WIRING DUCTS AND ALL PLASTIC WIRING DUCTS SHALL HAVE TYPED LABELS IDENTIFYING THE WIRING SYSTEM, VOLTAGE AND CHARACTERISTICS.
 2. SEE SPECIFICATIONS FOR SIZE, TYPE AND RATING OF CONDUCTORS.
 3. A SYSTEM OF COLOR CODING SHALL BE ADOPTED BY THE CONTRACTOR AND SHALL BE CONSISTENT THROUGHOUT.
 4. SPLICING OF WIRING IS PROHIBITED IN THE RELAY CABINET.
 5. ALL LOCKING CONTROL AND STATUS CIRCUITS SHALL BE INDIVIDUALLY FUSED.
 6. ALL RELAYS SHALL BE LABELLED WITH A TYPED LABEL, SHOWING DOOR NUMBER.
 7. ALL LOCKING CIRCUITS SHALL HAVE A GREEN GROUND WIRE.
 8. SEPARATE THE LOCK RELAYS FROM THE INTERLOCKING RELAYS.
 9. USE 24 VDC FOR DOOR STATUS, 12 VDC IS NOT ACCEPTABLE.
 10. RELAYS AND TERMINAL BLOCKS SHALL FIT IN DIN RAILS.
 11. WHERE CIRCUIT REQUIRE FUSES, FUSE HOLDER SHALL BE INTEGRAL OF TERMINAL BLOCK.
 12. ALL CONDUIT AND JUNCTION BOXES SHALL BE GROUNDED.
 13. ALL WIRING, RELAYS, FUSES, POWER SUPPLIES, COMPONENTS, ETC. SHALL BE LABELLED.

NOTES:

1. THE DRAWING SHOWN IS A TYPICAL FOR LOCKING CABINETS FOR EXISTING AND NEW BUILDINGS. SEE SPECIFICATIONS FOR COMPLETE REQUIREMENTS OF THE LOCKING SYSTEM HEADEND EQUIPMENT, ETC. CONTRACTOR SHALL SUBMIT ALL LOCKING CONTROL EQUIPMENT FOR REVIEW AND APPROVAL AS PART OF THE SHOP DRAWING SUBMITTAL.



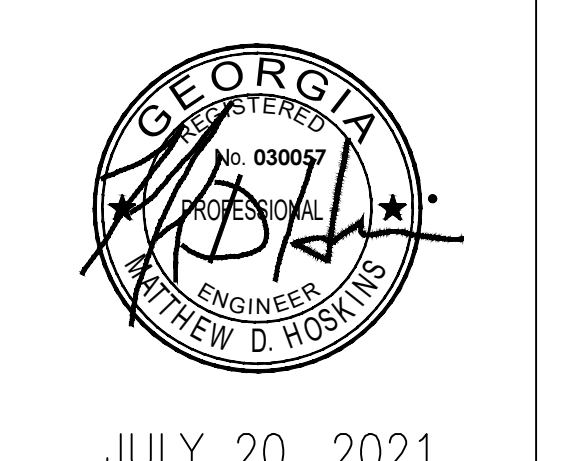
RELEASED FOR BID ONLY

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
3447 Lake Seminole Place Buford, Georgia 30519
Tanner@tannerhoskins.com 678-856-8832 mobile www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
25 Justice Way - Suite 2223 - Dawsonville, GA 30534
Project #367-20 - Security Systems Upgrades

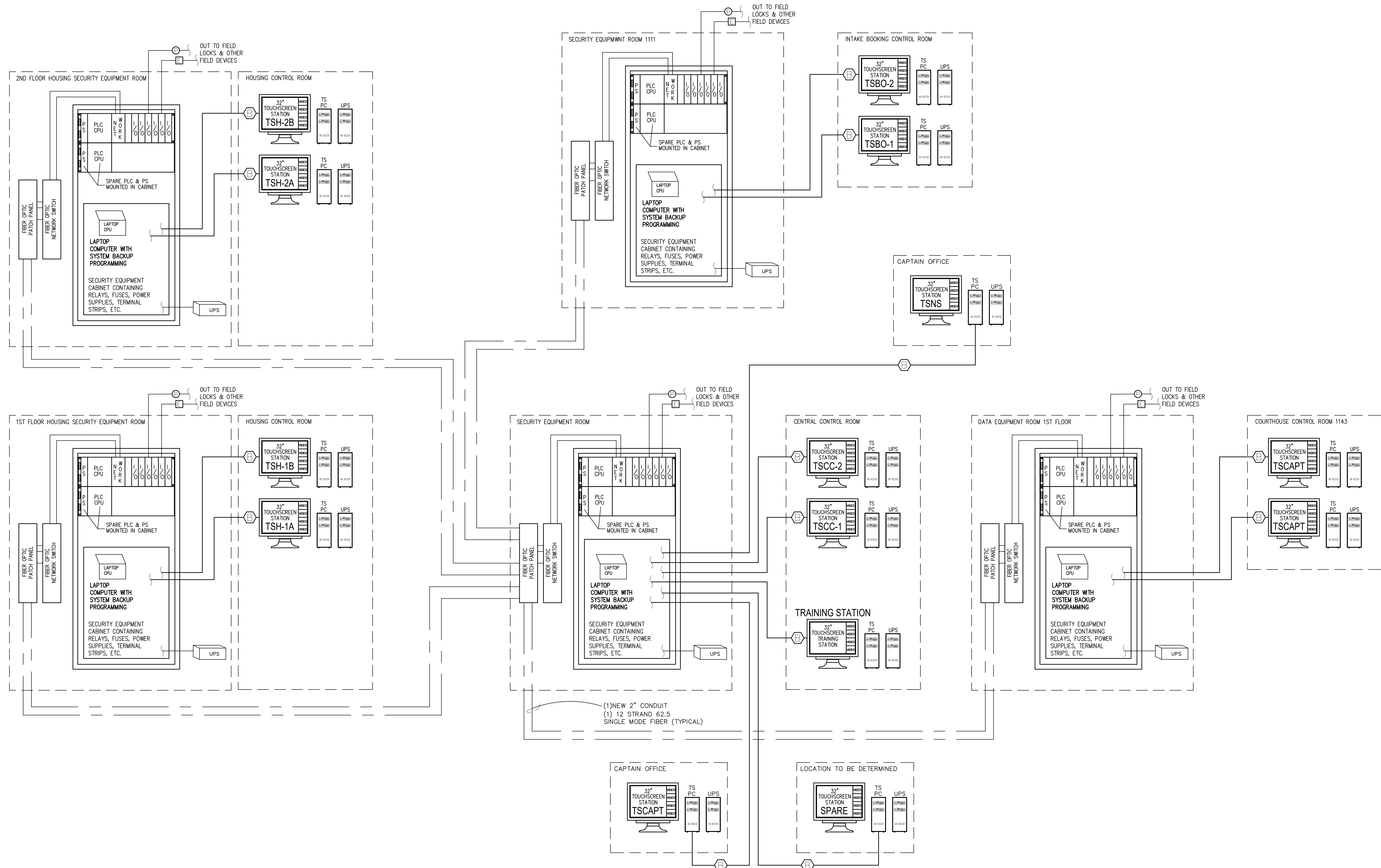


JULY 20, 2021
date:
JULY 20, 2021
BID SET ONLY

TYPICAL LOCKING CABINET LAYOUT

ES4.2

KEY PLAN:



1 TOUCHSCREEN LOCKING CONTROL ONE LINE DIAGRAM
 ES61 NO SCALE

KEYNOTES:

—(E)— CONNECTION BETWEEN SECURITY EQUIPMENT ROOM & TOUCHSCREEN UNITS.

GENERAL NOTES:

- TOUCHSCREEN UNITS ARE REQUIRED AT ALL CONTROL ROOMS.
- TS=TOUCHSCREEN
- FO=FIBER OPTICS

(1)NEW 2" CONDUIT
 (1) 12 STRAND 62.5 SINGLE MODE FIBER (TYPICAL)

RELEASED FOR BID ONLY

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

GEORGIA REGISTERED PROFESSIONAL ENGINEER
 MICHAEL D. HOSKINS
 JULY 20, 2021

date:
 JULY 20, 2021
 BID SET ONLY

TOUCHSCREEN LOCKING CONTROL SYSTEM ONE LINE DIAGRAM

ES4.3

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place Buford, Georgia 30519
 tanner@tannerhoskins.com 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY WAY WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades

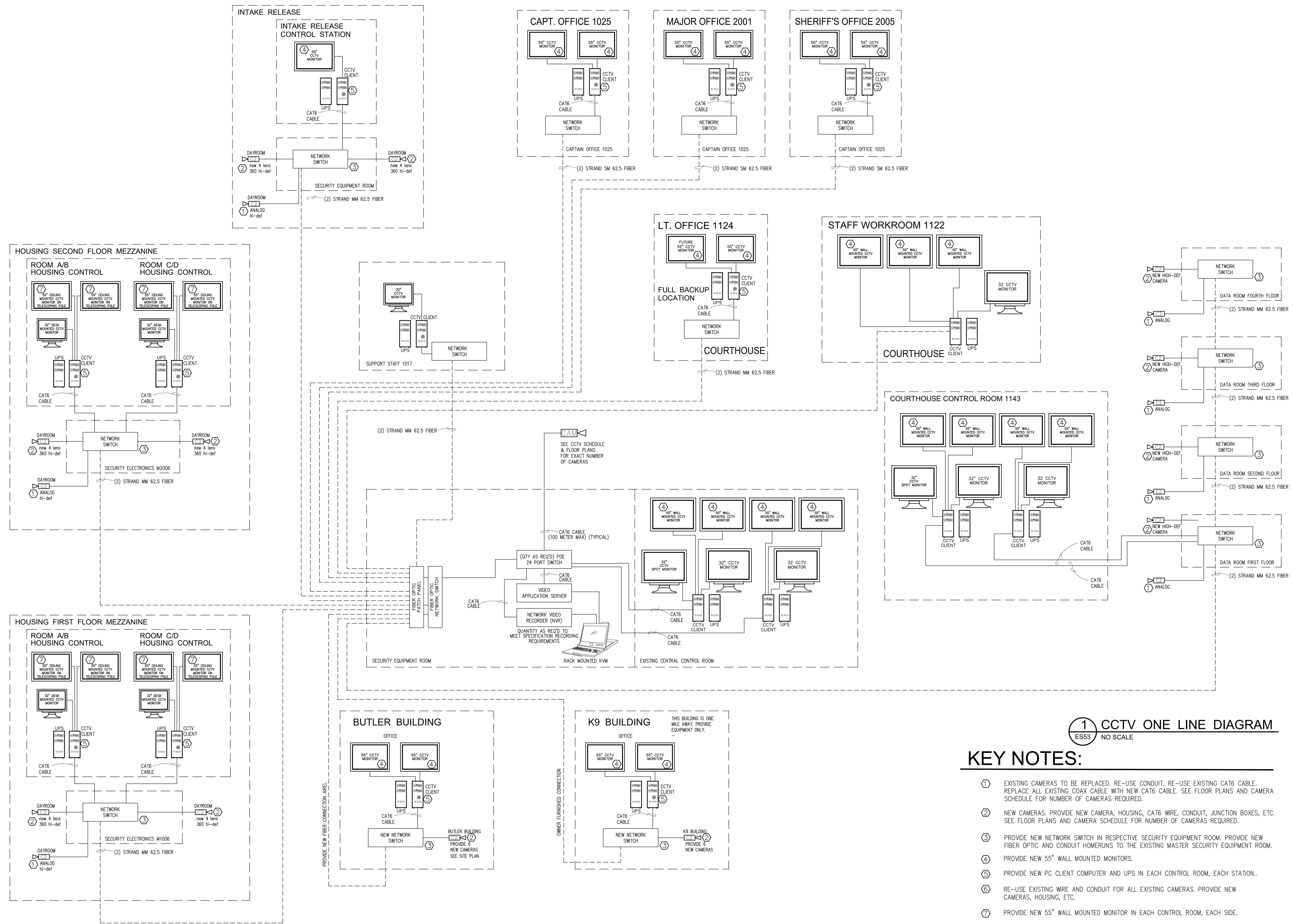
RELEASED FOR BID ONLY



JULY 20, 2021
 date:
 JULY 20, 2021
 BID SET ONLY

CCTV DETAILS
 ONE LINE DIAGRAM

ES5.1



1 CCTV ONE LINE DIAGRAM
 ES53 NO SCALE

KEY NOTES:

- EXISTING CAMERAS TO BE REPLACED. RE-USE CONDUIT, RE-USE EXISTING CAT6 CABLE. REPLACE ALL EXISTING COAX CABLE WITH NEW CAT6 CABLE. SEE FLOOR PLANS AND CAMERA SCHEDULE FOR NUMBER OF CAMERAS REQUIRED.
- NEW CAMERAS. PROVIDE NEW CAMERA, HOUSING, CAT6 WIRE, CONDUIT, JUNCTION BOXES, ETC. SEE FLOOR PLANS AND CAMERA SCHEDULE FOR NUMBER OF CAMERAS REQUIRED.
- PROVIDE NEW NETWORK SWITCH IN RESPECTIVE SECURITY EQUIPMENT ROOM. PROVIDE NEW FIBER OPTIC AND CONDUIT HOMERUNS TO THE EXISTING MASTER SECURITY EQUIPMENT ROOM.
- PROVIDE NEW 55" WALL MOUNTED MONITORS.
- PROVIDE NEW PC CLIENT COMPUTER AND UPS IN EACH CONTROL ROOM, EACH STATION..
- RE-USE EXISTING WIRE AND CONDUIT FOR ALL EXISTING CAMERAS. PROVIDE NEW CAMERAS, HOUSING, ETC.
- PROVIDE NEW 55" WALL MOUNTED MONITOR IN EACH CONTROL ROOM, EACH SIDE.

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC
 ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
 3447 Lake Seminole Place
 Buford, Georgia 30519
 tanner@tannerhoskins.com
 678-856-8832 mobile
 www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THCLLC. © Tanner Hoskins Consultants, LLC

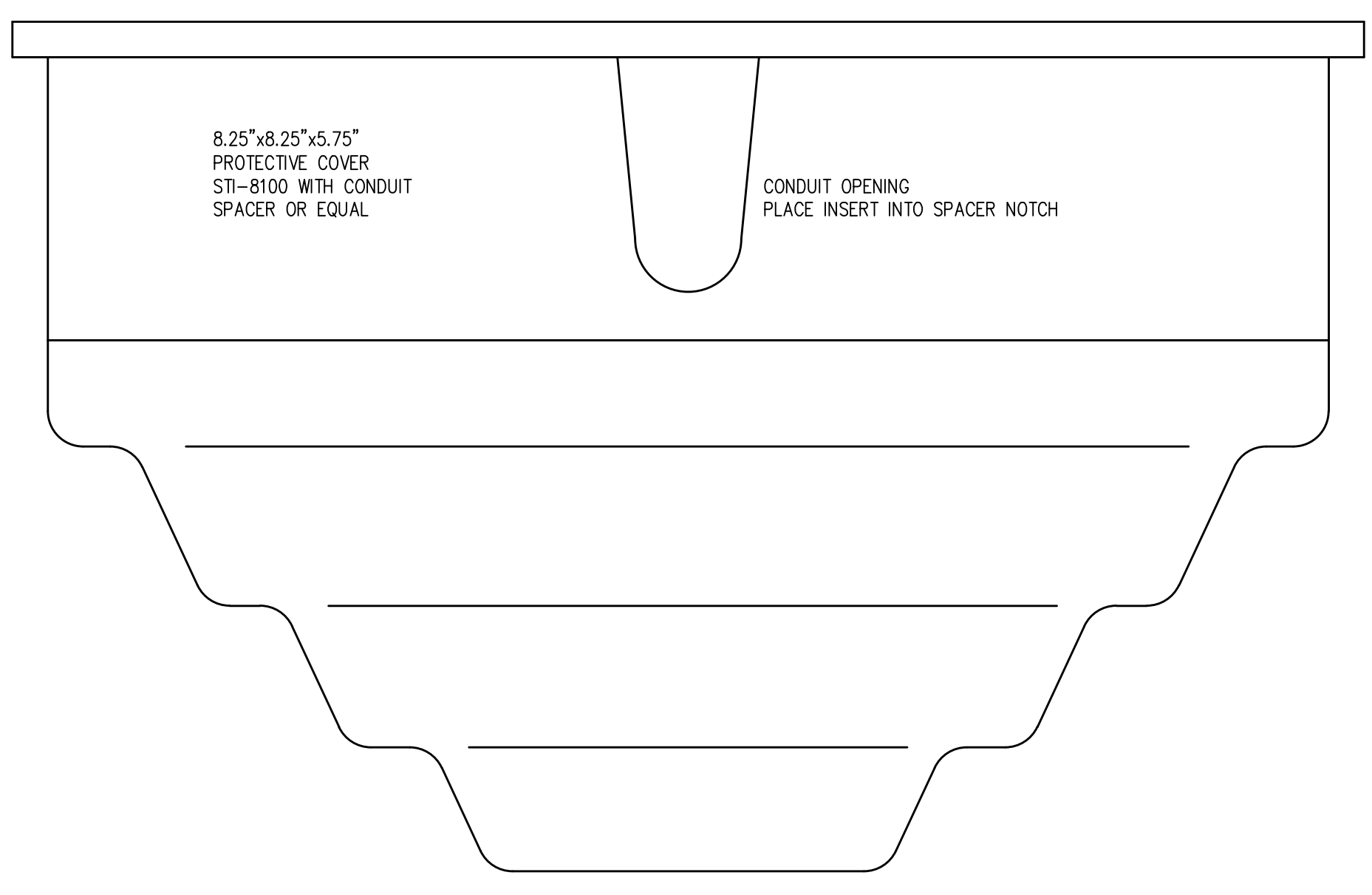
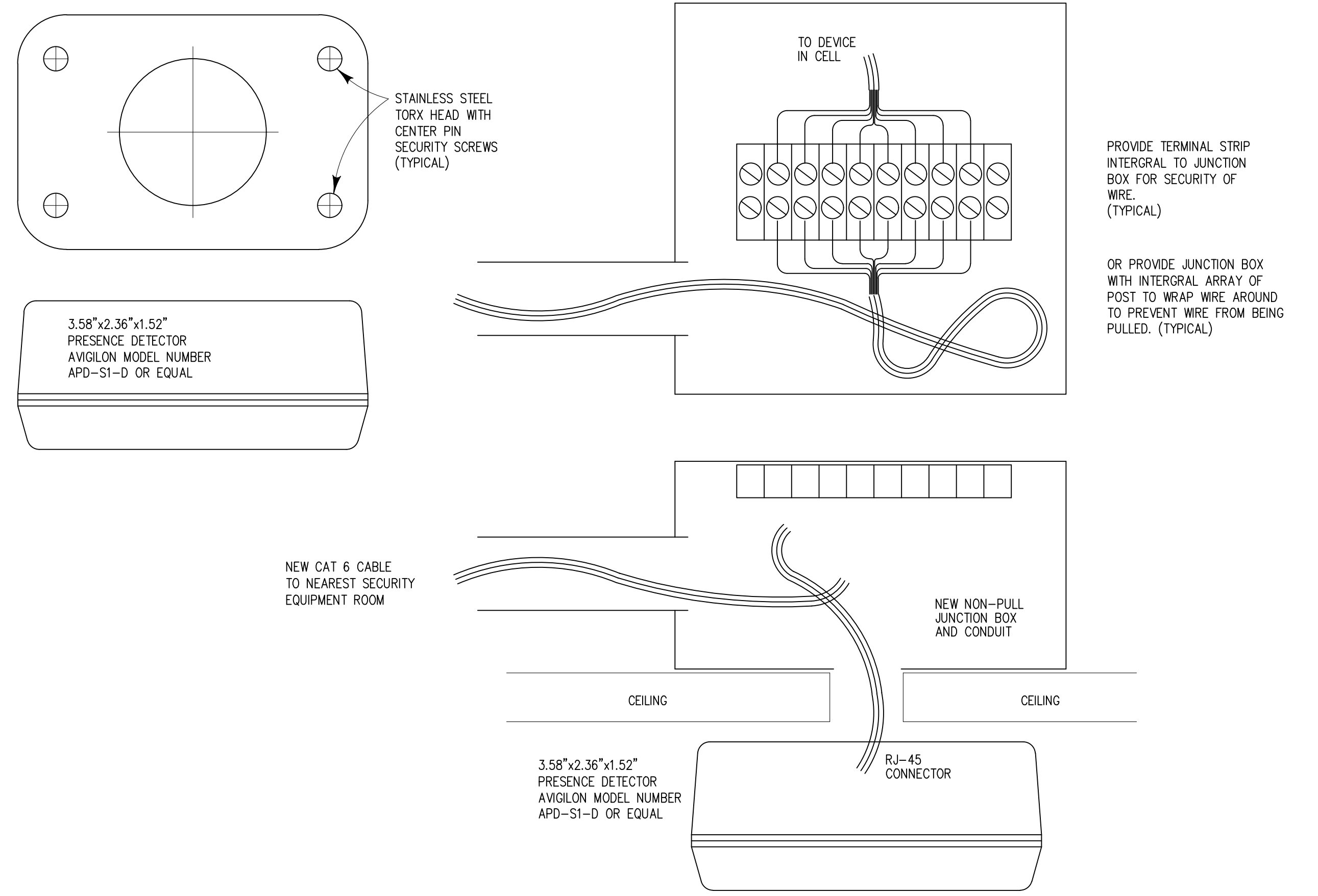
Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



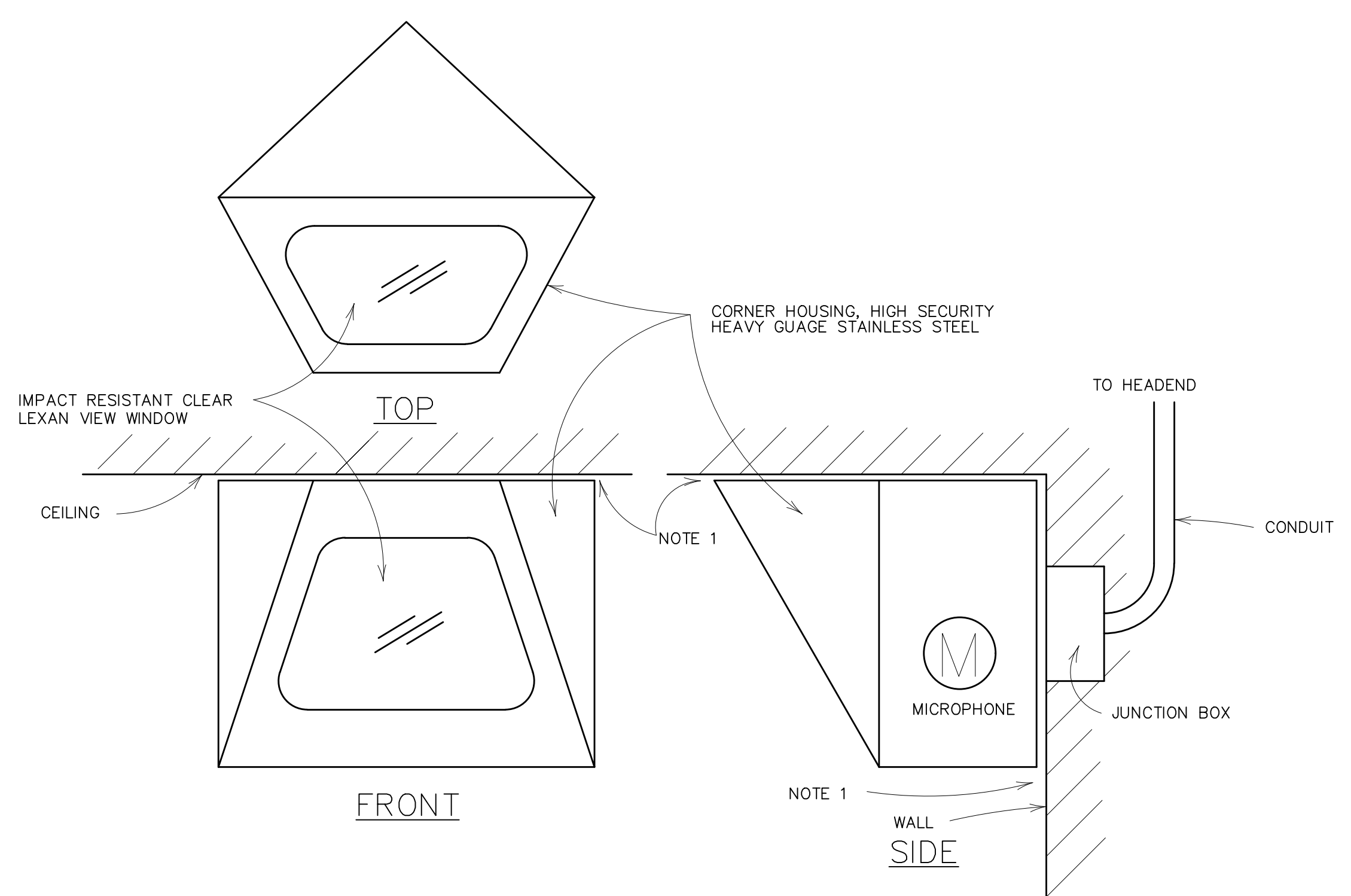
date:
JULY 20, 2021
 BID SET ONLY

CCTV DETAILS

ES5.2

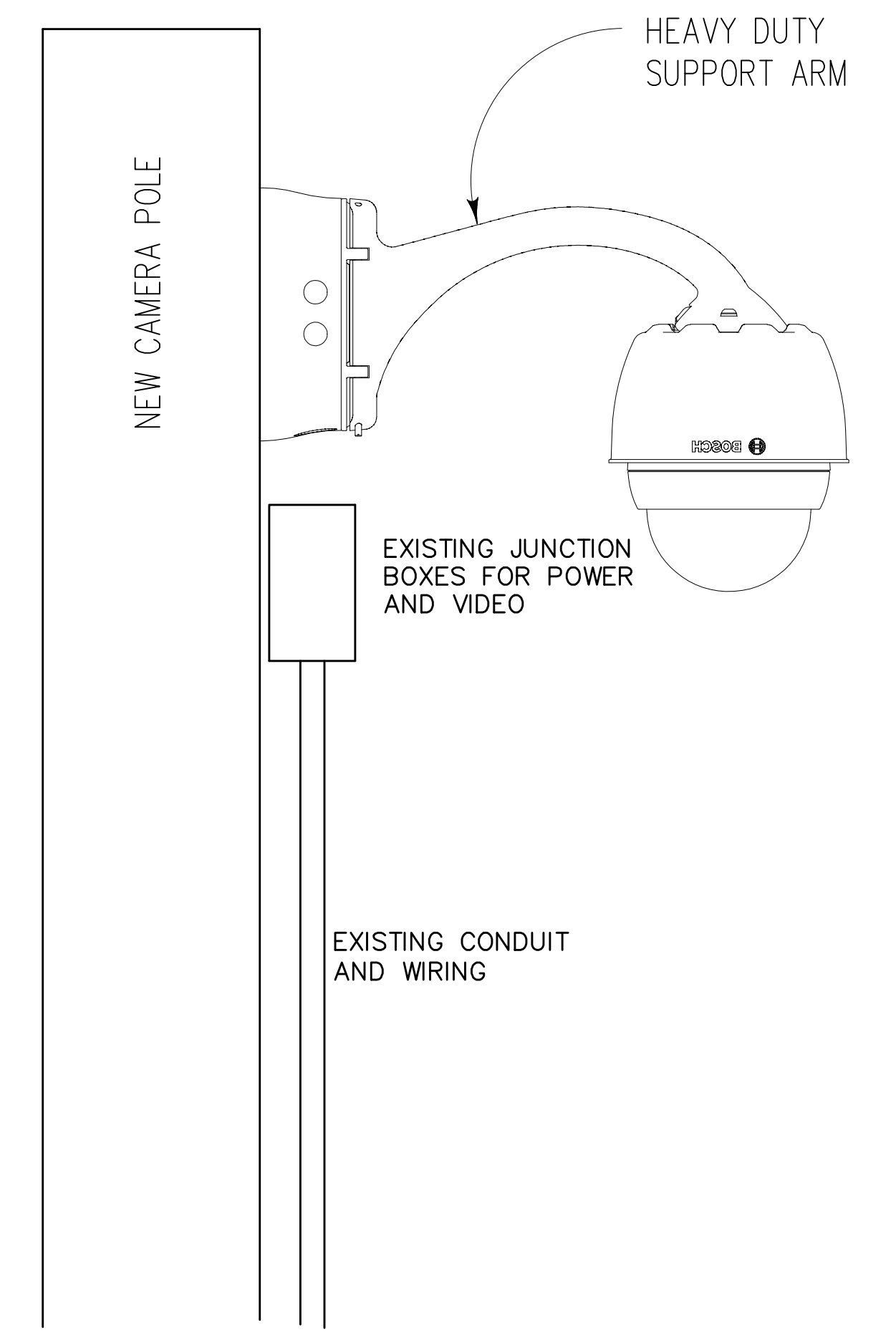


8 WIRE INSTALL DETAIL FOR CELL DEVICES
 ES52 SCALE: FULL SIZE

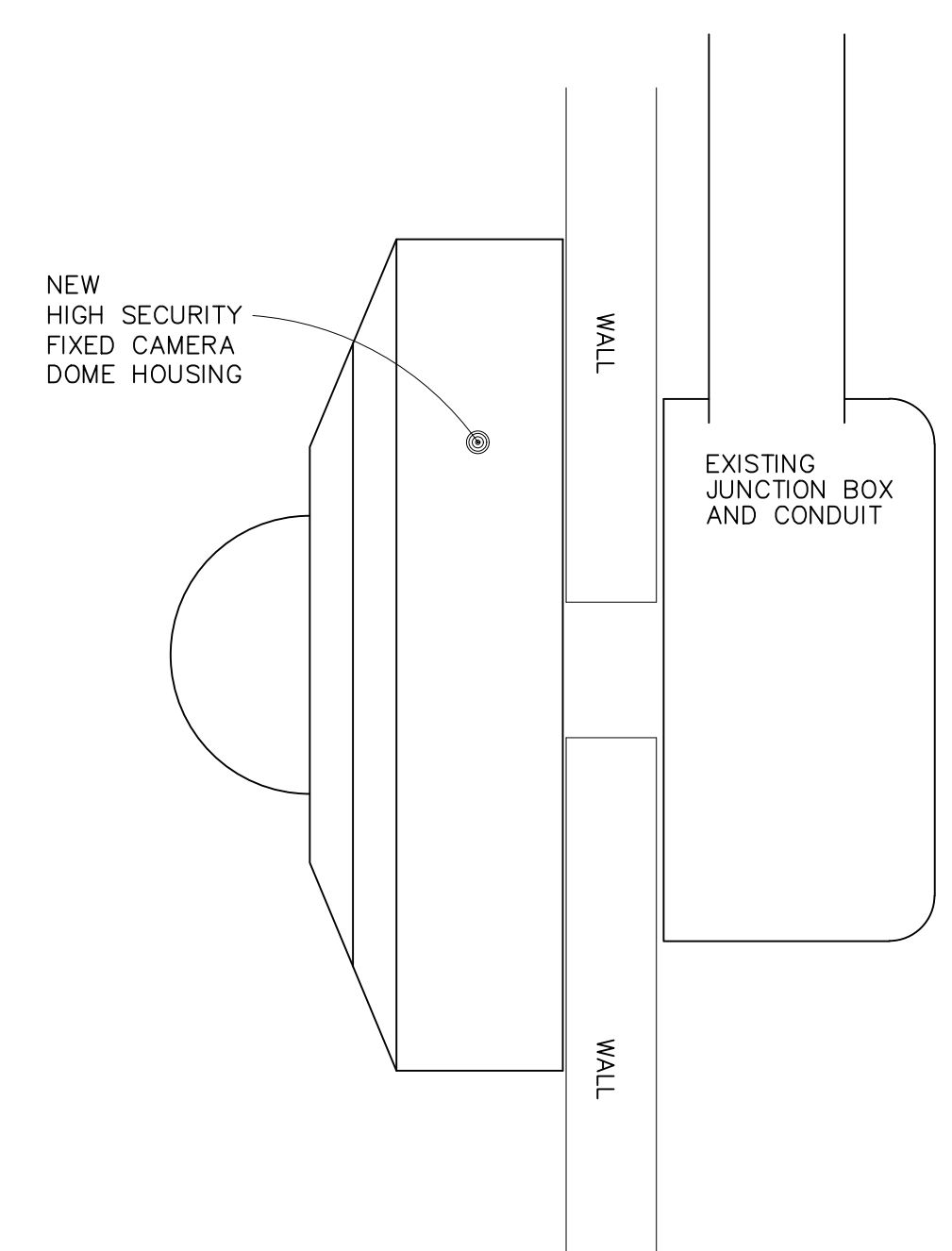


5 CORNER/CEILING MOUNT HIGH SECURITY HOUSING
 ES52 ONE QUARTER SIZE

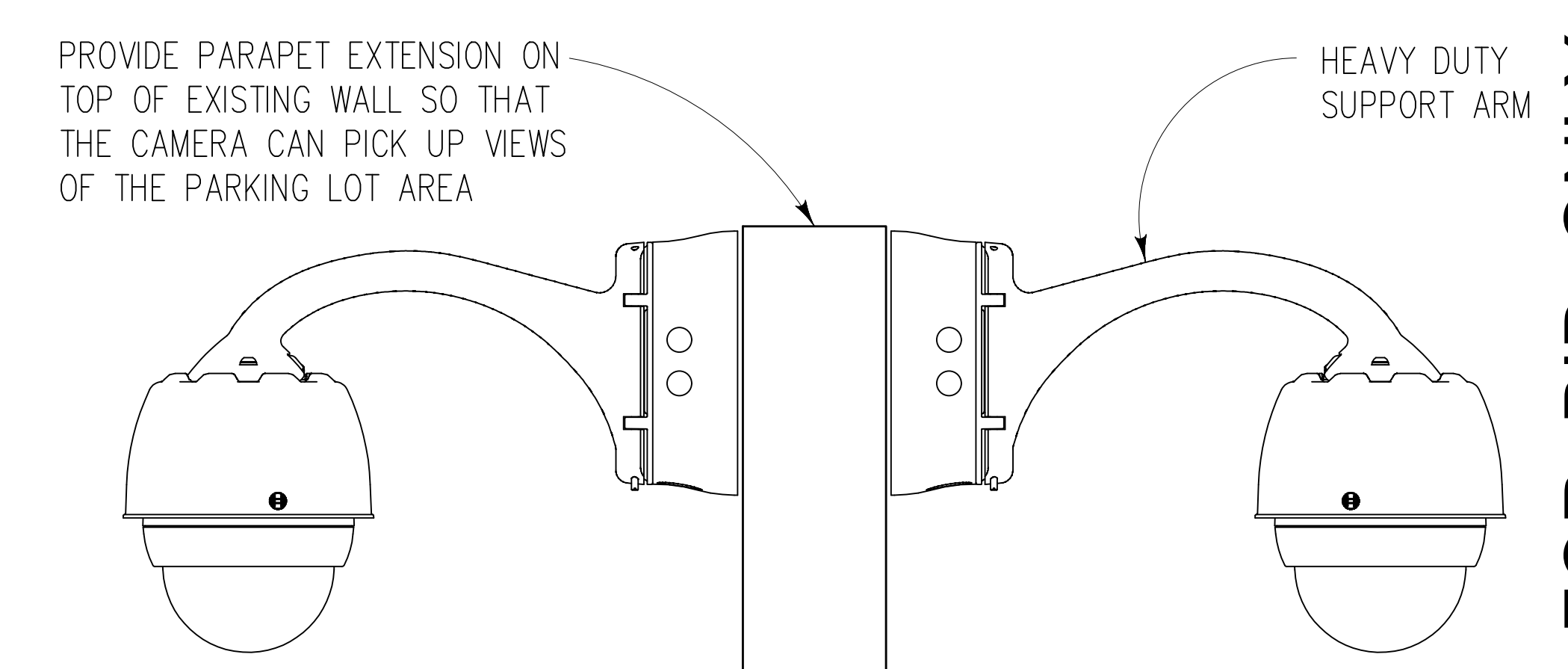
- NOTES:**
- HOUSING SHALL MOUNT FLUSH AGAINST CEILING AND WALL IN THE CORNER. PROVIDE SECURITY CAULKING ALL EDGES.
 - PROVIDE MICROPHONE IN ALL CORNER MOUNT HOUSING UNITS.



