To: ALL BIDDERS

Ref: **NEW RIVER C & TC – GHENT ATC RENOVATION**

Subj.: ADDENDUM BULLETIN NO. 4

This Addendum Bulletin shall be incorporated in the Construction Documents including the Drawings and Specifications for the Project referenced above. All work amended as listed herein shall be included in your Bid Proposal and the bidder shall acknowledge this addendum bulletin on the Bid Form. The work shall be amended as follows:

SPECIFICATIONS

1. **00300 Form of Proposal:** REPLACE section in its entirety, see Enclosures.

2. **012300 Alternates:** REPLACE section in its entirety, see Enclosures.

3. **280513 Conductors and Cables for Electronic Safety and Security:** ADD section in its entirety, see Enclosures.

DRAWINGS:

1. **C-3.0:** REPLACE sheet in its entirety, see Enclosures. Updates have been tagged. Revisions related to Add Alternate #03, security gates.

2. **C-3.1:** REPLACE sheet in its entirety, see Enclosures. Updates have been tagged. Revisions related to Add Alternate #03, security gates.

3. **MP-1.1r:** REPLACE sheet in its entirety, see Enclosures. Updates have been clouded and tagged. Revisions related to exterior AHUs.

4. **E-1.1:** REPLACE sheet in its entirety, see Enclosures. Updates have been clouded and tagged. Revisions related to camera layout.

5. **E-2.1r:** REPLACE sheet in its entirety, see Enclosures. Updates have been clouded and tagged. Revisions related to gate and sign circuits.

6. **E-3.1r:** REPLACE sheet in its entirety, see Enclosures. Updates have been clouded and tagged. Revisions related to power for exterior AHUs.

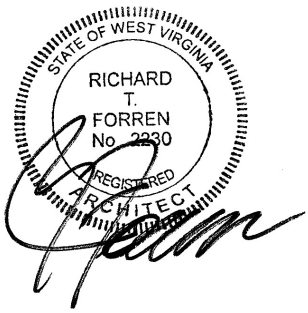
7. **E-3.2:** REPLACE sheet in its entirety, see Enclosures. Updates have been clouded and tagged. Revisions related to camera risers.

FOR CLARIFICATION:

a. N/A

END OF ADDENDUM

Submitted by:
THE OMNI ASSOCIATES – ARCHITECTS, INC.



Richard T. Forren, AIA
Principal

Enclosures:

A Bid Phase RFI Log
B Form of Proposal
C Alternates
D C3.0
E C3.1
F MP-1.1r
G E-1.1
H E-2.1r
I E-3.1r
J E-3.2
K Conductors and Cables for Electronic Safety and Security

New River ATC Renovation Bid Phase PBI Report

OMNI ARCHITECTS

Question	Response	In Addendum
Per drawing page 10/ C-5.2. Heavy-Duty Asphalt calls for 4" of Base I asphalt. Typical Asphalt calls for 3" of Base I asphalt. Per DOH handbook Base I can only be laid at a minimum of 3.25" Can 25mm Superpave be replaced for both applications? The range of 25mm is 3" to 4" minimum to maximum.	Yes, using the 25mm Superpave for the base on both applications will be acceptable.	2
4.What are the requirements for the Alt#2 Monument Sign? Spec section 012300-3.1 references sheets C-3.0 and A-8.1, which neither exist in the drawing set.	Both drawings C-3.0 and A-8.1 are in the Bid Drawings. Please clarify.	3
Could a Floor Plan and Finish Schedule be provided?	Drawings were provided in the Bid Drawings.	3
Where is the closest panel for EWC?	Refer to revised Sheet E-3.1R in Enclosures.	3
What brand of electrical panels are in the building?	GE. Contractor to confirm.	3
Who is the manufacturer of the door access equipment?	BOD is Lenel access control system.	3
Who is the manufacturer of the fire alarm panel?	Honeywell	3
Where is the existing IT room(s) for cameras, fire alarm, and door access?	See attached sheet A-1.1 for location of IT Room and Utility Closet. IT room to host cameras and door access. Utility room to host fire alarm.	3
E03 Cast Aluminum Signage. Please provide specification detail.	See spec 101419 Dimensional Letter Signage in Enclosures.	3
Plan Sheet C3.0 indicates removal of the existing sidewalk at the front of the building and installation of a new sidewalk at the vestibule. Please confirm what is to be installed in the area where the existing sidewalk is removed.	Removed sidewalk depicted shall be replaced with new concrete sidewalk with the exception of the new vestibule area.	3
The typical gravel section on Plan Sheet C5.2 indicates compacted subgrade, 4" of excavated material from existing gravel areas, and 4" of WVDOH Type 1 crushed aggregate base course. Note 1 states that existing gravel areas are to be excavated 8" and replaced per the section detail. Please confirm if the top 4" of WVDOH Type 1 is to be new stone.	Confirmed. 8" of material to be excavated. Lower bottom 4" can be recompacted excavated material; top 4" should be new stone.	3
Due to the petroleum market unstable pricing this year, (which includes asphalt) will there be an allowance for cost escalation of materials?	A price escalation/de-escalation on asphalt material will be acceptable. This cost fluctuation will be reflective of the price difference based on the month of the material purchase/installation as compared to the bid price. This change in price will directly correlate to the of the change in asphalt pricing as depicted on the WVDOH website: https://transportation.wv.gov/highways/contractadmin/Lettings/Pages/FuelandAsphaltPrices.aspx The cost escalation/de-escalation will be applied comparing the costs on the WVDOH website and then have that difference added to, or subtracted from, the contractor's bid price.	3
Sheet S001 Note 19 calls for the steel fabricator to be AISC Certified. Can this requirement be waived?	It is OK to delete that requirement.	4
Reference Spec Section 282113 and Sheet E-1.1 : Could it be clarified which camera types are associated together between specs and drawing plan notes?	See updated E-1.1 in Enclosures.	4
The cabling lengths for the three cameras to be installed are in excess of the maximum allowable distance (300') for Cat6 cable. Is there an additional telecom room that accommodate the cameras that are too far from IT room 102?	Contractor to coordinate with Architect & Owner to select location appropriate for fiber requirements without interfering with current building program requirements.	4
What are the fiber requirements for the gate mentioned on Sheet E2.01?	This question has already been answered.	4
Drawings state to replace and match slide gate with operators. What type of fence and how tall are the gate openings?	Contractors to verify fencing prior to bid submission.	4
3.What are the fiber requirements for the gate mentioned on sheet E2.01?	See updated E-2.1r in Enclosures.	4
2.Where is the data rack that the cameras and security doors are being fed from? A drawing with the location would be preferable.	Main data rack to be placed in IT Room 102.	4