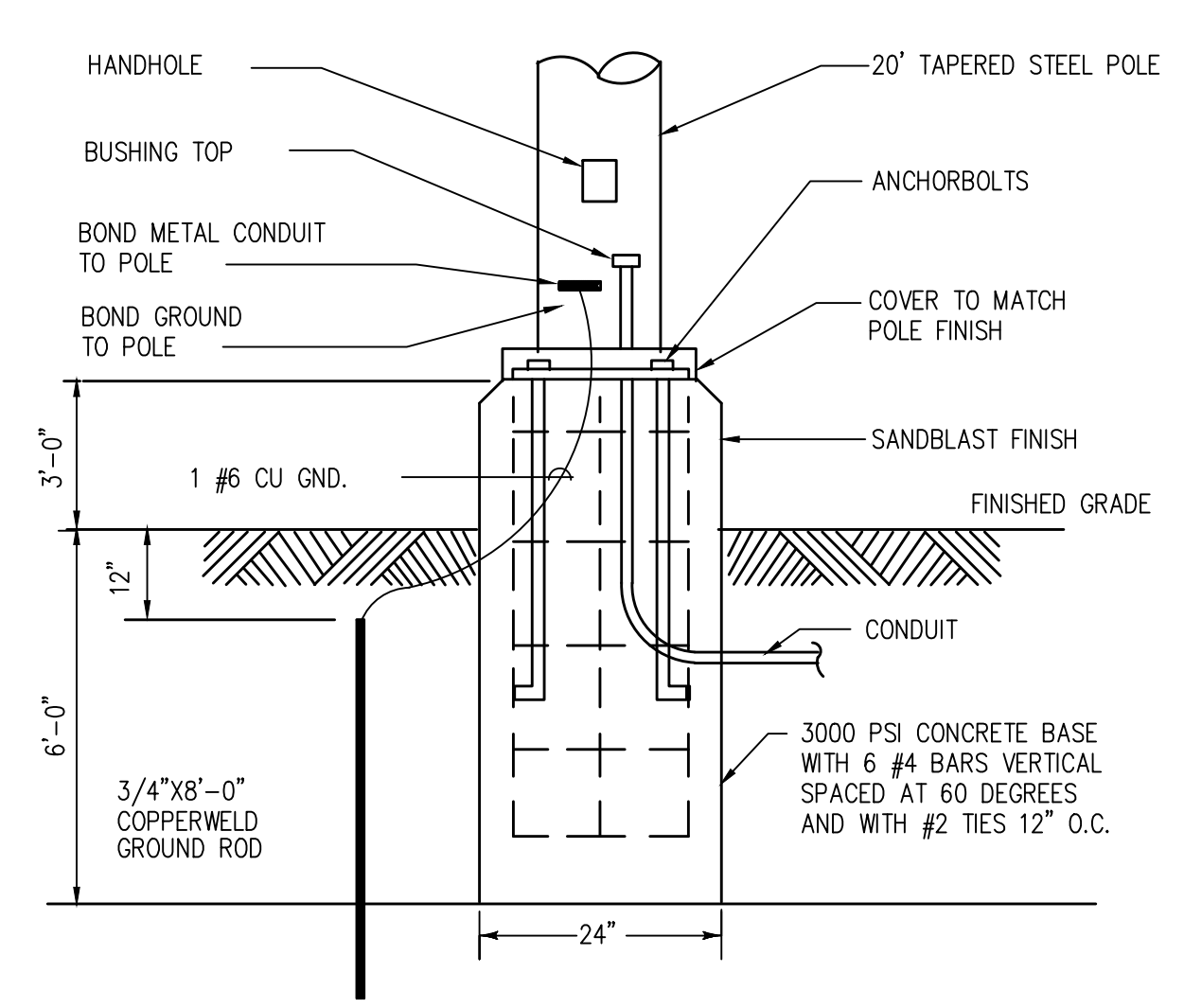
2 POLE, PARAPET, WALL MOUNT
 ES52 SCALE: NONE



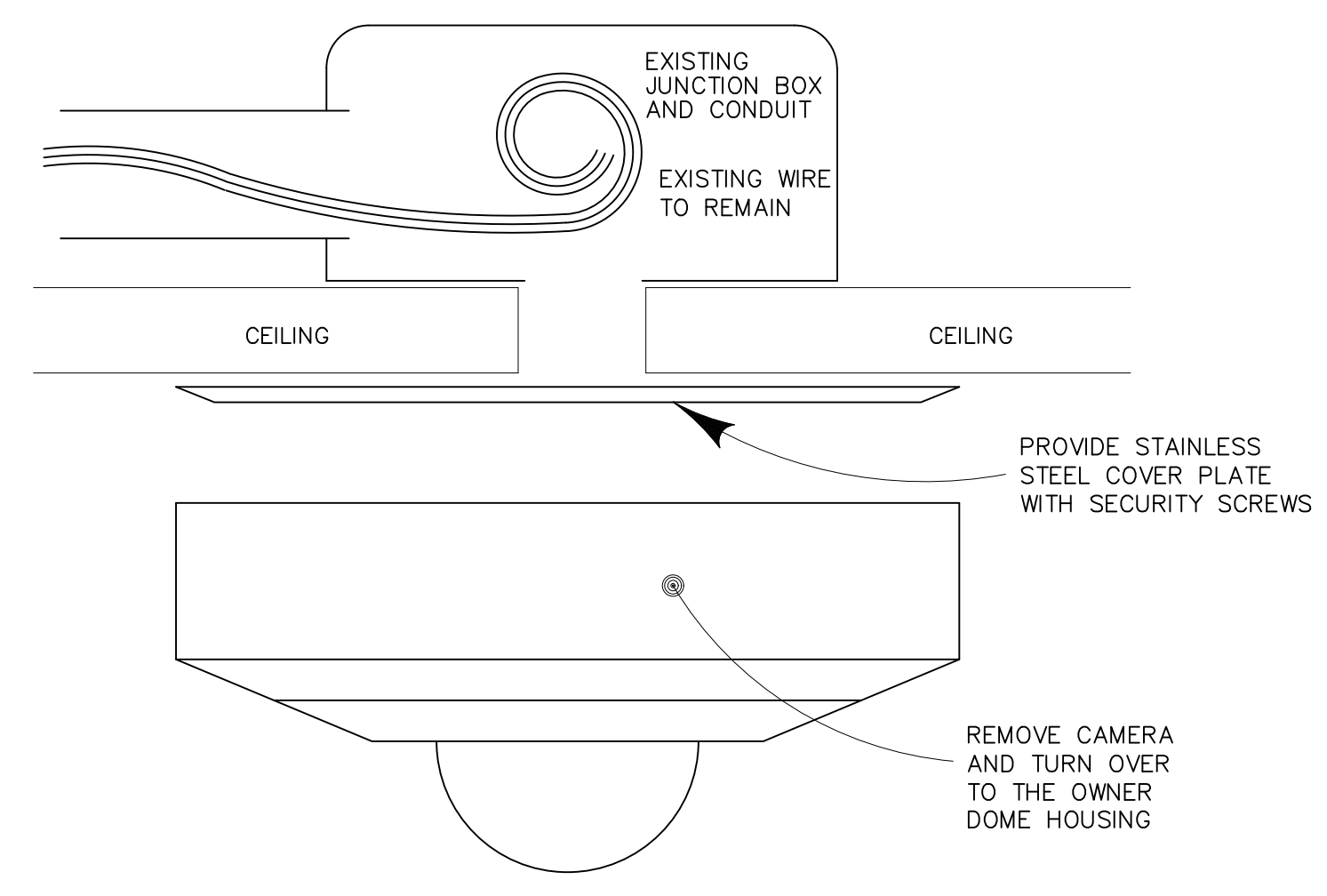
4 INTERIOR WALL MOUNTED CAMERA
 ES52 SCALE: FULL SIZE



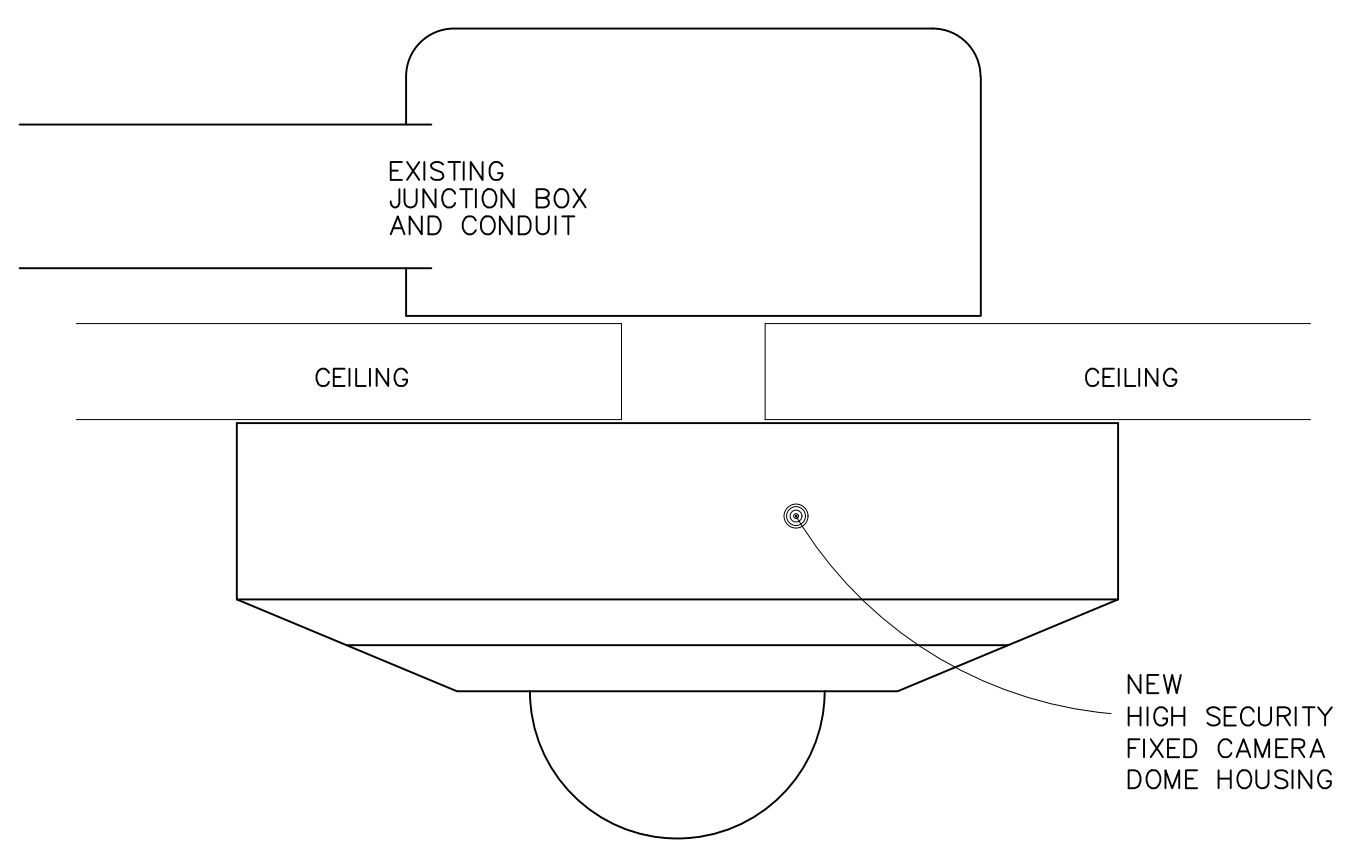
1 PARAPET MOUNT AT EXISTING VEHICLE SALLYPORT
 ES52 SCALE: ONE QUARTER SIZE



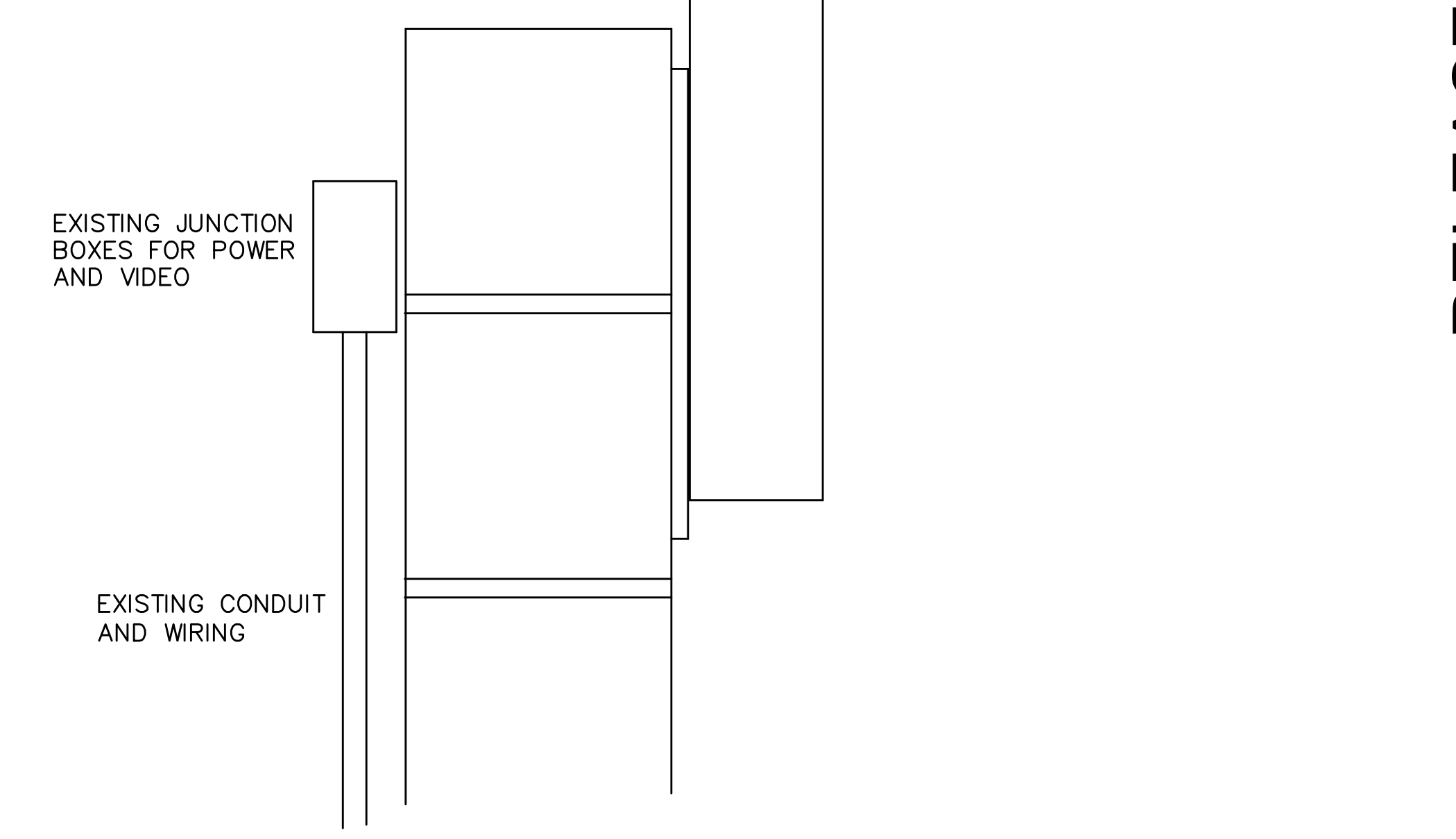
7 POLE BASE - CCTV CAMERA
 ES52 NO SCALE



6 EXISTING CAMERA TO BE ABANDON
 ES52 SCALE: FULL SIZE



3 INTERIOR CEILING MOUNTED CAMERA
 ES52 SCALE: FULL SIZE



KEY PLAN:

RELEASED FOR BID ONLY

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC

ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
3447 Lake Seminole Place
Buford, Georgia 30519
tanner@tannerhoskins.com
678-856-8832 mobile
www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY TANNER HOSKINS CONSULTANTS, LLC.

7 ABANDON

45 EX C
27 N
72 T

NOTES:

1. ALL NEW CAMERAS SHALL BE WIRED WITH CAT6 CABLE.
2. ALL EXISTING CAMERAS ARE COAX CABLING. REMOVE AND REPLACE WITH CAT6 CABLE.
3. THE EXISTING CAMERA SYSTEM MANUFACTURER IS BOSCH.

CCTV CAMERA SCHEDULE - LEC/JAIL 1ST FLOOR

CAMERA NUMBER	CAMERA TYPE	LENS TYPE	ZOOM LENS	PAN-TILT DRIVE UNIT	HOUSING TYPE	HOUSING FEATURES	MOUNTING DETAIL	MOUNTING LOCATION	GENERAL REMARKS	CAMERA NUMBER
A1	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	EXTERIOR ENTRY	A1
A2	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	VISITOR LOBBY	A2
A3	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	VISITATION DESK	A3
A4	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 1016	A4
A5	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	PUBLIC FINGERPRINT	A5
A6	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	TRUSTEE CONTACT VISITATION	A6
A7	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	TRUSTEE VISITATION	A7
A8	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	DETAINEE VISITATION ROOM	A8
A9	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	STAIR ONE	A9
A10	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	ELEVATOR LOBBY 1007	A10
A11	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	ELEVATOR CAB	A11
A12	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	ELEVATOR CAB	A12
A13	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	ELEVATOR CAB	A13
A14	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	SECURE VESTIBULE 1063	A14
A15	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	MULTI-PURPOSE ROOM	A15
A16	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	MULTI-PURPOSE ROOM	A16
A17	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	SECURE CORRIDOR 1117	A17
A18	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	SECURE CORRIDOR 1117	A18
A19	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	EXISTING MEDICAL CELL	A19
A20	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	EXAM COUNSELING	A20
A21	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	SECURE VESTIBULE 1057	A21
A22	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 106B	A22
A23	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	VEHICLE INTAKE	A23
A24	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	LAW ENFORCEMENT LOBBY	A24
A25	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	INTOXIMETER TESTING	A25
A26	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	INTAKE OPEN SEATING	A26
A27	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	INTAKE OPEN SEATING	A27
A28	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	INTAKE OPEN SEATING	A28
A29	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	STAFF VESTIBULE 1028	A29
A30	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 1014	A30
A31	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	PROPERTY EXCHANGE	A31
A32	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	ISOLATION ROOM	A32
A33	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	ISOLATION ROOM	A33
A34	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	EXAM ROOM	A34
A35	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	EXAM ROOM	A35
A36	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	INMATE WAITING	A36
A37	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 1064	A37
A38	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 1065	A38
A39	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	EXTERIOR ENTRY	A39
A40	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	LAUNDRY	A40
A41	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	KITCHEN	A41
A42	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	OFFICE 1093	A42
A43	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	KITCHEN	A43
A44	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	INMATE DINING 1090	A44
A45	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	LOADING DOCK	A45
AN1	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	MAIN ENTRY VESTIBULE	AN1
AN2	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	BONDING WINDOW	AN2
AN3	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	ATTORNEY VISITATION	AN3
AN4	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	PROPERTY ROOM	AN4
AN5	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	PROPERTY ROOM	AN5
AN6	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	SEG CELL	AN6
AN7	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	SEG CELL	AN7
AN8	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	SEG CELL	AN8
AN9	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	DRY STORAGE	AN9
AN10	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	KITCHEN	AN10
AN11	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	LOADING DOCK	AN11
AN12	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	VEHICLE SALLYPORT	AN12
AN13	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	REPORT WRITING AREA	AN13
AN14	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	STAIR TWO	AN14
AN15	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE INTERVIEW ROOM	AN15
AN16	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN16
AN17	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN17
AN18	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN18
AN19	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	WALL	EXTERIOR HOUSING EXIT	AN19
AN20	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN20
AN21	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN21
AN22	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN22
AN23	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN23
AN24	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN24
AN25	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	INTAKE HOLDING CELL	AN25
AN26	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	INTAKE CONTROL ROOM	AN26
AN27	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 1067	AN27
ABC1	NA	NA	NA	NA	INTERIOR	PROVIDE COVER PLATE	6/ESS.2	CEILING	LEAVE WIRE IN PLACE	ABC1
ABC2	NA	NA	NA	NA	INTERIOR	PROVIDE COVER PLATE	6/ESS.2	CEILING	LEAVE WIRE IN PLACE	ABC2
ABC3	NA	NA	NA	NA	INTERIOR	PROVIDE COVER PLATE	6/ESS.2	CEILING	LEAVE WIRE IN PLACE	ABC3
ABC4	NA	NA	NA	NA	INTERIOR	PROVIDE COVER PLATE	6/ESS.2	CEILING	LEAVE WIRE IN PLACE	ABC4

CCTV CAMERA SCHEDULE - LEC/JAIL 2ND FLOOR MEZZANINE

CAMERA NUMBER	CAMERA TYPE	LENS TYPE	ZOOM LENS	MULTI-LENS CAMERA	HOUSING TYPE	HOUSING FEATURES	MOUNTING DETAIL	MOUNTING LOCATION	GENERAL REMARKS	CAMERA NUMBER
D1	5 MEGAPIXIL	HIGH-RES	VARI-FOCAL	YES	INTERIOR	HIGH-SECURITY	3/ESS.2	CEILING	EXERCISE YARD	D1
D2	5 MEGAPIXIL	HIGH-RES	VARI-FOCAL	YES	INTERIOR	HIGH-SECURITY	3/ESS.2	CEILING	HOUSING DAYROOM	D2
D3	5 MEGAPIXIL	HIGH-RES	VARI-FOCAL	YES	INTERIOR	HIGH-SECURITY	3/ESS.2	CEILING	HOUSING DAYROOM	D3
D4	5 MEGAPIXIL	HIGH-RES	VARI-FOCAL	YES	INTERIOR	HIGH-SECURITY	3/ESS.2	CEILING	EXERCISE YARD	D4
D5	5 MEGAPIXIL	HIGH-RES	VARI-FOCAL	YES	INTERIOR	HIGH-SECURITY	3/ESS.2	CEILING	HOUSING DAYROOM	D5
D6	5 MEGAPIXIL	HIGH-RES	VARI-FOCAL	YES	INTERIOR	HIGH-SECURITY	3/ESS.2	CEILING	HOUSING DAYROOM	D6
D7	5 MEGAPIXIL	HIGH-RES	VARI-FOCAL	YES	INTERIOR	HIGH-SECURITY	3/ESS.2	CEILING	CONTROL ROOM	D7
DB	2 MEGAPIXIL	HIGH-RES	VARI-FOCAL	YES	INTERIOR	HIGH-SECURITY	3/ESS.2	CEILING	ELEVATOR LOBBY	DB
ABD1	NA	NA	NA	NA	INTERIOR	PROVIDE COVER PLATE	6/ESS.2	CEILING	LEAVE WIRE IN PLACE	ABD1
ABD2	NA	NA	NA	NA	INTERIOR	PROVIDE COVER PLATE	6/ESS.2	CEILING	LEAVE WIRE IN PLACE	ABD2

FIELD VERIFY EXACT LENS SIZES. COORDINATE WITH OWNER. MODIFY IF REQUIRED.

CCTV CAMERA SCHEDULE - LEC/JAIL 2ND FLOOR

CAMERA NUMBER	CAMERA TYPE	LENS TYPE	ZOOM LENS	MULTI-LENS CAMERA	HOUSING TYPE	HOUSING FEATURES	MOUNTING DETAIL	MOUNTING LOCATION	GENERAL REMARKS	CAMERA NUMBER
C1	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	DISPATCH	C1
C2	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 2073	C2
C3	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CENTRAL CONTROL	C3
C4	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	WALL	CORRIDOR DOOR	C4
C5	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR DISPATCH	C5
C6	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	MULTI-PURPOSE ROOM	C6
C7	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	MULTI-PURPOSE ROOM	C7
C8	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	SECURE CORRIDOR HOUSING	C8
C9	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR	C9
C10	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	EXTERIOR STAIRWELL	C10
C11	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	EXTERIOR STAIRWELL	C11
C12	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	EXAM COUNSEL	C12
C13	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	SECURE VESTIBULE	C13
C14	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR	C14
C15	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR	C15
C16	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 2056	C16
C17	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	CORRIDOR 2056	C17
C18	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	WALL	EXTERIOR ENTRY COURTHOUSE	C18
C19	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	INTERVIEW ROOM 2049	C19
C20	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	INTERVIEW ROOM 2049	C20
C21	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	INTERVIEW ROOM 2022	C21
C22	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CEILING	INTERVIEW ROOM 2022	C22
CN1	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	TRAINING ROOM	CN1
CN2	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	TRAINING CORRIDOR	CN2
CN3	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	WALL	ROOF PATIO	CN3
CN4	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	STAIR TWO 105B	CN4
CN5	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	SEG CELL	CN5
CN6	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	SEG CELL	CN6
CN7	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY W/MICROPHONE	5/ESS.2	CORNER	SEG CELL	CN7
CN8	2 MEGAPIXIL	MOTORIZED	VARI-FOCAL	NO	INTERIOR	HIGH-SECURITY	5/ESS.2	CEILING	STAIR ONE	CN8

5 N
5 T

CCTV CAMERA SCHEDULE - K9 BUILDING

Table with 11 columns: CAMERA NUMBER, CAMERA TYPE, LENS TYPE, ZOOM LENS, PAN-TILT DRIVE UNIT, HOUSING TYPE, HOUSING FEATURES, MOUNTING DETAIL, MOUNTING LOCATION, GENERAL REMARKS, CAMERA NUMBER. Rows include KN1 through KN6.

5 T 5 N

CCTV CAMERA SCHEDULE - BUTLER BUILDING

Table with 11 columns: CAMERA NUMBER, CAMERA TYPE, LENS TYPE, ZOOM LENS, PAN-TILT DRIVE UNIT, HOUSING TYPE, HOUSING FEATURES, MOUNTING DETAIL, MOUNTING LOCATION, GENERAL REMARKS, CAMERA NUMBER. Rows include BB1 through BB5.

NOTES:

- 1. ALL NEW CAMERAS SHALL BE WIRED WITH CAT6 CABLE.
2. ALL EXISTING CAMERAS ARE COAX CABLING. REMOVE AND REPLACE WITH CAT6 CABLE.
3. THE EXISTING CAMERA SYSTEM MANUFACTURER IS BOSCH. 10 ABANDON

17 EX H 3 N 20 T
63 REPLACED 20 NEW
83 TOTAL - COURTHOUSE

CCTV CAMERA SCHEDULE - COURTHOUSE 4TH FLOOR

Table with 11 columns: CAMERA NUMBER, CAMERA TYPE, LENS TYPE, ZOOM LENS, PAN-TILT DRIVE UNIT, HOUSING TYPE, HOUSING FEATURES, MOUNTING DETAIL, MOUNTING LOCATION, GENERAL REMARKS, CAMERA NUMBER. Rows include H1 through H17 and HN1 through HN3, ABH1 through ABH4.

FIELD VERIFY EXACT LENS SIZES. COORDINATE WITH OWNER. MODIFY IF REQUIRED.

19 EX G 4 N 23 T

CCTV CAMERA SCHEDULE - COURTHOUSE 3RD FLOOR

Table with 11 columns: CAMERA NUMBER, CAMERA TYPE, LENS TYPE, ZOOM LENS, PAN-TILT DRIVE UNIT, HOUSING TYPE, HOUSING FEATURES, MOUNTING DETAIL, MOUNTING LOCATION, GENERAL REMARKS, CAMERA NUMBER. Rows include G1 through G19 and GN1 through GN4, ABG1 through ABG4.

FIELD VERIFY EXACT LENS SIZES. COORDINATE WITH OWNER. MODIFY IF REQUIRED.

32 T 11 EX S 12 N 5 PTZ N 4 OPTION

CCTV CAMERA SCHEDULE - SITE PLAN - LEC/JAIL/COURTHOUSE

Table with 11 columns: CAMERA NUMBER, CAMERA TYPE, LENS TYPE, ZOOM LENS, MULTI-LENS CAMERA, HOUSING TYPE, HOUSING FEATURES, MOUNTING DETAIL, MOUNTING LOCATION, GENERAL REMARKS, CAMERA NUMBER. Rows include S1 through S12, OPT1 through OPT4, and SNM1 through SNM5.

FIELD VERIFY EXACT LENS SIZES. COORDINATE WITH OWNER. MODIFY IF REQUIRED.

CCTV CAMERA SCHEDULE - COURTHOUSE 2ND FLOOR

Table with 11 columns: CAMERA NUMBER, CAMERA TYPE, LENS TYPE, ZOOM LENS, PAN-TILT DRIVE UNIT, HOUSING TYPE, HOUSING FEATURES, MOUNTING DETAIL, MOUNTING LOCATION, GENERAL REMARKS, CAMERA NUMBER. Rows include F1 through F8 and FN1 through FN8.

FIELD VERIFY EXACT LENS SIZES. COORDINATE WITH OWNER. MODIFY IF REQUIRED.

CCTV CAMERA SCHEDULE - COURTHOUSE 1ST FLOOR

Table with 11 columns: CAMERA NUMBER, CAMERA TYPE, LENS TYPE, ZOOM LENS, PAN-TILT DRIVE UNIT, HOUSING TYPE, HOUSING FEATURES, MOUNTING DETAIL, MOUNTING LOCATION, GENERAL REMARKS, CAMERA NUMBER. Rows include E1 through E19 and ABE1 through ABE2.

FIELD VERIFY EXACT LENS SIZES. COORDINATE WITH OWNER. MODIFY IF REQUIRED.

KEY PLAN:

revisions:

TANNER HOSKINS ENGINEERING CONSULTANTS, LLC

ELECTRONIC SECURITY SYSTEMS, ELECTRICAL, LOW VOLTAGE & SECURITY HARDWARE
3447 Lake Seminole Place Buford, Georgia 30510
tanner@tannerhoskins.com 678-856-8832 mobile www.tannerhoskins.com

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY. © Tanner Hoskins Consultants, LLC

Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
25 Justice Way - Suite 2223 - Dawsonville, GA 30534
Project #367-20 - Security Systems Upgrades

8 EX F 8 N 15 T

RELEASED FOR BID ONLY



JULY 20, 2021

date: JULY 20, 2021 BID SET ONLY

CCTV SCHEDULES ELECTRONIC SECURITY

ES5.4

THESE DRAWINGS ARE COPYRIGHTED AND THE PROPERTY OF THE COMPANY TANNER HOSKINS CONSULTANTS, LLC. THESE DRAWINGS SHALL NOT BE REPRODUCED, PUBLISHED OR USED IN ANY MANNER WITHOUT WRITTEN PERMISSION AND CREDIT FROM THE COMPANY TANNER HOSKINS CONSULTANTS, LLC.

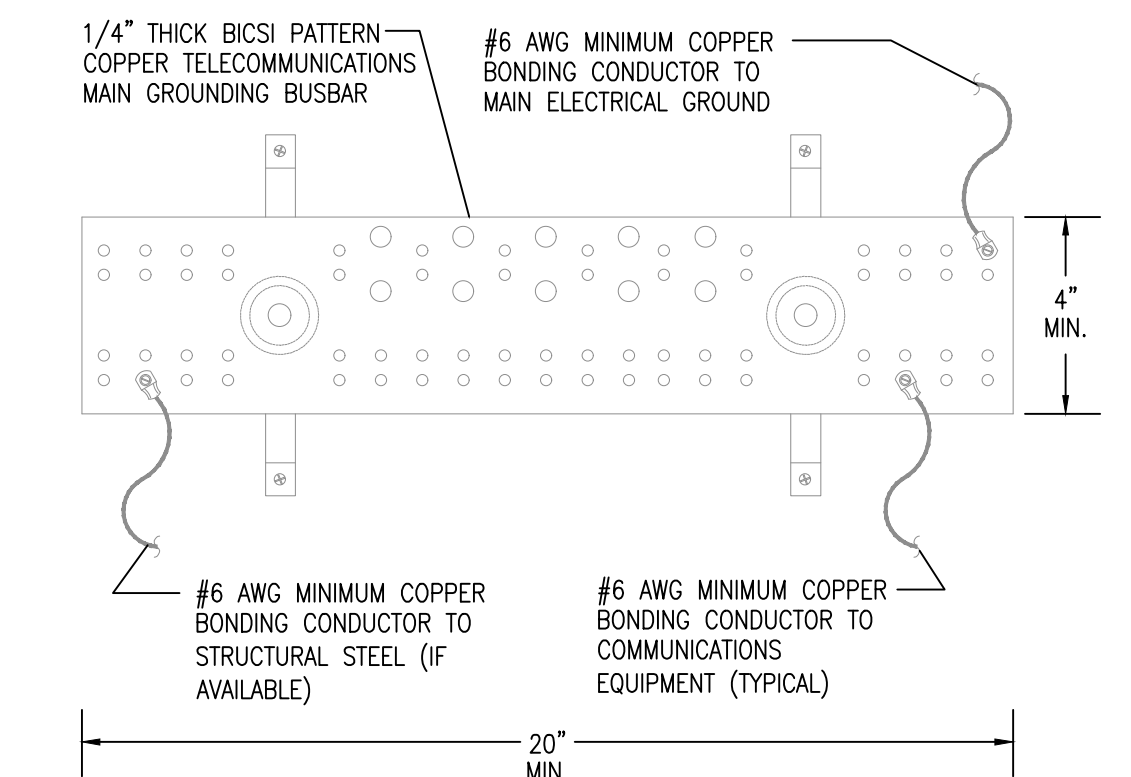
Dawson County Law Enforcement Center/Jail & Government Center Comprehensive Security System Upgrade
 25 Justice Way - Suite 2223 - Dawsonville, GA 30534
 Project #367-20 - Security Systems Upgrades



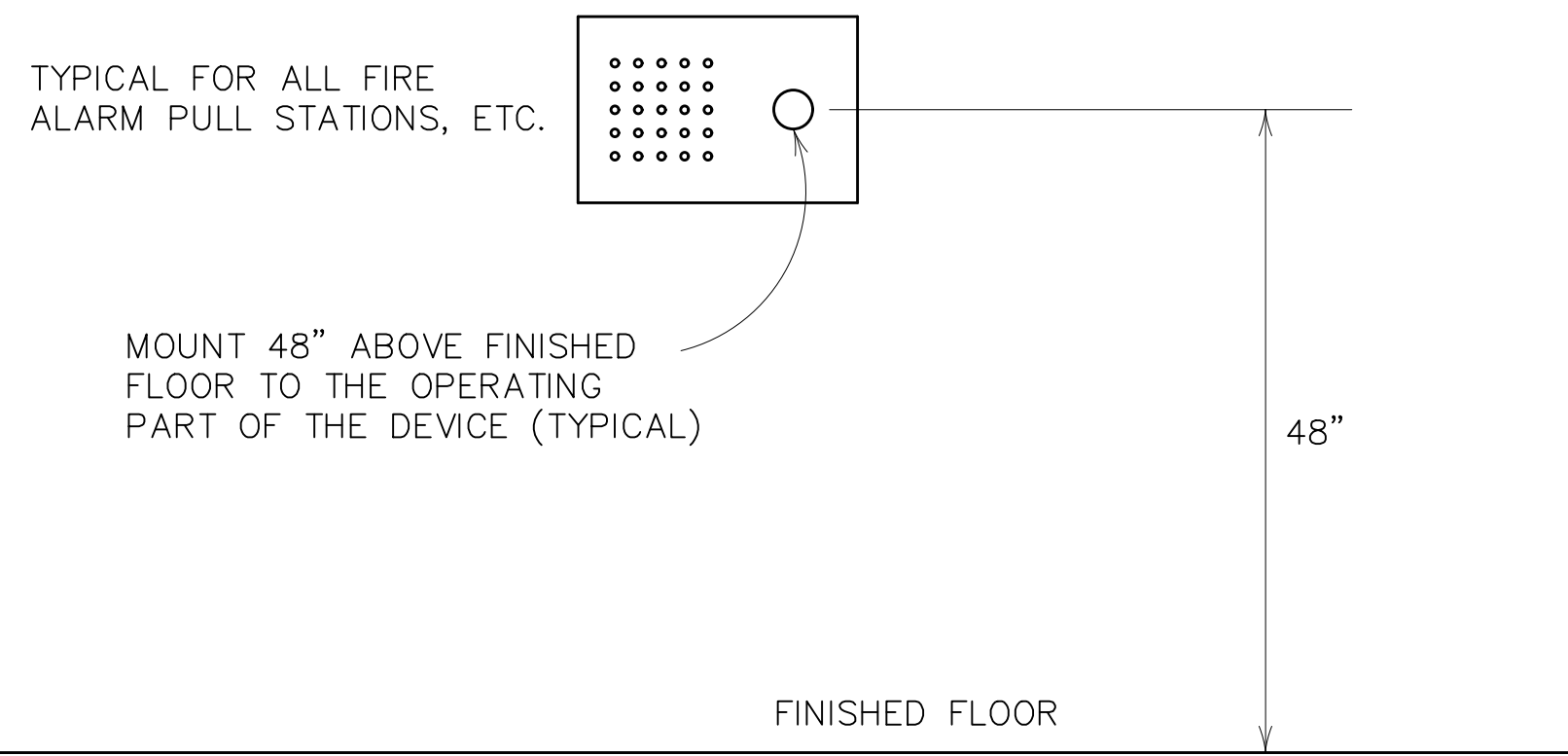
JULY 20, 2021
 date:
 JULY 20, 2021
 BID SET ONLY