Question	Response	In Addendum
1.Where is the closest panel to pull a circuit from for the new gate? A drawing with the location would be preferable.	To be determined.	4
Sheet A-8.1 shows ground mounted spotlights. Is there a fixture schedule for these lights? & Would this be a part of Alternate #2?	Ground mounted spotlights would be part of Alternate #2. Lithonia DSXF2 or equal.	4
Who supplied the Electric Gates & where is the nearest panel location for each?	Owner unable to provide exact location at this time. Gates to be replaced with Liftmaster CSL24ULWK, see C-3.1 in Enclosures.	4
The downspout detail on Plan Sheet MP-1.1 references "See Civil Plans for Continuation" for the storm drainage connection. However, the civil drawings do not appear to show a corresponding storm drain for these downspouts. Please clarify how the downspouts are to be terminated.	A revised sheet C3.0 has been attached depicting a 4" PVC line daylighted outside of the parking area.	4

SECTION 00300 – FORM OF PROPOSAL REVISED

BID TO THE OWNER: West Virginia Community and Technical College System
2001 Union Carbide Drive, Building 2000
South Charleston, WV 25303

PROJECT: RFB 26244
New River Community and Technical College
Advanced Technology Center Renovation

Bidder's Name: _____

The undersigned, hereinafter called "Bidder," being familiar with and understanding the Bidding Documents, and also having examined the site and being familiar with all local conditions affecting the Project, hereby proposes to furnish all labor, material, equipment, supplies and transportation, and to perform all Work in accordance with the Bidding and Contract Documents within the time set forth below for the sum of:

TOTAL BASE BID:
The Base Bid is the sum of Bid Item #1 + #2 +#3. Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail

For the Sum of: ($_____)

_____
_____
(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

Bid Item No. 1 Base Bid Site Work

For the Sum of: ($_____)

_____
_____
(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

Bid Item No. 2 Building Exterior Upgrades and Painting

For the Sum of: ($_____)

_____
_____
(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

Bid Item No. 3 New Building Entrance and Canopy

For the Sum of: ($_____)

_____

_____

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

The Bidder, if successful and awarded a Contract, agrees that all Work is to be Substantially Complete within two hundred and ten (210) consecutive calendar days following receipt of Owner's written Notice to Proceed and agrees to achieve Final Completion within 30 consecutive calendar days thereafter.

ALTERNATES:
The following Alternates may be added to the Base Proposal if selected by Owner. All work shown on drawings and/or specified is in Base Bid, except for such work specifically called to be an Alternate. Refer to Section 012300 - Alternates.

Alternate No.1 – Additional Site Work

ADD the Sum of: ..... ($_____)

_____

_____

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

Alternate No. 2 – Monument Sign

ADD the Sum of: ..... ($_____)

_____

_____

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

Alternate No. 3 – Security Gates

ADD the Sum of: ..... ($_____)

_____

_____

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

Alternate No. 4 – Security Cameras

ADD the Sum of: ..... ($_____)

_____

_____

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

RESPECTFULLY SUBMITTED:

SIGNATURE: _____ DATE: _____
Signature in Ink

NAME: _____ *Corporate Seal if Applicable*
Please Type or Print

TITLE: _____

BIDDERS NAME: _____
BIDDERS ADDRESS: _____

_____

_____

TELEPHONE: _____
EMAIL: _____
CONTRACTOR"S LICENSE NO.: _____

CONTRACTOR'S LICENSE

West Virginia Code §30-42 requires that all persons desiring to perform contractual work in West Virginia must be duly licensed. The West Virginia Contractor Licensing Board is empowered to issue a contractor's license. Application for a contractor's license may be made by contacting the West Virginia Contractor Licensing Board, Building 3, Room 200, 1900 Kanawha Boulevard, East, Charleston, West Virginia 25305. Telephone: (304) 558-7890. West Virginia Code §30-42 requires any prospective Bidder to include the contractor's license number on or with its Bid. Successful Bidder will be required to furnish a copy of their contractor's license prior to issuance of a Purchase Order/Contract.

AFFIDAVITS (on the following pages) – *TO BE SUBMITTED WITH BID OR AS OTHERWISE PERSCRIBED BY LAW*

- PURCHASING AFFIDAVIT: West Virginia code §5A-3-10A states that no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than $1,000 in the aggregate. The Bidder (vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Purchasing Affidavit provided in the Bidding Documents.

- DRUG-FREE WORKPLACE CONFORMANCE AFFIDAVIT: West Virginia Code §21-1D-5 requires each contractor that submits a bid for the work to submit an affidavit that the contractor has a written plan for a drug-free workplace policy prior to being awarded a contract. The contractor (bidder/vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Drug-Free Workplace Conformance Affidavit provided in the Bidding Documents.

CERTIFIED DRUG-FREE WORKPLACE REPORT

In accordance with West Virginia Code §21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract. That report must include each of the items identified in the Required Report Content section of the Certified Drug-Free Workplace Report Coversheet.

DISCLOSURE OF INTERESTED PARTIES TO CONTRACTS

Pursuant to West Virginia Code §6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of $1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

The Disclosure Form is available at the following URL: http://www.ethics.wv.gov/Pages/forms.aspx

VENDOR REGISTRATION AND DISCLOSURE STATEMENT

The successful Bidder must be a registered vendor with the West Virginia Department of Administration, Purchasing Division, prior to receiving a contract/purchase order. Vendor registration information is available at the following URL: http://www.state.wv.us/admin/purchase/vrc/wv1.pdf

LIQUIDATED DAMAGES

The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time following the date established for commencement of the Work in the notice to proceed and/or purchase order. As liquidated damages, and not as a penalty, the Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum of $ One Thousand Dollars ($1000) per day until Substantial Completion is achieved.

Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. All delays and any claim for extension of Contract Time must be properly documented in accordance with the General Conditions of the Contract for Construction, AIA Document A201-2017, and the State of West Virginia Supplementary Conditions to AIA Document A201-2017.

ADDENDA ACKNOWLEDGMENT

The undersigned hereby acknowledges receipt of the following Addenda and has taken the information contained therein into full consideration in the formulation of this Bid.

Addenda No. 1 _____

No. 2 _____

No. 3 _____

No. 4 _____

Failure to acknowledge receipt of each Addendum may be cause for rejection of the Bid.

SIGNATURE: _____ DATE: _____
Signature in Ink

LIST OF PROPOSED SUBCONTRACTORS
(To Be Completed and Submitted with Bid)

List as designated below the proposed subcontractor for each major branch of work for this bid. Also, provide the subcontractor's license number as required by the West Virginia Contractors Licensing Act. If the branch of work is to be completed solely by the Bidder/Contractor, so indicate. If the acceptance of an alternate bid changes a subcontractor, indicate by notation below. The Bidder/Contractor may be requested to change an unsatisfactory subcontractor. The Bidder/Contractor is responsible for selecting or changing subcontractors. The Owner and Architect/Engineer may indicate their concerns about any entity listed which they have reason to believe past experience indicates that poor performance may be expected. The Bidder/Contractor has full responsibility for satisfactory execution of all work in accordance with the Contract Documents. Any change of proposed subcontractors shall be at no additional cost to the Owner, as the Bidder/Contractor has full responsibility for execution of the work. Bidder/Contractor shall have up to two hours after the bid opening to make adjustments if necessary. Owner will suffer loss should Contractor change from those listed beyond the two-hour time stipulated. Please email adjustments/modifications to Chief Procurement Officer at Barrow.Koslosky@wvhepc.edu

Branch of Work/Material Category	**Subcontractor/Supplier**	**Contractor License No.**
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

END OF FORM OF PROPOSAL
END OF SECTION 00300

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include, as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation, whether or not indicated as part of alternate.

B. Execute accepted alternates under the same conditions as other Work of the Contract.

C. Schedule: A Part 3 "Schedule of Alternates" Article is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

Alternate No. 1: Additional Site Work

The alternate bid includes reworking all existing gravel areas and rebuilding a portion of the area using heavy duty asphalt paving and the remaining areas using the typical gravel section as shown on sheet C3.1. The heavy-duty pavement section is shown on sheet C5.2, and the typical gravel section is shown on sheet C5.2. There is approximately 11,375 square yards of heavy-duty asphalt paving area and approximately 29,975 square yards of gravel section reconstruction in the alternate bid.

Alternate No. 2: Monument Sign

New monument sign at beginning of parking, reference C-3.0 for location and A-8.1 for design elements.

Alternate No. 3: Security Gates

New security gates at the entrance to the property and southeast corner of the building, reference C3.0 & C3.1 for locations.

Alternate No 4: Security Cameras

Security system/cameras, reference E-1.1 Systems Plans for camera locations and E-3.2 for camera riser diagram.

END OF SECTION 012300

LEGEND

- EXISTING STREAM
- EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- EXISTING FENCE LINE
- EXISTING EDGE OF BUILDING
- EXISTING FIBER OPTIC
- EXISTING SANITARY LINE
- EXISTING CULVERT
- EXISTING POND
- PROPOSED HANDICAP PARKING
- PROPOSED EDGE OF PAVEMENT
- PROPOSED PARKING
- PROPOSED GREEN SPACE
- PROPOSED ASPHALT

NOTE: ALL CIVIL ITEMS DEPICTED TO BE INCLUDED IN BASE BID #1

EXISTING GRAVEL AREA TO BE REWORKED ACCORDING TO DETAIL ON SHEET C5.2
APPROXIMATELY 36,350 SY
(EXISTING FENCE WITHIN GRAVEL AREAS NOT TO BE DISTURBED OR DAMAGED)

PROPOSED WHEEL STOPS (5)

1 REMOVE AND DISPOSE AND REPLACE EX. CONCRETE SIDEWALK

PROPOSED BUILDING ADDITION (TYP)

PROPOSED SIDEWALK (TYP)

PROPOSED PAVED PARKING LOT
(TYPICAL ASPHALT PAVEMENT SECTION)
APPROXIMATELY 4,700 SY;
ALL EDGES ADJACENT TO EXISTING PAVEMENT ARE TO TIE INTO EXISTING PAVEMENT

PROPOSED 160 LF OF 4" PVC DOWNSPOUT COLLECTOR @ 2% MINIMUM SLOPE; VARMINT GUARD TO BE INSTALLED ON OUTLET 1

PROPOSED HANDICAP PARKING TO BE RESTRIPED

PROPOSED WHEEL STOPS ALONG OUTSIDE EDGE OF PARKING AREA (43)

EXISTING GRAVEL AREA OUTSIDE OF PROPOSED ASPHALT TO BE RETURNED TO LANDSCAPING OR SEED & MULCHED.

N

50 0 50 100

MICHAEL R. NESTOR
REGISTERED
18467
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
3/9/26

BID DOCUMENTS
03.09.2026

REVISIONS ▼
1. 2026-04-07
2. 2026-05-04

ASCENT Consulting & Engineering

ATC RENOVATION

NEW RIVER COMMUNITY & TECHNICAL COLLEGE
527 Odd Rd.
Ghent, WV 25843

SITE PLAN-BASE BID-BID ITEM #1

OMNI ARCHITECTS

C-3.0

Project No: 2024008.001 Drawn by: DTM

LEGEND

- EXISTING STREAM
- EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- EXISTING FENCE LINE
- EXISTING EDGE OF BUILDING
- EXISTING FIBER OPTIC
- EXISTING SANITARY LINE
- EXISTING CULVERT
- EXISTING POND
- PROPOSED HANDICAP PARKING
- PROPOSED EDGE OF PAVEMENT
- PROPOSED PARKING
- PROPOSED GREEN SPACE
- PROPOSED ASPHALT

NOTE: ALL CIVIL ITEMS DEPICTED TO BE INCLUDED IN ALTERNATIVES

2 REPLACE WITH LIFTMASTER CSL24ULWK SLIDE GATE OPERATOR; OR APPROVED EQUAL (SLIDE GATE TO BE CONSTRUCTED WITH MATERIALS MATCHING THAT OF THE EXISTING FENCE) (ALTERNATIVE #3)