ACCESS CONTROL SYSTEM ONE LINE DIAGRAM AND DETAILS

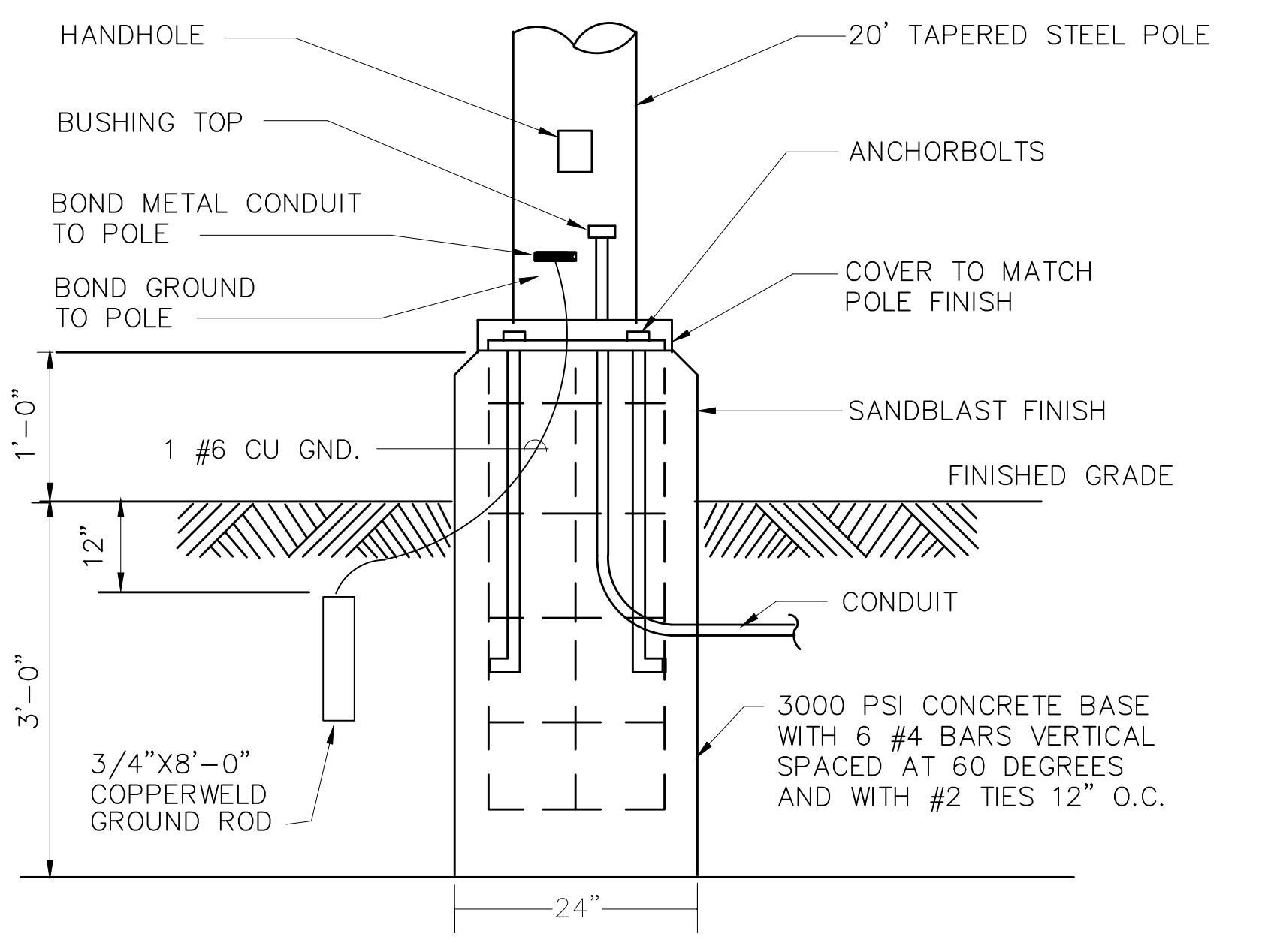
ES6.1



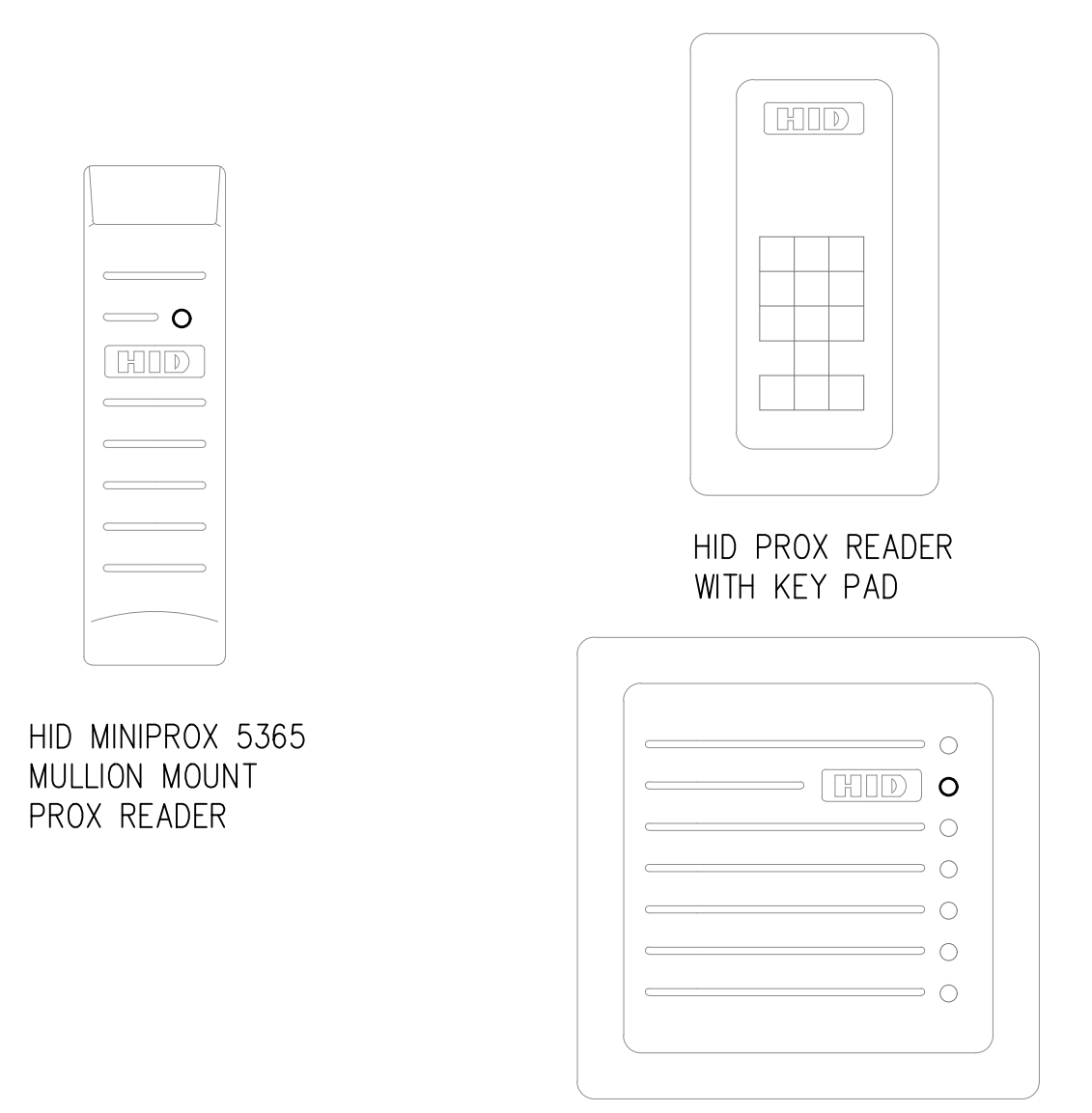
5 NEW EQUIPMENT GROUNDING BUSBAR
 ES6.1 SCALE: NONE



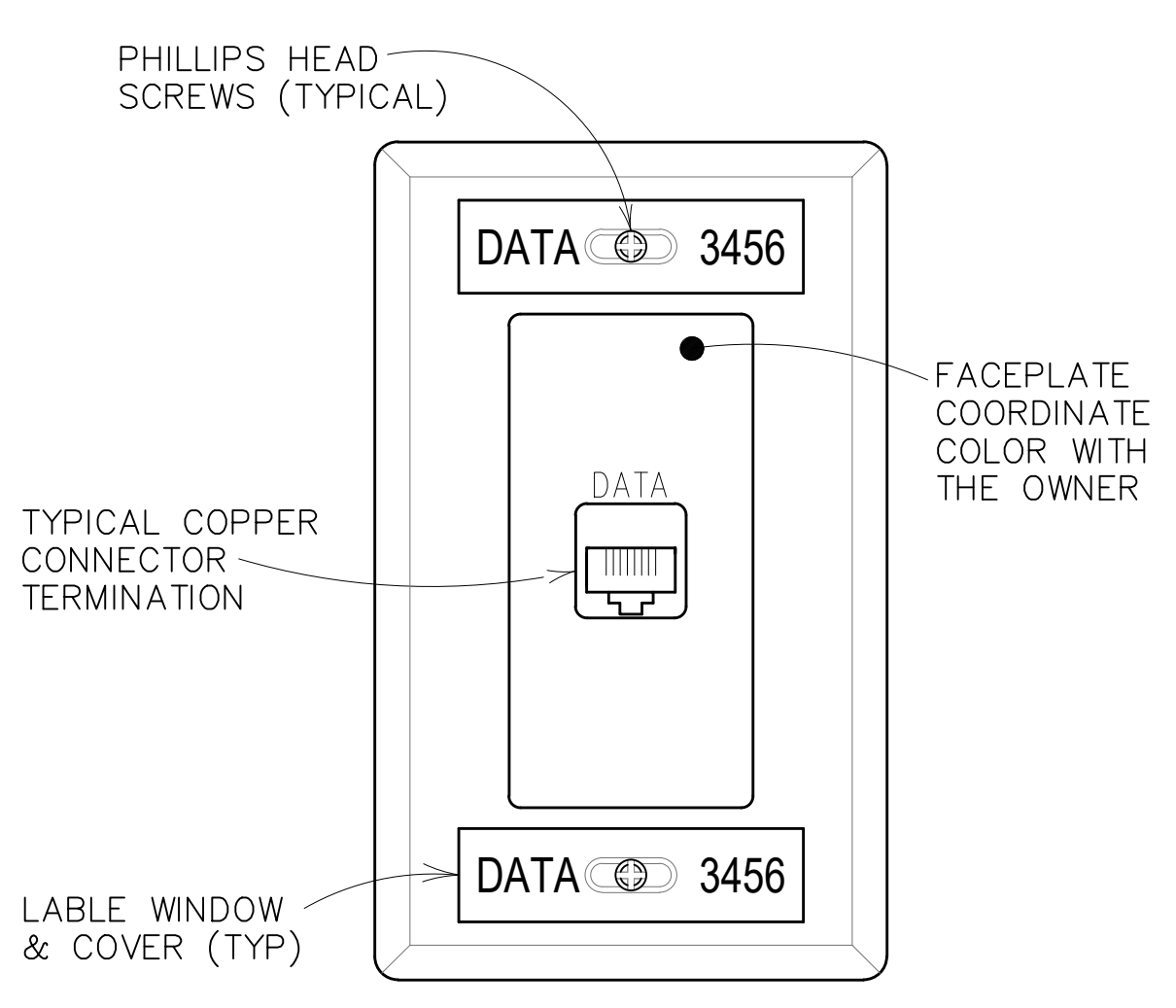
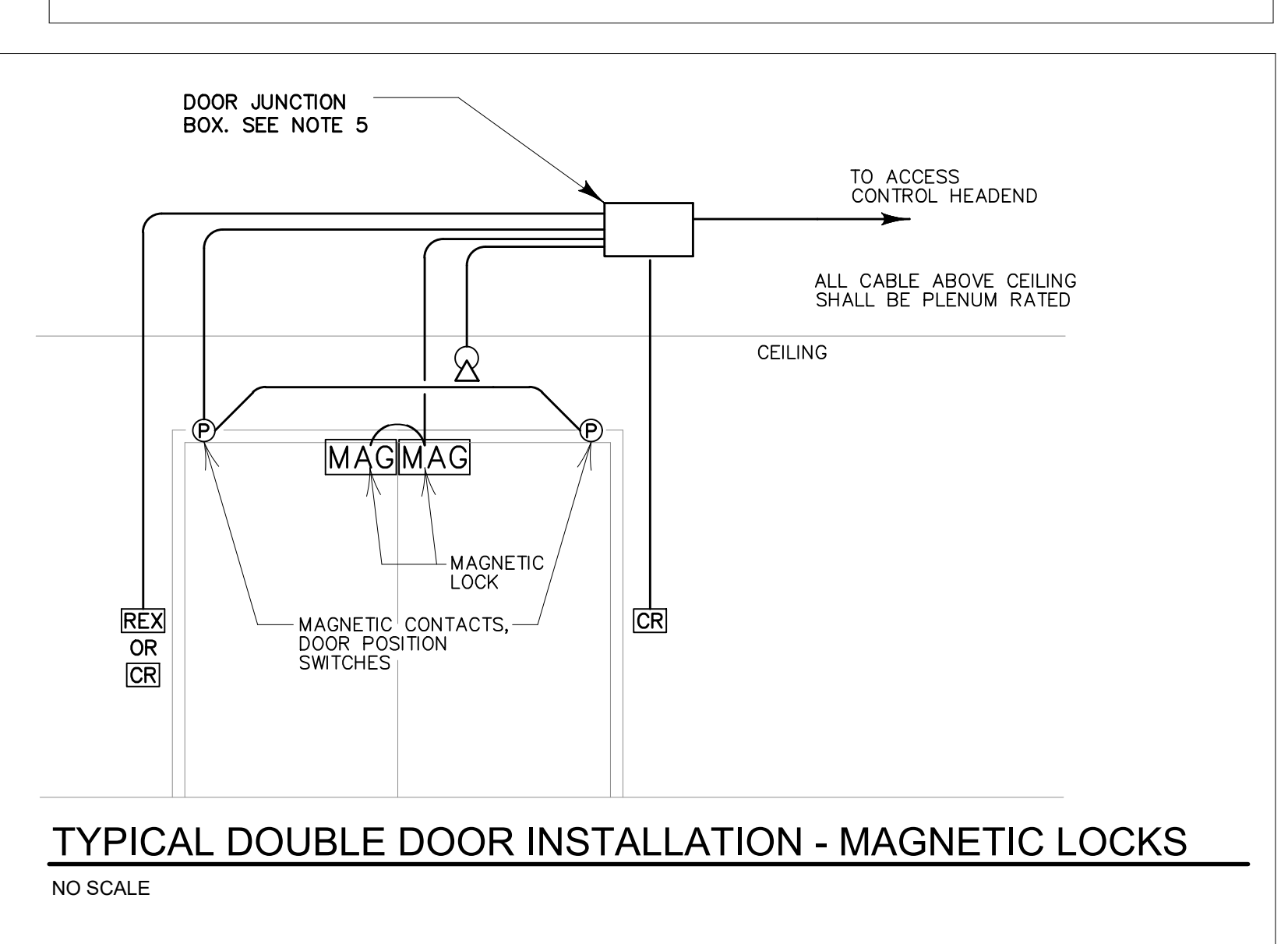
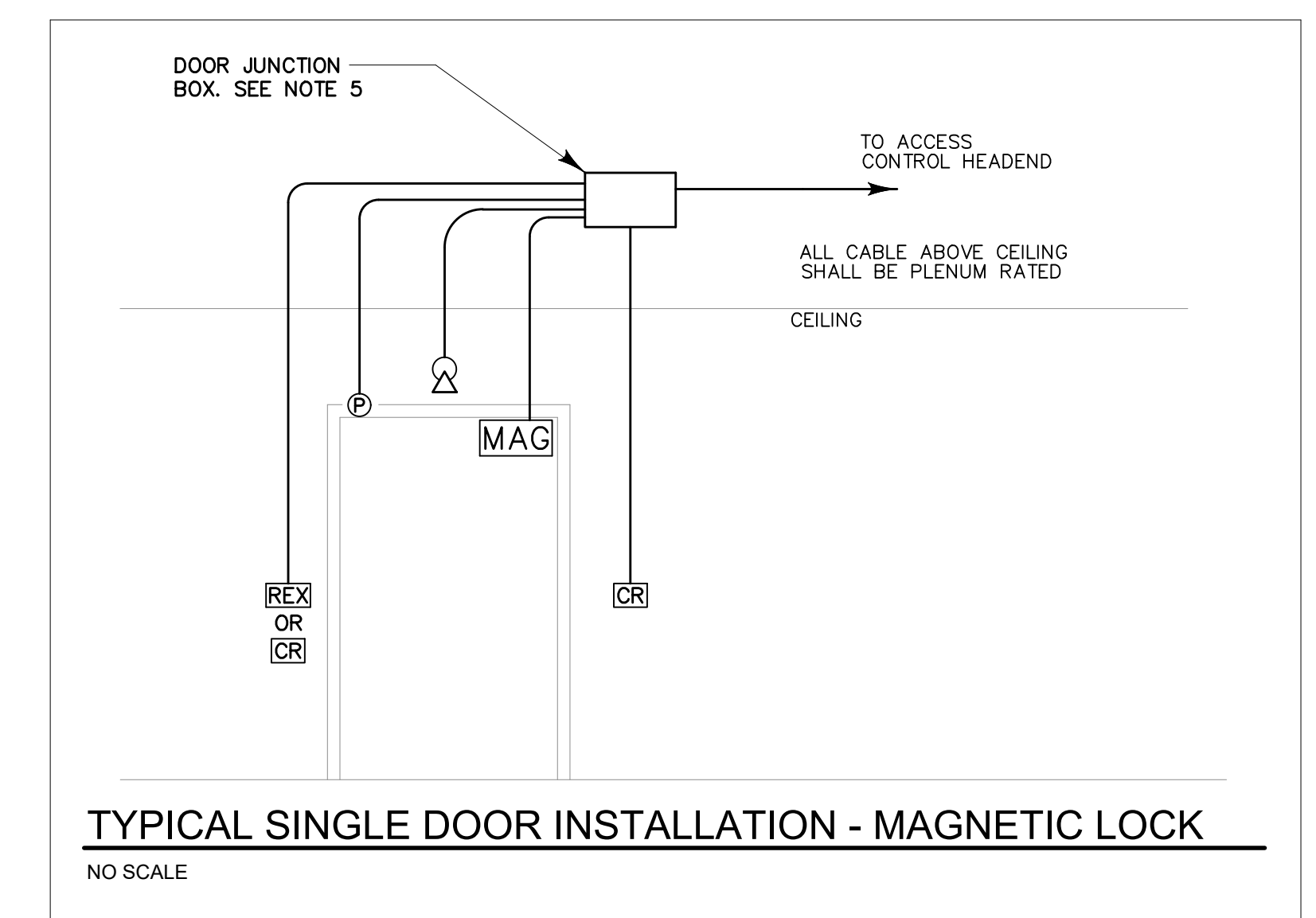
4 TYPICAL ADA HANDICAP MOUNTING HEIGHT
 ES6.1 SCALE: NONE



3 CAMERA POLE BASE DETAIL
 ES6.1 SCALE: NONE



- LEGEND:**
- Ⓟ DOOR POSITION SWITCH
 - MAG MAGNETIC DOOR LOCK
 - CR PROXIMITY CARD READER
 - REX EXIT REQUEST PUSHBUTTON
 - B BUILDERS HARDWARE ELECTRIC STRIKE
 - E SECURITY HARDWARE ELECTRIC LOCK
 - Ⓧ PASSIVE INFRARED DETECTOR
- NOTES:**
- PROVIDE UPS BACKUP FOR A MINIMUM OF FOUR HOURS FOR THE ACCESS CONTROL SYSTEM. (TYPICAL).
 - PROVIDE UPS BACKUP FOR A MINIMUM OF FOUR HOURS TO OPERATE THE MAGNETIC LOCKS AT EACH DOOR. MOUNT IN JUNCTION BOX ABOVE EACH DOOR. (TYPICAL ALL DOORS).
 - PROVIDE CONNECTION TO THE MAIN FIRE ALARM PANEL FOR FIRE ALARM OVERRIDE. COORDINATE WITH FIRE ALARM MANUFACTURER FOR INTERFACE REQUIRED.
 - PROVIDE CONNECTION TO THE MAIN TELEPHONE BACKBOARD FOR AUTOMATIC DIALER TO THE LOCAL SECURITY MONITORING MUNICIPALITY. PROVIDE MODEM AND AUTO-DIALER IF REQUIRED. COORDINATE WITH LOCAL TELEPHONE CO.
 - DOOR JUNCTION BOX CONTAINING, BUT NOT LIMITED TO, POWER SUPPLIES, RELAY CARDS, UPS BATTERIES, ACCESS CONTROL EQUIPMENT, ETC. XXX



2 DATA OUTLET
 ES6.1 SCALE: FULL SIZE
 TYPICAL VOICE & DATA OUTLET. PROVIDE JUNCTION BOX, TERMINATIONS, CONNECTORS, WIRE, FACEPLATE, ETC.



COORDINATE TELEPHONE OUTLETS WITH POWER OUTLETS. COVER PLATES ARE NOT REQUIRED IN ALL NON-INMATE AREAS. PROVIDE A STAINLESS STEEL COVER PLATE FOR ALL OUTLETS, ALL INMATE AREAS.

1 TYPICAL OUTLET CONFIGURATION
 ES6.1 SCALE: FULL SIZE
 THE CONTRACTOR SHALL COORDINATE THE POWER AND PHONE/DATE OUTLETS SHOWN ON THE TWO SETS OF DRAWINGS. WHERE DEVICES ARE SHOWN ON THE SAME WALL THEY SHALL BE INSTALLED AS SHOWN ABOVE. THIS APPLIES TO THE JAIL AND COURT BUILDINGS.

KEY PLAN:

RELEASED FOR BID ONLY

DAWSON COUNTY BOARD OF COMMISSIONERS

CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUPGRADE FOR DAWSON COUNTY

TABLE OF CONTENTS

PROPOSAL DOCUMENTS

Invitation to Bid.....	3
IFB Timetable	3
General Overview.....	4
General Conditions.....	9
Scope of Work	11
Directions for Submitting Response.....	22
General Terms.....	29
Vendor’s Checklist Form.....	78
Vendor’s Information Form.....	79
Vendor’s Price Proposal Form.....	80
Bid Bond.....	82
Execution of Proposal Form.....	85
Drug Free Work Place Form.....	86
Addenda Acknowledgement Form	87
Certificate and Statement of Non-Collusion Form.....	88
Georgia Security and Immigration Compliance Act Affidavit.....	90
Equal Employment Opportunity Form.....	93
Local Small Business Initiative Affidavit Form.....	99
Sample Contract.....	100
Drawings/Specifications/Equipment List.....	130

DAWSON COUNTY, GEORGIA
Purchasing Department
25 Justice Way, Suite 2223
Dawsonville, Georgia 30534
Phone: 706-344-3500 x.42223; Email: mhawk@dawsoncounty.org

July 22, 2021
CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY
SYSTEM UPGRADE FOR DAWSON COUNTY

INVITATION

This is an invitation to submit a bid to Dawson County for Construction Services - Comprehensive Security System upgrade for Dawson County, indicated herein. Details are listed under Section II. Sealed bids will be received by the office of the Purchasing Manager at 25 Justice Way, Suite #2223, Dawsonville, GA 30454.

Instructions for preparation and submission of a bid/proposal are contained in this packet. Electronic packets may be found at <https://vrapp.vendorregistry.com/Bids/View/BidsList?BuyerId=1bac094c-9726-497e-943b-141544ec4bd4>. Submissions must be typed or printed in ink. Prices submitted as a result of this invitation must include the Vendor Price Proposal Form and be returned in a sealed envelope or container marked, as Sealed Bid with the applicable Proposal Name and Proposal Number on the outside. The offer may not be considered unless so received. Proposals must be submitted no later than 10:30 a.m., August 26, 2021. Tentative award date is set for October 21, 2021.

There will be a **mandatory** pre-proposal conference at 10:00 a.m., on August 5, 2021, at the Law Enforcement Center lobby, located at 19 Tucker Avenue, Dawsonville, GA 30534. All questions/comments that may arise from this invitation must be submitted in writing and emailed to the Purchasing Manager at mhawk@dawsoncounty.org no later than August 9, 2021, at 1:00 p.m. All questions and answers will be posted to the County website and the Georgia Procurement Registry no later than August 12, 2021, at 1:00 p.m. Answers to question submitted that materially change the conditions and specifications of this invitation will be promulgated to the County website and the Georgia Procurement Registry. Any discussions or documents will be considered non-binding unless incorporated and publicized in an addendum.

Dawson County provides equal opportunity for all businesses and does not discriminate against any person or business because of race, color, religion, sex, national origin and handicap or veteran status. This policy ensures all segments of the business community have access to supplying the goods and services need by Dawson County. Dawson County does not guarantee a minimum/maximum value for this contract.

Sincerely,
Melissa Hawk
Melissa Hawk, Purchasing Manager

**DAWSON COUNTY, GEORGIA
REQUEST FOR PROPOSALS
FOR
CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY
SYSTEM UPGRADE FOR DAWSON COUNTY**

SECTION I – GENERAL OVERVIEW

A. INFORMATION TO PROPOSERS

1. BID SUBMISSION

The Proposers shall package and seal its submittal so that they will not be damaged in mailing. Technical and Cost/Fee Proposals are to be packaged and sealed **separately**.

One (1) original and five (5) copies of the technical proposal and one (1) original price proposal must be received by, AUGUST 26, 2021, AT 10:30AM, EASTERN STANDARD TIME. Technical and price proposals must be submitted in a **separate** sealed envelope stating on the outside, the proposer's name, address, the solicitation number **#377-21 Construction Services - Comprehensive Security System upgrade for Dawson County**. If the price is referenced in the technical proposal, the submission must be disqualified and will not be evaluated. The complete submittal (price and technical) must contain the proposer's name, address and the solicitation number **#377-21 Construction Services - Comprehensive Security System Upgrade For Dawson County** be delivered to:

Dawson County Board of Commissioners
Attention: Purchasing Manager
25 Justice Way, Suite 2223
Dawsonville, GA 30534

Hand Delivery

Hand delivered copies may be brought to the above address between the hours of 8:00AM and 5:00PM EST, Monday through Friday, excluding Holidays. For a complete listing of Holidays, please visit www.dawsoncounty.org. If a sealed bid is delivered after 10:25 a.m., on the day of the opening, deliver the package to the Purchasing Manager, in the County Administration Training Room, Suite #2204. No submission will be accepted after 10:30 a.m., on the date listed within the bid submission section, at which time all company names of offers received will be publically read aloud.

GPS Location

Some GPS systems cannot locate the above-named address. Proposers may search the following address if trying to visit the Dawson County Government Center: 25 Tucker Avenue, Dawsonville, GA 30534. Tucker Avenue is located on the East side of the Government Center. Upon arrival, please continue one block West on Shoal Creek Road

to Justice Way. Parking for the Government Center is available off of Justice Way. Proposers should verify address is in Dawson County and not a surrounding community.

Coordinates: 34°25'23.08"N 34°25'23.08N 84°07'12.05

Proposers are responsible for informing any commercial delivery service, if used, of all delivery requirements and for ensuring that the required address information appears on the outer wrapper or envelope used by such service. NOTE: *Many express mail and delivery services do not guarantee overnight by noon to Dawson County.*

The Submittal must be signed by a company officer who is legally authorized to enter into a contractual relationship in the name of the proposer.

3. CONTACT PERSON

Proposers are encouraged to contact **Melissa Hawk, Purchasing Manager at (706) 344-3501, by fax at (706) 531-2728 or email mhawk@dawsoncounty.org** to clarify any part of the RFP requirements. All questions that arise prior to the DEADLINE FOR QUESTIONS due date shall be directed to the contact person in writing via facsimile or email. Any unauthorized contact shall not be used as a basis for responding to this RFP and also may result in the disqualification of the proposer's submittal.

Proposers may not contact any elected official or other county employee to discuss the bid process or bid opportunities except: 1) through the Purchasing Manager named herein, or 2) as provided by existing work agreement(s). This policy shall be strictly enforced and the County reserves the right to reject the submittal of any proposer violating this provision.

4. ADDITIONAL INFORMATION/ADDENDA

Dawson County will issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the due date posted on the county's website under the bid information. Proposers should not rely on any representations, statements or explanations other than those made in this RFP or in any addendum to this RFP. Where there appears to be a conflict between the RFP and any addenda issued, the last addendum issued will prevail. Proposers are advised to check the website for addenda before submitting their proposals.

Proposers must acknowledge any issued addenda by including Attachment B-Addenda Acknowledgement with the submittal. Proposals which fail to acknowledge the proposer's receipt of any addendum will result in the rejection of the offer if the addendum contains information which substantively changes the Owner's requirements

5. LATE SUBMITTAL AND LATE MODIFICATIONS

Submittals received after the due date and time will not be considered. Modifications received after the due date will not be considered. Dawson County Government assumes no responsibility for the premature opening of a proposal not properly addressed and identified, and/or delivered to the proper designation.

6. REJECTION OF PROPOSALS/CANCELLATION

Dawson County Government reserves the right to reject any and all submittals and reserves the right to waive any irregularities or informalities in any submittal or in the submittal procedure, when to do so would be to the advantage of Dawson County. Dawson County reserves the right to cancel this RFP at any time.

7. MIMINUM RFP ACCEPTANCE PERIOD

Submittals shall be valid and may not be withdrawn for a period of 90 days from the date specified for receipt of submittals.

8. NON-COLLUSION AFFIDAVIT

By submitting a response to this RFP, the proposer represents and warrants that such proposal is genuine and not a sham or collusive or made in the interest or in behalf of any person not therein named and that the proposer has not directly or indirectly induced or solicited any other proposer to put in a sham proposal, or any other person, firm or corporation to refrain from submitting and that the proposer has not in any manner sought by collusion to secure to that proposer any advantage over any other proposer.

By submitting a proposal, the proposer represents and warrants that no official or employee of Dawson County Government has, in any manner, an interest, directly or indirectly in the proposal or in the contract which may be made under it, or in any expected profits to arise there from.

9. COST INCURRED BY PROPOSERS

All expenses involved with the preparation and submission of the RFP to the Dawson County Board of Commissioners, or any work performed in connection therewith is the responsibility of the proposer(s).

10. RFP OPENING

Only the names of the firms responding to this RFP will be read aloud publicly due to the fact that the proposals will be subject to an evaluation review for accurate qualifications. A list of names of firms responding to the RFP may be obtained from the county's website www.dawsoncounty.org, after the RFP due date and time stated herein. A copy of the final evaluation tabulation to the RFP will be posted to the website after the RFP has been awarded, along with the awarded Contractor's name and date of award.

11. OPEN RECORDS

Proposers are reminded that under Georgia law, all opened documents fall under the open records act and are subject to inspection by the public. Proposers are reminded that documents and information in the possession of Dawson County will be treated as

confidential/proprietary information only to the extent permitted by the Georgia Open Records Act, and will be exempt from disclosure to a third party only to the extent permitted by the Georgia Open Records Act. Should you believe that your Proposal contains any trade secrets you must include an affidavit, at time of proposal submission that states that specific portions of the proposal contain trade secrets as defined by Georgia law (Article 27 of Chapter 1 of Title 10 of the Official Code of Georgia). Furthermore the affidavit must be detailed, citing specifically (citing paragraphs, articles, provisions, pages, etc.) the portions of the proposal containing any trade secrets. Accordingly, proprietary information and/or data cannot be withheld from public inspection.

12. TAXES

Dawson County Government is tax exempt. No sales tax will be charged on any products or services. Dawson County cannot exempt any other person/proposer from applicable sales taxes that may be required of them in relations to this project. Selected proposer will be provided with Dawson County's Sales and Use Tax Certificate of Exemption number upon request.

13. PROPOSER INFORMATION

All submissions shall include a completed proposer information form, current copy of business license and current W-9. Failure to provide this information could result in the disqualification of the proposer from submitting a proposal.

14. INSURANCE

Selected proposer will be required to provide Dawson County with a Certificate of Insurance for liability and workman's compensation insurance before work can begin on this County project and be effective for the duration of the work as described in the Contract Documents, including authorized change orders, plus any period of guarantee as required in the general warranty.

General liability insurance should be at least one million dollars (\$1,000,000) combined single limit per occurrence. Automobile insurance should be at least five hundred thousand dollars (\$500,000) combined single limit per accident for bodily injury or property damage; Workman's Compensation insurance should be as required by the State of Georgia; and Professional Liability insurance should be at least one million dollars (\$1,000,000).

The insurance certificate **must name** Dawson County Government its officers, employees and agents as an **additional insured** for the contracted project and the proper endorsements must accompany the certificate of insurance.

15. BONDS

If required, under SECTION II – SCOPE OF WORK of this document any combination of the following bonds may be requested by Dawson County. A five percent (5%) bid bond, a one hundred percent (100%) payment bond, and a one

hundred percent (100%) performance bond. All bonds would be payable to Dawson County Board of Commissioners. Failure to submit appropriate bonding will result in automatic rejection of bid. Bonding company must be authorized to do business in Georgia by the Georgia Insurance Commission, listed in the Department of Treasury's publication of companies holding certificates of authority as acceptable surety on Federal bonds and as acceptable reinsuring companies, and have an A.M. Best rating.

16. ANTI-DISCRIMINATION

Dawson County, in accordance with Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all proposers that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 23 will be afforded full opportunity to submit proposals in response to this Request for Proposal and will not be discriminated against on the grounds of race, color, national origin, sex, handicap/disability in consideration of an award.

By submitting their proposals, all proposals certify to Dawson County that they will conform to the provisions of the Federal Civil Rights Act of 1964.

In every contract of over \$10,000 the provisions in Sections 1 and 2 below apply:

1. During the performance of this contract, the PC agrees as follows:
 - a. The PC will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the PC. The PC agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - b. The PC, in all solicitations or advertisements for employees placed by or on behalf of the PC, will state that such PC is an equal opportunity employer.
 - c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
2. The PC will include the provisions of Section 1 above in every subcontract or purchase order of over \$10,000 so that the provisions will be binding upon each Sub-contractor or proposer.

Proposers may request this Request for Proposal in another language by contacting Purchasing Manager Melissa Hawk at p) 706-344-3501, f) 706-531-2728 or via email at mhawk@dawsoncounty.org. All bid submissions must be returned in English.

17. GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT

Proposers submitting a qualification package in response to this RFP must provide the following information in the package to indicate compliance with the Georgia Security and Immigration Compliance Act. The form is provided for completion.

- A. A statement that indicates the PC will conduct itself in compliance with O.C.G.A. §13-10-91 and Rule 300-10-.02 in the execution of the contract.
- B. By completing the affidavit that is provided with this solicitation, the proposer is attesting to the following:
 - a. The affiant has registered with and is authorized to use the federal work authorization program;
 - b. The user identification number and date of authorization for the affiant;
 - c. The affiant is using and will continue to use the federal work authorization program throughout the contract period;
 - d. Any employee, PC, or Sub-contractor of such PC or Sub-contractor shall also be required to satisfy the requirements set forth in this paragraph; and
 - e. Upon contracting with a new Sub-contractor, a PC or Sub-contractor shall notify Dawson County and shall deliver a completed Sub-contractor Affidavit to Dawson County within five (5) working days of entering into a contract or agreement of hire with the Sub-contractor before the new Sub-contractor begins any work.
- C. Failure to provide the completed and notarized affidavit with the PC's proposal will result in immediate disqualification as required by the Georgia Security and Immigration Compliance Act.

SECTION II – GENERAL CONDITIONS

A. PURPOSE

Dawson County Purchasing Department is soliciting **sealed** proposals from qualified individuals/firms who specialize in providing a turn-key security system (equipment, installation, electrical, door hardware, automatic doors, wireless networking, permitting, etc.) to complete the Construction Services - Comprehensive Security System for the Dawson County Law Enforcement Center and the Dawson County Government Buildings. Individuals/firms must provide all equipment, materials and labor to complete the scope of work. Details are listed herein. The County does not guarantee a minimum/maximum value for this contract.

B. CONTRACT PERIOD

The term of a contract awarded as a result of this RFP shall be from award until final acceptance of project by the County, which is to be two hundred seventy (270) calendar days from the issuance of the Notice to Proceed letter.

The contract shall terminate absolutely and without further obligation at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the County under this contract. The County does not guarantee a minimum value for this contract.

If, at any time, the County determines it is in its best interest to discontinue use of these services the County reserves the right to cancel this Agreement by giving thirty (30) days advance written notice.

C. BACKGROUND

The Dawson County sits in northeast Georgia and covers 214 square miles and 49 linear miles of lake shore. The 2010 census reported 22,330 residents live within Dawson County. Separated by four (4) voting and school districts Dawson County's population is centralized near the GA Hwy 400 corridor and thins out from the area.

Dawson County currently utilizes an integrated security and control system installed and maintained by Accurate Control, which has been in place since approximately 2007 at the Law Enforcement Center, which encompasses the Jail, and since 2011 at the Government Center.

There are multiple command center locations throughout the LEC/Jail that control the integrated modules currently in use by utilization of a touchscreen monitor. Each command center is responsible for an assigned area of the facility with one command center having the ability to operate the entire facility. The LEC/Jail staff is also responsible for operating the system for the Government Center after hours and during other designated times. There is only one command center located in the Government Center, also controlled by a touchscreen monitor. These modules consist of door control and monitoring, access control, intercom and paging, duress alarms, video surveillance/CCTV, video visitation and court hearings, parking lots and utility controls. There are 3 rooms currently set up for video/audio recording. Two of the interview rooms are at the main facility with 1 being off site at a different facility. The live feed of the video and audio can be monitored remotely from numerous locations from within the facility. Recordings can also be downloaded / copied from various locations. The audio and video data are stored/maintained on-site.

D. SCOPE OF WORK

General Requirements

1. Provide a management plan for installation of a comprehensive security system upgrade on a fully operational administration building/jail and courthouse/government center, to include:
 - a) Detailed description of equipment
 - b) Installation details
 - c) Maintenance details, including manufacture requirements and schedules
 - d) Detailed support services requirements

- e) Details on the phases of replacement and how the current system will remain functional as the buildings will be in use during the replacement.
2. Some of the goods and services required shall include, but not limited to, the following:
- a) Replace obsolete and ineffective analog systems/equipment, to include the video surveillance system with a digital video/audio management system (to allow the detention center staff to view the government center); DVR recording system with a new server-based recording system capable of thirty (30) day retention for the government center material and as the time frame for retention for the LEC/Jail in accordance with applicable records retention laws and guidelines; 190 analog cameras with new IP cameras (166 fixed cameras and 24 PTZ cameras) within and on the exterior of the LEC/jail and government center.
 - b) The most current video/audio surveillance technology is required for the cameras, to include the capability of detection and notification of unauthorized objects such as weapons, unauthorized persons or vehicles in restricted areas, with facial recognition capabilities for all locations and presence detection such as respiration and motion movement
 - c) Provide real time monitoring solutions
 - d) Maintain current and provide new security access control system, to include thirty (30) electronic card readers, with the addition at a minimum of three (3) electronic card readers (at the government center) AND those (at the Sheriff's Office/Detention Center)
 - e) CCTV surveillance equipment repair/replacement
 - f) Provide an audit process
 - g) Provide engineering to meet federal/state laws, rules and regulations
 - h) Provide software updates, as needed
 - i) Provide line-item pricing for labor, training, hardware and software, maintenance and repair/replacement costs
 - j) Replace existing monitors located within the central control room and administrative office of the government center; minimum size of 32 inches, quantity to allow the officer to maintain observation of secured areas and access points.
 - k) Replace existing monitors located within the Sheriff's Office and detention center
 - l) Identify blind spots throughout facilities and outside perimeters
 - m) Hand-held mobile control unit
3. To follow are some requirements mandated by the county:
- a) **Maintenance:** Full preventative maintenance, repair and modification services details for existing equipment until such time that all upgrades have been completed. Details for all supervision, labor, administrative support, materials, tools, parts, supplies, equipment and transportation necessary shall be included. Routine maintenance and repair work required to maintain existing system

shall be in the condition by the original equipment manufacturer's recommended guidelines.

- b) **Equipment Installation:** Details to install all system components and accessories required, in accordance with the manufacturer's instructions. This shall include all necessary interconnections, services and all adjustments required for a complete and operable system. Details to install all control signals, communications and data transmission line grounding to be installed as necessary to preclude ground loops, noise and surges from adversely affecting system operation. Details shall include system installation and construction methods to conform with all requirements of the State of Georgia and all applicable building codes. Details shall include other trades and existing conditions with direction to verify exact routing of all cable trays, conduits, etc. to include exact location and mounting heights of all equipment for installation of new system. Details that all work shall be concealed above ceilings, in walls and elsewhere within the buildings with use of existing conduit and surface raceway where possible and practical.
- c) **Cleaning of Equipment and Hardware:** Details as to the method to be used to inspect and perform a detailed cleaning of equipment, hardware and any security system related components.
- d) **Software Updates:** Details as to ensuring critical network security updates as needed. Details as to coordinating with the county IT department for review and manage firewall, virus and spyware protection tools, and maintenance of software licenses as required by the manufacturer. Details stipulating software updates will be implemented to maintain the most current version available from the manufacturer, including but not limited to:
 - a. Hardware firmware
 - b. Operating system software
 - c. Access control software
 - d. Sub-modules
 - e. Digital video recorder software
- e) **Service Level Agreement:** Details the county requires to be included in the SLA are:
 - a. Maintenance and support services shall be available twenty-four (24) hours per day, seven (7) days per week, including acknowledged Holidays by the county.
 - b. Local service center, with adequate parts supply for all major components within three (3) hours from or 150 miles of Dawson County.
 - c. Service center shall be staffed and adequately equipped to provide on-site service within four (4) hours after being called during normal business hours and on-site service within five (5) hours after being called for emergency service after hours.
 - d. Maintenance and support call response times shall be within one (1) hour from time of critical issue requests and twenty-four (24) hours from time of non-critical issue requests. Critical requests shall include

maintenance and support of hardware and software that manages the security system, perimeter doors, server room doors, entrances to doors of suites in the government center and LEC, pod doors, unit doors, kitchen doors, laundry room doors, sally port doors, medical area doors, booking doors and the 911 center.