EXISTING GRAVEL AREA TO BE REWORKED ACCORDING TO DETAIL ON SHEET C5.2 APPROXIMATELY 13,250 SY (ALTERNATIVE #1)

REPLACE WITH LIFTMASTER CSL24ULWK SLIDE GATE OPERATOR; OR APPROVED EQUAL (SLIDE GATE TO BE CONSTRUCTED WITH MATERIALS MATCHING THAT OF THE EXISTING FENCE) (ALTERNATIVE #3) 2

PROPOSED WVCTC SIGN TO BE INCLUDED IN ALTERNATIVE #2

PROPOSED PAVED TRAINING AREA (HEAVY DUTY ASPHALT PAVEMENT SECTION) APPROXIMATELY 11,400 SY (ALTERNATIVE #1)

EXISTING GRAVEL AREA TO BE REWORKED ACCORDING TO DETAIL ON SHEET C5.2 APPROXIMATELY 11,820 SY (ALTERNATIVE #1)

REPLACE WITH LIFTMASTER CSL24ULWK SLIDE GATE OPERATOR; OR APPROVED EQUAL (SLIDE GATE TO BE CONSTRUCTED WITH MATERIALS MATCHING THAT OF THE EXISTING FENCE) (ALTERNATIVE #3) 2

N

50 0 50 100

MICHAEL R. NESTOR REGISTERED 18467 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER 3/9/26

BID DOCUMENTS
03.09.2026

REVISIONS ▼
1. 2026-04-07
2. 2026-05-04

ASCENT Consulting & Engineering

ATC RENOVATION

NEW RIVER COMMUNITY & TECHNICAL COLLEGE
527 Odd Rd.
Ghent, WV 25843

SITE PLAN- ALTERNATE BID

OMNI ARCHITECTS

C-3.1

Project No: 2024008.001 Drawn by: DTM

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	CIRCUIT SETTER (GPM INDICATED ON PLANS)
	ROUND FLEXIBLE DUCT (ONLY @ DIFFUSER CONNECTION)
FD	FIRE DAMPER
	MANUAL BALANCING DAMPER
	SUPPLY DUCT RISER
	RETURN OR OUTSIDE AIR DUCT RISER
	EXHAUST AIR DUCT RISER
24"X10"	DUCT SIZE INSIDE DIMENSIONS - 24"W x 10"D
10"ø	DUCT SIZE - 10" DIAMETER
T	THERMOSTAT
H	HUMIDISTAT
	CONNECT TO EXISTING
WG	WIRE GUARD
(EX)	EXISTING
S D	DUCT MOUNT SMOKE DETECTOR
LS	LOOP SUPPLY PIPING
LR	LOOP RETURN PIPING

(2) 1 10"x18" 400

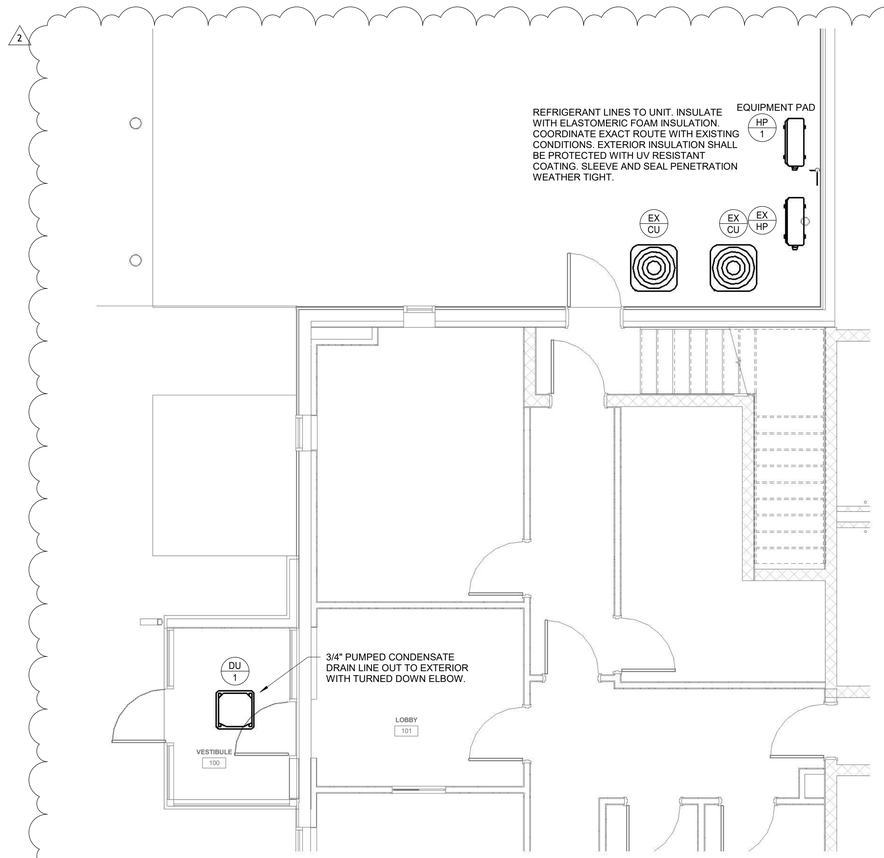
- DIFFUSER SYMBOL-SEE SCHEDULE
- NECK SIZE
- DESIGN CUBIC FEET PER MINUTE OF AIR
- QUANTITY FOR ROOM OR SPACE

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISH FLOOR
BTU	BRITISH THERMAL UNIT
DN	DOWN
GC	GENERAL CONTRACTOR
GPM	GALLON PER MINUTE
NTS	NOT TO SCALE
PC	PLUMBING CONTRACTOR
(TYP)	TYPICAL
VTR	VENT THRU ROOF
W/	WITH
WG	WIRE GUARD
WP	WEATHER PROOF