- e. Provide materials for any repairs to equipment, if needed, provide loaner equipment to provide system functionality for critical component failure.
 - f. Provide and install upgrades for system software and hardware firmware with at least forty-eight (48) hours of notice to pertinent Dawson County staff.
 - g. Provide training to pertinent Dawson County staff for operating and troubleshooting the equipment and systems, to include, but not limited to upgrades, system changes, additional features, etc.
- f) **Warranties:** Details covering warranties shall include a one (1) year workmanship warranty in which upon receipt of notification from the county of failure of any material/product or workmanship, it shall be required that the replacement of the failed material/product or workmanship, including removal, replacement or repair at no additional cost to the county shall take place within twenty-four (24) hours. The county requires that all provided equipment shall have the manufacturer's and/or suppliers guarantee or warranty shall be executed by filing all related paperwork by the installer. All product warranties shall be in effective for a period of a minimum of one (1) year from date of county's acceptance of the project. The county requires that the installer shall be responsible to obtain service or repair under the terms of any said guarantee or warranty on the county's behalf. The county requires that all guarantees and warranties shall be in writing and shall be provided to the project manager of the county at the completion of the installation. All equipment, products, materials that are replaced shall remain the property of the county and shall be disposed of by county staff.

4. To follow is an overview of existing modules:

- a) **Door Controls & Monitoring** – The door controls and monitoring module allows the operator of the command center to control door access using a touch-screen. The doors inside the secure area of the jail do not allow for badged access and must be opened/closed from the command center only. The doors outside of the secure area of the jail allow for both badged access and command center control. Some administrative areas are able to control a switch to allow for access to certain doors. See access control module for further information on doors that allow for badged access.
- b) **Access Control** – The access control module allows for control over certain areas of the facility, mostly outside of the jail. The card/badge access system consists of a database and card readers throughout the facility. Access can be customized for each user or a group of users. The database keeps track of what users can and cannot access certain areas and when users access a particular

area. The module also allows for on-site badge printing. Some of the card readers are equipped with PIN pads and require a PIN to gain access.

- c) **Intercoms and Paging** – The intercoms and paging modules allows for communication throughout the facility between the operator of the command center and officers, inmates, and others. Intercoms are located on the inside and outside of every pass-through door of the jail facility and at various other locations outside the jail. The intercoms can be activated by the operator of the command center or can be acknowledged by the command center if called from the intercom.
- d) **Duress Alarms/Call Buttons** - Duress alarms are located in various areas of the jail to signal the operator of the command center that there is an emergency situation that needs immediate attention. Once activated, the duress alarm provides a visual and audible signal on the command center touch screen. The duress alarm must be reset with a key at the site where the duress alarm is activated. Call buttons are also located at various locations throughout the jail. When the call button is activated, the command center receives a visible and audible signal. The call button can be reset from the command center. There is currently no way to communicate audibly from the call buttons as they are only utilized to alert the command center.
- e) **Video Surveillance/CCTV** - There are approximately 96 cameras in the jail and LEC. Approximately 15 of the total cameras are PTZ. Cameras located nearest to an intercom are called when the intercom is activated and acknowledged by the command center. The cameras can be selected from the touch screen or keypad however the functionality of the camera can only be operated with the keypad and joystick. All cameras record with the data being stored onsite and can be viewed from numerous locations within the facility.
- f) **Video Visitation** - Currently video visitation is onsite only. There are 10 visitation booths in the lobby. There are 2 booths in each pod. The command center in the lobby of the LEC connects the booth in the lobby to the booth in the pod. Each booth consists of a camera, video screen, and phone receiver.
- g) **Utility Control** – The utility control module allows the operator of the command center to control lights, phones, and televisions in various areas of the jail by use of the touch screen.

The awarded Proposer must provide all equipment, materials and labor to complete the scope of work. The awarded Proposer will ensure that all Georgia Laws, Rules, Regulations and Codes, to include but not limited to, the General Contractors Official Code of Georgia Sections 43-41-1 through 43-41-17, Public Works Official Code of Georgia Title 36, Dawson County Planning and Development, Codes and Regulations, Building and Development Codes and the Georgia Department of Community Affairs, Georgia's Construction Codes (<http://www.dca.state.ga.us/development/constructioncodes/programs/codes2.asp>) and all NFPA related regulations and codes are strictly adhered to where appropriate to the scope of work within this RFP document. Specific areas of work for this project shall be in

accordance with all applicable, national, state and local codes to include, but not limited to the following:

- Americans with Disabilities Act (ADA) and ANSI A117.1
- International Building Code (IBC)
- National Electric Code (NEC) and NFPA 70
- Local Governing Codes and Standards to include the Local Authority having Jurisdiction (AHJ)
- National Fire Protection Association, National Electrical Code (NFPA 70)
- National Fire Protection Association Life Safety Code (NFPA 101)
- Underwriters Laboratories Applicable Standards (UL) including 60950, E218113, 294, and PB4982
- IEEE802.3 and IETF Standards
- EN 55022 ITE (1994), EN 55024 Immunity Standard (1998), CFR47 Part 15B (1995)
- Power over Ethernet Standard 802.3AF and 802.3AT
- H.264 Standard ISO 14496-4 & 14496-10
- The hardware manufacturer shall be an ISO 9001:2000 registered company
- American Society of Testing Materials (ASTM)
- American National Standards Institute (ANSI)
- National Electrical Manufacturer's Association (NEMA)
- Institute of Electrical and Electronic Engineers (IEEE)

All design/management plans will be approved by the County staff prior to beginning any ground work.

Attachments containing the hardware and software descriptions, limited building drawings and specifications begin on page 130. Equipment brand name and product information listed shall be quoted. If a Proposer wishes to submit a substitution, the procedure included within this RFP shall be followed, which begins on page 51 of this RFP. **DO NOT FOLLOW THE DIRECTIONS WITHIN THE ATTACHMENT "A" OR ATTACHMENT "B" FOR REQUEST FOR SUBSTITUTIONS.**

1. The proposer selected for award shall hold the contract with Dawson County and shall act in the capacity of the Prime Contractor (PC). **The PC must assign a dedicated representative through the duration of the project to be reasonably available to the County and communicate weekly with the County on the progress of the project.** The PC shall perform all construction activities efficiently and with the requisite expertise, skill and competence to satisfy the requirements of the Contract Documents. The PC shall at all time exercise complete and exclusive control over the means, methods, sequences and techniques of construction with approval from the County.

The PC warrants to the County that the construction, including all materials and equipment furnished as part of the construction, shall be new and without default.

Time is of essence in the completion of this project. The project completion shall be within two hundred seventy (270) calendar days of the Notice to Proceed Letter.

Details for the security system upgrade, are included but, not limited to, the following:

- Complete the project in accordance to the drawings and specifications included in this RFP
- Pre-construction engineering, planning, coordination and permitting
- Site Inspection and Engineering
- Site preparation
- Procurement of all engineering and construction work and materials
- Project Management
- Employee/Sub-contractor staging, management and coordination (All sub-contractors will be pre-approved by the county prior to any work beginning on this project.)
- Space will be provided on site for materials staging and management
- Site access management and scheduling
- Independent special testing and inspection(s) in accordance with ASTM
- Procurement and management of all in-house employees/sub-contractors, vendors and suppliers
- Construction scheduling and cost controls
- Construction of the project
- Quality assurance and quality control, including inspection and testing
- Turnover of the facility and systems, including but not limited to, warranties, operation instruction and maintenance brochures, and any necessary training.
- Obtaining the certificate of occupancy, if required
- Provide at the time of installation the latest available version of all software and equipment. Discontinued software and equipment shall not be accepted. All equipment shall be new. No refurbished/reused equipment shall be accepted.
- Identify any item with which they cannot comply or comply by different means, fully explaining this difference. Any item not specifically cited shall be assumed to comply. Awarded Contractor shall be strictly held to the performance described in these documents.
- Deliverables required for material completion will include but, is not limited to, the following:
 - Certificates confirming the completion status of work, system operations, various legal affidavits, final (asset) costs, and any other certifications confirming the completion status of work.
 - Receipts for delivery of other deliverables prior to material completion such as owner's manuals, training manuals, key schedules and other deliverables.
 - Documents such as required operational permits from the Fire Marshall and any other required operational permits, initial test and balance report, facility operation and maintenance instructions, and other documents as specified in the trade specifications including warranties, guarantees, bonds. certificates of manufacturers of major components, and other documents as required.

Details for the construction of a control room in the Booking Area, Add Alternate, are included but, not limited to, the following:

- Complete detailed design in accordance to the below design criteria, where necessary
- Pre-construction engineering, planning, coordination and permitting
- Site Inspection and Engineering
- Site preparation
- Procurement of all engineering and construction work and materials
- Design Management
- Project Management
- Employee/Sub-contractor staging, management and coordination (All sub-contractors will be pre-approved by the county prior to any work beginning on this project.)
- Space will be provided on site for materials staging and management
- Site access management and scheduling
- Independent special testing and inspection(s) in accordance with ASTM
- Procurement and management of all in-house employees/sub-contractors, vendors and suppliers
- Cost estimation, scheduling and controls
- Construction of the project
- Quality assurance and quality control, including inspection and testing
- Obtaining the certificate of occupancy, if required
- Deliverables required for material completion will include but, is not limited to, the following:
 - Certificates confirming the completion status of work, system operations, various legal affidavits, final (asset) costs, and any other certifications confirming the completion status of work.
 - Receipts for delivery of other deliverables prior to material completion such as owner's manuals, training manuals, key schedules and other deliverables.
 - Documents such as required operational permits from the Fire Marshall and any other required operational permits, initial test and balance report, facility operation and maintenance instructions, and other documents as specified in the trade specifications including warranties, guarantees, bonds, certificates of manufacturers of major components, and other documents as required.

Drawing formats and requirements will consist of, but not limited to, the following:

- Digital drawing files shall be submitted at the completion of design in Adobe Acrobat X Standard
- A unique file name shall be assigned to each drawing. A consistent file name format and a table of contents shall be utilized throughout the project.
- Signature blocks shall be included to show the name of the primary individual producing drawing, the primary designer, the primary reviewer, and the PC's Engineer approving the drawing. All names in the signature block shall be the first initial and the complete last name.

- Standard legends and abbreviations shall be used throughout the Project. Standard legend sheets shall be prepared containing all symbols and abbreviations used on the Drawings.
- Drawings shall include a sequential revision number to allow tracking of the drawings. Title block shall note drawings issued for procurement or construction and any subsequent changes including final.

All design submittals required under Applicable Laws to be sealed and signed shall be done so by the PC's Architect/Engineer currently licensed in Georgia under Applicable Laws.

Design submittals shall be delivered in bound sets, indexed and clearly marked to indicate the date of issuance and stage of development.

Three (3) hard copies and one .pdf copy of drawings, specifications and other design submittals shall be provided for the preliminary and detailed design phases.

Three (3) hard copies and one .pdf copy of drawings, specifications and other design submittals shall be provided for the final design phase.

As part of each design submittal, review comments from previous discussion shall be submitted with actions taken to address concerns.

Typical construction details shall be developed for the site improvements.

Site utilization and construction staging plan shall be developed by the Prime Contractor to include but, not limited to, utilities such as power, internet and telephone hookups, transportation logistics and other common services required supporting the construction activity.

1. The Prime Contractor must have in-house capability or have sub-contractors for the following required disciplines:

- Electrical Engineering
- Structural Engineering
- Electrical: Wiring, junction box, sound system, any and all other electrical work
- Demolition (if any)

2. The PC shall comprise a construction team from either in-house personnel or establishing sub-contractor agreements for the following:

- PC Architect/Engineer
- PC Project Manager/Superintendent
- PC Safety Coordinator/Inspector
- PC Quality Assurance/Quality Control Coordinator/Inspector

If the last three (3) titles are combined, this person must have non-exclusive authority to make decisions on site that will bind the PC in all decisions, changes or other matters relating to the project; this person must be on site every day of construction (without fail), this person must have the proper credentials to perform all jobs; this person must still perform all duties as spelled out within the RFP as if this person were individuals.

3. The function of each construction team is to include, but not limited to:

The PC's Project Architect and Engineer can be the same person. The PC's Project Manager and Superintendent can be the same person or two individuals. The PC's Safety Coordinator/Inspector and the Quality Assurance/Quality Control Coordinator/Inspector can be the same person or two individuals.

- The PC's Architect/Engineer:

Shall serve as the designer for the project from start to finish ensuring quality, innovative and functional design; produce detailed blueprints and make necessary corrections; keep within budgets and timelines; ensure that all works are carried out to specific standards, building codes, guidelines and regulations; make on site visits, as determined at the contract meeting prior to any work beginning, to check on project status and report on project; develop the construction punch list in partnership with the County.

- The PC's Project Manager:

Shall serve as the PC's point of contact for the Project, and is defined by the County contract as the person designated by the PC to serve as its representative and be available for general consultation throughout the Project. The PC's Project Manager shall have authority to receive and transmit instructions and information and render decisions related to the Project on behalf of the PC, and shall have the non-exclusive authority to bind the PC in all decisions, changes or other matters relating to the Project. The PC's Project Manager shall serve as the PC's point of contact on all matters relating to Work including, but not limited to, contract compliance, progress of work, overall project scheduling, financial matters and contract changes.

- The PC's Superintendent:

Shall serve as the PC's on-site point of contact in all matters relating to the Work including, but not limited to, scheduling of work, supervision of sub-contractors, testing and utility interruptions and connections. The Superintendent is responsible for supervision of the PC's Work through Final Completion of the Project, including the supervision of employee/sub-contractors. The Superintendent shall be present on the Project Site whenever Work is being performed, and shall attend all weekly Project meetings. The Superintendent shall be capable of identifying existing and predictable hazards on the site; and working conditions that are unsanitary, hazardous, or dangerous to employees; and shall have the authority to take prompt corrective measures to eliminate such hazards and conditions. The Superintendent shall not perform construction work. All directions given to the Superintendent from the County, in writing if changes from the contract result from said direction, and from the Superintendent to the construction crew shall be binding.

- The PC's Safety Coordinator/Inspector:
Shall serve as the PC's point of contact for all matters relating to project safety. The PC's Safety Coordinator/Inspector enforces and implements the safety requirements of the Contract, including the PC's Safety Plan. The Safety Coordinator/Inspector is on site at all times during building activities, foundations work, trench work and structural steel/aluminum erection.
- The PC's Quality Assurance/Quality Control Coordinator/Inspector:
Shall serve as the Authority's point of contact for all construction quality issues; and shall perform coordination between the PC, sub-contractors; and any independent testing labs; and shall have the authority to act for the PC in all construction quality control matters. The QA/QC Coordinator shall be onsite at all times during construction to perform construction quality control duties.

Notice of Award

The PC agrees that in the case of failure on his part to execute the said contract and the bonds within fifteen (15) consecutive calendar days of receipt of a written Notice of Award from the County, the check or bid bond accompanying this bid, and the monies payable thereon shall be paid into the funds off the Owner as liquidated damages for such failure, otherwise, the check or bid bond accompanying this proposal shall be returned to the undersigned.

Notice to Proceed

The PC shall begin work as agreed upon and specified on the Notice to Proceed from the County and shall meet the agreed upon benchmarks throughout the project.

Weather days

All weather days are to be approved in writing by the Public Works Director and/or the County Manager.

Retainage

The PC shall be paid for work performed based upon satisfactory inspections and completion of the agreed upon draw schedule. PC's fee will be paid on a Net 30 basis less 10% retainage.

Liquidated Damages

The County and the PC recognize that time is of the essence with this project. The County and the PC also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration preceding the actual loss suffered by the County if the work is not completed within the agreed upon time. Accordingly, instead of requiring any such proof, the County and the PC will agree that as liquidated damages for delay (but not as a penalty), the PC shall pay to the County **One Thousand and 00/100 (\$1,000.00) Dollars** for each and every calendar day that expires after agreed upon date of completion.

When the County reasonably believes that completion will be inexcusably delayed, the County shall be entitled, but not required, to withhold from any amounts otherwise due the

PC an amount then believed by the County to be adequate to recover liquidated damages applicable to such delays. If and when the PC overcomes the delay in achieving completion, or any part there, for which the County has withheld payment, the County shall promptly release to the PC those funds withheld, but no longer applicable, as liquidated damages.

Invoicing

1. Dawson County is Net 30. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment less than 30 days, however.
2. Proposers shall invoice quarterly, by location, including a detailed list of services provided and only after work has been performed (in arrears).
3. All invoices will be paid in the year in which services are provided.
4. Proposer to provide contact information for dedicated team member to provide billing inquiries. More information is included in the Statement of Qualifications portion of this RFP.
5. Invoices should be sent via mail or email to:

Accounts Payable
25 Justice Way, 2220
Dawsonville, GA 30534
cmcmillon@dawsoncounty.org

Pricing

1. Submissions must use returned on the Proposer's Price Proposal Form as provided within this RFP.
2. If submitting an alternate, use the form provided clearly labeled as alternate. Make additional copies as needed. Failure to comply may result in disqualification.

Administration

The project will be administered by the Dawson County Board of Commissioners with the Public Works Director being the main point of contact for all questions related to scope of work issues during the term of the contract. Any contract issues will be directed to the Dawson County Purchasing Manager during the term of the contract.

Permits and Licensing

1. Proof of Licensing: PC shall submit proof of professional license, insurance and business license at time of submittal as it relates to the Scope of Work defined herein. The business license will be the current license your business operates, if you are out of county, this will not be a Dawson County business license.
2. The successful proposer must hold a valid Business License at time of proposal and a copy must be filed with the Purchasing Manager at time of proposal. If awarded to an out-of-county proposer, that proposer must register their business license with the Dawson County Planning and Development Department within 10 days of award. Fees may apply and are not a part of this agreement. *Note: Only the successful proposer*

needs to register with Dawson County Planning and Development Department. As of January 1, 2017, there is no longer a registration fee.

E. QUALIFICATIONS

This section identifies all information which must be submitted in each proposal. The County is not interested in elaborate submissions.

Tab A - Company Background and Structure

The Proposer will provide a general history and description of its company including, but not limited to, the number of years in business and number of employees. Include the legal form of the business organization, the state in which incorporated (if corporation), the types of business ventures in which the organization is involved, and the office location that will be the point of contact during the term of any resulting contract.

The proposal must provide the following:

- Length of time the Proposer has been providing comprehensive security systems design/installation to local governments.
- Demonstrate the Proposer's experience working with projects equal to this scope of work of this RFP.
- Description of the Proposer's organization, financial resources, staffing levels, and any other evidence of its ability to successfully complete the project.
- The proposer must certify that there are no circumstances, which will cause a conflict of interest in performing the services required.
- Statement listing any and all differences between your proposal and the work specified in the RFP.
- The proposer must demonstrate it is duly authorized to conduct business in the State of Georgia.

Tab B - Company Experience

The proposer shall submit at least three (3), but no more than six (6), projects as examples of the PC's past experience in performing and managing construction projects or design-build projects, comparable in scope and complexity to the scope of work. The case studies shall describe projects completed within the past ten (10) years, for which the PC served as the prime construction PC, in the fabrication, assembly and installation of systems of greater or equal magnitude and quality as that being specified herein. This experience relates to the office performing the work and not the company on a national basis. Examples showing public-sector projects are preferable. Examples representing comparable design-build experience are preferable, but examples need not be limited to design-build projects.

Projects of similar scope and complexity may include any of the following:

- Projects of similar size or cost
- State/Local Government facilities projects
- Private sector projects
- Design-Build Projects

- Any combination of the above

The examples must concisely set forth the basic background information for the projects offered as comparable (dates and location and the cost and scope of the work). The examples must describe the effectiveness of the cited projects, and the methodology used to measure such effectiveness (on-time delivery, successful completion of project, effective management of costs). The examples shall demonstrate why the cited projects are comparable to the Project in cost, size and complexity or delivery method. Where applicable, the examples shall demonstrate the PC's experience working with the Sub-contractors and/or Consultants required to be named, as described in the scope of work. (Identification and Prequalification of Members of Design Build Team) of this RFP. Each example must identify the name and address of the contracting entity and the name, title and telephone number of a contact person associated with the contracting entity that is familiar with and able to comment on the PC's performance on each project.

Tab C - Identification of all Contracted Personnel

The Awarded PC's employees shall wear proper identification for all employees working in the County on the contract. At a minimum, photo identification badges will be required for each person along with employee's personal data and the awarded PC's name. Such identification must be clearly displayed on the outside clothing of all the awarded PC's employees during field work and readily visible at all times when working on the Dawson County project. Vehicles used by the awarded PC shall be clearly marked to identify the company and the nature of their business. Please state how this will be met during the project.

The awarded PC must be the highest-level certification for the SMS such as Enterprise for Software House or Value-Added Reseller (VAR) for Lenel as well as certified business partner in good standing for the products proposed. Include information attesting to the fact that their installation and service technicians are competent factory trained staff.

The awarded PC must employ certified personnel capable of maintaining the system and providing reasonable service time.

Tab D - Qualifications of Key Team Members

Identify and include qualifications of key staff who would be assigned to work on the scope within this RFP. Include an organizational chart that depicts how the staff would be structured to perform details herein. Proposers must have qualified and trained staff to successfully complete the contract requirements. At a minimum, the organizational chart shall identify the responsibilities, structure, and lines of authority between and among the PC, the Design Consultant and any Sub-contractor entities required to be named. The Proposer shall take appropriate and meaningful disciplinary measures against those who violate the terms of this provision.

The information shall be brief and include the following:

- Identification, qualifications and experience of all persons to be assigned to the County project site and team organization; and the assignments of responsibilities and level of experience by site position.
- Identification and qualifications of any key team members and any subcontract consultants, including resumes of individual or the firm, as applicable. Resumes shall include the name and address of the contracting entity that is familiar with the work of each team member.
- The County requires that the assigned architect/engineer has at least five (5) years of practical experience fulfilling the scope of work of the same size project. The project architect/engineer will be assigned to Dawson County for the duration of the project.
- The County requires that the assigned project manager has at least five (5) years of practical experience involving project management of the same size project. The project manager will be assigned to Dawson County for the duration of the project.
- The County requires that the assigned project superintendent has at least five (5) years of practical experience in a construction superintendent role of the same size project. The project superintendent will be assigned to Dawson County for the duration of the project.
- The County requires that the assigned project safety coordinator has at least four (4) years of practical construction experience. The safety coordinator must have completed a 30-hour OSHA Construction Industry Outreach Training Program and OSHA scaffold training.
- The County requires that the assigned project quality assurance/quality control coordinator/inspector has at least four (4) years of experience in a similar role.
- All personnel assigned to the project will be subject to the approval of the County and will be removed from this project by the PC upon written recommendation of the County's contract contact. Additionally, the PC shall notify the County's contract contact in writing of all changes in supervision or key personnel. The notice shall include the reason for the change and provide a plan for immediate replacement.
- Attach the following Georgia Licenses within this tab held by PC or sub-contractor:
 - Georgia Utility Contractor's License
 - Georgia Registered Architect License
 - Georgia General Contractor's License
 - All other licenses that the Proposer wishes to submit

Tab E - Approach to Scope of Work

Referencing the Scope of Work in Section D, provide a detailed approach to fulfill the requirements of this RFP. At a minimum, proposals must address:

- A description of the individual/firm's organizational approach to the project.
- This portion of the Proposal shall state how the PC/firm proposes to achieve the required outcomes through goals, objectives, policies and programs. It shall also indicate how the final projects will be organized, formatted and presented.

- A description of the individual/firm's understanding of the scope and challenges of the project; The PC's approach to selection of materials and systems, including how such selections impact project cost, project delivery dates, and other matters.
- The approach shall also illustrate (through examples of relevant experiences in similar projects) how the PC/firm will successfully maintain an effective line of communication throughout the process.
- Address all tasks in the scope of work, providing detailed information on all work tasks required to complete the project within the performance period. Include a statement of understanding of work involved, particularly regarding the level of effort required for any portion of the Plan and its update.
- Purchasing Plan for project materials, including identification of long-lead items.
- Workforce plan for the project by phases, identifying the trades, types or percentages of work to be performed by the PC/firm's own forces as compared to the trades, types or percentages work to be subcontracted to others.
- Identification of Site logistics concerns and discussion of plan for site organization and maintenance of site;
- Approach to management of construction team to include Sub-contractors and sub-consultants.
- Summary description of quality control and assurance program.
- Identification of code compliance concerns, special inspection issues, and plan for interaction with code officials.
- Summary description of start-up and testing program for systems and equipment.
- Identification of safety concerns and summary description of plan for site safety and efforts to reduce workplace injuries.
- Identification of security concerns and summary description of plan for site security.
- Plan for achieving timely project close out.
- The individual/firm shall submit a detailed bar-chart schedule for completion of the project, showing all design phases, the securing of the Dawson County staff's approvals of plans, as well as tracking major construction activities and milestones including substantial completion, final completion and project closeout. The bar chart schedule shall be accompanied by a written narrative indicating the individual/firm's approach and methodology for executing the Project within the milestone dates provided. The narrative shall address topics relevant to the performance and completion of the project that may include, without limitation, the following: identification of schedule concerns and constraints (e.g., completion of preliminary and final design, permitting issues, labor and material availability, winter weather conditions) and plan for completion of the project in accordance with the County's proposed date for contract completion. Include discussion of plan for maintaining schedule and providing regular schedule updates.
- The Proposer will identify any design or construction feature that will set the facility as an iconic comprehensive security system.

The County welcomes innovating suggestions and recommendations from individual/firms that will ensure a successful service approach.

Tab F - References

Proposers must submit at least five (5) references for persons that the individual/firm will assign, to include all sub-contractors, to complete the Scope of Work listed herein. Ideally, references should be government entities within Georgia should be included. The following information for each reference shall be listed:

- Name of government entity
- Address
- Contact person with title
- Phone number of contact person
- Email (highly recommended and preferred method)
- Dates of service
- Range of services

Tab G - Financial Stability

Provide financial information that would allow proposal evaluators to ascertain the financial stability of the Proposer.

- If a public company, include a recap of the most recent audited financial report.
- If a private company, provide a recap of the most recent internal financial statement and a letter, on the financial institution's letterhead, stating financial stability.

Tab H - Business Litigation

Disclose any involvement by the individual/firm or any officer or principle in any material business litigation within the last five (5) years. The disclosure will include an explanation, as well as the current status and/or disposition of the case.

Tab I - Sample of a Detailed Construction/Management Plan

Proposers are to submit a sample of the detailed construction/management plan defining the necessary process and procedure which if fully implemented shall/will accomplish the Sheriff's Office/Government Center staff objectives. The Management Plan shall include, but may not be limited to, the following:

- Detailed staffing plan and support schedule
- Detailed maintenance and support plan
- Detailed transition/installation plan
- Detailed training plan

Tab J – Required Solicitation Forms

Proposers are to complete and attach all forms listed on the Proposer's Checklist and include in Tab J. This direction **excludes** the Price Proposal Form. Price shall not be included in any of the Technical submittal. This will be cause for disqualification and considered non-responsive bid.

Financial Proposal

Proposers are to use the Proposer's Price Proposal Form provided within this RFP. All costs to the Dawson County Government must be included on the Price Proposal Form that the individual/firm will incur to complete all tasks associated for the design and construction management for the enclosed scope of work. **Price shall not be included in any of the Technical submittal. This will be cause for disqualification and considered a non-responsive bid. This form must be sealed separate from the technical proposal and list the company name, address, RFP# and name on the outside of the envelope.**

F. EVALUATION PROCESS

Proposals will be reviewed by the Review Committee for quality and completeness. These proposals will then be scored in each of the following categories using the maximum point values listed in the below.

Proposals will be reviewed and evaluated by the review committee to determine whether the Proposer has met the criteria described in this RFP.

Company Background and Structure	10
Experience and Qualifications of Dedicated Staff	22
Project Understanding/Approach to Scope of Work	23
References	10
Management Plan	10
Price Proposal	25
TOTAL POINTS	100

Presentations

The top-ranking individual/firms *may* be invited to conduct oral interviews. If required, these presentations will be scheduled in advance and limited in time. Presentations will be conducted in Dawson County at a location to be determined. Independent scores compiled, during this phase of the evaluation by the RFP evaluators, will supersede the technical scores previously published for the Proposers selected to make an oral presentation.

Dawson County shall be the sole judge of the provider's ability to meet the requirements set forth. Their decision in determining responsible and responsive provider(s) will be final. Dawson County reserves the right to act in its best interest in this determinations process, to waive all technicalities, and to select the most responsible and responsive provider.

G. PROCEDURES AND MISCELLANEOUS ITEMS

1. All questions shall be submitted in writing via email and directed to the Dawson County Purchasing Manager. All answers shall be communicated in the form of an addendum and posted on the County's website under the bid information; all individuals/firms responding to this RFP should check the website before responding to this RFP.

2. All Proposers to this RFP shall indemnify and hold harmless the Dawson County Board of Commissioners, and any of their officers and employees from all suits and claims alleged to be a result of this RFP. The issuance of this RFP constitutes only an invitation to present a proposal. The Dawson County Board of Commissioners reserves the right to determine, at its sole discretion, whether any aspect of a Proposer's submittal meets the criteria in this RFP. The Dawson County Board of Commissioners also reserves the right to seek clarifications, to negotiate with any proposer submitting a response, to reject any or all responses with or without cause, and to modify the procurement process and schedule. In the event that this RFP is withdrawn or the project canceled for any reason, the Dawson County Board of Commissioners shall have no liability to any Proposer for any costs or expenses incurred in connection with this RFP or otherwise.
3. The RFP is subject to the provisions of the Dawson County Purchasing Policy and any revisions thereto, which are hereby incorporated into this RFP in their entirety except as amended or superseded herein.
4. Failure to submit all the mandatory forms from this RFP package shall be just cause for the rejection of the qualification package. However, Dawson County reserves the right to decide, on a case-by-case basis, in its sole discretion, whether or not to reject such a bid as non-responsive.
5. In case of failure to deliver goods in accordance with the contract terms and conditions, Dawson County, after due oral or written notice, may procure substitute goods or services from other sources and hold the PC responsible for any resulting additional purchasing and administrative costs. This remedy shall be in addition to any other remedies which Dawson County may have.
6. By submitting a proposal, the proposer is certifying that they are not currently debarred from bidding on contracts by any entity of the State of Georgia, nor are they an agent of any person or entity that is currently debarred from submitting proposals on contracts by any entity of the State of Georgia.
7. Any contract resulting from this RFP shall be governed in all respects by the laws of the State of Georgia and any litigation with respect thereto shall be brought in the courts of the State of Georgia. Then PC shall comply with applicable federal, state, and local laws and regulations.
8. It is understood and agreed between the parties herein that Dawson County shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.

H. **BONDS**

Bid Bond – **5%**

Payment Bond – **100%**

Performance Bond – **100%**

I. FINAL SELECTION

Following review of all qualified proposals, selection of a suitable proposer, and preliminary contract negotiations, a recommendation will be made to the Dawson County Board of Commissioners by the project representative. Following Commission approval, the County will complete the Contract Documents to the awarded PC for execution.

The Dawson County Board of Commissioners reserves the right to accept the response that is determined to be in the best interest of the County. The County reserves the right to reject any and or all proposals.

Every proposer submitting a proposal must complete the forms showing compliance with the **GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT OCGA §13-10-90**. The forms are provided with this RFP package.

SECTION III – GENERAL TERMS – The RFP scope of work is unique for the County in the fact that the PC is responsible for the planning, design and construction of the project within this RFP. The General Terms Section is predominantly geared towards the construction phase. The PC’s engineer/architect will work closely with the County’s representative to ensure the below is adhered to for the duration of the project. The PC is contractually responsible for each aspect of the items below.

INDEX

- | | |
|---|---|
| 01. Definitions | 02. Royalties and Patents |
| 03. Permits and Regulations | 04. Verbal Agreements |
| 05. Not Applicable for this RFP Contract | 06. General Warranty and Guarantee |
| 07. Bonds | 08. PC's Insurance |
| 09. Liens | 10. Assignment |
| 11. Joint Venture PC | 12. Successor's Obligations |
| 13. Business License | 14. Obligations and Liability of the PC |
| 15. Responsibilities of the PC | 16. Compliance with Laws |
| 17. Plans, Specifications and Design | 18. Drawings Furnished |
| 19. Ownership of Drawings | 20. Reference Standards |
| 21. Division of Specifications and Drawings | 22. Order of Completion |
| 23. Materials, Appliances & Employees
Name | 24. Survey Information |
| 26. Inspection and Testing of Materials | 25. Project Completion |
| | 27. Substantial Completion |

- | | |
|---|---|
| 28. Rights of Various Interests | 29. Separate Contracts |
| 30. Sub-contractors | 31. Access |
| 32. Construction Schedule and Procedures | 33. Project Management |
| 34. Entry | 35. Preservation and Restoration |
| 36. Completion of "Punch List" Items | 37. Authority of PC |
| 38. Authority of Engineer/Architect/Architect | 39. Owner-PC Coordination |
| 40. Not Applicable for this RFP Contract | 41. Not Applicable for this RFP Contract |
| 42. Material, Equipment and Workmanship | 43. Compliance With Contract Requirements |
| 44. Project Meetings | 45. Overtime and Shift Work |
| 46. Construction Schedule | 47. Quality |
| 48. Material and Equipment By Brand | 49. Submittal Procedure |
| 50. Request for Substitution | 51. Manufacturer's Directions |
| 52. Product Data | 53. Operation and Maintenance Information |
| 54. Record Drawings | 55. Protection of the Public and Property |
| 56. Protection of the Owner's Property | 57. Maintenance of Traffic |
| 58. Lot Corners | 59. Existing Utilities |
| 60. Equal Employment Opportunity | 61. Material Delivery, Handling and Storage |
| 62. Maintenance During Construction | 63. Emergencies |
| 64. Compensation | 65. Safety and Health Regulations |
| 66. Accidents | 67. Load Limits |
| 68. Sanitary Provisions | 69. Construction Buildings |
| 70. Cleaning Up | 71. Electrical Energy |
| 72. Water Supply | 73. Environmental Impact |
| 74. Progress Payments | 75. Measurement and Payment |
| 76. Use of Completed Portions | 77. Beneficial Use |
| 78. Payments Withheld | 79. Contract Time |
| 80. Omissions | 81. Differing Site Conditions |
| 82. Changes in Work | 83. Not Applicable for this RFP Contract |
| 84. Not Applicable for this RFP Contract | 85. Correction of Work Before Final Payment |
| 86. Liquidated Damages | 87. Suspension or Abandonment of Work |
| 88. Termination of Contract | 89. PC's Right to Stop Work |

90. Disputes Resolution

91. Removal of Equipment

92. Laws of Georgia

93. Quantity Variance Reserve

94. Discrepancies between General Conditions

95. Salvaged Material & Equipment and
Technical Specifications

01 - Definitions

Where used in the project manual, the following words and terms shall have the meanings indicated. The meanings shall be applicable to the singular, plural, masculine and feminine of the words and terms.

Acceptance

Formal action of the Owner in determining that the PC/construction crew's work has been completed in accordance with the contract and in notifying the PC in writing of the acceptability of the work.

Act of God

A cataclysmic phenomenon of nature, such as a hurricane, earthquake, or abnormal flood. Rain, wind, high water, or other natural phenomenon which might reasonably have been anticipated from historical records of the general locality of the work shall not be construed as acts of God.

Addenda

Supplemental written specifications or drawings issued prior to execution of the contract which modify or interpret the project by addition, deletion, clarification or corrections.

Bid

Offer of a bidder submitted on the prescribed form setting forth the price or prices of the work to be performed.

Bidder

Individual, partnership, corporation, or a combination thereof, including joint ventures, offering a bid to perform the work.

Contract

The writings and drawings embodying the legally binding obligations between the Owner and the PC for completion of the work; Contract Documents attached to the Contract and made a part thereof as provided herein.

Contract Documents

The Contract, Addenda (which pertain to the Contract Documents), PC's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award), the Notice to Proceed, the Bonds, these General Conditions, the Special Conditions, the Specifications and Drawings, together with all Written Amendments, Change Orders, Work Change directives, Field Orders, and Drawing submittals.

Contract Drawings

The drawings which show the scope, extent, and character of the work to be furnished and performed by the PC and which have been prepared and reviewed by the Engineer/Architect/Owner and are referred to in the Contract Documents.

Contract Price

Amount payable to the PC under the terms and conditions of the contract. Based on the price given on the bidding schedule, with adjustments made in accordance with the contract. The base amount given in the bidding schedule shall be either a lump sum bid or the summation of the unit price proposals multiplied by the estimated quantities set forth in the proposal form.

Contract Time

Number of calendar days stated in the contract for the completion of the work or portions thereof.

Contractor/PC

The individual, partnership, corporation, or combination thereof, including joint ventures that enter into the contract with the Owner for the performance of the work. The term covers Sub-contractors, equipment and material suppliers, and their employees.

Contractor/Construction Crew/PC's Plant and Equipment

Equipment, material, supplies, and all other items, except labor, brought onto the site by the Contractor/Construction Crew/PC to carry out the work, but not to be incorporated in the work. The Owner will make available to the Contractor/Construction Crew/PC, for his plant, equipment and storage, only the area indicated on the Site Plan within the limits of the work. The Contractor/Construction Crew/PC shall confine his operations to his allotted areas to avoid interference with the Building's normal and continued operation. The PC's and Sub-contractor's personnel shall not be permitted to park their cars on Owner's property except in the area designated for construction. The General PC shall see that this restriction is enforced.

Contract Technical Representative

The day-to-day County Representative designated by the Owner.

County Owner.

Day Calendar day.

Defective

An adjective which when modifying the word "work" refers to work, including but not limited to the furnishing of materials, that is unsatisfactory, faulty, deficient or performed in a non-workmanlike manner, in that it does not conform to or meet the requirements of the

contract, any inspection, reference standard, test or approval referred to in the contract, or has been damaged prior to a recommendation of final payment.

Direct

Action of the Owner by which the PC, to include Design Team and construction crew, is ordered to perform or refrain from performing work under the contract.

Directive

Written documentation of the actions of the Engineer/Architect or the Owner in directing the construction crew.

Engineer/Architect

Whenever the word “Engineer/Architect” and/or “Architect” is used in the contract, it shall be understood as referring to the Engineer/Architect of the PC working closely with the Owner, or such other Engineer/Architect supervisor, or inspector as may be authorized by the Owner to act in any particular area of the contract or an employee of the Owner.

Equipment

Mechanical, electrical, instrumentation, or other device with one or more moving parts, or devices requiring an electrical, pneumatic, electronic, or hydraulic connection.

Furnish

To deliver to the job site or other specified location any item, equipment, or material.

Herein

Refers to information presented in the project manual.

Holidays

Legal holidays designated by the Owner.

Install

Placing, erecting, or constructing complete in place any item, equipment, or material.

May

Refers to permissive actions.

Owner

Commissioner of Roads and Revenue Dawson County, Dawson County Board of Commissioners, Dawsonville, Georgia.

Person

The term, person, includes firms, companies, corporations, partnerships, and joint ventures.

Project

The undertaking to be performed under the provisions of the contract.

Project Manual

Those Contract Documents prepared for bidding and as amended by addenda.

Provide

Furnish and install, complete in place.

Punch List

List of incomplete items of work which are not in conformance with the contract. The list will be prepared by the Engineer/Architect and the Owner when the construction crew (1) notifies the Engineer/Architect in writing that the work has been completed in accordance with the contract and (2) requests in writing that the Owner accept the work.

Shall

Refers to actions by either the PC or the Owner and means the PC or Owner has entered into a covenant with the other party to do or perform the action.

Shown

Refers to information presented on the drawings, with or without reference to the drawings.

Specifications

That part of the Contract Documents consisting of written descriptions of the technical features of materials, equipment, construction system, standards, and workmanship. Titles of sections and paragraphs in these Contract Documents are introduced merely for convenience and shall not be taken as a complete segregation of the various unites of materials and labor.

Specify

Refers to information described, shown, noted or presented in any manner in any part of the contract.

Submittals

The information which is specified for submission to the Owner in accordance with this document.

Substantial Completion

Sufficient completion of the project or the portion thereof to permit utilization of the project, or portion thereof for its intended purpose. Substantial completion requires not only that the work be sufficiently completed to permit utilization, but that the Owner can effectively utilize the substantially completed work. Determination of substantial completion is solely at the discretion of the Owner. Substantial completion does not mean complete in accordance with the contract nor shall substantial completion of all or any part of the project entitle the PC to acceptance under the contract.

Substantial Completion Date

Date shown on the certificate of Substantial Completion.

Will

Refers to actions entered into by the PC or the Owner as a covenant with the other party to do or to perform the action.

Work

The labor, materials, equipment, supplies, services and other items necessary for the execution, completion and fulfillment of the contract.

02 - Royalties and Patents

The PC shall pay all royalties and license fees and assume all costs incident to the use in the performance of the work or the incorporation in the work of any invention, design, process, product, or device which is the subject of the patent rights or copyrights held by others. He shall defend all suits or claims for infringement of any patent rights and shall hold harmless the Owner, its officers, employees, and agents from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular manufacturer, product, or process is specified by the Owner and properly installed by the PC pursuant to the manufacturer's specifications.

03 - Permits and Regulations

The PC shall obtain and pay for all construction permits, licenses, and easements of a temporary nature necessary for the prosecution of the work. The PC shall pay all governmental charges and inspection fees necessary for the prosecution of the work. The PC shall pay all charges of utility owners for connections to the work, and Owner shall pay all charges of such utility owners for capital costs related thereto.

The PC shall comply with all County, State, and Federal laws, statutes, ordinances, rules and regulations applicable to furnishing and performance of the work.

04 - Verbal Agreements

No verbal agreement or conversation with any officer, agent, or employee of the Owner either before or after execution of this Contract shall affect or modify any of the terms of obligations contained in any of the documents comprising said Contract.

05 - Lands of Work

Not Applicable to this RFP.

06 - General Warranty and Guarantee Against Defective Work

The PC/construction crew shall warrant and guarantee the work required under this Contract for a period of one year from the date of Final Acceptance. The PC/construction crew warrants and guarantees to Owner, that materials and equipment furnished under the Contract shall be of good quality and new unless otherwise required or permitted by the Contract Documents, that all work will be in accordance with the Contract Documents, and that all work will be of good quality, free from faults and defects. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner or the Engineer/Architect, the construction crew shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

The PC/construction crew's obligation to perform and complete the work in a workmanlike manner, free from faults and defects and in accordance with the Contract Documents shall be absolute. The PC shall remedy, at his own expense, and without additional cost to the Owner, all defects arising from either workmanship or materials, as determined by the Owner, or Owner's representative. The obligations of the PC under this Paragraph shall not include normal wear and tear under normal usage.

07 - Bonds

The PC shall furnish payment and performance bonds with good and sufficient surety or sureties acceptable to the Owner for the protection of persons furnishing materials or labor in connection with the performance of the work. The penal sum of such payment and performance bond will be 100% of the contract price. The bonds required hereunder will be dated as of the same date as the contract and will be furnished to the Owner at the time the contract is executed. These bonds shall be issued from a company licensed to do business in Georgia and shall be signed or counter signed by a Georgia resident agent, and shall have proper Power of Attorney evidencing the authority of the individual signing the bond. Included with the Bonds shall be a signed Affidavit on the form provided herewith.

Out of state PCs shall post a bond with the State Tax Commissioner for each tax year during construction of the project to guarantee payment of taxes on the work of this Contract.

08 - PC's Insurance

A. Liability

The PC shall maintain such insurance as will protect him from claims under workmen's compensation acts and from any other claims for damages to property, and for personal injury, including death, which may arise from operations under this contract, whether such operations be by himself or by any sub-contractor or anyone directly or indirectly employed by either of them.

Certificates of Insurance indicating that the successful proposer has obtained such coverage, shall be filed with the Owner prior to the commencement by the successful proposer of the services. Such certificates shall be in form and substance reasonably acceptable to the Owner, shall indicate that, except in respect to workers compensation insurance coverage and professional errors and omissions, Owner is an additional insured with respect to such coverage, and shall indicate that such coverage is primary and not contributory with any similar insurance purchased by the Owner. The certificates shall contain a provision that the insurer will endeavor, if allowed by the policy, to provide Owner with thirty (30) calendar day notice of nonrenewal, cancellation, or termination of the coverage. If the successful proposer receives a nonrenewal, cancellation, or termination notice from an insurance carrier affording coverage required herein, the successful proposer agrees to notify Owner by fax within two (2) business days with a copy of the nonrenewal, cancellation, or termination notice, or written specifications as to which coverage is no longer in compliance. Failure to comply with any of the provisions relating to insurance coverage herein shall be deemed a material breach if not cured. Certificates of such insurance shall be filed with the Owner. The PC shall be responsible for providing adequate limits of insurance when working within property owned by railroads, as established by such railroad company.

B. Indemnity

To the fullest extent permitted by laws, statutes, rules and regulations, the PC shall indemnify and hold harmless the County and the Officers, Directors, Employees, Agents, and other Consultants of each and any of them from and against claims, costs, damages, losses, and expenses, including but not limited to all fees and charges of Engineer/Architects, architects, attorneys and other professionals and all court costs, arising out of or resulting from performance of the work, but only to the extent caused in whole or in part by negligent, reckless, willful and wanton, or wrongful acts or omissions of the PC, its Officers, Directors, Employees, Agents, and anyone directly, or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, cost, damage, loss, or expense is caused in part by a party indemnified hereunder, except that no party shall indemnify any other party or person for their own sole negligence.

Such obligation shall not be construed to negate, abridge or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph.

Comprehensive General Liability -The successful Bidder shall exercise proper precaution at all times for the protection of persons and property. He shall carry approved insurance from insurance companies authorized to do business in Georgia and having an A.M. Best's rating of B+ or better with the following minimums:

***The limits of insurance are as follows:**

- a) General Liability Insurance of at least One Million (1,000,000) Dollars (Combined Single Limit per occurrence) and Two Million (2,000,000) Dollars aggregate;
- b) Automobile Insurance of at least Five Hundred Thousand (500,000) Dollars (Combined Single Limit per accident for bodily injury or property damage); and
- c) Workers' Compensation Insurance as will protect potential bidder or offerer from Workers' Compensation Acts.

09 – Liens

Neither the final payment nor any part of the retained percentage shall become due until the PC shall deliver to the Owner a complete release of all claims or liens arising out of this Contract and an affidavit that so far as he has knowledge or information the release and receipts include all the labor and materials for which a lien or claim could be filed; but the PC may, if any Sub-contractor refuses to furnish a release or receipt in full, furnish an additional bond satisfactory to the Owner, to indemnify the Owner against any claim or lien (in cases where such payment is not already guaranteed by Surety Bond). If any claim or lien remains unsatisfied after all payments are made, the PC shall refund to the Owner all monies that the latter may be compelled to pay on discharging such a lien, including all costs and a reasonable attorney's fee.

10 - Assignment

The Owner shall have the right to reject the assignment or sub-letting of any portion of the Contract by the PC. Assigning or sub-letting the Contract shall not relieve the PC or his surety from any Contract obligations.

11 - Joint Venture Contractor

In the event the PC is a joint venture of two or more contractors, the grants, covenants, provisos and claims, rights, power, privileges and liabilities of the contract shall be construed and held to be several as well as joint. Any notice, order, direct request, or any communication required to be or that may be given by the Owner to the PC under this contract, shall be well and sufficiently given to all persons being the PC if given to any one or more of such persons. Any notice, request, or other communication given by any one of such persons to the Owner under this Contract shall also be given to the Owner and shall be deemed to have been given by and shall bind all persons being the PC.

12 - Successors' Obligations

The grants, covenants, provisos and claims, rights, powers, privileges and liabilities obtained in the Contract Documents shall be read and held as made by and with, and granted to an imposed upon, the PC and the Owner and their respective heir, executors, administrations, successors and assigns.

13 - Business License

PCs and Sub-contractors shall have a current Occupation Tax Certificate, and shall furnish certificate and license numbers prior to entering into a contract with the Owner.

14 - Obligations and Liability of the PC

The PC shall do all the work and furnish all the materials, tools, and appliances, except as herein otherwise specified, and everything necessary for properly performing and completing the work required by the Contract, in the manner and within the time specified. He shall complete the entire work to the satisfaction of the Owner, and in accordance with the Specifications and Plans herein mentioned, at the prices herein agreed upon and fixed therefore.

All the work labor and materials to be done and furnished under this Contract shall be done and furnished strictly pursuant to, and in conformity with, the Contract Documents, and the directions of the Engineer/Architect as given from time to time during the progress of the work, under the terms of this contract.

All loss or damage arising out of the performance or nature of the work, or any damage to the work itself to be done under this contract or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same, or from the action of the elements or from any cause or causes whatsoever, until the same shall have been finally accepted, shall be sustained and paid for by the PC.

The PC shall coordinate his operations with those of any other PCs who may be employed on other work of the Owner and shall avoid interference therewith and cooperate in the arrangements for storage of materials.

The PC shall conduct his work so as to interfere as little as possible with private business and public travel. He shall, at his own expense, wherever necessary, or required, maintain fences, furnish watchmen, maintain lights, and take such other precautions as may be necessary to protect life and property.

The PC shall take all responsibility for the work done under this Contract, for the protection of the work, and for preventing injuries to persons, and damage to property and utilities on or about the work.

He shall in no way be relieved of his responsibility by any rights of the Owner, its officers, employees and agents to give permission or issue orders relating to any part of the work, or by any such permission given or orders issued, or by failure of the Owner, its officers, employees and agents to give such permission or issue such orders. The PC shall bear all losses resulting to him or to the Owner, its officers, employees and agents on account of the amount or character of the work, or because of the nature of the land in or on which the work is done is different from what was estimated or expected, or on account of the weather elements or other causes. The PC shall assume the defense of all claims arising out of injury or damage to persons, corporations, or property, whether said claims arise out of negligence or not, or whether said claims are for unavoidable damage or not, and from all claims relating to labor and materials furnished for the work and from all expenses incurred in defending or settling such claims, including reasonable attorney's fees.

The PC shall so conduct his operations as not to damage existing structures or work installed either by him or by other PCs. In case of any such damage resulting from his own operations, he shall repair and make good as new the damaged portions at his own expense.

The PC warrants that he is familiar with the codes applicable to the work and that he has the skill, knowledge, competence, organization, and plant to execute the work promptly and efficiently in compliance with the requirements of the Contract Documents. The PC having the obligation to keep a competent superintendent on the work during its progress, to employ only skilled mechanics, and to enforce strict discipline and good order among his employees, the PC, himself is responsible for seeing that the work is installed in accordance with the Contract Documents.

Failure or omission on the part of the Owner, representative of the Owner, agents of the Owner, Project Representative, clerk-of-the-works, employed by the Owner either to discover or to bring to the attention of the PC any deviation from, omission from, or non-compliance with the Contract Documents shall not be set up by the PC as a defense of failure to his part to install the work in accordance with the Contract Documents or for any other neglect to fulfill requirements of the Contract; nor shall the presence of any one, or all, or any of the foregoing at the site of the fact that any one, or all, or any of the foregoing may have examined the work or any part of it be set up as a defense by the PC against a claim for failure on his part to install the work in accordance with the Contract Documents or for any neglect to fulfill requirements of the contract. No requirement of this contract may be altered or waived except in pursuance of a written order of the Owner and in strict accordance with the provisions of the contract for changes in the work.

15 – Responsibilities of the PC

A. Sub-contractors, Manufacturers, and Suppliers

The PC shall be responsible for the adequacy, efficiency, and sufficiency of Sub-contractors, manufacturers, suppliers and their employees.

B. PC's Employees

The PC shall be responsible for the adequacy, efficiency, and sufficiency of his employees. Workers shall have sufficient knowledge, skill, and experience to perform properly the work assigned to them.

C. Payment for Labor and Materials

The PC shall pay and require his Sub-contractors to pay any and all accounts for labor including Workers Compensation premiums, State Unemployment and Federal Social Security payments, and other wage and salary deductions required by law. The PC also shall pay and cause his Sub-contractors to pay any and all accounts for services, equipment, and materials used by him and his Sub-contractors during the performance of work under this contract. Such accounts shall be paid as they become due and payable. If requested by the Owner, the PC shall furnish proof of payment of such accounts to the Owner.

D. Attention to Work

The PC, acting through his representative, shall give personal attention to and shall manage the work so that it shall be prosecuted faithfully. When his representative is not personally present at the project site, his designated alternate shall be available and shall have the authority to act on the contract.

E. Employee Safety

The PC alone shall be responsible for the safety of his and his Sub-contractor's employees. The PC shall maintain the project site and perform the work in a manner which meets the Owner's responsibility under statutory and common law for the provision of a safe place to work.

F. Public Safety and Convenience

The PC shall conduct his work so as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the work and to insure the protection of persons and property. No road or street shall be closed to the public except with the permission of the Owner. Fire hydrants on or adjacent to the work shall be accessible to firefighting equipment. Temporary provisions shall be made by the PC to insure the use of sidewalks, private and public driveways, and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses.

G. Cooperation with the Construction Inspector

The PC, when requested, shall assist the Construction Inspector in obtaining access to work which is to be inspected. The PC shall provide the Construction Inspector with information requested in connection with the inspection of the work.

16 - Compliance with Laws

The PC shall keep himself fully informed of all existing and future State and Federal Laws, all regulations of the various departments or agencies of the State of Georgia, and local ordinances and regulations in any manner affecting those engaged or employed in the work, or the materials used in the work, or in any way affecting the conduct of the work and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered, in the Plans, Drawings, Specifications, or Contract for this work in relation to any such law, ordinance, regulations, order, or decree, he shall forthwith report the same to the Engineer/Architect and Owner in writing.

He shall at all times himself observe and comply with, and cause all his agents and employees to observe and comply with, all such existing and future laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner, its officers, employees and agents against any claim or liability arising from or based upon violation of any such law, ordinance, regulation, order, or decree, whether by himself or his employees or any Sub-contractor.

17 - Plans, Specifications, and Design

The Design-Build PC shall furnish plans and specifications which represent the requirements of the work as far as practical to be performed under the Contract to the Owner. All such drawings and instructions shall be consistent with the Contract Documents. Plans and specifications which represent the work to be done shall be furnished prior to the time of entering into the Contract. The Owner may, during the life of the Contract issue additional instructions, by means of drawings or otherwise, necessary to illustrate change in the work.

18 - Drawings Furnished

Unless otherwise provided in the Contract Documents, the Design-Build PC will furnish to the Owner, free of charge, up to six (6) hard copy and 1 electronic copy of the drawings and specifications necessary for the execution of the work.

19 - Ownership of Drawings

All drawings, specifications and copies thereof furnished to the Owner may be reused on other work. All models are the property of the Owner.

20 - Reference Standards

Reference to the Standards of any technical society, organization or association or to codes of local or state authorities, shall mean the latest standard, code, specifications, or tentative standard adopted and published at the date of taking proposals, unless specifically stated otherwise.

21 - Division of Specifications and Drawings

Specifications and drawings are to be divided into groups for the convenience of the Owner. These divisions are not for the purpose of apportioning work or responsibility for work among Sub-contractors, suppliers, and manufacturers.

22 - Order of Completion

Before starting work and within ten (10) days of issuance of the Notice of Award with the work, the PC shall submit to the Owner, a schedule which shall show the order in which the PC proposes to carry on the work, indicating the starting and completion dates and locations of the various stages of the work. The schedule shall be in a bar graph form suitable for periodic updating to show actual work completed.

Monthly progress reports shall be delivered with the pay estimate to the Owner showing the progress of the past month's construction in relation to the approved work schedule.

No payments will be made to the PC until the construction schedule has been submitted by the PC and approved by the Owner.

If the progress report does not agree with the approved work schedule, the PC shall deliver in writing an explanation with the report. Upon request from the Owner, the PC shall submit a revised schedule for approval.

If the PC sub-contracts the construction portion of the scope of work of this RFP, the PC's Engineer/Architect will work with the Owner to review, revise and interrupt, if needed, the progress report(s) and work schedule.

23 - Materials, Appliances & Employees

Unless otherwise stipulated, the PC shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, supervision, and other facilities necessary for the execution and completion of the work. Unless otherwise specified, all materials incorporated in the permanent work shall be new. The PC shall furnish satisfactory evidence as to the kind and quality of materials in accordance with section 49 below.

The construction crew/PC shall at all times enforce strict discipline and good order among his employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned to him. If at any time before the commencement or during the progress of work, tools, equipment and supervision appear to the Engineer/Architect and/or Owner to be insufficient, inefficient or inappropriate to secure the quality of work required or the proper rate of progress, the Engineer/Architect and/or Owner may order the construction crew to increase their efficiency, to improve their character, to augment their number, or to substitute new tools, plant or equipment, as the case may be, and the PC shall conform to such order; but the failure of the Engineer/Architect to demand such increase of efficiency, number, or improvements shall not relieve the construction crew/PC of his obligation to secure the quality of work and the rate of progress necessary to complete the work within the time required by this contract to the satisfaction of the Owner.

24 - Survey Information

The Owner will establish reference bench marks and base line identified on the drawings. From the information provided, the PC shall develop and make such additional surveys as are needed for construction, such as control lines, slope stakes, batter boards, and stakes for pipe locations and other working points, lines, and elevations. Survey work shall be performed under the supervision of a licensed land surveyor or registered civil Engineer/Architect. PC shall reestablish reference bench marks and survey control monuments destroyed by his operations at no cost to the Owner.

25 - Project Completion

If the specifications, the Engineer/Architect's or Owner's instructions, laws, ordinances, or any public authority require any work to be specifically tested or approved, the construction crew shall give the Engineer/Architect/Owner notice of its readiness for inspection. Such notice shall be a minimum of two (2) working days. Inspections by the Owner shall be promptly made and where practicable at the source of supply.

An inspection will be made by the Engineer/Architect/Owner and a determination will be made as to whether or not the work is in fact complete. Acceptance will not be given nor final payment released until all "punch list" items are complete and as-built drawings have been approved.

"Punch list" shall not be considered all-inclusive and therefore; each requested final inspection may generate additional "punch list" items as the construction crew/PC is responsible for completion of all work described in the Contract Documents.

The final walk-through and "punch list" will be conducted by the Owner prior to acceptance of the project at completion.

26 - Inspection and Testing of Materials

Before acceptance of the whole or any part of the work, it shall be subject to tests to determine that the accomplished work is in accordance with the plans and/or specifications. The PC shall be required to maintain all work in a first-class condition for a 30-day operating period after the same has been completed as a whole and the Engineer/Architect has notified the PC in writing that the work has been finished to his satisfaction. The retained percentage as provided herein will not be due or payable to the PC until after the 30-day operating period has expired.

For all projects involving professionally designed structures falling under the "Special Inspections" requirements of the Georgia State Minimum Standard Building Code (2006 or most recent edition International Building Code) the County shall be responsible for and pay for all required "special testing" unless otherwise specified herein.

The PC shall be responsible for and pay for all testing in accordance with the project plans and specifications.

Tests for infiltration, line and grade of sewer, hydrostatic and leakage tests on force mains shall be made by the PC in the presence of the Engineer/Architect. No portion of the work will be accepted for partial or final payment until tests prove it has been satisfactorily completed. All such tests shall be documented, signed by the person conducting the tests and reviewed by the Engineer/Architect and approved by the Owner prior to payment.

27 - Substantial Completion

At such time as the PC has completed the work and prior to requesting a final inspection, the PC shall make written request for an inspection for substantial completion. Such request shall be

made no less than seven (7) calendar days prior to the requested date of inspection. An inspection will be made by the Engineer/Architect and the Owner and a determination will be made as to whether or not the work is in fact substantially complete and a "punch list" will be developed. "Punch Lists" containing numerous items or items which may affect the intended use of the work will be considered cause to delay issuance of a document of Substantial Completion. Operation and Maintenance manuals shall be submitted and approved prior to issuance of any document of Substantial Completion.

28 - Rights of Various Interests

Wherever work, being done by the Owner's forces or by other PCs, is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Owner, to secure the completion of the various portions of the work in general harmony.

29 - Separate Contracts

The Owner reserves the right to let other Contracts in connection with this work. The PC shall afford other PC's reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

30 - Sub-contractors

The PC shall notify the Owner in writing of the names and addresses of all proposed Sub-contractors for the work at the Preconstruction Meeting. Sub-contractors, or their sub-contractors, will not be recognized as having a direct relationship with the Owner. The persons engaged in the work, including employees of Sub-contractors and suppliers, will be considered employees of the PC and their work shall be subject to the provisions of the contract. References in the Contract Documents to actions required of Sub-contractors, manufacturers, suppliers, or any person, other than the PC, the Owner, the Engineer/Architect or the Construction Inspector, shall be interpreted as requiring that the PC shall require such Sub-contractor, manufacturer, supplier or person to perform the specified action.

A Sub-contractor for any part of the work must have experience on similar work and, if required, furnish the Owner with a list of projects and the Engineer/Architects who are familiar with their competence.

31 - Access

The PC shall maintain access to the property owners adjacent to the Project covered by the Contract. The Architect/Engineer/Owner will have full access to the project site at all times.

32 - Construction Schedule and Procedures

The PC shall submit and continually update a time schedule for the work and a sequence of operations.

Before starting any work, and from time to time during its progress, as the Owner may request, the PC shall outline to the Owner the methods he plans to use in doing the work, and the various steps he intends to take. Failure of the Owner to reject the methods or steps proposed by the PC shall not relieve the PC of his responsibility for the correct and timely performance of the work.

This outline will be made part of the Contract Documents delivered to the Owner.

33 - Project Management

The PC shall schedule and coordinate the work of the PC and all Sub-contractors and others involved to maintain the accepted progress schedule. His duties shall also include the planning of the work, the scheduling of ordering and delivery of materials, and checking and control of all work under this contract. Before ordering materials or doing work which is dependent upon coordination with site conditions, the PC shall verify all dimensions, elevations, grades, and utilities at the site and shall be responsible for the correctness of same. No consideration will be given any claim based on difference between the actual dimensions and those indicated on the drawings. Any discrepancies between the drawings and/or the specifications and the existing conditions shall be referred to the Architect/Owner for decision before any work affected thereby is begun.

The PC shall be responsible for complete supervision and control of his Sub-contractors as though they were his own forces. Notice to the PC shall be considered notice to all affected Sub-contractors.

34 - Entry

The right of access to the work wherever it is in preparation or progress shall be extended to the Owner and representatives of appropriate regulatory agencies. The PC shall provide facilities for such access and inspection.

35 - Preservation and Restoration

The PC shall use every precaution to prevent damage or destruction of buildings, poles and shrubbery. The PC shall provide an approved consultant whose responsibilities shall be to provide direct supervision of all removal and relocation of all shrubbery, hedges, plants and bushes shown to be relocated and plants not shown for relocation but requiring relocation due to the lay out of the sidewalk. He shall protect and carefully preserve from disturbance and damage all survey land monuments and property markers until an authorized agent has witnessed or otherwise referenced their location and such monuments and markers shall be properly and accurately restored at no cost to the Owner.

When direct or indirect damage or injury is done to public or private property by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before the damage was done, by repairing or otherwise restoring, or he shall make good such damage in an acceptable manner. All restoration by the PC shall be accomplished as soon as construction in the disturbed area is complete.

Throughout the performance of the work, the PC shall construct and adequately maintain suitable and safe crossings over the trenches and such detours as are necessary to care for public and private traffic. The material excavated from trenches shall be deposited in such manner as shall give as little inconvenience as possible to the traveling public, to adjoining property owners, to other PCs (if any) or to the Owner.

Prior to commencing work on private property, the PC shall contact the Owner and/or occupant two (2) days in advance of the time work will commence.

The PC shall keep the premises, rights-of-way and adjacent property free from accumulations of waste materials, rubbish and other debris resulting from the work; and every day as the work areas as well as all tools, construction equipment and machinery and surplus materials; and shall leave the site clean. Any variations from this must be obtained in writing by the Owner. Trash burning on site will not be permitted. Prior to approval of a request for partial payment, the PC shall ensure that the work areas are cleaned up where construction has been performed during the period for which payment is requested.

When the work involves the laying of utility lines across grassed areas, streets, sidewalks and other paved areas; it shall be the responsibility of the PC to restore such areas to their original sound condition using construction techniques and materials which are the same as existing. In the case of planted areas, PC shall maintain the restoration work until positive growth has evidenced.

In a case of dispute, the Owner may remove the rubbish and surplus materials or perform restoration work and charge the cost to the PC.

36 - Completion of "Punch List" Items

Prior to completion of the project, the PC shall request an inspection and any deficiencies found at that time will be noted on a "Punch List". The development of a "Punch List" shall not delay or terminate the accumulation or assessment of liquidated damages as established in Section 86 below.

37 - Authority of PC

PC's Representative

The PC shall notify the Owner in writing of the name of the person who will act as the PC's representative and shall have the authority to act in matters relating to this contract. This person shall have authority to carry out the provisions of the contract and to supply materials, equipment, tools and labor without delay for the performance of the work.

Construction Procedures

The PC shall supervise and direct the work. He has the authority to determine the means, methods, techniques, sequences and procedures of construction, except in those instances where the Owner, to define the quality of an item of work, specifies in the contract, a means, method, technique, sequence or procedure for the construction of that item of work.

38 - Authority of Engineer/Architect

Engineer/Architect will be the initial interpreter of the requirements of the Contract Documents in conjunction with the Owner to the construction crew and shall review the work for acceptability of the work thereunder. Neither the Engineer/Architect's authority or responsibility under the Contract Documents nor any decision made by Engineer/Architect in good faith either to exercise or

not exercise such authority or responsibility or the undertaking, exercise or performance of any authority or responsibility of Engineer/Architect shall give rise to any duty owed by Engineer/Architect to PC, any Sub-contractor, any Supplier any other person or organization, or to any surety for employee or agent of any of them.

39 - Owner-PC Coordination

Service of Notice

Notice, order, direction, request or other communication given by the Owner to the PC shall be deemed to be well and sufficiently given to the PC if left at any office used by the PC or delivered to any of his office, clerks or employees or posted at the site of any work or mailed to any post office addressed to the PC at the address given in the contract document or mailed to the PC's last known place of business. If mailed by first-class mail, any form of communication shall be deemed to have been given to and received by the PC two days after the day of mailing. All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the PC, be delivered to the County Technical Representative.

Suggestions to PC

Plan or method of work suggested by the Owner to the PC but not specified or required, if adopted or followed by the PC in whole or in part, shall be used at the risk and responsibility of the PC.

The Owner assume no responsibility therefore and in no way will be held liable for any defects in the work which may result from or be caused by the use of such plan or method of work.

Cooperation

The PC agrees to permit entry to the site of the work by the Owner or other PCs performing work on behalf of the Owner. The PC shall afford the Owner, other Sub-contractors and their employees, reasonable facilities and cooperation and shall arrange his work and dispose of his materials in such a manner as to not interfere with the activities of the Owner or of others upon the site of the work. The PC shall promptly make good any injury or damage that may be sustained by other PCs or employees of the Owner at his hands. The PC shall join his work to that of others and perform his work in proper sequence in relation to that of others.

If requested by the PC, the Owner shall arrange meetings with other PCs performing work on behalf of the Owner to plan coordination of construction activities. The Owner shall keep the PC informed of the planned activities of other PCs.

Differences or conflicts arising between the PC and others employed by the Owner or between the PC and the works of the Owner with regard to their work, shall be submitted to the Owner for his review of the matter. If the work of the PC is affected or delayed because of any act or omission of other PCs or of the Owner, the PC may submit for the Owner's consideration, a documented request for a change order.

40 – Interpretation of Specifications and Drawings

Not applicable to this RFP Contract. General

The specifications and drawings are intended to be explanatory of each other. Work specified on the drawings and not in the specifications, or vice versa, shall be executed as if specified in both.

Request for Clarification

In the event the work to be done or matters relative thereto are not sufficiently detailed or explained in the contract documents, the Contractor shall apply to the Engineer/Architect for further explanations as may be necessary and shall conform thereto so far as may be consistent with the terms of the contract. In the event of doubt or question arising respecting the true meaning of the specifications or drawings, reference shall be made to the Engineer/Architect for his decision.

41 - Discrepancies in Specifications and Drawings

Errors and Omissions

If the PC, in the course of the work, becomes aware of any claimed errors or omissions in the contract documents or in the Owner's field of work, he shall immediately inform the Owner in writing. The Owner, with assistance of the Engineer/Architect, shall promptly review the matter and if he finds an error or omission has been made; he shall determine the corrective actions and advise the PC accordingly.

If the corrective work associated with an error or omission increases or decreases the amount of work called for in the contract, the Owner shall issue an appropriate change order. After discovery of an error or omission by the PC, related work performed by the PC shall be done at his risk unless authorized, in writing, by the Owner.

Conflicting Provisions

In cases of conflict between the specifications and drawings, the specifications shall govern. Figure dimensions on drawings shall govern over scale dimensions and detail drawings shall govern over general drawings. In the event an item of work is described differently in two or more locations on the drawings and in the specifications, the PC shall request a clarification from the Engineer/Architect. For any event where the PC claims any ambiguities or discrepancies within the specifications, the PC may assume that the higher, greater and most stringent specification or standard applies.

42 - Material, Equipment and Workmanship

Unless otherwise specifically stated in the Contract Documents, the PC shall provide and pay for material, labor, tools, equipment, water, light, power, transportation, supervision, and temporary construction of any nature, and other services and facilities of any nature, whatsoever necessary, to execute, complete and deliver the work within the specified time. Material and equipment shall be new, free of defects and of the quality specified. Equipment offered shall be current modifications which have been in successful regular operation under comparable conditions. Construction work shall be executed in conformity with the standard practice of the trade. The PC is ultimately responsible for all work of all employees and sub-contractors and will warrant all work for this project.

43 – Demonstration of Compliance with Contract Requirements Inspection

To demonstrate his compliance with the contract requirements, the PC shall assist the Owner in the performance of inspection work.

The PC shall grant the Owner access to the work and to the site of the work, and to the places where work is being prepared, or whence materials, equipment or machinery are being obtained for the work. The PC shall provide information requested by the Owner in connection with inspection work.

If the Contract Documents, laws, ordinances, or any public regulatory authority requires parts of the work to be specially inspected, tested or approved, the PC shall give the Owner adequate prior written notice of the availability of the subject work for examination.

If parts of the work are covered in contravention of the Owner's directive, the cost of exposing the work for inspection and closing shall be borne by the PC regardless of whether or not the work is found to be in compliance with the contract.

If any work is covered in the absence of the Owner's directive to the contrary, the PC shall, if directed by the Owner, uncover, expose or otherwise make available for inspection, portions of covered work.

If it is found that such work is defective, the PC shall bear the expense of uncovering and reconstructing. If the work is found to be in compliance with the contract, the PC will be allowed an increase in the contract price, or an extension in the contract time, or both via a change order. The Owner reserves the right to require additional documentation from the PC as necessary to determine compliance with the Contract Documents.

Certification

In cases where compliance of materials or equipment to contract requirements is not readily determinable through inspection and tests, the Owner shall request that the PC provide properly authenticated documents, certificates or other satisfactory proof of compliance. These documents, certifications and proofs shall include performance characteristics, materials of construction and the physical or chemical characteristics of materials.

Inspection at Point of Manufacturing

If inspection and testing of materials or equipment in the vicinity of the work by the Owner is not practical, the specifications may require that such inspection and testing or witnessing of tests take place at the point of manufacture. In this case and in the event the remote inspection and testing is not specified and is requested by the Owner, the required travel, subsistence, and labor expenses shall be paid by the Owner. If the PC request the Owner to inspect and test material or equipment at the point of manufacture, then the additional costs to the Owner for travel, subsistence, and labor expenses shall be paid by the PC.

44 - Project Meetings

Project meetings will be held on site as often as deemed necessary by the Owner throughout the construction period. Meetings will normally be held monthly. PC's representatives shall attend. The purpose of the meetings will be to discuss schedule, progress, coordination, submittals and job-related problems.

45 - Overtime and Shift Work

Overtime and shift work may be established as a regular procedure by the Contractor with reasonable notice and written permission of the Owner. No work other than overtime and shift work established as a regular procedure shall be performed between the hours of 6:00 p.m. and 7:00 a.m. nor on Sundays or holidays except such work as is necessary for the proper care and protection of the work already performed or in case of an emergency.

Contractor agrees to pay the Owner's costs of overtime inspection except those occurring as a result of overtime and shift work established as a regular procedure. Overtime inspection shall include inspection required during holidays and weekends, and between the hours of 6:00 p.m. and 7:00 a.m. on weekdays. Costs of overtime inspection will cover Engineer/Architecting, inspection, general supervision and overhead expenses which are directly chargeable to the overtime work. Contractor agrees that Owner shall deduct such charges from payments due the Contractor.

46 - Construction Schedule

Scope

This section specifies reports and schedules for planning and monitoring the progress of the work.

The construction schedule shall reflect the Contract Time stated in the Request for Proposal.

Daily Reports

The Contractor shall prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Architect and/or Owner at weekly intervals. The Contractor shall maintain a complete set of reports at the job site, to include, work activities and progress; list of subcontractors at the site; general weather conditions and temperatures; meetings and significant decisions; stoppages, delays, shortages and losses; orders and requests of governing authorities; change orders received, implemented; status of change orders, shop drawings and other factors affecting completion; services connected, disconnected; equipment or system tests and start-up; problems or decisions required. Schedule of Non-Compliant Work shall be updated daily and submitted at monthly intervals.

Description

The Contractor shall provide a graphic construction schedule (bar chart) indicating various subdivisions of the work with a reasonable breakdown for each task to include the days in duration and the dates of commencing and finishing each task to the Owner.

Submittal Procedures

Within fifteen (15) days after Notice of Award of the Bid, the Contractor shall submit to the Engineer/Architect a Job Progress Chart in triplicate indicating graphically the estimated date of starting and the length of time required to complete the various items of work to be done under this contract, together with the amount of money involved in each item. The complete schedule shall include everything required in the execution of the contract and the total figure shall equal the contract price. The schedule shall show the anticipated payments for each month. Up-to-date schedules shall be submitted each month.

Within fourteen (14) calendar days after receipt of the submittal, the Engineer/Architect shall review the submitted schedule and return two copies with comments to the Contractor. If the Engineer/Architect finds that the submitted schedule does not comply with specified requirements, the corrective revisions will be noted on the submittal copy returned to the Contractor.

Schedule Revisions

Revisions to the accepted construction schedule may be made only with the written approval of the PC and Owner. A change affecting the contract value of any activity, the completion time and sequencing shall be made in accordance with applicable provisions of Number 82, Change in Work.

Project Status Update

Project status, review and update shall be provided with each pay request and at least monthly as specified in Number 79, Contract Time.

47 - Quality

Where the contract requires that materials or equipment be provided or that construction work be performed, and detailed specifications of such materials, equipment or construction work are not set forth, the PC shall perform the work using materials and equipment of the best grade in quality and workmanship obtainable in the market from firms of established good reputations, and shall follow standard practices in the performance of construction work. The work performed shall be in conformity and harmony with the intent to secure the standard of construction and equipment of work as a whole and in part. The PC is ultimately responsible for all work of all employees and sub-contractors and will warrant all work for this project.

48 - Material and Equipment Specified By Name

Although the plans and specifications may make reference to particular manufacturers and model numbers for various products, such reference is made only to establish function and quality of such products. If it is desired to use materials or equipment of trade names or of manufacturer's names which are different from those mentioned in the Contract Documents, applicable for the approval of the use of the specified materials or the specified items of equipment as manufactured by firms other than those named in the Contract Documents must reach the hands of the **Purchasing Manager** by the date established for the questions and answers period for this IFB through the Request for Substitutions document located on the last page this RFP. The burden of proving equivalent of a proposed substitute to an item designated by trade name or by manufacturer's name in the Contract Documents rests on the party submitting the request for approval. The Contractor warrants that if substitutions are found to have no exceptions, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the contract price or contract time.

49 – Submittal Procedure

General

The PC shall submit descriptive information which will enable the Owner to determine whether the PC's proposed materials, equipment, or methods of work are in general conformance to the design concept and in compliance with the drawings and specifications.

PC's Responsibilities

The PC shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment, or method of work shall be as described in the submittal. The PC shall verify in writing that all features of all products conform to the requirements of the specifications and drawings. Submittal documents shall be clearly edited to indicate only those items, models, or series of material or equipment which are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated.

The PC shall insure that there is no conflict with other submittals and shall notify the Owner in each case where his submittal may affect the work of another PC or the Owner. The PC shall insure coordination of submittals among the related crafts and Sub-contractors.

Transmittal Procedure

General

Before each submittal, the PC shall have determined and verified all field measurements, quantities, dimensions, specified performance criteria, installations requirements, materials, catalog numbers and similar information with respect thereto; all materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the work; and all information relative to the PC's sole responsibilities in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.