GENERAL MECHANICAL NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
2. CERTAIN ITEMS SUCH AS RISES AND DROPS IN DUCTWORK, ACCESS DOORS, VOLUME DAMPERS, ETC., ARE INDICATED FOR CLARITY IN CERTAIN AREAS. THIS DOES NOT RELIEVE THE CONTRACTOR OF PROVIDED THESE ITEMS NOT SHOWN IN OTHER AREAS AS REQUIRED FOR A COMPLETE INSTALLATION.
3. REFER TO CLASSROOM CONTROL PANEL DETAIL FOR MOUNTING HEIGHT OF C02 SENSOR, HUMIDITY SENSOR, AND TEMPERATURE SENSOR.
4. ALL DUCTWORK SHALL CLEAR DOORS AND WINDOWS.
5. ALL DUCTWORK DIMENSIONS, AS SHOWN ON DRAWINGS, ARE INTERNAL CLEAR DIMENSIONS. DUCT SIZE SHALL BE INCREASED IN SIZE TO COMPENSATE FOR INTERNAL LININGS.
6. COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL PLANS, LIGHTING, AND OTHER ITEMS LOCATED IN CEILING.
7. LOCATE ALL MECHANICAL EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.
8. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS CONNECTED TO AIR HANDLING UNITS, RTU, EXHAUST FANS, AND OTHER EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION UNLESS NOTED OTHERWISE.
9. RUNS OF FLEXIBLE DUCTWORK SHALL NOT EXCEED 5 FEET.
10. ALL DUCTWORK SHALL BE COORDINATED WITH OTHER TRADES. OFFSETS AND TRANSITIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
11. PROVIDE ACCESS DOORS IN DUCTWORK WHERE REQUIRED.
12. ALL DUCTS SHALL BE GROUNDED ACROSS FLEXIBLE CONNECTIONS WITH FLEXIBLE COPPER GROUNDING STRAPS.
13. SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MOUNTING THE SMOKE DETECTOR IN THE DUCTWORK.
14. CONTROL RELAYS SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND MOUNTING THE RELAY IN THE EQUIPMENT.
15. TURNING VANES SHALL BE INSTALLED IN ALL RECTANGULAR DUCT ELBOWS THAT EXCEED 45° CHANGE IN DIRECTION.
16. INSTALL 1" DUCTLINER IN FIRST 15' OF ALL RETURN AIR DUCTS.



1 PARTIAL HVAC PLAN

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

DUCTLESS UNIT AND CONDENSING UNIT SCHEDULE

INDOOR UNIT							OUTDOOR UNIT					SYSTEM ELECTRICAL					
MARK	MANUFACTURER	MODEL NO.	WEIGHT (LBS.)	CFM	COOLING MBH	HEATING MBH	MARK	MODEL NO.	TON	WEIGHT (LBS.)	SEER2	VOLTAGE	PHASE	FLA	MCA	MOCP	NOTES
DU-1	CARRIER	45MBCAQ12	41	365 CFM	12	12	HP-1	37MAHAQ12	1 TON	100	22.5	208 V	1	12.0 A	15 A	20 A	1, 2

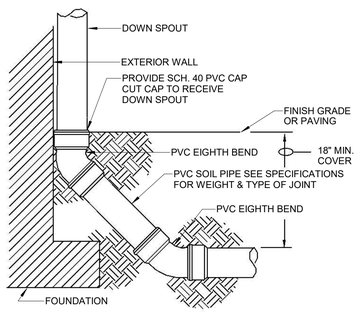
NOTES:
1. HIGH WALL AIR HANDLER SPLIT SYSTEM WITH FILTERS, GRILLE, CONDENSATE PUMP, ELECTRIC HEAT, HARD WIRED WALL MOUNTED THERMOSTAT. 454B REFRIGERANT WITH LEAK DETECTION. LINE SET HIDE AWAY KIT.
2. AIR COOLED CONDENSING UNIT WITH REF LINE, LOW AMBIENT OPERATION, PROGRAMMABLE THERMOSTAT.

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TURN UP OR FROM BELOW		COLD WATER PIPE (CW)
	TURN DOWN		HOT WATER PIPE (HW)
VTR	VENT THRU ROOF	140	(HW) PIPE @140°F
	BALL VALVE		HOT WATER RECIRCULATING (HWC)
	CHECK VALVE	ST	BELOW GRADE STORM DRAIN
	UNION	SAN	SANITARY SEWER
	GAS VALVE	AW	ACID WASTE PIPING
	GAS VALVE IN VERTICAL	AV	ACID VENT PIPING
A	SHOCK ABSORBER, LETTER DESIGNATES SIZE		VENT PIPING
	PRESSURE REGULATING VALVE	G	GAS PIPING
FCO	FLOOR CLEANOUT	WH	WALL HYDRANT
SCO	SURFACE CLEANOUT	RD	ROOF DRAIN
FD	FLOOR DRAIN	FM	FORCE MAIN PIPING
	FLOOR SINK	FP	FIRE PROTECTION PIPING
P-1	FIXTURE DESIGNATION	CD	CONDENSATE DRAIN PIPING
RWC	ABOVE GRADE RAINWATER CONDUCTOR	DSN	DOWNSPOUT NOZZLE
	STRAINER	SRD	SECONDARY ROOF DRAIN
		1	KITCHEN EQUIPMENT NUMBER