Submittal documents common to more than one piece of equipment shall be identified with all the appropriate equipment numbers and specification section and paragraph.

Each submittal will bear a stamp or specific written indication that the PC's obligations under the Contract Documents with respect to the PC's review and approval of that submittal.

Deviation from the Contract

If the PC proposes to provide material, equipment, or method of work which deviates from the project manual, the PC shall give the Owner specific written notice of such deviations or variations that the submittal may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, the PC shall cause a specific notation to be made on each shop drawing and sample submitted to the Owner.

50 - Requests for Substitution

The Owner will consider offers for substitution only from the Contractor and will not acknowledge or consider such offers from suppliers, distributors, manufacturers, or subcontractors. The Contractor's offers of substitution shall be made in writing to the Purchasing Agent and shall include sufficient data to enable the Owner to assess the acceptability of the material or equipment for the particular application and requirements.

51 - Manufacturer's Directions

Manufactured articles, material and equipment shall be applied, installed, connected, erected, adjusted, tested, operated and maintained as recommended by the manufacturer, unless otherwise specified. Manufacturer's installation instructions and procedures shall be provided prior to installation of the manufactured articles, material and equipment.

52 - Product Data

Data, which shall include manufacturer's catalog cuts, standard color charts, wiring diagrams, rough-in diagrams, test results, performance characteristics, certifications, maintenance instructions, installation instructions and other information to establish compliance with the specifications; required by the Owner for inspecting, testing, operating or maintaining parts of the work shall be provided by the Contractor.

Unless otherwise specified, such information shall consist of six (6) copies and shall be provided at the time the referenced material or equipment is delivered to the job site. The data shall include such items as shop drawings, erection drawings, reinforcing steel schedules, testing and adjusting instructions, operations manuals, maintenance procedures, parts lists and record drawings. When applicable, information and data to be provided shall be identified by the specified equipment number. Extraneous material on the pages or drawings provided shall be crossed out, and the equipment or material to be supplied shall be clearly marked. Such information is to be provided as part of the work under this contract and its acceptability determined under normal material submittal procedures. The certificate of substantial completion shall not be issued for any portion of the work for which complete product data has not been submitted and approved.

The product data will indicate special utility and electrical characteristics, utility connection requirements and location of utility outlets for service for functional equipment and appliances.

53 - Operation and Maintenance Information

Six (6) complete sets of operation and maintenance information shall be provided for all mechanical and electrical equipment to include the following before final inspection. A draft copy of all information will be submitted fifteen (15) days prior to final inspection. The draft will be reviewed by the Owner and returned with comments, if any. Such operating and maintenance information shall consist of the name and address of the manufacturer, the nearest representative of the nearest supplier of the manufacturer's equipment and parts. The Contractor is to provide submittals to the Owner that are required by governing authorities, including occupancy permit, operating certificates and inspections as follows:

Building inspection, Fire Marshall, plumbing inspection, HVAC inspection, health inspection and electrical inspection.

Part 1: Directory which lists names, addresses and telephone numbers of Contractor, Subcontractors and major equipment suppliers.

Part 2: Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify names, addresses and telephone numbers of Subcontractors and supplies. In addition, the following items of information shall be provided where applicable:

Lubrication Information: This shall consist of the manufacturer's recommendations regarding the lubricants to be used and the lubrication schedule to be followed.

Control Diagrams: Diagrams shall show internal and connection wiring.

Start-up Procedures: These instructions consist of the equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.

Operating Procedures: These instructions consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, and stopping the equipment under specified modes of operation.

Preventive Maintenance Procedures: These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment.

Overhaul Instructions: These instructions consist of the manufacturer's directions for the disassembly, repair and reassembly of the equipment and any safety precautions that must be observed while performing the work.

Parts List: This list consists of the generic title and identification number of each component part of the equipment.

Spare Parts List: This list consists of the manufacturer's recommendations of numbers of parts which should be stored by the Owner and any special storage precautions which may be required. The Contractor shall provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections. The Contractor shall deliver to project site and place in location as directed and obtain a receipt prior to final payment.

Additional Data: This consists of extra information needed by the Owner for operation and maintenance as it becomes apparent during instruction.

Make changeover to permanent locks and transmit keys to Owner.

Part 3: Project documents and certificates, including the following: shop drawings and product data; air and water balance reports; certificates and photocopies of warranties and bonds.

Original warranties as required by the Contract Documents and as supplied by the manufacturer.

54 - Record Drawings

Record drawings refer to those documents maintained and annotated by the PC during construction and are defined as (1) a neatly and legibly marked set of contract drawings showing the final location and elevations, as appropriate and referenced to the bench marks shown on the plans, for all piping, manholes, equipment, electrical conduits, outlet boxes, cables and electrical wiring diagrams; (2) additional documents such as schedules, lists, drawings, and electrical and

instrumentation diagrams included in the specifications; (3) PC layout and installation drawings; and (4) general and specific notes and detailed, dimensioned sketches regarding interferences, high water tables, poor soil conditions, relocation of existing utilities or other information pertaining to unusual or unexpected construction techniques, installations or conditions.

Unless otherwise specified, record drawings shall be full size and maintained in a clean, dry, and legible condition. Record documents shall be subject to periodic review by the Owner. Record documents shall not be used for construction purposes and shall be available for review by the Owner during normal working hours at the job site. Prior to final inspection, all record drawings shall be submitted to the Owner.

All utilities installed under this contract shall be shown on the drawings and located by sequential stations. Record drawings shall commence with the same station as the construction drawings. The following items shall be stationed on all utility record drawings: piping, valves, fittings, service lateral connection to the main, manholes, points of tie-in, fire hydrants and post hydrants. Also, the centerline of each paved street of which the utility crosses shall be given a station.

Where sanitary sewers or sanitary sewer services have been stubbed out for future use, the invert elevation of the capped or plugged end shall be given to the nearest 0.1 feet.

The drawings shall be marked to show the relative location of utilities to surface improvements. (i.e. show utilities on correct side of curb, trees, other utilities, etc.) Marking of the drawings shall be kept current and shall be done at the time the material and equipment are installed. Failure to maintain current record drawings shall be cause for delay of request for payment. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:

Additions - Red
Deletions -
Green
Comments - Blue
Dimensions - Graphite*

*Legibly mark to record actual depths, horizontal and vertical location of underground utilities, cables, and appurtenances referenced to permanent surface improvements.

Record Drawing Disc(s): In addition to the "record drawings" a DXF Disc(s) (Export File from Auto Cad) showing all "record drawings" shall be prepared and submitted.

The professional Engineer/Architect or Licensed Surveyor preparing the disc(s) shall certify to the County that "all information contained on the disk(s) is accurate and correct".

During progress of this work, the construction crew/PC shall furnish and keep on file at all times a complete and separate set of black line prints on which shall be clearly, neatly and accurately noted promptly as work progresses all changes, revisions and addition to the work, and wherever work was installed otherwise than as shown on the contract drawings.

As the work progresses, record on one set of Drawings all changes and deviations from the Contract Drawings. Record also the exact final locations of sewer, water and gas lines by off-set

distances to surface improvements, such as buildings or curbs. Upon completion, have these Drawings and records checked by the Architect/Owner and deliver them to the Authority for incorporation in the Tracings.

At completion of work, the construction crew/PC shall furnish a second set of black line prints, which he shall mark up with as-built features exactly duplicating the original marked set. The construction crew/PC shall then deliver both sets of marked prints to the Architect/Owner.

55 - Protection of the Public and Property

The PC shall provide and maintain all necessary watchmen, barricades, lights, fencing, flagmen and warning signs and take all necessary precautions for the protection of the public safety and/or as required by law. Such facilities shall be maintained throughout the life of this contract.

56 – Protection of the Owner’s Property

The PC shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the Owner's property from injury or loss arising in connection with this Contract. The PC shall adequately protect adjacent private and public property, as provided by Law and Contract Documents.

Before parking any heavy equipment on property of the Owner, the PC must request and receive permission from the Owner.

57 - Maintenance of Traffic and Sequence of Operation

General - The following requirements will apply:

The work shall be arranged and conducted so that it can be performed with the least interference to all vehicular and pedestrian traffic.

Two-way traffic must be maintained on all public roads and streets, except that during periods of off-peak use, one-way traffic, properly controlled by flagmen, will be permitted at the discretion of the Engineer/Architect. Each time that there is to be a change in the number of lanes open to traffic, this shall be reviewed by the Engineer/Architect and approved by the Owner.

The Owner may approve detours around construction when one lane traffic open is impossible.

Trenches shall be opened for only the amount of pipe that can be laid in one (1) calendar day. Trenches shall be backfilled and compacted as soon as the pipe is laid, if applicable. Where access to parking lots is to be denied, the PC shall advise each property owner one (1) calendar day in advance of the time the parking lot(s) will be inaccessible.

As a minimum, all signage shall be accomplished in accordance with the current revision of the Federal Manual of Uniform Traffic Control Devices latest edition, and Supplements, for design, dimensions, materials, colors, use and placement; state and local laws, rules and regulations apply.

Materials Required

Portable Advance Warning Sign - These signs shall conform to the requirements of Manual on Uniform Traffic Control Devices latest edition, and the Supplements, for design, dimensions, materials, colors use and placement.

Fluorescent orange traffic cones, 24” high.

Placement and Erection

The advance warning signs shall be placed ahead of construction in accordance with the Construction Section of Manual on Uniform Traffic Control Devices, current edition.

Traffic cones shall delineate the full length of the lane closure, including transitions, if applicable.

In order to provide the greatest possible convenience to the public, the PC shall remove all lane closure markings and devices immediately when closure work is completed or temporarily suspended for any length of time, if applicable.

Safety

The PC performing the work shall be responsible for the erection and maintenance of all traffic control devices during construction.

At the end of work each day, the PC shall remove all equipment, tools, and any other hazards in the traveled portion of the roadway.

Enforcement

In the event that compliance with these measures is not achieved, the Owner may shut-down all operations being performed. The Owner shall also withhold any payments due, until the above requirements have been met. At any time during the course of the work, the Owner may at their discretion and by whatever means necessary, correct any situation that they may deem hazardous to the health and welfare of the public. Work, performed by the Owner or by any entity enlisted by the Owner, to correct situations of public hazard shall be deducted from monies due the PC.

Compensation

There will be no separate pay item for maintenance of traffic or for coordination of the Sequence of Operations.

58 - Lot Corners

In the course of the construction work, it may be necessary to disturb and remove the established lot or property corners of some of the properties. The Contractor shall be required to record all property corners and replace them after the construction is completed.

All lot or property corners removed as described above, or all lot or property corners destroyed by the Contractor's operations shall be replaced at the expense of the Contractor by a Land Surveyor registered in the State of Georgia. The Contractor shall provide certification from the Land Surveyor for all reset property corners.

59 – Existing Utilities

All known utility facilities are shown schematically on the plans and are not necessarily accurate in location as to plan or elevation. Utilities such as service lines or unknown facilities not shown on the plans will not relieve the PC of his responsibility under this requirement. The PC shall be responsible for the cost of repairs to any damaged underground facilities; even when such facilities are not shown on the plans. The PC shall contact all utility companies prior to beginning work and request an accurate location of their respective utilities. "Existing Utility Facilities" shall mean any utility that exists on the project in its original, relocated or newly installed position.

In accordance with Ga. Code Title 25, Section 9, "Georgia Utility Facility Protection Act" (as amended) the PC shall call, by law, the Utility Location and Coordination Council in Atlanta at 1-800-282-7411 and shall request that all owners of utilities, including gas companies, electric companies, telephone companies, cable television companies and governmental units, prior to starting any excavation of the project locate and mark their respective facilities.

All PCs' operations shall be conducted as to interfere as little as possible with utility service. Any proposed interruption by the PC must be approved in advance by the respective utility's owner. The existence and location of underground utilities will be investigated and verified in the field by the PC before starting work. The location of all known interferences based on the best information available has been shown on the drawings, but this information may not be complete or accurate.

Water lines and gas lines and appurtenances and sewer lines uncovered by the PC shall be protected and kept in service by the PC and the PC shall notify the respective utility's owner that the line has been or will be uncovered. The PC shall use adequate braces and slings or other appropriate methods to keep the lines in service, and any repairs made necessary by his operation shall be made at the PC's expense. Extreme caution shall be exercised when equipment is being moved or work is being performed under and around existing utility facilities, especially gas.

The PC shall familiarize himself with and comply with the provisions of O.C.G.A. Section 25-9-1 et. seq. If any public or private utility lines, pipes, facilities, or structures are damaged or broken by the operations of the PC as a result of being disturbed, exposed or unsupported, the PC shall be responsible for the complete and prompt restoration of the same and shall indemnify and hold the Owner, its officers, employees and agents harmless from any claims or causes or action for damage and for any liability which may arise therefrom.

The PC is responsible for coordinating with the respective utility's owner any relocation, adjustment, holding or replacement of utility facilities.

Power poles, telephone poles, gas lines, and other utility facilities to be relocated shall be moved by the responsible utility owner. The relocation, holding or replacement of any existing facilities shall be considered consequential to the work and any cost associated therewith shall be borne by the Contract and no expense shall accrue to the Owner.

The PC shall not disconnect, cut, cut into, or otherwise interrupt any existing utility service, electrical, water, gas, sewerage or any other work, pipe or conduit which connects to or serves the existing building installations or facilities from either maned or on-site sources except as follows:

The PC shall notify the Owner and the local utility company in writing three (3) calendar days in advance of the necessity of interruption of any utility service as defined hereinbefore. The notice shall state the date, the time of day and the estimated duration of the proposed interruption.

The PC will notify the Owner of approval or disapproval of the proposed interruption and the restrictive conditions connected therewith. The PC is solely responsible to coordinate with and notify the Local Utility Company. The PC shall not cause any interruption without the approval of the Owner or Utility.

60 - Equal Employment Opportunity

There shall be no discrimination against any employee who is employed in the work covered by this Agreement, or against any applicant for such employment because of race, color, religion, sex or national origin. This provision shall include, but is not limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates or pay or their forms of compensation, and selection for training, including apprenticeship.

61 - Material Delivery, Handling, and Storage

The PC shall schedule and sequence the delivery of material and equipment such that installation can be accomplished in a timely manner. The PC shall thoroughly examine all material and equipment upon delivery and shall not accept delivery of defective or damaged material or equipment.

Nylon slings and chokers shall be used for lifting all material and equipment. Chains, cables, wire rope, or other such items that may cause change to factory applied coatings shall not be used for handling of material or equipment.

Material and equipment shall be stored as compactly and neatly as practicable at points convenient for the PC and which do not damage the work or interfere with or are otherwise hazardous to traffic. Material and equipment shall be stored so as to facilitate inspection and to insure preservation of their quality and fitness for use. All material and equipment shall be stored on wooden skids or platforms such as not to be in direct contact with the ground.

All mechanical and electrical equipment shall be stored and covered in a manner such as to completely be protected from dust and moisture. Prior to the delivery of any materials or equipment the PC shall submit, for the Owner's review, a plan showing all designated storage and assembly areas. Should the PC choose to store material or equipment or use for assembly property which is not owned by the Owner or the PC, a letter of permission signed by the legal owner of the property shall be obtained by the PC and submitted to the Owner a minimum of 24 hours prior to delivery. All material and equipment stored at any facility other than the site shall be tagged with the Owners name and the project number.

62 - Maintenance During Construction

The PC shall maintain the work from the beginning of construction operations until final acceptance of the Project. This maintenance shall constitute continuous and effective work prosecuted day by day with adequate equipment and forces to the end that the roadway or structures are kept in satisfactory condition at all times, including satisfactory signing or marking as appropriate and control of traffic where required by use of traffic control devices as required by the State of Georgia, where applicable.

Upon completion of the work, the PC shall remove all construction signs and barricades before final acceptance of the project.

63 - Emergencies

In an emergency affecting the safety of life or of the work or of adjoining property, the PC is, without special instructions or authorization from the Owner, hereby permitted to act at his discretion to prevent such threatening loss, damage or injury. He shall also act, without appeal, if so authorized or instructed by the Owner. The PC shall supply the Engineer/Architect and the Owner with two (2) emergency phone numbers for contact 24 hours per day in the event of an emergency. After attempting contact with the PC via the emergency phone numbers, the PC cannot be reached or should he fail to respond, the Owner may remedy the situation by whatever means as may be necessary and deduct the cost for same from any monies due the PC.

64 - Compensation

Any compensation claimed by the PC due to emergency work shall be subject to reviewed approved by the Owner if payment is to be made by the Owner.

65 - Safety and Health Regulations

The PC shall comply with the Department of Labor, Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970, as amended. The PC also shall comply with the provisions of the High-Voltage Safety Act of the State of Georgia, O.C.G.A. Section 46-3-30 et. seq., and all federal, state, and local codes, regulations, and standards.

66 - Accidents

The PC shall provide at the site such equipment and medical facilities as are necessary to supply first-aid service to anyone who may be injured in connection with the work. The PC shall report in writing to the Owner all accidents whatsoever arising out of, or in connection with, the performance of the work, whether on or adjacent to the site, which causes death, personal injury, or property damages, giving full details and statement of witnesses. In addition, if death or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the PC and any sub-contractor an account of any accident, the PC shall promptly report the facts to the Owner, giving full details in writing of the claim.

The PC shall provide his Superintendent and Foreman who are on the site of the work, the name of hospital and phone number and the name and phone number of the doctor he proposes to use in case of accident.

67 - Load Limits

The PC shall be governed by the local load limit requirements of the Georgia Standard Specifications on State, County or City maintained roadways. The PC shall be responsible for his damage to existing streets and roads.

68 – Sanitary Provisions

The PC shall provide temporary sanitary facilities for the use of the workmen during the progress of the work. The sanitary facilities shall conform to the requirements of the Federal Occupational Safety and Health Administration. All facilities shall be removed at the completion of the Contract.

69 - Construction Buildings

Should the PC desire, he may erect structures for housing tools, machinery and supplies; structures will be permitted only at places approved by the Owner. Their surroundings shall be maintained at all times in a sanitary and satisfactory manner. On or before the completion of the work, all such structures shall be removed, together with all rubbish and trash, and the site shall be restored to its original condition at the expense of the PC. Structures will not be permitted for the housing of men.

70 - Cleaning Up

The PC shall, as directed by the Owner, remove at his own expense from the Owner's property and from all public and private property all temporary structures, rubbish and waste materials resulting from his operations. Clean-up shall be concurrent with the work. Where complete restoration is not reasonable until testing or inspection is complete, the PC shall, at minimum, remove all debris and trash and perform grading such that the area is left neat and without depressions that may hold water. The sufficiency of temporary clean-up shall be at the discretion of the Engineer/Architect and the Owner.

71 - Electrical Energy

The PC shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light required for the proper completion of this contract during its entire progress. The PC shall provide all temporary wiring, switches, connections and meters.

There shall be sufficient artificial light, by means of electricity, so that all work may be done in a workmanlike manner when there is not sufficient daylight.

The PC shall remove all temporary electrical service and appurtenances prior to final acceptance by the Owner. Where permanent electrical service is required, the PC shall request, in writing, an inspection of the electrical components of the work. Such request for inspection shall be given a minimum of 48 hours in advance. At such time as the electrical components of the work have been inspected and approved, the PC shall request from the Owner, in writing, an electrical service. Such request for electrical service shall be given a minimum of ten (10) days in advance.

72 - Water Supply

The PC shall provide all water required to successfully perform the work. All water provided by the PC which is not potable shall be clearly marked as such.

All water from fire hydrants, post hydrants, or otherwise from the existing distribution system under local control, shall be metered with a meter supplied by any local public body or authority responsible for the system and shall be obtained only with written authorization of the Owner. The PC shall remove all temporary water service and appurtenances prior to final acceptance by the Owner.

73 - Environmental Impact

The PC shall conduct his operations so as to minimize, to the greatest extent possible, adverse environmental impact.

Noise

All equipment and machinery shall be provided with exhaust mufflers maintained in good working order so as to reduce operating noise to minimum levels. In addition, operation of equipment and machinery shall be limited to daylight hours, with no Saturday or Sunday work, except with the permission of the Owner, based on critical need for the operation. The work shall be arranged, scheduled and organized in such a manner and method so as to cause the minimum of interference with the conduct of the adjacent City and County operation. No loud radios, use of drugs, or profanity on project sites. Workman shall be restricted from all buildings other than those in which work is being done. No unmuffled internal combustion engines, pneumatic devices nor pressure relief valves will be permitted.

Dust/Smoke

All equipment movements shall be accompanied by a minimum of dust. Traveled surfaces and earthwork shall be maintained in a moist condition to avoid the generation of dust or the airborne movement of particulate matter under all prevailing atmospheric conditions. Dust causing operations shall be controlled by sprinkling or aspiration.

Burning or refuse or rubbish on or near the site will not be permitted.

Traffic

Trucks carrying spoil, fill, concrete or other materials shall be routed over roads which will result in the least effect on traffic and nuisance to the public. All material shall be loaded in a manner which will preclude the loss of any portion of the load in transit, including covering, if necessary.

Siltation and Erosion

The PC shall perform his work to minimize siltation and erosion during construction. All points of concentrated runoff from rainfall shall be visually monitored to determine that no eroded material leaves the construction site. Measures shall be taken promptly to eliminate siltation and erosion, including the installation of dams, detention basins, silt fencing, and other retaining devices. The PC shall conduct operations and maintain the work in such condition that adequate drainage shall be in effect at all times.

Use of Chemicals

All chemicals used during construction or furnished for project operation whether herbicide, pesticide, disinfectant, polymer, reactant or other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.

74 - Progress Payments

The parties hereto expressly agree that the provisions of the Georgia Prompt Pay Act, O.C.G.A. Section 13-11-1 et. seq., shall not apply to this Contract and is superseded by the terms and conditions of the Contract.

Not later than the fifth day of every month the Contractor shall prepare and submit a Request for Periodic Payment, along with an Affidavit of payment of claims, covering the total quantities under each item of work that has been completed from the start of the job up to and including the last day of the preceding month, and the value of the work so completed determined in accordance with the schedule of values for such items together with such supporting evidence as may be required by the Engineer/Architect; however, the Owner reserves the right to request additional information from the Contractor.

Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.

Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.

Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

Identification: Include the following Project identification on the schedule of values:

- Project name and location.
- Name of Architect.
- Architect's Project number.
- Contractor's name and address.
- Date of submittal.

Arrange schedule of values consistent with format of AIA Document G703.

Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:

- Related Specification Section or Division.
- Description of the Work.
- Name of subcontractor.

Name of manufacturer or fabricator.

Name of supplier.

Change Orders (numbers) that affect value.

Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.

Labor.

Materials.

Equipment.

Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent (5%) of the Contract Sum.

Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

Differentiate between items stored on-site and items stored off-site.

Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate Owner payments or deposits, if any, and balance to be paid by Contractor.

Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.

Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.

Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent (5%) of the Contract Sum and subcontract amount.

Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

This estimate may also include an allowance for the cost of such materials and equipment required in the permanent work as has been delivered to the site or stored in an approved location and suitably protected but not as yet incorporated in the work. Under no circumstances shall any material or equipment, for which payment has been made by the owner to the Contractor, be sold, returned to the supplier or otherwise moved from storage except for incorporation into the work as covered in this contract without written authorization from the Owner. Payments shall be made for materials stored off- site only if said materials are stored in an independent bonded warehouse and if all costs of storage, insurance, loading and transfer for such materials is paid for by the Contractor. The Contractor shall submit to the Owner bills of lading and bonds with any request for such payment.

Not later than the 30th day after submitting an accepted, approved and correct estimate along with all required documentation (as per these contract documents) as detailed in the above paragraph, the Owner shall, after deducting previous payments made, pay to the Contractor 90% of the amount of the estimate as approved by the Owner, as long as the gross value of completed work is less than

50% of the total Contract amount, or if the Contractor is not maintaining his construction schedule to the satisfaction of the Owner, the Owner shall retain 10% of the gross value of the completed work as indicated by the current approved estimate.

After the gross value of completed work becomes equal to 50% of the total Contract amount within a time period satisfactory to the Owner, then the Owner will continue to retain the 10% of the first 50% of the work but will not require any additional retainage; provided, however, that if work is unsatisfactory or falls behind schedule, retention may be resumed at the previous level after notification to the Contractor. Amounts unpaid at the end of the 30 days after the billing date shown on each invoice shall bear interest at the rate of one percent (1%) per month not to exceed three months (3%).

The Contractor shall also submit with each Request for Periodic Payment a progress report on a form approved by the Engineer/Architect at or before the pre-construction conference. Failure to submit a progress report shall be grounds for the Owner to withhold payment. To expedite the approval of requests for partial payment, the Contractor shall submit with his request the following information:

A copy of the Progress Schedule marked to indicate the work actually accomplished.

An itemized list of materials stored for which payment is being claimed. This list shall be accompanied by the suppliers' invoices indicating the materials costs. Payment for materials stored shall be subject to the same retainage provisions as for work completed.

An outline of time lost because of an event giving rise to a request for an extension of contract time.

The Owner has a right to hold a payment to a contractor who has not included an updated progress report with his pay request.

Retention of contractual payments and the creation of escrow accounts for contracts for the installation, improvement, maintenance or repair of water or sewer facilities shall be in accordance with the Georgia Retainage Law, Section 13-10-20, Article 2, as found in O.C.G.A.

Before final payment is due, the Contractor shall submit evidence satisfactory to the Engineer/Architect and Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid, except that in case of disputed indebtedness or liens, the Contractor may submit in lieu of evidence of payment an additional Surety Bond satisfactory to the Owner guaranteeing payment of all such disputed amounts when adjudicated.

Special Payment Provision: For contractor where payment bonds have been waived, all Requests for Periodic payment forms submitted by the Contractor shall be accompanied by payment affidavits from each subcontractor/supplier for the services/materials claimed before payment will be released

by the owner. Application for final payment shall also be accompanied by a lien waiver from each (sub)contractor/supplier who furnished labor or materials for the job.

Under this paragraph, failure to supply said documentation, any additional requested information, partial releases, waiver of liens, and evidence of payment of all current accounts will be considered grounds for withholding partial payments, and failure to supply a release and unconditional lien waivers for said Surety Bond for the entire job, on completion, will be grounds for withholding final payment.

75 - Measurement and Payment

Measurement and payment shall be made for the units or lump sum contract prices shown on the Bid Schedule. Direct payment shall only be made for those items of work specifically listed in the proposal and the cost of other work must be included in the contract price for the applicable item to which it relates.

Within ten (10) days of issuance of the Notice of Award, on lump sum contracts, the PC shall provide, for review and approval, a schedule of values for the various subdivisions of the work.

76 - Use of Completed Portions

The Owner may, at any time during progress of the work, after written notice to the PC, take over and place in service any completed portions of the work which are ready for service, although the entire work of the Contract is not fully completed, and notwithstanding the time for completion of the entire work or such portions which may not be expired. In such case, the Engineer/Architect with the Owner's occurrence may issue documents of Substantial Completion for such portions of the work; but such taking possession thereof shall not be deemed an acceptance of any other portions of the work, nor of any uncompleted portions, nor of any work not completed in accordance with the Contract Documents.

77 – Payments Withheld Prior to Final Acceptance

During the execution of the work certain portions of the work may be directly or indirectly placed in service. However, "beneficial use" shall not be claimed by the PC as a means to force acceptance or completion. It shall be the responsibility of the PC to request, in writing to the Owner, an inspection to determine acceptance on all or any portion of the work.

It shall be the responsibility of the PC to consider the amount of time any particular portion of this job may be used prior to Final Acceptance and bid the job accordingly.

78 - Payments Withheld Prior to Final Acceptance

The Owner may withhold or, an account of subsequently discovered evidence, nullify the whole or part of any certificate of payments to such extent as may be necessary to protect himself from loss on account of:

Defective work not remedied.

Claims filed or reasonable evidence indicating proposed public filling of claims by other parties against the PC.

Failure of the PC to make payments properly to Sub-PCs or for material or labor.

Damage to another Contactor.

When the above grounds are removed or the PC provides a Surety Bond, satisfactory to the Owner, which will protect the Owner in the amount withheld, payment shall be made for amounts withheld because of them.

Nothing in this paragraph shall negate, abridge or alter other grounds for withholding or delaying payment to the PC as stated in the contract.

79 - Contract Time

General

Time shall be of the essence of the contract. The PC shall promptly start the work after the date of the notice to proceed and shall prosecute the work so that portions of the project shall be complete within the times specified in Section 46. During periods when weather or other conditions are unfavorable for construction, the PC shall pursue only such portions of the work as shall not be damaged thereby. No portions of the work, where acceptable quality or efficiency will be affected by unfavorable conditions, shall be constructed while those conditions exist. It is expressly understood and agreed by and between the PC and the Owner that the contract time for completion of the work described herein is a reasonable time taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

Construction Schedule

The PC shall provide a construction schedule and reports as specified in Section 46 for scheduling and coordinating the work within the contract time. Contract time extensions shall be incorporated into updated schedules, reflecting their effect at the time of occurrence. Failure of the PC to comply with these requirements for submittal of the construction schedule and reports shall be cause for delay in review of progress payments by the Owner.

Construction Progress

The PC shall furnish such manpower, materials, facilities and equipment as may be necessary to insure the prosecution and completion of the work in accordance with the accepted schedule. If work falls fourteen (14) days or more behind the accepted construction schedule, the PC agrees that he will take some or all of the following actions to return the project to the accepted schedule. These actions may include the following:

Increase manpower in quantities and crafts.

Increase the number of working hours per shift, shifts per working day, working days per week, or the amount of equipment, or any combination of the foregoing.

Reschedule activities.

If requested by the Owner, the PC shall prepare a proposed schedule revision demonstrating a plan to make up the lag in progress and insure completion of the work within the contract time. Upon receipt of an acceptable proposed schedule, the revision to the construction schedule shall be made in accordance with Paragraph 22. All actions to return the project to the acceptable schedule are at the PC's expense.

The PC shall pay all costs incurred by the Owner which result from the PC's action to return the project to its accepted schedule. The PC agrees that the Owner shall deduct such charges from payments due the PC. It is further understood and agreed that none of the services performed by the Engineer/Architect in monitoring, reviewing and reporting project status and progress shall relieve the PC of responsibility for planning and managing construction work in conformance with the construction schedule.

Delays

When the PC foresees a delay in the prosecution of the work and, in any event, immediately upon the occurrence of a delay which the PC regards as unavoidable, he shall notify the Owner in writing of the probability of the occurrence of such a delay, the extent of the delay and its possible cause. The PC shall take immediate steps to prevent, if possible the occurrence or continuance of the delay.

If this cannot be done, the Owner shall determine how long the delay shall continue and to what extent the prosecution and complete of the work are being delayed thereby. He shall also determine whether the delay is to be considered avoidable or unavoidable and shall notify the PC of his determination. The PC agrees that no claim shall be made for delays which are not called to the attention of the Owner at the time of their occurrence.

Avoidable delays in the prosecution of the work shall include delays which could have been avoided by the exercise of care, prudence, foresight and diligence on the part of the PC or his Sub-contractors. Avoidable delays include:

Delays which may in themselves be unavoidable but which affect only a portion of the work and do not necessarily prevent or delay the prosecution of neither other parts of the work nor the completion of the whole work within the contract time.

Time associated with the reasonable interference of other PCs employed by the Owner which do not necessarily prevent the completion of the whole work within the contract time.

Unavoidable delays in the prosecution or completion of the work shall include delays which result from causes beyond the control of the PC and which could not have been avoided by the exercise of care, prudence, foresight and diligence on the part of the PC or his Sub-contractors.

Delays caused by acts of God, fire, unusual storms, floods, tidal waves, earthquakes, strikes, labor disputes and freight embargoes shall be considered as unavoidable delays insofar as they prevent the PC from proceeding with at least 75 percent of the normal labor and equipment force for at least 5 hours per day toward completion current controlling items on the accepted construction schedule.

Should abnormal conditions prevent the work from beginning at the usual starting time, or prevent the PC from proceeding with 75 percent of the normal labor and equipment force for a period of at least 5 hours per day, and the crew is dismissed as a result thereof, he will not be charged for the working day whether or not conditions change so that the major portion of the day could be considered suitable for work on the controlling item.

Extension of Time

In case the work is not completed in the time specified, including extensions of time as may have been granted for unavoidable delays, the PC will be assessed liquidated damages, as specified in Section 86 below.

The Owner may grant an extension of time for avoidable delay if he deems it in his best interest. If the Owner grants an extension of time for avoidable delay, the PC agrees to pay the liquidated damages.

Unavoidable Delays: For delays which the PC considers to be unavoidable, he shall submit to the Engineer/Architect complete information demonstrating the effect of the delay on the controlling operation in his construction schedule. The submission shall be made within thirty (30) calendar days of the occurrence which is claimed to be responsible for the unavoidable day.

The Owner shall review the PC's submission and determine the number of days unavoidable and the effect of such unavoidable delay on controlling operations of the work.

If the Owner agrees to grant an extension of time to the extent that unavoidable delays affect controlling operations in the construction schedule, during such extension of time, neither extra compensation or Engineer/Architecting inspection and administration nor damages for delay will be charged by the PC to the Owner.

It is understood and agreed by the PC and Owner that time extensions due to unavoidable delays will be granted only if such unavoidable delay involve controlling operations which would prevent completion of the whole work within the specified contract time. It is understood and agreed by the PC and Owner that during such extension of time, no extra compensation shall be paid to the PC.

Damage for Delays: For the period of time that any portion of the work remains unfinished after the time fixed for completion in the Contract Documents, as modified by extensions of time granted by the Owner, it is understood and agreed by the PC and the Owner that the PC shall pay the Owner the liquidated damages, specified in Section 86 below.

81 - Differing Site Conditions

The PC shall promptly, and before such conditions are disturbed, notify the Owner in writing of (1) subsurface or latent physical conditions differing materially from those indicated in the contract or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract.

82 - Changes in Work

The Owner, without invalidating the Contract, may order additions to or deductions from the work. The PC shall proceed with the work, as changed and the value of any such extra work or change shall be determined as provided in the Agreement, and the contract sum adjusted accordingly. Any claim for extension of time caused thereby shall be adjusted at the time of ordering such change. Except in an emergency endangering life and property, no extra work or change shall be made unless in pursuance of a written order approved by the Owner, and no claim for an addition to the Contract Sum shall be valid unless the additional work was so ordered.

83 - Force Account and Extra Work

If the Engineer/Architect orders, in writing, the performance of any work not covered by the plans or included in the specifications, and for which no unit price or lump sum basis can be agreed upon, then such extra work shall be done on a Cost-Plus-Percentage basis of payment as follows:

Reasonable allowance for overhead and profit combined to be included in the total cost to the Owner shall be based on the following schedule:

For the Contractor, for any work performed by the Contractor's own forces, an amount not to exceed fifteen percent (15%) of the cost.

For the Contractor, for any work performed by the Contractor's Subcontractor, seven and one-half percent (7-1/2%) of the amount due the Subcontractor. The Owner will not recognize subcontractors of subcontractors. To facilitate checking of quotations for extras or credits, however, all proposals shall be accompanied by a complete itemization of costs including labor, materials and subcontracts. Labor and materials shall be itemized in the manner prescribed above. The burden of proof of cost rests upon the Contractor. Where major cost items are subcontracts, they shall be itemized also. All changes require written approval prior to commencing work.

The term "Cost" shall cover all payroll charges for persons employed and supervision required under the specific Order, together with all workmen's compensation, Social Security, pension and retirement allowances and social insurance, or other regular payroll charges on same; the cost of all material and supplies required of either temporary or permanent character; rental of all power-driven equipment at the current Associated Equipment Distributors (AED) rate; and any other costs incurred by the Contractor as a direct result of executing the Order, if approved by the Engineer/Architect and the Owner.

Except in an emergency endangering life and property, no extra work or change shall be made unless in pursuance of a written order, and no claim for an addition to the Contract Sum shall be valid unless the additional work was so ordered. The cost of the work shall be submitted to the Engineer/Architect along with the monthly pay request.

84 - Claims for Extra Cost

If the Contractor claims that any instructions by drawings or otherwise issued after the date of the Contract involved extra cost under the Contract, he shall give the Engineer/Architect written notice thereof within twenty (20) calendar days after the receipt of such instructions, and in any event before proceeding to execute the work, except in an emergency endangering life or property, and the procedure shall then be as provided for changes in the work. No such claim shall be valid unless so made. Otherwise, it will be assumed that the instructions or changes incur no additional cost.

Extra work not included the Scope of Work but, authorized after the date of the contract cannot be classified as coming under any of the contract units may be done at mutually agreed upon unit price or on a lump sum basis, or under the provision of Section 83 above.

Extra costs that result from delays, which cause an interruption in the orderly progress of work, as described in Section 79 above, will be considered under the following conditions: No claim will be considered for delays less than five (5) hours in duration.

No claim will be considered in cases where the Contractor is able, without undue hardship, to shift his work crew to other productive work on the same project in the same general work area.

The claim for extra cost due to delay shall be computed on a cost plus percentage basis as specified in Section 83 above.

Unavoidable delays caused by weather as defined in Section 79 above, shall be cause for extensions of time. However, damage to the Contractor caused by weather or an Act of God shall not be cause for additional compensation or monetary adjustment.

85 - Correction of Work Before Final Payment

The PC shall promptly remove from the premises all material condemned by the Owner, or as determined by the Owner as failing to meet Contract requirements, whether incorporated in the work or not, and the PC shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the Owner and shall bear the expense of making all work of other PCs destroyed or damaged by such removal or replacement.

If the PC does not remove such condemned work and materials as promptly as possible, after written notice, the Owner may remove them and store the material at the expense of the PC.

86 - Liquidated Damages

The Owner will suffer financial loss if the work is not complete on the date set forth in the Contract Documents, including extension granted thereto. Failure to complete the work within the number of days stipulated in the Contract shall entitle the Owner to retain from compensation otherwise due to be paid to the PC, or for the Owner to be paid directly by the PC the sum of **One Thousand Dollars (\$1,000)** as fixed and agreed to as liquidated damages for each calendar day of delay until the work is complete. The PC, and his Surety, shall be liable for and shall pay to the Owner any sum due and owing to the Owner as liquidated damages.

It is agreed by and between the parties hereto that the aforesaid sum has been established, not as a penalty but as liquidated damages and that it is reasonable and acceptable, as the County provides services necessary for the health and welfare of the public and due to the impracticability and extreme difficulty of fixing and ascertaining the actual damages sustained in such an event.

87 - Suspension or Abandonment of Work

Suspension of Work

The Owner may at any time, for any reason, suspend the work, or any part thereof by giving three (3) days written notice to the PC. The work shall be resumed by the PC within ten (10) days after the date fixed in the written notice from the Owner to the PC.

If the project is suspended by the Owner during any given phase for more than 60 consecutive days, the PC shall be compensated for services performed prior to notice of such suspension. When the project is resumed, the PC's compensation shall be equitably adjusted to provide for actual expenses incurred in the interruption and resumption of the PC's services, excluding overhead and profit.

Said expenses must be documented and submitted to the Owner for review and upon approval by the Owner for reasonable expenses will be reimbursed to the PC. The PC shall mitigate any expenses incurred during the suspension period.

Nothing in this Subparagraph, above, shall prevent the Owner from immediate suspension of the PC's work when the health or welfare of the public is at risk in the opinion of the Owner.

Abandonment of Work

This Contract may be terminated by the Owner upon seven (7) days written notice to the PC in the event that the project is permanently abandoned. If the project is abandoned by the Owner for more than 90 consecutive days, the PC may terminate this Contract upon not less than seven (7) days written notice to the Owner.

88 - Termination of Contract

Termination for Convenience of Owner

The Owner may, at will, upon written notice to the PC, terminate (without prejudice to any right or remedy of the Owner) the whole or any portion of the Work for the convenience of the Owner.

The PC in calculating his termination application for payment, shall develop his outstanding costs in accordance with Section 83, including those materials in transit and non-cancellable with the appropriate percentage markups; Sub-contractors shall follow same procedures. All costs must be substantiated by adequate back-up documentation. The termination will not affect any rights or remedies of the Owner against the PC then existing or which may thereafter accrue. Any retention or payment of moneys due to the PC by the Owner will not release the PC from liability.

Default Termination

The Owner may, if in the Owner's sole judgment and upon written notice to the PC, terminate (without prejudice to any right or remedy of Owner) the whole or any portion of the Work required by the Contract Documents in any one of the following circumstances:

If the PC refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will ensure the Substantial Completion of the Work within the Contract time:

The PC is in material default in carrying out any provisions of this Contract for a cause within its control;

If the PC files a voluntary petition in bankruptcy or a petition seeking or acquiescing in any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief for itself under any present or future federal, state or other statute, law or regulation relating to bankruptcy, insolvency or other relief for debtors;

If a trustee, receiver or liquidator, is appointed for the PC or for all or any substantial part of the property of the PC; or if the PC makes a general assignment for the benefit of creditors or admits in writing its inability to pay its debts generally as they become due;

If the PC has filed against it a petition in bankruptcy under any present or future federal or state statute, law or regulation relating to bankruptcy, insolvency or other relief for debtors and the same is not discharged on or before forty-five (45) days after the date of the filing thereof; or if the PC is adjudged a bankrupt;

If the PC is adjudged a bankrupt, makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency;

If the PC fails to supply a sufficient number of properly skilled workmen or suitable materials or equipment;

If the PC fails to make prompt payment to Sub-contractors for materials or labor, unless PC otherwise provides Owner satisfactory evidence that payment is not legally due;

If the PC persistently disregards laws, ordinances, rules, or regulations or order of any public authority having jurisdiction;

If the PC substantially violates any provision of the Contract Documents;

or

If, after the PC has been terminated for default pursuant to paragraph two (2), it is determined that none of the circumstances set forth paragraph two (2) exist, then such termination shall be considered a termination of convenience pursuant to paragraph one (1). If the Owner terminates this agreement for any of reasons enumerated in paragraph two (2), then the Owner may take possession of the site and of all documents, materials, equipment, tools, construction equipment and machinery thereon owned by the PC and may finish the work by whatever method the Owner may deem expedient. In such case, the PC shall not be entitled to receive any further payment until the work is finished.

Allowable Termination Costs

If the Owner terminates the whole or any portion of the Work pursuant to Paragraph "A" then the Owner shall only be liable to PC for those costs reimbursable to PC in accordance with Paragraph "D", plus the cost of settling and paying claims arising out of the termination of Work under subcontracts or orders, pursuant to Paragraph "D", which are properly chargeable to the terminated portion of the Contract (exclusive of amounts paid or payable on account of completed items of equipment delivered or services furnished by Sub-contractors or proposers prior to the effective date of the Notice of Termination), which amounts shall be included in the costs payable under Subparagraph "B.1", above, and the reasonable costs of settlement, including accounting, legal, clerical and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract, together with reasonable storage, transportation and other costs incurred in connection with the protection of disposition of property allocable to this contract.

Provided, however, that if there is evidence that the PC would have sustained a loss on the entire Contract had it been completed, no profit shall be included or allowed hereunder and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss.

The total sum to be paid to the PC under this Paragraph "C" shall not exceed the Contract sum as reduced by the amount of payments otherwise paid, by the Contract price of Work not terminated and as otherwise permitted by this Contract.

Except for normal spoilage, and except to the extent that the Owner shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the PC, as provided in this paragraph, the fair value as reviewed by the Engineer/Architect, determined by the Owner, of property which is destroyed lost, stolen or damaged so as to become undeliverable to the Owner.

General Termination Provisions

After receipt of a Notice of Termination from the Owner, pursuant to paragraph one (1) or two (2), and except as otherwise directed by the Owner, the PC shall:

Stop Work under the Contract on the date and to the extent specified in the Notice of Termination;

Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated;

Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;

Assign to the Owner in the manner, at the times and to the extent directed by the Owner, all of the right, title and interest of the PC under the orders and subcontracts so terminated, in which case the Owner shall have the right, in its sole discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification shall be final for all the purposes of this clause;

Transfer title and deliver to the entity or entities designed by the Owner, in the manner, at the times and to the extent, if any, directed by the Owner, and to the extent specifically produced or specifically acquired by the PC for the performance of such portion of the work as had been terminated;

The fabricated or un-fabricated parts, work in process, partially completed supplies and equipment, materials, parts, tools, dies, jigs and other fixtures, completed work, supplies and or other material produced as part of, or acquired connection with, the performance of the work terminated by the Notice of Termination, and the completed or partially completed plans, drawings, information and other property related to the work;

Use his best efforts to sell, in the manner, at the times, to the extent and at the price or prices directed or authorized by the Owner, and property of the types referred to in paragraph four (4);

Shall not be required to extend credit to any buyer, and may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner;

And provided further that the Proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Owner to the PC under this contract or shall otherwise be credited to the price or cost of the work covered by this contract or paid in such other manner as the Owner may direct;

Complete performance of such part of the Work as shall not have been terminated by the Notice of Termination; and

Take such action as may be necessary, or as the Owner may direct, for the protection and preservation of the property related to this Contract, which is in the possession of the PC and in which the Owner has or may acquire an interest.

The PC shall, from the effective Date of Termination until the expiration of three years after Final Settlement under this contract, preserve and make available to the Owner, at all reasonable times at the office of the PC, but without direct charge to the Owner, all its books, records, documents, and other evidence bearing on the costs and expenses of the PC under this Contract and relating to the Work terminated hereunder, or, to the extent approved by the Engineer/Architect, photographs, microphotographs or other authentic reproductions thereof. In arriving at any amount due the PC pursuant to paragraph three (3) there shall be deducted:

All unliquidated advance or other payments on account theretofore made to the PC applicable to the terminated portion of this Contract;

Any claim which the Owner may have against the PC;

Such claim as the Owner may advise and the Owner determines to be necessary to protect the Owner against loss because of outstanding or potential liens or claims; and the agreed price

for, or the proceeds of sale of, any materials, supplies, or other things acquired by the PC or sold, pursuant to the provisions of paragraph four (4); and not otherwise recovered by or credited to the Owner.

PC shall refund to the Owner any amounts paid by the Owner to the PC in excess of costs reimbursable under paragraph three (3).

The Owner, at its option and PC's expense, may have costs reimbursable under paragraph three (3) audited and certified by an independent certified public accountant selected by the Owner.

89 - PC's Right to Stop Work or Terminate Contract

If the work should be stopped under an order of any court for a period of three (3) months, through no fault of the PC or of anyone employed by him, then the PC may, upon seven (7) days written notice to the Owner, stop work or terminate this Contract and recover from the Owner payment for all work executed, plus any loss sustained upon any plant or materials excluding overhead, profit and damages.

90 – Disputes Resolution

All claims, disputes and other matters in question between the PC and the Owner arising out of, or relating to, this contract or the breach therefore, shall be tried before a jury trial, unless otherwise stipulated between the parties. Any legal proceeding arising out of, or relating to, this agreement shall include, by consolidation, joinder or joint filing, any additional person or entity to the final resolution of the matter in controversy.

The PC hereby further agrees that, should any Sub-contractor or supplier to the PC file a claim concerning any dispute or controversy, which involves the allegations of any acts, errors or omissions of the PC, then the PC shall indemnify and hold harmless the Owner, its employees, agents, and representatives, its employees, agents, and representatives from any and all costs incurred to include legal costs and attorney's fees and payment of any judgment against the Owner.

Should the Owner utilize an attorney to enforce any of the provisions hereof, to protect its interest in any matter arising under this Contract, or to collect damages for breach of this Contract, the PC agrees to pay the Owner all reasonable costs, charges, expenses and attorneys' fees expended or incurred therein.

Any disputes arising under the terms and conditions of this Contract shall not be subject to mediation or arbitration.

The PC irrevocably consents that any legal action or proceeding against it under, arising out of or in a manner relating to the Contract shall be brought in any court in Dawson County, Georgia. PC designates the Secretary of the State of Georgia as its agent for service of process, provided no such agent located in Georgia is on file with the said Secretary. PC, by the execution and delivery of this Contract, expressly and irrevocably assents to and submits to the personal jurisdiction of any court in Dawson County, and irrevocably waives any claim or defense in any

said action or proceeding based on any alleged lack of jurisdiction, improper venue or forum non conveniens or any similar basis.

91 - Removal of Equipment

In the case of termination of this Contract before completion for any cause whatever the PC, if notified to do so by the Owner, shall promptly remove any part or all of his equipment from the property of the Owner, failing which the Owner shall have the right to remove such equipment at the expense of the PC.

92 - Laws of Georgia

This Contract shall be governed by the Laws of the State of Georgia.

If any provision hereof shall be held or deemed to be or shall, in fact, be inoperative or unenforceable as applied in any particular case in any jurisdiction or jurisdictions or in all jurisdictions, or in all cases because it conflicts with any other provision or provisions hereof or any constitution or statute or rule of public policy, or for any other reason, such circumstances shall not have the effect of rendering the remaining provision of this Contract invalid, inoperative or unenforceable.

93 – Quantity Variance Reserve

This line item shall be strictly reserved for work as required by the Owner under Section 82 above and Section 83 above without the adjustment of the contract sum, and shall not otherwise be interpreted for any other use and shall not contain any of the PC's work, or cost, known or unknown, at the time of bidding.

Prior to final acceptance of the work, a summary change order shall be developed and the contract sum shall be reduced by the total amount of the quantity variance reserve not used by the Owner.

94 - Discrepancy Between General Conditions and Technical Specifications

Should there be a discrepancy between the General Conditions and Technical Specifications, the Technical Specifications shall govern.

95 – Ownership of Salvaged Material and Equipment

Dawson County shall have the right to retain ownership of any salvaged material or equipment. The PC shall notify the owner prior to the disposal of any salvageable material.

-End of This Section-



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM UPGRADE FOR
DAWSON COUNTY
VENDOR'S CHECKLIST**

Company Name: _____

Please indicate you have completed the following documentation; and submit them in the following order. **This Page is to be submitted with your Proposal.**

- Vendor's Checklist
- Vendor's Information Form
- Vendor's Price Proposal Form
- Vendor's Qualifications as detailed in Section II, D
- References as listed under Section II, D
- Execution of Proposal Form
- Addenda Acknowledgement Form and Any Addenda Issued
- Proposer's Certification and Non-Collusion Affidavit
- Drug-Free Workplace Affidavit
- Georgia's Security and Immigration Compliance Act Affidavit
 - Contractor Affidavit
 - Subcontractor Affidavit (if applicable)
- Local Small Business Initiative Affidavit (if applicable)
- Proof of Insurance/Certificate of Insurance – Requirements listed on Page 7
- Completed W9
- Copy of Valid Business License
- Copy of Professional licenses (if applicable)

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM UPGRADE FOR
DAWSON COUNTY
PROPOSER'S INFORMATION FORM**

1. Legal Business Name _____
2. Street Address _____
3. City, State & Zip _____
4. Type of Business: _____ State of Registration: _____
(Association, Corporation, Partnership, Limited Liability Company, etc.)
5. Name & Title of Authorized Signer: _____
6. Primary Contact _____
7. Phone _____ Fax _____
8. E-mail _____
9. Company Website _____
10. Has your company ever been debarred from doing business with any federal, state or local agency? Yes _____ No _____ If Yes, please state the agency name, dates and reason for debarment.

ATTACH COPY OF BUSINESS LICENSE AND A COMPLETED W-9 FORM
THIS PAGE MUST BE COMPLETED AND SUBMITTED WITH PROPOSAL



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUPGRADE FOR
DAWSON COUNTY
PROPOSER’S PRICE PROPOSAL FORM**

COMPANY NAME: _____

ITEM DESCRIPTION	ESTIMATED QUANTITY	UOM	UNIT COST	EXTENDED COST
Turn-Key Comprehensive Security System Upgrade - Installation	2160	Combined Hourly Rate		
Turn-Key Comprehensive Security System Upgrade - All Equipment Required	1	Not To Exceed		N/A
Turn-Key Comprehensive Security System Upgrade - All Software Required	1	Not To Exceed		N/A
Software/Hardware Training	20	Hourly Rate		
Service/Maintenance Support - Year After Warranty Period	5	Annually		

Add Alternate 1:

ITEM DESCRIPTION	ESTIMATED QUANTITY	UOM	UNIT COST	EXTENDED COST
Intake Control Room with Security Walls - Design-Build	1	EA		

Add Alternate 2:

ITEM DESCRIPTION	ESTIMATED QUANTITY	UOM	UNIT COST	EXTENDED COST
Video Visitation Units	26	EA		

Add Alternate 3:

ITEM DESCRIPTION	ESTIMATED QUANTITY	UOM	UNIT COST	EXTENDED COST
Metal Detector/Package Screener	1	EA		



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM UPGRADE
FOR DAWSON COUNTY
PROPOSER'S PRICE PROPOSAL FORM**

COMPANY NAME: _____

- All costs incurred by the Proposer must be included in the Price of Project for the total scope of work as listed in this RFP.
- Proposer to provide all materials, labor and equipment needed to complete the Scope of Work.

Authorized Signature

Title

Print Name

Date

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



BID BOND
(Turn this form in with the bond)

STATE OF GEORGIA

COUNTY OF DAWSON

KNOW ALL MEN BY THESE PRESENT, that we, _____

_____, as Principal, and

_____, as Surety, are held and firmly

bound unto Dawson County, Georgia in the sum of _____ Dollars(\$ _____) lawful money of the United states, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assign, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted to the County a Proposal for:

RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM UPGRADE FOR DAWSON COUNTY

NOW THEREFORE, the conditions of this obligation are such that if the Bid be accepted, the Principal shall, within fifteen days (15) days after receipt of conformed Contract Documents, execute a contract in accordance with the Bid upon the terms, conditions and prices set forth therein, and in the form and manner required by the County and executed a sufficient and satisfactory Performance Bond and Payment bond payable to the County, each in an amount of one hundred percent (100%) of the total contract price, in form and with security satisfactory to the County, then this obligation shall be void; otherwise, it shall be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all to the foregoing requirements within the time specified above, immediately pay to the aforesaid County, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

This bond is given pursuant to and in accordance with the provisions of Section 23-1705 et seq of the Code of Georgia, as amended by the Act approved February 27, 1956, and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted and these are hereby made a part hereof to the same extent as if set out herein in full.



IN WITNESS WHEREOF, the said _____ Principal has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this _____ day of _____, 20____.

PRINCIPAL: _____

Signed and sealed in the presence of:

By: _____

Title: _____

(Seal)

1. _____

2. _____

SURETY: _____

Signed and sealed in the presence of:

By: _____

Title: _____

(Seal)

1. _____

2. _____

THIS DOCUMENT MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM UPGRADE FOR
DAWSON COUNTY
PROPOSER'S REFERENCE FORM**

All references must be from customers for whom your company has completed work similar to the specifications of this bid. Attach additional page if necessary.

References for: _____
(Company Name)

1. Company _____
Street Address _____
City, State & Zip _____
Contact Person Name _____ Title _____
Phone _____ FAX _____ Email _____
Describe Scope of Work and dates of project/service: _____

2. Company _____
Street Address _____
City, State & Zip _____
Contact Person Name _____ Title _____
Phone _____ FAX _____ Email _____
Describe Scope of Work and dates of project/service: _____

3. Company _____
Street Address _____
City, State & Zip _____
Contact Person Name _____ Title _____
Phone _____ FAX _____ Email _____
Describe Scope of Work and dates of project/service: _____

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM UPGRADE FOR
DAWSON COUNTY
EXECUTION OF PROPOSAL**

DATE: _____

The potential PC certifies the following by placing an "X" in all blank spaces:

- ___ That this proposal was signed by an authorized representative of the firm.
- ___ That the potential PC has determined the cost and availability of all materials and supplies associated with performing the services outlined herein.
- ___ That all labor costs associated with this project have been determined, including all direct and indirect costs.
- ___ That the potential PC agrees to the conditions as set forth in this Request for Proposal with no exceptions.

Therefore, in compliance with the foregoing **Request for Proposal**, and subject to all terms and conditions thereof, the undersigned offers and agrees, if this proposal is accepted within sixty (60) days from the date of the opening, to furnish the services for the prices quoted within the timeframe required.

Business Name

Authorized Signature Date

Typed Name & Title

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM UPGRADE FOR
DAWSON COUNTY
DRUG FREE WORKPLACE**

I hereby certify that I am a principle and duly authorized representative of:

Whose address is:

And it is also that:

1. The provisions of Section § 50.24.1 through § 50.24.6 of the Official Code of Georgia Annotated, relating to the "Drug Free Workplace Act" have been complied with in full; and,
2. A drug free workplace will be provided for the PC'S employees during the performance of the contract; and,
3. Each Sub-contractor hired by the PC shall be required to ensure that the Sub-contractor's employees are provided a drug free workplace. The PC shall secure from that Sub-contractor the following written certification: "As part of the subcontracting agreement with _____, _____ certifies to the PC that a drug free workplace will be provided for the Sub-contractor's employees during the performance of this contract pursuant to paragraph (7) of subsection (b) of the Official Code of Georgia Annotated Section § 50.24.3"; and,
4. It is certified that the undersigned will not engage in unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the contract.

Date

Signature

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUPGRADE FOR
DAWSON COUNTY
ADDENDA ACKNOWLEDGEMENT**

The proposer has examined and carefully studied the Request for Proposal and the following Addenda, receipt of all of which is hereby acknowledged:

Addendum No. _____

Addendum No _____

Addendum No. _____

Addendum No. _____

Authorized Representative (Signature)

Date

Authorized Representative/Title
(Print or Type)

Proposers must acknowledge any issued addenda. Proposals which fail to acknowledge the proposer's receipt of any addendum will result in the rejection of the offer if the addendum contained information which substantively changes the Owner's requirements.

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUPGRADE FOR
DAWSON COUNTY
PROPOSER'S CERTIFICATION AND STATEMENT OF NON-COLLUSION**

I _____certify that this proposal is made without prior understanding, agreement or connection with any corporation, firm or person submitting a proposal for the same services and is in all respects fair and without collusion or fraud. I understand that collusive bidding is a violation of state and Federal law and can result in fines, prison sentences and civil damages awards.

I certify that this proposal has been prepared independently and the price submitted will not be disclosed to another person.

I certify that there has been no contact or communication by the proposer or the proposer's associates with any County staff, or elected officials since the date this solicitation #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUPGRADE FOR DAWSON COUNTY was issued except: 1) through the Purchasing Department, 2) at the Pre-Proposal Conference (if applicable) or 3) as provided by existing work agreement(s). **The County reserves the right to reject the proposal submitted by any proposer violating this provision.**

I agree to abide by all conditions of this proposal and certify that I am authorized to sign this proposal.

COMPANY NAME: _____

Authorized Representative (Signature)

Date

Authorized Representative/Title
(Print or Type)

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



Georgia Security & Immigration Compliance (GSIC) Act Affidavit

As per the Georgia Senate Bill 529 and Senate Bill 447, the Georgia Department of Labor has promulgated new rules for the implementation of Section 2. O.C.G.A. §13-10-91 and Chapter 300-10-01-.02 state that no Georgia Public Employer shall enter into a contract for *the physical performance of services within the State of Georgia* unless the PC registers and participates in a federal work authorization program to verify the work eligibility information of all of its new employees.

The Employment Eligibility Verification “E-Verify” site operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security is the electronic federal work authorization program to be utilized for these purposes.

The website is <https://e-verify.uscis.gov/enroll/>

By executing the attached PC Affidavit, PC verifies its compliance with O.C.G.A. §13-10-91 stating affirmatively that the individual, firm or corporation which is contracting with the Dawson County Board of Commissioners has registered and is participating in this federal work authorization program in accordance with the applicability provisions and deadlines established in this Statute.

PC further agrees that should it employ or contract with any Sub-contractor(s) for the physical performance of services pursuant to the contract with the Dawson County Board of Commissioners, PC will secure from the Sub-contractor(s) verification of compliance with O.C.G.A. §13-10-91 on a Sub-contractor Affidavit and shall provide a copy of each such verification to the Dawson County Board of Commissioners at the time the Sub-contractor(s) is retained to perform such services.

PLEASE COMPLETE THE ATTACHED AFFIDAVIT AND RETURN IT TO:

Melissa Hawk
Dawson County Purchasing Manager
25 Justice Way, Suite 2223
Dawsonville, GA 30534

Fax: (706) 531-2728
Email: mhawk@dawsoncounty.org



**IMMIGRATION AND SECURITY FORM
(GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT)**

PC's Name:	
County Solicitation/ Contract No.:	

PC AFFIDAVIT

By executing this affidavit, the undersigned PC verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the PC identified above has registered with and is participating in a federal work authorization program*, in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any Sub-contractor(s) in connection with the physical performance of services pursuant to this contract with the County, PC will secure from such Sub-contractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the attached Sub-contractor Affidavit. PC further agrees to maintain records of such compliance and provide a copy of each such verification to the County at the time the Sub-contractor(s) is retained to perform such service.

EEV / E-Verify™ Number

BY: Authorized Officer or Agent
(PC Name)

Date

Title of Authorized Officer or Agent of PC

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS
THE _____ DAY OF _____ 20__

[NOTARY SEAL]

Notary Public

My Commission Expires:

*any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603



**IMMIGRATION AND SECURITY FORM
(GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT)**

PC's Name:	
County Solicitation/ Contract No.:	

ADDITIONAL INSTRUCTIONS TO PC: Identify all Sub-contractors used to perform under the county contract. In addition, you must attach a signed and notarized affidavit (third page of this form) from each of the Sub-contractors listed below. The PC is responsible for providing a signed and notarized affidavit to the County within five (5) days of the addition of any new Sub-contractor used to perform under the identified County contract.

PC's Name:	
Sub-contractors:	



**IMMIGRATION AND SECURITY FORM
(GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT)**

PC's Name:	
Sub-contractor's (Your) Name:	
County Solicitation/ Contract No.:	

SUB-CONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned Sub-contractor verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the Sub-contractor which is engaged in the physical performance of services under a contract with the PC identified above on behalf of the County identified above has registered with and is participating in a federal work authorization program*, in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

EEV / E-Verify™ Number

BY: Authorized Officer or Agent
(Sub-contractor Name)

Date

Title of Authorized Officer or Agent of PC

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS
THE _____ DAY OF _____ 20____

[NOTARY SEAL]

Notary Public

My Commission Expires:

*any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUPGRADE FOR DAWSON COUNTY
EQUAL EMPLOYMENT OPPORTUNITY (EEO) PRACTICE**

EEO Plan: The successful Proposer will develop and implement an EEO policy that, as a minimum, will recruit, hire, train, and promote, at all levels, without regard to race, color, religion, national origin, sex, or age, except where sex or age is a bona fide occupational qualification.

EEO For Veterans/Handicapped: The successful Proposer will also provide equal employment opportunities for qualified disabled veterans, handicapped persons and veterans of the Vietnam Era.

EEO For Successful Proposer Programs: The successful Proposer, will ensure equal employment opportunity applies to all terms and conditions of employment, personnel actions, and successful Proposer-sponsored programs. Every effort shall be made to ensure that employment decisions, programs and personnel actions are non-discriminatory. That these decisions are administered on the basis of an evaluation of an employee's eligibility, performance, ability, skill and experience.

EEO Acquisitions: The successful Proposer will develop and implement a policy that will give equal opportunity to the purchase of various goods and services from small businesses and minority-owned businesses.

Does the Proposer have the above EEO policy in place?	Y	N

If the answer to the above is no, will the Proposer have such a policy in place prior to commencing work on this project?	Y	N

Statement of Assurance: The Proposer herein assures the County that it is in compliance with Title VI & VII of the 1964 Civil Rights Act, as amended, in that it does not on the grounds of race, color, national origin, sex, age, handicap, or veteran status, discriminate in any form or manner against employees or employers or applicants for employment and is in full compliance A.D.A.

Firm's Name

Authorized Signature

Date

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM UPGRADE FOR
DAWSON COUNTY
LEGAL AND CHARACTER QUALIFICATIONS**

Convictions: Has the Proposer (including parent corporation, if applicable) or any principal ever been convicted in a criminal proceeding (felonies or misdemeanors) in which any of the following offenses were charged?

		Y	N
a	Fraud		
b	Embezzlement		
c	Tax Evasion		
d	Bribery		
e	Extortion		
f	Jury Tampering		
g	Anti-Trust Violations		
h	Obstruction of justice (or any other misconduct affecting public or judicial officers'		
i	False/misleading advertising		
j	Perjury		
k	Conspiracy to commit any of the foregoing offenses		

Civil Proceedings: Has the Proposer or any principal ever been a party, or is now a party, to civil proceeding in which it was held liable for any of the following?

		Y	N
a	Unfair/anti-competitive business practices		
b	Consumer fraud/misrepresentation		
c	Violations of securities laws (state and federal)		
d	False/misleading advertising		
e	Violation of local government ordinance		

License Revocation:

		Y	N
	Has the proposer or any principal ever had a business license revoked, suspended, or the renewal thereof denied, or is a party to such a proceeding that may result in same?		

Responses: If "yes" is the response to any of the foregoing, provide Information such as date, court, sentence, fine, location, and all other specifics for each "yes" response.

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



Principals: The full names and addresses of persons or parties interested in the foregoing bid, as principals, are as follows:

NAME

ADDRESS

References: The Bidder lists below work he has done of similar nature as this solicitation, as references that will afford the County opportunity to judge as to experience, skill, business standing, and financial ability.

**CONTACT
PERSON**

TITLE

**PHONE
NUMBER/EMAIL**

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



Dawson County Board of Commissioners
“VOLUNTARY” Title VI Statistical Data Form

Used For Government Monitoring Purposes

Dawson County Board of Commissioners is committed to broad-based competition on all proposals. We are gathering the following information for recordkeeping in compliance with federal regulations. All information will be considered strictly private and confidential and will be used for Title VI of the Civil Rights Act of 1964 purposes only. Your responses are strictly voluntary and will help in developing and monitoring nondiscrimination enforcement programs. This form is not part of the bid document and has no emphasis on decision of award, if you prefer not to reply that is acceptable. **Failure to complete this form will not affect your chances of award.** Your cooperation is appreciated.

Instruction for submission: DO NOT INCLUDE WITH BID PROPOSAL. Form should be submitted separately in a non-identifying envelope addressed to the Dawson County Purchasing Department, 25 Justice Way, Suite 2223, Dawsonville, GA 30534. Please write in bid name and number for project tracking purposes.

BID NAME & BID #377-21 DESIGN-BUILD SERVICES FOR THE VETERANS MEMORIAL PARK POOL HOUSE

Please place an “X” on the line that apply

Owner Gender: Male Female
Owner Race/Ethnicity: White/Caucasian Hispanic or Latino
 Black or African American American Indian or Alaska Native
 Native Hawaiian or Asian
 Other Pacific Islander Two or More Races

Disability: Any person who (1) has a physical or mental impairment that substantially limits one or more major life activities (2) has a record of such impairment; or (3) is regarded as having such impairment.

Yes No

Minority Owned Business: Yes No

Disadvantaged Business Enterprise (DBE) Company? Yes No

Number of Employees: _____

Staff Race/Ethnicity Make-up: White/Caucasian Hispanic or Latino
 Black or African American American Indian or Alaska Native
 Native Hawaiian or Asian
 Other Pacific Islander Two or More Races

Dawson County Government is committed to serve the public efficiently, preserve our heritage, safeguard the environment, protect citizens and improve the quality of life.



Dawson County Board of Commissioners

Local Small Business Initiative

Purpose & Scope:

Giving preference to local suppliers, even if it means spending a little more, can actually benefit a county's finances. Dollars spent locally generate additional economic activity even beyond the value of the initial contract as the local supplier in turn sources goods and services locally. Each additional dollar that circulates locally boosts economic activity, employment, and ultimately tax revenue. A study in Arizona found that using local independent suppliers for state contracts results in three times the economic benefit of bids fulfilled through national chains.

Local Small Business Initiative (LSBI) is a Dawson County program designed to promote opportunities to Local Small Businesses located in Dawson County.

The **LSBI** program is designed to return as much taxpayer money to the local economy, in a relatively short time span, as possible while at the same time foster inclusiveness with the County's procurement activities and a goal to provide more opportunities for Dawson County businesses.

Definition of Local Small Business:

- Local Small Business shall mean a business which has its principal office located in and having a street address within Dawson County for at least six months immediately prior to the issuance of the quote/bid/proposal. Post Office boxes (to include mailing/shipping center addresses) are not eligible and shall not be used for the purpose of establishing a physical address.
- Must hold a valid business license required by the County and have no outstanding or unresolved fees, fines or penalties due to Dawson County.
- Not have more than twenty-five (25) employees, and of which at least 33% of those employees have their primary residence in Dawson County, or, if the business has no employees, the business shall be at least fifty-one (51%) percent owned by one or more persons whose primary residence in Dawson County.
- Have a banking relationship with a bank located in Dawson County.
- Average annual gross receipts of five million dollars (\$5,000,000.00) or less over the previous three years.
- Must certify under oath to the above criteria upon submission for any bid, solicitation, or proposal to Dawson County.

The LSBI Policy will not be applicable for the following types of purchases, bids, or solicitations:

- Goods or services provided under a cooperative purchasing agreement or inter-local agreement;

- Purchases or contracts which are funded in whole or part by a governmental entity and the laws, regulations, or policies governing such funding prohibit application of preference;
- Purchases made or contracts let under emergency or non-competitive situations or for legal services;
- Projects over \$100,000.00.

Affidavit:

The County will accept an affidavit that a business meets the County's standards to be considered a Local Small Business. The County, in its sole discretion, may request additional information from the business to support its claim of being a Local Small Business. The Purchasing Department will be required to review the affidavit and request additional information as necessary to ensure the LSBI criteria are satisfied. The County will notify a business of acceptance of LSBI certification.

How Incentive Works:

Under any applicable solicitation or bid, vendors desiring to receive local preference under the LSBI Policy will be required to affirmatively demonstrate via affidavit that they satisfy all pertinent requirements. Any vendor who fails to submit the required affidavit shall be automatically excluded from LSBI consideration. Vendors shall submit the affidavit with each solicitation or bid proposal. The affidavit contemplated under this Policy is valid only for the submitted solicitation or bid, and must be reaffirmed and resubmitted for each subsequent solicitation of bid.

For any solicitation that is under \$100,000.00 the Local Small Business (as demonstrated via affidavit) that submits a responsive, responsible price, a local preference credit of 3%.

Waiver:

The application of local preference to a particular purchase, contract, bid, solicitation or category of contracts may be waived by the Dawson County Board of County Commissioners in its sole discretion. The promulgation of this Policy is not intended nor should it be construed as created a right or property interest in local preference or in the local preference credit.



**DAWSON COUNTY BOARD OF COMMISSIONERS
LOCAL SMALL BUSINESS
AFFIDAVIT OF ELIGIBILITY**

Complete form and submit with your bid. Incomplete forms may be rejected.

1. Legal Name of Firm _____
2. Mailing Address: _____ Physical Address (if different) _____

3. Year business was established in Dawson County: _____
4. Business License Number issued by Dawson County: _____
5. Number of Employees: _____
6. Average annual gross receipts for past three years: _____
7. Business Type (circle one): Corporation, Partnership, Sole Proprietorship
8. Does your business have more than one location in Dawson County? Yes No
If yes, specify the location(s): _____
Is your businesses' principal base of operations in Dawson County? Yes No
Does your business have any locations outside Dawson County? Yes No
9. If yes, please specify the location(s): _____

CERTIFICATION: I hereby certify under penalty of perjury that the information which I have provided on this form is true and correct, that I am authorized to sign on behalf of the business set out above, and if requested by the County will provide, within 10 days of notice, the necessary documents to substantiate the information on this form.

Attest: _____

Sworn to and subscribed before me this

_____ day of _____, 20____

Notary Public

Commission Expires: _____

(SEAL)

Authorized Signature

Print Name

Title

SAMPLE AGREEMENT BETWEEN OWNER AND CONTRACTOR

RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUPGRADE FOR DAWSON COUNTY

This Agreement is made by and between Dawson County, a political subdivision of the State of Georgia, entered into on , 2018, (hereinafter referred to as the "Owner") and , (hereinafter referred to as the "Contractor") under seal for all work called for in the Dawson County **Request for Proposals #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUpgrade for Dawson County** for furnishing materials, labor, and equipment necessary for job description as listed in the specifications and proposed by the Contractor.

In consideration of the mutual promises, covenants, and payment set forth herein and for other good and valuable consideration, the County and Consultant agree to perform in accord with the terms of this Agreement.

ARTICLE 1

THE CONTRACT AND THE CONTRACT DOCUMENTS

1.1 The Contract

1.1.1 The Contract between the Owner and the Contractor, consists of the Contract Documents and shall be effective on the date this Agreement is executed by the last party to execute it. If any items in the Contract conflict with the law of the State of Georgia law, law of the State of Georgia shall prevail.

1.2 The Contract Documents

1.2.1 The Contract Documents consist of this Document, the Request for Proposal **#377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEMUpgrade for Dawson County** and all addenda, the Contractor's Bid Schedule, all Change Orders and Field Orders issued hereafter, and any other amendments executed by the parties hereafter. Documents not enumerated in this paragraph are not Contract Documents and do not form part of this Contract.

1.3 Entire Agreement

1.3.1 This Contract, together with the Contractor's payment bond for the Project, constitutes the entire and exclusive agreement between the Owner and the Contractor with reference to the Project. Specifically, but without limitation, this Contract supersedes all prior written or oral communications, representations and negotiations, if any, between the Owner and Contractor.

1.4 No Privity with Others

1.4.1 Nothing contained in this Contract shall create, or be interpreted to create, privity or any other contractual agreement between the Owner and any person or entity other than the Contractor.

1.5 Intent and Interpretation

1.5.1 The intent of this Contract is to require complete, correct and timely execution of the Work. Any work that may be required implied or inferred by the Contract Documents, or any one or more of them, as necessary to produce the intended result shall be provided by the Contractor for the Contract Price.

1.5.2 This Contract is intended to be an integral whole and shall be interpreted as internally consistent. What is required by any one Contract Document shall be considered as required by the Contract.

1.6 Ownership of Contract Documents

1.6.1 The Contract Documents, and each of them, shall remain the property of the Owner. The Contractor shall have the right to keep one record set of the Contract Documents upon completion of the Project; provided, however, that in no event shall Contractor use, or permit to be used, any or all of such Contract Documents on other projects without the Owner's prior written authorization.

1.7 Unobligated Funds

1.7.1 This Agreement shall terminate absolutely and without further obligation at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the County under this Agreement.

ARTICLE II

CONTRACT DEFINITIONS

The following terms shall have the following meanings whether in the singular or in the plural:

2.1 Agreement Execution. The Agreement Execution means the date both parties execute this Agreement.

2.2 Contract. The word contract has the identical meaning as the word Agreement.

2.3 Contract Documents. The contract documents consist of this Agreement between the County and the Consultant, the request for proposals, addenda issued before the execution of this Agreement, the Consultant's statement of proposal and required response forms, change orders and modifications issued after execution of this Agreement, a written amendment to this Agreement signed by both parties, and a supplemental Agreement in the form of change work order signed by both parties.

2.4 Contract Price. The contract price means the total monies, adjusted in accordance with any provision set forth herein, payable to the Consultant pursuant to a change work order or a supplemental Agreement.

2.5 Contract Time. The contract time means the period of time stated herein for completion of work.

2.6 Cost of Work. The cost of work means the fixed price or estimated cost necessary to perform the work described in the scope of services or any change work order.

2.7 County. The County means Dawson County, Georgia, a political subdivision of the State of Georgia.

2.8 Deliverables. Deliverables means all reports, drawings, plans, designs, and other documents prepared by the Consultant identified in the scope of services as deliverable to the County.

2.9 Drawings. The drawings, if any, shall be the graphic and pictorial portions of the contract documents whether completed or partially completed.

2.10 Liaison. Liaison means the representative of the County who shall act as a liaison between the County and the Consultant for all matters pertaining to this Agreement including review of Consultant's plans and work.

2.11 Multi-year Contract. Multi-year contract means a contract for the purchase of supplies or services for more than one (1), but not more than five (5), fiscal years. A multi-year contract may provide that performance under the contract during the second and subsequent years of the contract is contingent upon the appropriation of funds, and (if it does so provide) may provide for a cancellation payment to be made to the Consultant if appropriations are not made.

2.12 Project. Project means a task or set of tasks assigned pursuant to the Scope of Work and/or a Change Work Order.

2.13 Specifications. Specifications mean the written technical provisions including all appendices thereto, both general and specific, which form part of the contract documents.

2.14 Sub-consultant. A sub-consultant means any person, firm, partnership, joint venture, company, corporation or entity with an Agreement with the Consultant or Consultant's sub-consultants to provide part of the work required by a change work order.

2.15 Change Work Order. A Change Work Order shall mean a written order to the Consultant executed by the County, issued after execution of this Contract, authorizing and directing a change in the work or an adjustment in the Contract Price or the Contract Time. The Contract Price and the Contract Time may be changed only by Change Order.

2.16 Work. The work means any and all obligations, duties and responsibilities, including furnishing equipment, consulting, design, labor, and any other service or thing necessary to the successful completion of the project assigned to or undertaken by the Consultant under this Agreement or change work order.