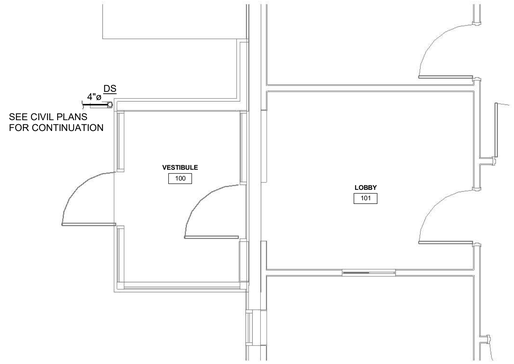
GENERAL PLUMBING NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF INTERNATIONAL PLUMBING CODE & LOCAL AUTHORITIES HAVING JURISDICTION.
2. ALL PIPING IN EXTERIOR WALLS TO BE RUN ON BUILDING SIDE OF INSULATION.
3. PIPING LAYOUT IS SCHEMATIC, EXACT LOCATIONS OF PIPES TO BE COORDINATED WITH BUILDING STRUCTURE AND WORK OF OTHER TRADES.
4. MINIMUM PIPE SLOPE ON THE DRAINAGE AND VENT SYSTEM WITHIN THE BUILDING.
   A. 2" PIPING SHALL SLOPE AT LEAST 1/4" PER FOOT.
   B. ALL PIPE 3" AND LARGER SHALL SLOPE AT LEAST 1/8" PER FOOT.
5. PIPING SHALL NOT BE ROUTED ABOVE ELECTRIC PANELS.
6. COORDINATE PIPING IN TOILET AREAS WITH RECESSED TOILET ACCESSORIES. OFFSET PIPING AS REQUIRED TO ALLOW RECESS OF THESE ITEMS. SEE ENLARGED TOILET PLANS FOR LOCATIONS.
7. NOT ALL PLUMBING FIXTURES, ACCESSORIES AND PIPE SIZES ARE NECESSARILY SHOWN ON THIS DRAWING. REFER TO ALL OTHER SECTIONS, DETAILS, RISERS, PLANS AND SPECIFICATIONS FOR THIS PROJECT FOR COMPLETE SYSTEM REQUIREMENTS.
8. ALL PENETRATIONS THROUGH FIRE/SMOKE RATED CONSTRUCTION WILL BE SEALED WITH A FIRE RATED CAULK EQUAL TO OR EXCEEDING THE CONSTRUCTION FIRE RATING.
9. COORDINATE FINAL LOCATION OF PLUMBING FIXTURES, PIPING, ACCESSORIES, ETC. WITH GENERAL CONTRACTOR BEFORE FABRICATION OR INSTALLATION.
10. COORDINATE ALL PENETRATIONS OF FLOORS, ROOF, WALLS, ETC. WITH GENERAL CONTRACTOR.



DOWNSPOUT DETAIL

NTS



2 PARTIAL DRAINAGE AND VENT PLAN

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

JASON E HARTER REGISTERED PROFESSIONAL ENGINEER 017278 STATE OF WEST VIRGINIA 03.09.2026

BID DOCUMENTS 03.09.2026

2	4/24/26	Addendum 3

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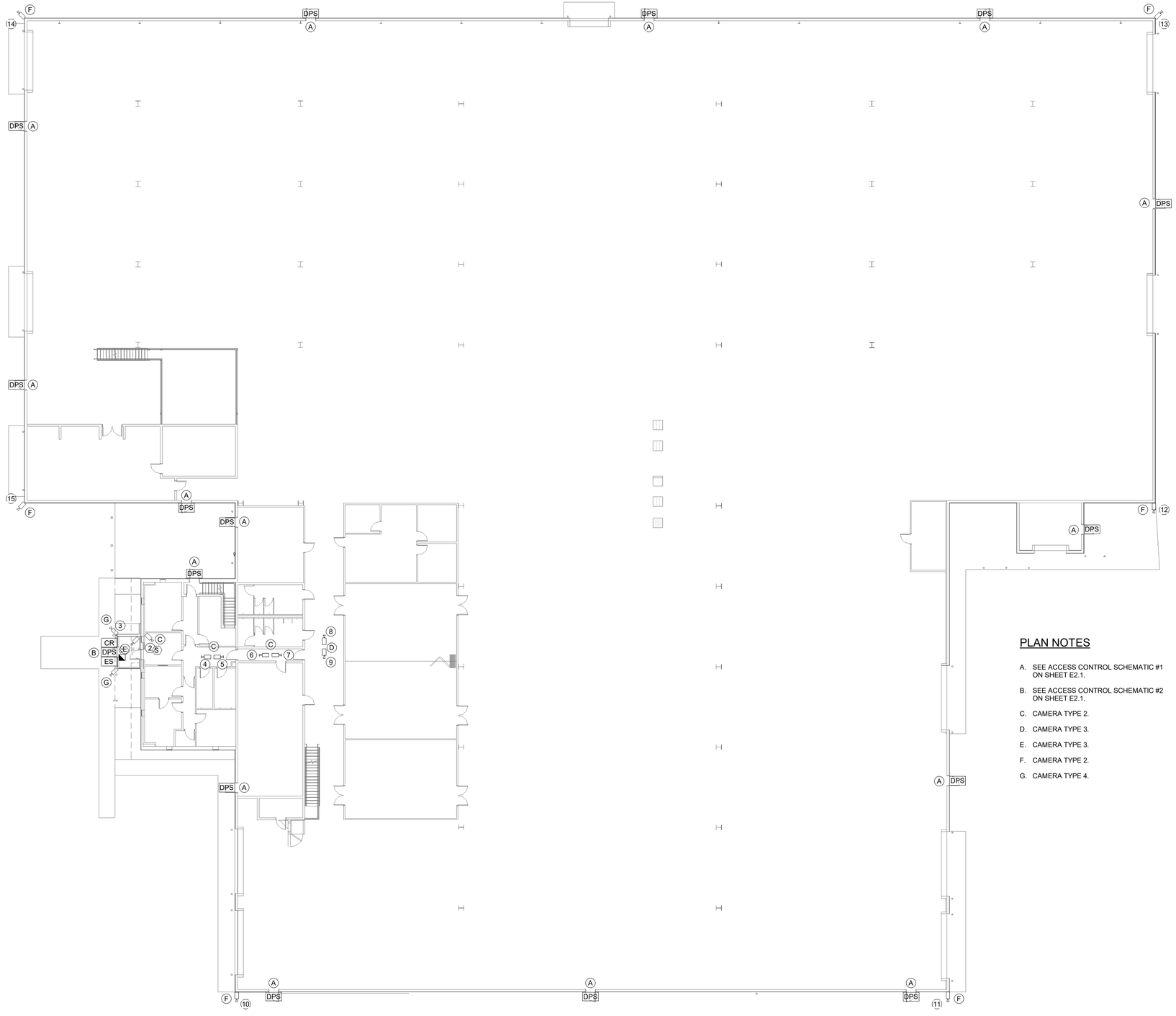
HVAC AND PLUMBING PLANS

OMNI ARCHITECTS

MP-1.1r

Project No: 2024008.001 Drawn by: Staff



1 FIRST FLOOR SYSTEMS PLAN
SCALE: 1/16" = 1'-0"

PLAN NOTES

A. SEE ACCESS CONTROL SCHEMATIC #1 ON SHEET E2.1.

B. SEE ACCESS CONTROL SCHEMATIC #2 ON SHEET E2.1.

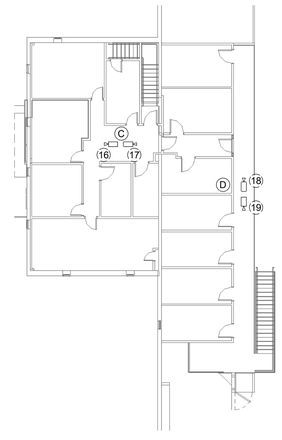
C. CAMERA TYPE 2.