2.17 Term of Agreement. Term of Agreement means a fixed duration that the contract will be in effect. The signing parties are obligated to adhere to the terms and conditions within the contract until the expiration, or end date, of the contract or if the contract is terminated as specified herein.

ARTICLE III

THE WORK

3.1 Scope of Services

3.1.1 The Contractor shall perform all of the Work required, implied or reasonably inferable from this Contract, all in accordance with plans, specifications, amendments to the IFB document, and drawings of the Project and in accordance with the bid and specifications as outlined in Invitation for Bid #377-21 **CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM Upgrade for Dawson County.**

3.1.2 The term "Work" shall mean whatever is done by or required of the Contractor to perform and complete its duties under this Contract, including the following: construction of the whole or a designated portion of the Project; furnishing of any required bonds and insurance; provision of required certifications and documentation of associated testing results; provision or furnishing of labor, supervision, services, materials,

supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, power, permits and licenses required of the Contractor, fuel, heat, light, cooling and all other utilities as required by this Contract. The work to be performed by the Contractor is generally described in Exhibit "A":

ARTICLE IV

CONTRACT TIME

4.1 Time and Liquidated Damages

4.1.1 The Contractor shall complete the each phase of the project within a 120 calendar day period after notice to proceed.

4.1.2 The Contractor shall pay the Owner the sum of one hundred dollars (\$100.00) per day for each and every calendar day of delay not excused by Section 86 as defined in the IFB documents in achieving completion beyond the time set forth herein for completion of the work. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the Owner, estimated at or before the time of executing this Contract. When the Owner reasonably believes that completion will be inexcusably delayed, the Owner shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an amount then believed by the Owner to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving completion, or any part there, for which the Owner has withheld payment, the Owner shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages.

4.2 Substantial Completion

4.2.1. "Substantial Completion" shall mean that state in the progression of the Work when the Work is sufficiently complete in accordance with this Contract that the Owner can enjoy beneficial use or occupancy of the work and can utilize the work for its intended purpose.

4.3 Time is of the Essence

4.3.1 All limitations of time set forth in the Contract Documents are of the essence of this Contract.

ARTICLE V

CONTRACT PRICE

5.1 The Contract Price

5.1.1 The Owner shall pay, and the Contractor shall accept, as full and complete payment for all of the work required in the Bid Documents, the fixed sum as set forth in Exhibit "B" for furnishing materials, labor, and equipment necessary for the completion of Project #377-21 **DESIGN-BUILD SERVICES FOR FIRE SERVICES - STATION 9**. The sum set forth in this Paragraph 4.1.1 shall constitute the Contract Price which shall not be modified except by Change Order as provided in this Contract. Actual quantities used for the subject work will be verified and paid using unit pricing as detailed in Request for Proposal Document, unless stipulated as "lump sum".

5.1.2 The Contractor agrees that the Contractor shall not be compensated for customary overhead items that are not referenced within "Exhibit B". The parties agree that the Owner shall review and approve any proposed billing rate adjustments of the Contractor before any such billing rate adjustments shall be implemented.

ARTICLE VI

PAYMENT OF THE CONTRACTOR

6.1 Payment Procedure

6.1.1 Based upon the Contractor's applications and certificates for payment issued to the Owner, Owner shall make progress payments to the Contractor to be applied toward the Contract Price.

6.1.2 On or before the tenth day of each month after commencement of the work, the Contractor shall submit an Application for Payment for the period ending the last day of the prior month to the Owner in such form and manner, and with such supporting data and content, as the Owner may reasonably require. Therein, the Contractor may request payment for ninety percent (90%) of that portion of the Contract Price properly allocable to Contract requirements properly provided, i.e., labor, materials and equipment properly incorporated in the work plus ninety percent (90%) of that portion of the Contract Price properly allocable to materials or equipment incorporated in the work, less the total amount of previous payments received from the Owner for such labor, materials, and equipment. Such Application for Payment shall be signed by the Contractor and shall constitute the Contractor's representation that the work has been properly performed in full accordance with this Contract. When Owner determines amounts requested to be properly owing to the Contractor, the Owner shall make partial payments on account of the Contract Price to the Contractor on a day to be determined each month in which application for payment is made.

6.1.3 The Contractor warrants that upon submittal of an Application for Payment, all work for which payments have been received from the Owner shall be free and clear of liens, claims, security interest or other encumbrances in favor of the Contractor or any other person or entity whatsoever. The Contractor shall promptly pay each Subcontractor out of the amount paid to the Contractor on account of such Subcontractor's work, the amount to which such Subcontractor is entitled. In the event the Owner becomes informed that the Contractor has not paid a Subcontractor as herein provided, the Owner shall have the right, but not the duty, to issue future checks in payment to the Contractor of amounts otherwise due hereunder naming the Contractor and such Subcontractor as joint payees.

6.1.4 No progress payment, nor any use or occupancy of the Project by the Owner, shall be interpreted to constitute an acceptance of any work not in compliance with this Contract.

6.2 Withheld Payment

6.2.1 The Owner may decline to make payment, may withhold funds, and, if necessary, may demand the return of some or all of the amounts previously paid to the Contractor to protect the Owner from loss because of:

- (a) Defective work not remedied by the Contractor;
- (b) Claims of third parties against the Owner;
- (c) Failure by the Contractor to pay Subcontractors or others in a prompt and proper fashion;
- (d) Evidence that the balance of the work cannot be completed in accordance with the Contract for the unpaid balance of the Contract Price;

- (e) Evidence that the work will not be completed in the time required for substantial or final completion;
- (f) Persistent failure to carry out the work in accordance with the Contract; or
- (g) Damage to the Owner or a third party to whom the Owner is, or may be, liable

6.3 Completion and Final Payment

6.3.1 When all of the work is finally complete and the Contractor is ready for a final inspection, Contractor shall notify the Owner in writing. Thereupon, the Owner will make final inspection of the work and, if the work is complete in compliance with this Contract and this Contract has been fully performed, then the Contractor will promptly issue a final Application for Payment certifying to the Owner that the Project is complete and the Contractor is entitled to the remainder of the unpaid Contract Price, less any amount withheld pursuant to this Contract. Contractor will return Exhibit "C" of the contract to the Purchasing Manager at 25 Justice Way, Suite 2223, Dawsonville, Georgia 30534 at time of final Application for Payment.

6.3.2 The Contractor shall not be entitled to final payment unless and until the Contractor submits to the Purchasing Department an affidavit that all payrolls, invoices for materials and equipment, and other liabilities connected with the work for which the Owner or the Owner's property might be responsible, have been fully paid or otherwise satisfied; releases and waivers of lien from all Subcontractors of the Contractor and of any and all other parties required by the Project Manager or the Owner; and consent of the Surety to final payment. If any third party fails or refuses to provide a release of claim or waiver of lien as required by the Owner, the Contractor shall furnish a bond satisfactory to the Owner to discharge any such lien or indemnify the Owner from liability.

6.3.3 The Owner shall make final payment of all sums due the Contractor within thirty (30) days of the Project Manager's execution of a final Certificate for Payment.

6.3.4 Acceptance of final payment shall constitute a waiver of all claims against the Owner by the Contractor except for those claims previously made in writing against the Owner by the Contractor, pending at the time of final payment, and identified in writing by the contractor as unsettled at the time of its request for final payment, as attested to in Exhibit "C" of the contract.

6.3.5 Payment shall be made at the unit rates as set out in the Pricing Schedule submitted by the Contractor for the Work for the quantities actually installed into the Work except as follows:

- (a) There are no exceptions.

ARTICLE VII

THE OWNER

7.1 Information, Services and Things Required From Owner

7.1.1 The Owner shall furnish to the Contractor, at the time of executing this Contract, any and all written and tangible material in its possession that are necessary to facilitate the completion of this project in a timely manner, if any.

7.1.2 Excluding permits and fees normally the responsibility of the Contractor, the Owner shall obtain all approvals, easements, and the like required for construction.

7.1.3 The Owner shall furnish the Contractor, free of charge, three copies of the Contract Documents for execution of the Work.

7.2 Right to Stop Work

7.2.1 If the Contractor fails or refuses to perform the work in accordance with this Contract, the Owner may order the Contractor to stop the work, or any described portion thereof, until the cause for stoppage has been corrected, no longer exists, or the Owner orders that work be resumed. In such event, the Contractor shall immediately obey such order. The stop work order referenced herein must be in writing and must specify in detail the alleged failure of the Contractor in accordance with the contract documents.

7.3 Owner's Right to Perform Work

7.3.1 If the Contractor's work is stopped by the Owner under Paragraph 7.2 and the Contractor fails within seven (7) days of such stoppage to provide adequate assurance to the Owner that the cause of such stoppage will be eliminated or corrected, then the Owner may, without prejudice to any other rights or remedies the Owner may have against the Contractor, proceed to carry out the subject work. In such a situation, an appropriate Change Order shall be issued deducting from the Contract Price the cost of correcting the subject deficiencies, plus compensation for the Project Manager's additional services and expenses necessitated thereby, if any. If the unpaid portion of the Contract Price is insufficient to cover the amount due the Owner, then the Contractor shall pay the difference to the Owner.

ARTICLE VIII

THE CONTRACTOR

8.1 The Contractor shall perform the work strictly in accordance with this Contract.

8.2 The Contractor shall supervise and direct the work using the Contractor's best skill, effort and attention. The Contractor shall be responsible to the Owner for any and all acts or omissions of the Contractor, its employees, subcontractors, and others engaged in the work on behalf of the Contractor.

8.3 Warranty

8.3.1 The Contractor warrants to the Owner that all labor furnished to progress the work under this Contract will be competent to perform the tasks undertaken, that the product of such labor will yield only first-class results, that materials and equipment furnished will be of good quality and new unless otherwise permitted by this Contract, and that the work will be of good quality, free from faults and defects and in strict conformance with this Contract. All work not conforming to these requirements may be considered defective. This project shall have a one (1) year warranty on workmanship, equipment and software.

8.4 The Contractor shall obtain and pay for all permits, fees and licenses necessary and ordinary for the work. The Contractor shall comply with all lawful requirements applicable to the work and shall give and maintain any and all notices required by applicable law pertaining to the work.

8.5 Supervision

8.5.1 The Contractor shall employ and maintain at the Project site only competent supervisory personnel. Absent written instruction from the Contractor to the contrary, the superintendent shall be deemed the Contractor's authorized representative at the site and shall be authorized to receive and accept any and all communications from the Owner.

8.6 Cleaning the Site and the Project

8.6.1 The Contractor shall keep the site reasonably clean during performance of the work as stipulated in the IFB document. Upon final completion of the work, the Contractor shall clean the site and the Project and remove all waste, together with all of the Contractor's property.

8.7 Access to Work

8.7.1 The Owner and the Project Manager shall have access to the work at all times from commencement of the work through final completion. The Contractor shall take whatever steps necessary to provide access when requested.

8.8 Indemnity

8.8.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner from and against liability, claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from performance of the work, provided that such liability, claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable.

8.8.2 In claims against any person or entity indemnified under this Paragraph 8.8 by an employee of the Contractor, a Subcontractor, any one directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph 8.8 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE IV

CONTRACT ADMINISTRATION

9.1 Administration

9.1.1 The Dawson County Project Manager shall be the Owner's representative from the effective date of this Contract until final payment has been made for work site operations. Any and all change orders must be submitted through the Dawson County Project Manager to the County Manager. Acceptance of the change order will be reflected on the project purchase order issued by the Purchasing Manager.

9.1.2. The Owner and the Contractor shall communicate with each other in the first instance through the Project Manager for all site work.

9.1.3 The Owner's Representative shall be the initial interpreter of the requirements of the drawings and specifications and the judge of the performance by the Contractor.

9.1.4 The Owner's Representative shall have authority to reject work that is defective or does not conform to the requirements of this Contract.

9.1.5 The Owner's Representative will review the Contractor's Applications for Payment and will certify those amounts then due the Contractor as provided in this Contract.

9.1.6 The Owner's Representative, shall, upon request from the Contractor, conduct inspections to determine the date of final completion, will receive records, written warranties and related documents required

by this contract and will issue a final Certificate for Payment upon compliance with the requirements of this Contract.

9.2 Claims by the Contractor

9.2.1 All Contractor claims shall be initiated by written notice and claim to the Owner attention the Purchasing Department. Such written notice and claim must be furnished within seven (7) days after occurrence of the event or the first appearance of the condition giving rise to the claim.

9.2.2 Pending final resolution of any claim of the Contractor, the Contractor shall diligently proceed with performance of this Contract and the Owner shall continue to make payments to the Contractor in accordance with this Contract. The resolution of any claim under this paragraph 9.3 shall be reflected by a Change Order executed by the Owner and the Contractor.

9.2.3 *Claims for Concealed and Unknown Condition* - If concealed and unknown conditions are encountered in the performance of the Work (a) below the surface of the ground or (b) in an existing structure be at variance with the conditions indicated by this Contract or if unknown conditions of an unusual nature differing materially from those ordinarily encountered in the area and generally recognized as inherent in the Work of the character provided for in this contract be encountered, then the Contract Price shall be equitably adjusted by Change Order upon the written notice and claim by either party made within seven days after the first observance of the condition. As a condition precedent to the Owner having any liability to the Contractor for concealed or unknown conditions, the Contractor must give the Owner written notice of, and an opportunity to observe, the condition prior to disturbing it. The failure by the Contractor to make the written notice and claim as provided in this Subparagraph shall constitute a waiver by the Contractor of any claim arising out of or relating to such concealed or unknown condition.

9.2.4 Claims for Additional Costs

9.2.4.1 If the Contractor wishes to make a claim for an increase in the Contract Price, then as a condition precedent to any liability of the Owner, the Contractor shall give the Owner written notice of such claim within seven days after the occurrence of the event or the first appearance of the condition giving rise to such claim. Such notice shall be given by the Contractor before proceeding to execute any additional or changed Work. The failure by the Contractor to give such notice and to give such notice prior to executing the Work shall constitute a waiver of any claim for additional compensation.

9.2.4.2 In connection with any claim by the Contractor against the Owner for compensation in excess of the Contract Price, any liability of the Owner for the Contractor's costs shall be strictly limited to direct costs incurred by the Contractor and shall in no event include indirect costs or consequential damages of the Contractor. The Owner shall not be liable to the Contractor for claims of third parties, including Subcontractors, unless and until liability of the Owner has been established in a court of competent jurisdiction.

9.2.5 Claims for Additional Time

9.2.5.1 If the Contractor is delayed in progressing any task, which at the time of delay is then critical or which during the delay becomes critical, as the sole result of any act or neglect to act by the Owner or someone acting on the Owner's behalf or by changes ordered in the work, unusual delay in transportation, unusually adverse weather conditions not reasonably anticipated, fire or any causes beyond the Contractor's control, then the date for achieving completion of the work shall be extended upon the written notice and claim of the Contractor to the Owner's Representative for such reasonable time as the Owner's representative may determine. Any notice and claim for an extension of time by the Contractor shall be made not more than fifteen (15) days after the occurrence of the event or the first appearance of the condition giving rise to the

claim and shall set forth in detail the Contractor's basis for requiring additional time in which to complete the Project.

9.2.6 *Claims for Weather Delays*

9.2.6.1 Claims for weather delays shall not be considered unless work is not feasible for more than one-half of a day due to weather conditions. Claims for weather delays shall not be considered for Sundays unless the Contractor consistently works on Sundays prior to the claim. Weather Days are to be turned in within four weeks of the occurrence.

ARTICLE X

CHANGES IN THE WORK

10.1 **Changes Permitted**

10.1.1 Changes in the work within the general scope of this Contract consisting of additions, deletions, revisions, or any combination thereof may be ordered without invalidating this Contract by Change Order. Change Orders are to be processed through the Dawson County Project Manager with the County Manager's signature required as authorization. All Change Orders must be processed by the County Purchasing Manager on the issued Project Purchase Order for record.

10.1.2 Changes in the work shall be performed under applicable provisions of this Contract and the Contractor shall proceed promptly with such changes.

10.2 **Change Order Defined**

10.2.1 Change Order shall mean a written order to the Contractor executed by the Owner, issued after execution of this Contract, authorizing and directing a change in the work or an adjustment in the Contract Price or the Contract Time. The Contract Price and the Contract Time may be changed only by Change Order. Acceptance of the change order will be reflected on the project purchase order issued by the Purchasing Manager.

10.3 **Changes in the Contract Price**

10.3.1 Any change in the Contract Price resulting from a Change Order shall be determined as follows: (a) by mutual agreement between the Owner and the Contractor as evidenced by (1) the change in the Contract Price being set forth in the Change Order, (2) such change in the contract Price, together with any conditions or requirements related thereto, being initialed by both parties and (3) the Contractor's execution of the Change Order, or (b) if no mutual agreement occurs between the Owner and the Contractor, then as provided in Subparagraph 10.3.2 below. Acceptance of the change order will be reflected on the project purchase order issued by the Purchasing Manager.

10.3.2 If no mutual agreement occurs between the Owner and the contractor as contemplated in Subparagraph 10.3.1 above, the change in the Contract Price, if any, shall then be determined by the Owner on the basis of the reasonable expenditures or savings of performing, deleting or revising the work attributable to the change, including, in the case of an increase or decrease in the Contract Price, a reasonable allowance for direct job site overhead and profit. In such case, the Contractor shall present, in such form and with such content as the Owner requires, an itemized accounting of such expenditures or savings, plus appropriate supporting data for inclusion in a Change Order.

10.3.3 If unit prices are provided in the Contract and if the quantities contemplated are so changed in a proposed Change Order that application of such unit prices to the quantities of Work proposed will cause

substantial inequity to the Owner or to the Contractor, then the applicable unit prices shall be equitably adjusted.

10.4 Notice to Surety; Consent

10.4.1 The Contractor shall notify and obtain the consent and approval of the Contractor's surety with reference to all Change Orders if such notice, consent and approval are required by the Contractor's surety or by law. The Contractor's execution of the Change Order shall constitute the Contractor's warranty to the Owner that the surety has been notified of and consents to, such Change Order and the surety shall be conclusively deemed to have been notified of such Change Order and to have expressly consented thereto.

ARTICLE XI

CONTRACT TERMINATION

11.1 Termination by the Contractor

11.1.1 If the work is stopped for a period of ninety (90) days by an order of any court or other public authority or as a result of an act of the Government, through no fault of the Contractor or any person or entity working directly or indirectly for the Contractor, the Contractor may, upon ten (10) days' written notice to the Owner, terminate performance under this contract and recover from the Owner payment for the actual reasonable expenditures of the Contractor for all work executed.

11.1.2 If the Owner shall persistently or repeatedly fail to perform any material obligation to the Contractor for a period of thirty (30) days after receiving written notice from the Contractor of its intent to terminate hereunder, then the Contractor may terminate performance under this Contract by written notice to the Owner. In such event, the Contractor shall be entitled to recover from the Owner as though the Owner had terminated the Contractor's performance under this Contract for convenience pursuant to Subparagraph 11.2.1.

11.2 Termination by the Owner

11.2.1 *for Convenience*

11.2.1.1 The Owner may for any reason whatsoever terminate performance under this Contract by the contractor for convenience. The Owner shall give written notice of such termination to the Contractor specifying when termination becomes effective.

11.2.1.2 The Contractor shall incur no further obligations in connection with the work and the Contractor shall stop work when such termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The Owner may direct the Contractor to assign the Contractor's right, title and interest under terminated orders or subcontracts to the Owner or its designee.

11.2.1.3 The Contractor shall transfer title and deliver to the Owner such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Contractor has.

11.2.1.4

The Contractor shall submit a termination claim to the Owner specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the Owner. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, then the Owner shall pay the Contractor an amount derived in accordance with subparagraph (b) below.

- (a) The Owner and the Contractor may agree to the compensation, if any, due to the Contractor hereunder.
- (b) Absent agreement of the amount due to the contractor, the Owner shall pay the Contractor the following amounts:
 - i. Contract prices for labor, materials, equipment and other services accepted under this Contract;
 - ii. Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for overhead and profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it appears that the Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included, and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;
 - iii. Reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Subparagraph 11.2.1.2 of this Paragraph. These costs shall not include amounts paid in accordance with other provisions hereof;
 - iv. The total sum to be paid the Contractor under this Subparagraph 11.2.1 shall not exceed the total Contract Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

11.2.2 *for Cause*

11.2.2.1 If the Contractor persistently or repeatedly refuses or fails to prosecute the work in a timely manner, supply enough properly skilled workers, supervisory personnel or proper equipment or materials, or it fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a material provision of this Contract, then the Owner may by written notice to the Contractor, without prejudice to any other right or remedy, terminate the employment of the contractor and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the work by whatever methods it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished.

11.2.2.2 If the unpaid balance of the Contract Price exceeds the cost of finishing the work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, then the Contractor shall pay the difference to the Owner. This obligation for payment shall survive the termination of the Contract.

11.2.2.3 In the event the employment of the Contractor is terminated by the Owner for cause pursuant to subparagraph 11.2.2 and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under Subparagraph 11.2.1 and the provisions of Subparagraph 11.2.1 shall apply.

ARTICLE XII

INSURANCE

12.1 Contractor's Insurance Requirements

12.1.1 The Contractor shall maintain in full force and effect at all times during the Contract period Comprehensive General Liability and Automobile Insurance in an amount equal to One Million (\$1,000,000.00) Dollars.

12.1.2 The Contractor shall provide to the Owner Certificates of Insurance naming the Owner as additional insured party under the policy or policies of all Insurance as required by Paragraphs 12.1.1 and 12.1.4.

12.1.3 The insurance policy or policies as aforesaid shall provide that thirty (30) days written notice be given to the Owner prior to cancellation thereof.

12.1.4 The Consultant shall maintain in full force and effect at all times during the Contract period Workers' Compensation Insurance as provided by Georgia law in such form as to protect Contractor and the County with the County being named as an additional insured for any claims for damages or bodily injury, including death and damage to property that may arise from acts or omissions of Contractor under this Contract.

12.1.5 Contractor agrees to protect, defend, indemnify and hold harmless the County, the County's commissioners, agents and employees from and against any liability, damage, claim, including attorney fees and expenses of litigation, suit, lien, and judgment for injuries to or death of any person or damage to property or other rights of any person caused by the Contractor, the Contractor's employees, servants, agents or subcontractors. The Contractor's obligation to protect, defend, indemnify, and hold harmless extends to any claim for the alleged infringement of any patent, trademark, copyright, or any actual or alleged unfair competition, disparagement of product or service, or other business tort or any actual or alleged violation of trade regulations arising out of the performance of Contractor's duties in accord with this Contract, as well as any other claim. The Contractor shall maintain worker's compensation and comprehensive general liability insurance in such form as to protect Contractor and the County with the County being named as an additional insured for any claims for damages or bodily injury, including death and damage to property that may arise from acts or omissions of Contractor under this Contract.

ARTICLE XIII

MISCELLANEOUS

13.1 Governing Law

13.1.1 This Agreement is to be governed by the law of the State of Georgia and venue for any dispute shall be Dawson County, Georgia

13.2 Successors and Assigns

13.2.1 The Owner and Contractor bind themselves, their successors, assigns and legal representatives to the other party hereto and to successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in this Contract. The Contractor shall not assign this Contract without written consent of the Owner.

13.3 Surety Bonds

13.3.1 The Contractor shall furnish separate payment and performance bonds, Exhibits "D" and "E", to the Owner. Each bond shall set forth a penal sum in an amount not less than the contract Price. Each bond

furnished by the Contractor shall incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in such bonds. In the event the Contract Price is adjusted by Change Order executed by the Contractor, the penal sum of both the payment bond and the performance bond shall be deemed increased by like amount. The payment and performance bonds furnished by the Contractor shall be in form suitable to the Owner and shall be executed by a surety, or sureties, reasonably suitable to the Owner.

13.4 Severability

13.4.1 The parties agree that each of the provisions included in this Agreement is separate, distinct and severable from the other and remaining provisions of this Agreement, and that the invalidity of any provision shall not affect the validity of any other provision of this Agreement.

13.5 Merger

13.5.1 The parties agree that the terms of this Agreement, include the entire Agreement between the parties and that no other representation either oral or written may be used to contradict the terms of this Agreement. If there is any conflict between the terms of the contract documents, the latter shall prevail and take precedence.

13.6 Confidential Information

13.6.1 While performing services for the Owner, the Contractor shall not disclose any confidential business information that may become known to the Contractor. Personnel acting on behalf of the Contractor shall be instructed to not remove any of the Owner's documents or materials and to not disclose any confidential information to any persons other than Owner personnel, unless written authorization from the Owner is provided.

13.6.2 All documents and materials prepared pursuant to the IFB and this Contract shall be the property of Dawson County. The Owner shall have the unrestricted authority to publish, disclose, distribute and otherwise use, in whole or in part, any reports, data, maps, or other materials prepared in accord with the terms of this Contract and Agreement.

13.7 Litigation and Arbitration

13.7.1 The Owner and the Contractor agree to resolve through negotiation, mediation or arbitration any disputes between the parties arising out of or relating to this Contract and Agreement. If the parties do not resolve the dispute through negotiation and do not agree to mediation, then arbitration shall be the exclusive and final method of resolving any disputes related to this agreement. Arbitration proceedings shall be in accord with O.C.G.A. § 9-9-1, the Georgia Arbitration Code. Venue for any litigation arising for arbitration shall be the Superior Court of Dawson County, Georgia. A demand for arbitration shall be made within a reasonable term after the claim, dispute or other matter in question occurs but, not later than one-hundred eighty (180) days after such claim, dispute or other matter.

13.8 Condition Precedent – Litigation

13.8.1 This Contract shall be governed by the Laws of the State of Georgia. The Consultant hereby agrees that as a condition precedent to the filing of any legal action against the Owner arising out of or related to this Agreement, the Consultant shall first provide the Owner thirty (30) days' written notice of its intent to file such

action. Such notice shall include an identification of the anticipated parties to the action and a description of all anticipated claims and causes of action to be asserted.

13.9 Term of Agreement

13.9.1 The term of a Contract awarded as a result of the IFB shall be from the time the Proposal is awarded until delivery and acceptance of the work solicited by Dawson County.

13.10 Multi-year Contract

13.10.1 This Contract and Agreement shall not be eligible for a multi-year contract term.

13.10.2 This Contract shall terminate immediately and absolutely at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the County under the terms of this Contract or any renewal.

13.11 Notices

13.11.1 Any notice to be given in accord with the terms hereof may be affected either by personal delivery, by registered or certified mail, postage prepaid with return receipt requested, or by recognized overnight delivery service. This Agreement and any documents relating to it may be executed and transmitted to the parties listed below by electronic mail, which electronic mail shall be deemed to be, and utilized in all respects as, an original, wet-inked manually executed document when both parties have executed their part in blue ink. Notice shall be delivered as follows:

Owner:

Consultant:

Dawson County Board of Commissioner

Attn: Melissa Hawk

Attn:

25 Justice Way, Suite 2223

Dawsonville, GA 30534

Phone: 706-344-3500 x.42223

Email: mhawk@dawsoncounty.org

IN WITNESS WHEREOF, the Undersigned have set their hands and seals on the day and date appearing below the signatures of their authorized representatives.

OWNER:
DAWSON COUNTY, GEORGIA

CONTRACTOR:

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Attest:

Attest:

By: _____

By: _____

Name: _____

Name: _____

Title: County Clerk

Title: _____

EXHIBIT "A"

SCOPE OF WORK

Contractor to provide all work as depicted in each section listed in the RFP, including any and all amendments released during the solicitation period.

Contractor must provide all equipment, materials and labor to complete the scope of work. The awarded Proposer will ensure that all Georgia Laws, Rules, Regulations and Codes, to include but not limited to, the General Contractors Official Code of Georgia Sections 43-41-1 through 43-41-17, Public Works Official Code of Georgia Title 36, Dawson County Planning and Development, Codes and Regulations, Building and Development Codes and the Georgia Department of Community Affairs, Georgia's Construction Codes (<http://www.dca.state.ga.us/development/constructioncodes/programs/codes2.asp>) and all NFPA related regulations and codes are strictly adhered to where appropriate to the scope of work within this RFP document. Specific areas of work for this project shall be in accordance with all applicable, national, state and local codes to include, but not limited to the following:

- Americans with Disabilities Act (ADA) and ANSI A117.1
- International Building Code (IBC)
- National Electric Code (NEC) and NFPA 70
- Local Governing Codes and Standards to include the Local Authority having Jurisdiction (AHJ)
- National Fire Protection Association, National Electrical Code (NFPA 70)
- National Fire Protection Association Life Safety Code (NFPA 101)
- Underwriters Laboratories Applicable Standards (UL) including 60950, E218113, 294, and PB4982
- IEEE802.3 and IETF Standards
- EN 55022 ITE (1994), EN 55024 Immunity Standard (1998), CFR47 Part 15B (1995)
- Power over Ethernet Standard 802.3AF and 802.3AT
- H.264 Standard ISO 14496-4 & 14496-10
- The hardware manufacturer shall be an ISO 9001:2000 registered company

All design/management plans will be approved by the County staff prior to beginning any ground work.

Contractor to provide all work and follow all direction as depicted in each section of the Drawings. This document will be known as Security Systems Upgrade Drawings Attachment "A". Contractor to provide all work and follow all directions as depicted in each section of the specifications. This document will be known as Security Systems Upgrade Specifications Attachment "B". The index for the Attachment "B" is as follows. Contractor to provide all work and follow all direction as depicted in each section of the system description. This document will be known as Security Systems Upgrade System Index Attachment "C".

DAWSON COUNTY SPECIFICATION INDEX – ATTACHMENT B

ELECTRICAL

SECTION NUMBER	SECTION NAME
260500	GENERAL - ELECTRICAL
260513	CONDUCTORS AND RACEWAYS
260515	WIRING DEVICES
260523	OUTLET BOXES AND JUNCTION BOXES
260526	GROUNDING AND BONDING
260529	SUPPORTS
260533	CONDUIT AND RACEWAY

COMMUNICATIONS (VOICE/DATA/COAX/FIBER)

SECTION NUMBER	SECTION NAME
270000	GENERAL - TELECOM COMMUNICATIONS
270510	FIRESTOPPING FOR TELECOMM SYSTEMS
270526	GROUNDING FOR TELECOMM SYSTEMS
270528	PATHWAYS FOR TELECOMM SYSTEMS
270543	UNDERGROUND DUCTS & RACEWAYS
270553	IDENTIFICATIONS
270800	COMMISSIONING
271113	ENTRANCE PROTECTION
271119	TERMINATION BLOCKS & PATCH PANELS
271323	FIBER OPTIC BACKBONE
271513	COPPER HORIZONTAL
271523	FIBER OPTIC HORIZONTAL CABLE
271543	FACEPLATES & CONNECTORS
271619	PATCH CORDS & WORK STATION CORDS

272133 WIRELESS ACCESS

ELECTRONIC SECURITY

SECTION NUMBER

SECTION NAME

280000	GENERAL - ELECTRONIC SECURITY
280100	SCOPE OF WORK - SECURITY
280120	TOUCHSCREEN LOCKING CONTROLS
280140	PROGRAMMABLE LOGIC CONTROLLERS
280150	ELECTRONIC RELAY SYSTEM
280200	INTERCOM SYSTEM
280210	CELL MONITORING & INMATE ALARM
280290	VIDEO VISITATION - ALTERNATE
280280	CCTV IP CAMERAS, ACCESS CONTROL
280400	WATCH TOUR
280508	GROUNDING & BONDING
280650	METAL DETECTORS AND PACKAGE SCREENERS - ADD ALTERNATE 2
280710	UPS
280800	SURGE PROTECTION
280900	WIRING METHODS

-End of Exhibit A-

EXHIBIT "B"
PROJECT PRICE PROPOSAL FORM

-End of Exhibit "B"-

EXHIBIT "C"

AFFIDAVIT OF PAYMENT OF CLAIMS

(SUBMIT TO THE PURCHASING MANAGER AT TME OF FINAL INVOICE)

_____ this _____ day of _____,

20_____ appeared before me _____, a Notary

Public, in and for _____, and being by me first duly

sworn states that all subcontractors and suppliers of labor and materials have been paid all sums

due them to date for work performed or material furnished in the performance of the contract

between:

Dawson County Board of Commissioners and _____(Contractor),

last signed _____, 20___ for the Design-Build Services for FIRE SERVICES - STATION 9.

BY: _____

TITLE: _____

DATE: _____

(Seal)

Subscribed and sworn to before the _____ day

of _____, _____

My commission expires on the _____ day

of _____, _____

NOTARY PUBLIC

(Notary Seal)

EXHIBIT "D"
PAYMENT BOND

STATE OF GEORGIA
COUNTY OF DAWSON

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal, (herein after known as "Contractor"), and we _____, as Surety, do hereby acknowledge ourselves indebted and firmly bound and held unto Dawson County, Georgia for the use and benefit of those entitled thereto in the sum of **and _____/100 Dollars** (_____) for the payment of which will and truly to be made, in lawful money of the United States, we do hereby bind ourselves, successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION BOND IS THIS:

WHEREAS, the County has engaged the said Contractor for the sum of _____ **and _____/100 Dollars** (_____) for the **RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM Upgrade for Dawson County**, as more fully appears in a written Agreement bearing the same project title, a copy of which Agreement is by reference hereby made a part thereof.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Contractor and all subcontractors to whom any portion of the work provided for in said Contract is sublet and all assignees of said Contract and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, products, services, or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension of or addition to said Contract, and for the payment of reasonable attorney's fees, incurred by the claimants in suits on this bond, then the above obligation shall be void; otherwise, it shall remain in full force and effect.

HOWEVER, this bond is subject to the following conditions and limitations:

a) Any person, firm or corporation that has furnished labor, products, or supplies for or in the prosecution of the work provided for in said Contract shall have a direct right of action against the Contractor and Surety on this bond, which right of action shall be asserted in a proceeding, instituted in the county in which the work provided for in said Contract is to be performed or in any county in which Contractor or Surety does business. Such right of action shall be asserted in proceedings instituted in the name of the claimant or claimants for his or their use and benefit against said Contractor and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.

b) The Principal and Surety hereby designate and appoint _____ as the agent of each of them to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this bond and hereby consent that such service shall be the same as personal service on the Contractor and/or Surety.

c) In no event shall the Surety be liable for a greater sum than the penalty of this bond or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said contract.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. Sections 36-10-1 et seq and 36-91-50 et seq and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOFF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, but its duly authorized officers, on this _____ day of _____, _____ Executed in two (2) counterparts.

CONTRACTOR:

Company

Print Authorized Representative

Signature

Title

Title: _____

(Seal)

Signed, sealed and delivered
in the presence of:

1. _____

2. _____

-Payment Bond to Follow-

EXHIBIT "E"
PERFORMANCE BOND

STATE OF GEORGIA
COUNTY OF DAWSON

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal, (herein after known as "Contractor"), and we _____, as Surety, do hereby acknowledge ourselves indebted and firmly bound and held unto Dawson County, Georgia for the use and benefit of those entitled thereto in the sum of **and _____/100 Dollars** (_____) for the payment of which will and truly to be made, in lawful money of the United States, we do hereby bind ourselves, successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION BOND IS THIS:

WHEREAS, the County has engaged the said Contractor for the sum of _____ **and _____/100 Dollars** (_____) for the **RFP #377-21 CONSTRUCTION SERVICES - COMPREHENSIVE SECURITY SYSTEM Upgrade for Dawson County**, as more fully appears in a written Agreement bearing the same project title, a copy of which Agreement is by reference hereby made a part thereof.

NOW, THEREFORE, if a said Contractor shall fully and faithfully perform all the undertakings and obligations under the said agreement or contract herein before referred to and shall fully indemnify and save harmless the said Owner from all costs and damage whatsoever which it may suffer by reason of any failure on the part of said Contractor to do so, and shall fully reimburse and repay the said Owner such default, and shall guarantee all products and workmanship against defects for a period of one year, then this obligation or bond shall be null and void, otherwise, it shall remain in full force and effect.

And for value received it is hereby stipulated and agreed that no change, extension of time, alteration or addition to the terms of the said Agreement or Contract or in the work to be performed thereunder, or the Specifications accompanying the same shall in any way affect the obligations under this obligation or bond, and notice is hereby waived of any such change extension of time, alteration or addition to the terms of the Agreement or Contract or to the work or to the Specifications.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. Sections 36-10-1 et seq and 36-91-50 et seq and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOFF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, but its duly authorized officers, on this _____ day of _____, _____ Executed in two (2) counterparts.

CONTRACTOR:

Company Print Authorized Representative

Signature Title
Title: _____

(Seal)

Signed, sealed and delivered
in the presence of:

- 1. _____
- 2. _____

SURETY:

Surety Print Authorized Representative

Signature Title

Signed, sealed and delivered
in the presence of:

(Seal)

- 1. _____
- 2. _____

-Performance Bond to Follow-

-Certificate of Insurance to Follow-

**RFP #377-21 CONSTRUCTION SERVICES – COMPREHENSIVE SECURITY SYSTEM UPGRADE
REQUEST FOR SUBSTITUTIONS**

To: Melissa Hawk
Purchasing Manager, Dawson County
via mhawk@dawsoncounty.org

From: _____

Specified Item: _____

Specification Section No. _____ Page No. _____ Article and/or Paragraph No. _____

Proposed Substitute: _____

Manufacturer: _____

Deviation from specified item (attach complete supporting documents):

Changes in work necessary to permit use of this proposed substitution:

Effect in Construction Schedule (attach explanation):

Change in Cost (attach breakdown): _____

Local Representative and Phone No.: _____

The undersigned, after thorough and careful review of the Project Requirements, does hereby certify that this proposed substitution is equal or better in every significant respect to that required and that it will perform adequately. I further waive recovery of additional payment or time that I may subsequently consider necessary because of the failure of the substitute to perform adequately, or for coordination with project requirements.

Signature

Title

Printed Name

Date

The following information should accompany this form:

- a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
- b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
- c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
- h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project, from ICC, IBC, and NFPA.
- j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

REMINDER: NO CORESPONDENCE IS TO BE DELIVERED DIRECTLY TO THE ARCHITECT/ENGINEER OR ANY DAWSON COUNTY STAFF OUTSIDE OF THE DAWSON COUNTY PURCHASING OFFICE. DOING SO WILL RESULT IN YOUR BID SUBMISSION BEING DISQUALIFIED FROM EVALUATION.

THIS DOCUMENT AND ALL QUESTIONS ARE TO BE SENT TO MELISSA HAWK, DAWSON COUNTY PURCHASING MANAGER VIA EMAIL TO mhawk@dawsoncounty.org SAME SHALL BE RECEIVED NO LATER THAN THE DATE AND TIME LISTED ON PAGE 3 OF THE INVITATION FOR BID DOCUMENT.