D. CAMERA TYPE 3.

E. CAMERA TYPE 3.

F. CAMERA TYPE 2.

G. CAMERA TYPE 4.



2 SECOND FLOOR SYSTEMS PLAN
SCALE: 1/16" = 1'-0"

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03.09.2026

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4	5/4/26	Alternate 4

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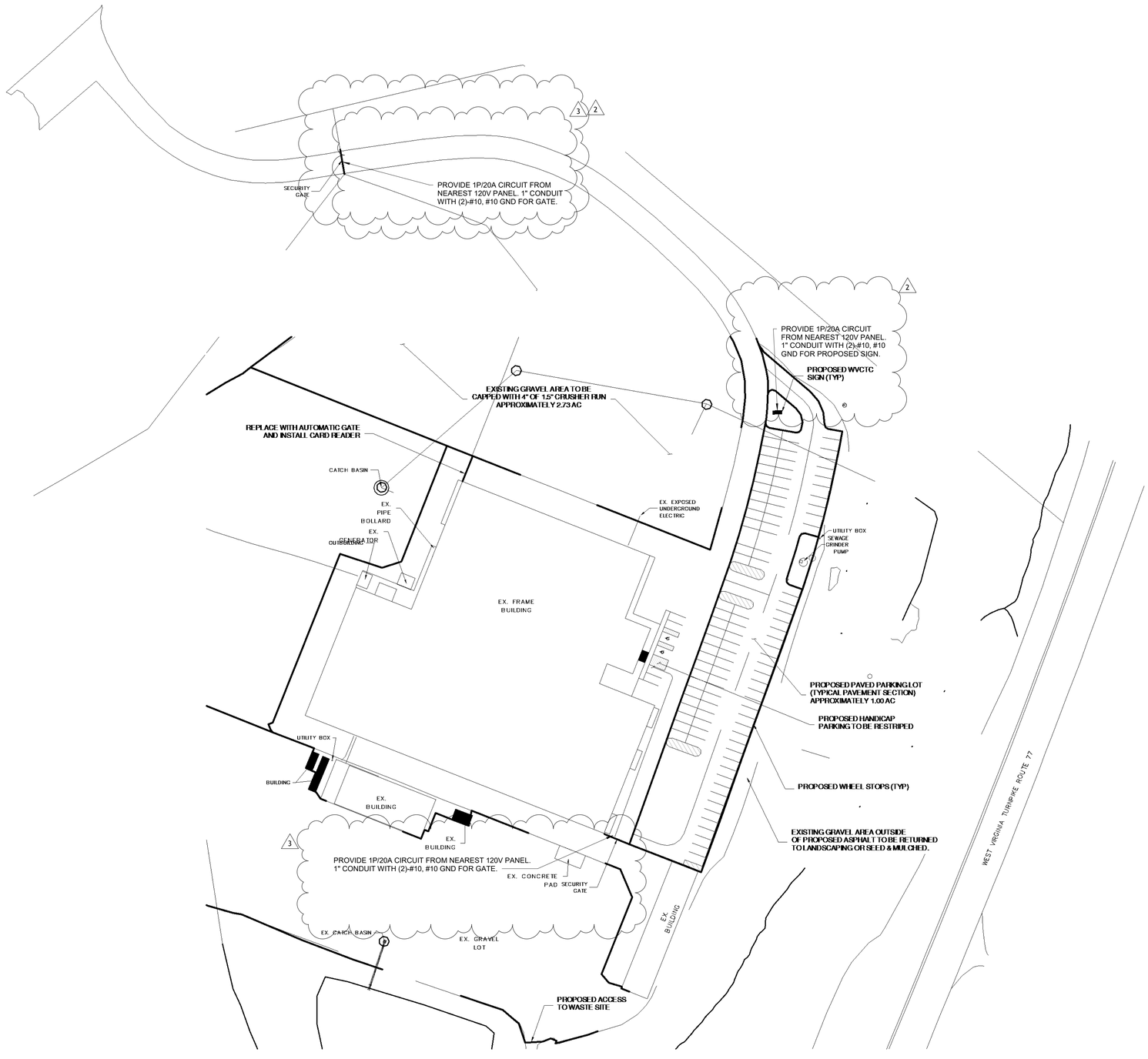
SYSTEMS PLANS

OMNI ARCHITECTS

E-1.1

Project No: 2024008.001 **Drawn by:** Author



1 SITE
SCALE: 1" = 60'-0"

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2	4/24/26	Addendum 3
3	5/4/26	Alternate 3

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SITE PLAN

OMNI ARCHITECTS

E-2.1r

Project No: 2024008.001 **Drawn by:** Author

WIRE AND CONDUIT SIZE SCHEDULE

MOCP (AMP)	CONDUCTOR SIZE	GROUND SIZE	CONDUIT SIZE WITH GROUND 1-POLE	2-POLE	3-POLE
20	#12	#12	3/4"	3/4"	3/4"
30	#10	#10	3/4"	3/4"	3/4"
40	#8	#10	3/4"	3/4"	3/4"
50	#8	#10	3/4"	3/4"	3/4"
60	#6	#8	3/4"	3/4"	3/4"
70	#4	#8	1"	1"	1"
80	#4	#8	-	1"	1"
90	#3	#8	-	1 1/4"	1 1/4"
100	#2	#8	-	1 1/4"	1 1/4"
110	#2	#6	-	1 1/4"	1 1/4"
125	#1	#6	-	1 1/4"	1 1/4"
150	#1/0	#6	-	1 1/2"	1 1/2"
175	#2/0	#6	-	1 1/2"	2"
200	#3/0	#6	-	1 1/2"	2"
225	#4/0	#4	-	-	2-1/2"
250	250MCM	#3	-	-	2 1/2"
300	350MCM	#3	-	-	3"
350	500MCM	#3	-	-	4"
400	500MCM	#3	-	-	4"

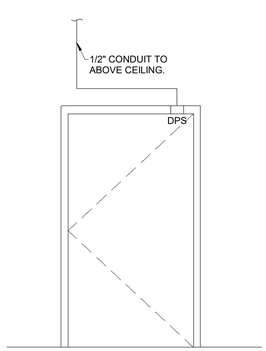
INCREASE CONDUCTOR SIZE AS REQUIRED FOR MAXIMUM VOLTAGE DROP OF 2% FOR FEEDERS AND 3% FOR BRANCH CIRCUITS.

ALL CIRCUITS SHALL COMPLY WITH NEC AND OTHER APPLICABLE CODES.

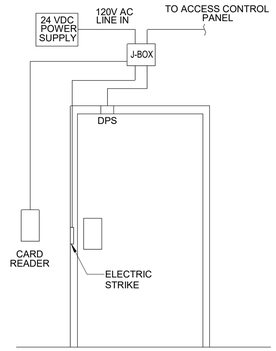
CONDUCTOR SIZE BASED ON 75 DEGREE C LUGS.

GENERAL ELECTRICAL NOTES

1. COORDINATE LOCATIONS OF CEILING-MOUNTED LIGHTING FIXTURES, SPEAKERS AND OTHER ITEMS WITH THE CEILING PATTERN AND MECHANICAL EQUIPMENT.
2. CENTER WALL-MOUNTED LIGHTING FIXTURES DIRECTLY OVER ANY RELATED LAVATORY, MIRROR OR OTHER EQUIPMENT.
3. LOCATE FLOOR SERVICE FITTINGS, FLOOR BOXES AND FLOOR CONDUIT TERMINATIONS APPROXIMATELY AS INDICATED, EXACTLY AS NECESSARY OR AS DIRECTED TO COORDINATE WITH THE ASSOCIATED FURNISHINGS OR EQUIPMENT.
4. LOCATE DUPLEX RECEPTACLES DESIGNATED "EWC" TO BE CONCEALED BY THE ASSOCIATED WATER COOLER.
5. LOCATE SNAP SWITCHES APPROXIMATELY 4 TO 6 INCHES FROM THE LATCH SIDE OF THE RELATED DOOR FRAME WHERE POSSIBLE, EXCEPT AS NOTED OTHERWISE.
6. LOCATE SNAP SWITCHES DIRECTLY UNDER THERMOSTATS WHERE THEY ARE SHOWN IN CLOSE PROXIMITY (SEE MECHANICAL DRAWINGS).
7. LOCATE WALL BOXES APPROXIMATELY AS INDICATED, EXACTLY AS DIRECTED OR AS NECESSARY TO ACHIEVE SYMMETRY AND COORDINATED WITH THE BUILDING, FINISHES AND EQUIPMENT.
8. LOCATE ALL BOXES TO BE ACCESSIBLE.MOUNT FLUSH BOXES WITH THEIR FRONT EDGES EVEN WITH THE FINISHED SURFACE OF COMBUSTIBLE MATERIALS, WITHIN 1/4 INCH OF NON-COMBUSTIBLE MATERIALS.
9. MOUNT SINGLE-GANG BOXES WITH THE LONGER DIMENSION VERTICAL EXCEPT AS NOTED OTHERWISE. MOUNT ALL BOXES AND PLATES PLUM.
10. DO NOT INSTALL BOXES BACK TO BACK ON BOTH SIDES OF A PARTITION. OFFSET BOXES A MINIMUM OF 6 INCHES EXCEPT AS NOTED OTHERWISE.
11. LOCATE ALL RACEWAYS TO AVOID INTERFERENCE WITH DUCTS, PIPES, MECHANICAL EQUIPMENT, WITH THE REMOVAL OF CEILING TILE, OR WITH ACCESS TO EQUIPMENT THAT REQUIRES PERIODIC ADJUSTMENT OR MAINTENANCE.
12. DO NOT SUPPORT RACEWAYS OR EQUIPMENT FROM PIPES, DUCTS, OR A CEILING SUSPENSION SYSTEM.
13. BRANCH CIRCUIT AND FEEDERS ARE DESIGNATED BY A NUMBER AND LETTER.
14. INSTALL FEEDER RACEWAYS WITH NO MORE THAN 3 CURRENT-CARRING CONDUCTORS PLUS A NEUTRAL CONDUCTOR, PLUS A GROUND CONDUCTOR.
15. INDICATED BRANCH CIRCUIT CONDUCTOR SIZES ARE BASED ON NO MORE THAN 3 CURRENT-CARRYING CONDUCTORS AND A NON-CURRENT-CARRYING NEUTRAL CONDUCTOR IN EACH RACEWAY. WHERE THE NUMBER OF CONDUCTORS EXCEEDS THIS AMOUNT, ADJUST THE CONDUCTOR SIZES IF AND AS NECESSARY TO ACCOUNT FOR DERATING THEIR AMPACITY IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
16. FROM EACH FLUSH MOUNTED PANELBOARD EXTEND A MINIMUM OF THREE EMPTY 3/4" CONDUITS TO ABOVE AN ACCESSIBLE CEILING AND CAP.
17. PROVIDE AN ADJACENT DISCONNECT SWITCH FOR EACH ELECTRIC UNIT HEATER.
18. IN MECHANICAL ROOMS ADJUST LIGHTING FIXTURE LOCATIONS AS NECESSARY TO COORDINATE WITH EQUIPMENT AND TO PROVIDE OPTIMUM ILLUMINATION.
19. LOCATE TV AND DATA OUTLETS APPROXIMATELY AS SHOWN ON DRAWINGS. COORDINATE EXACT LOCATIONS WITH ARCHITECT.
20. WHERE EMERGENCY LIGHTING FIXTURES ARE CONTROLLED BY ONE OR MORE WALL SWITCHES, PROVIDE AN UNSWITCHED CIRCUIT CONDUCTOR FOR OPERATION OF THE EMERGENCY CONTROLS.
21. PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH DIMMED LIGHTING CIRCUIT.
22. COORDINATE OUTLET LOCATIONS AND CIRCUIT RATINGS WITH THE EQUIPMENT SHOWN ON THE MECHANICAL AND PLUMBING DRAWINGS AND WITH ALL EQUIPMENT AND FURNISHINGS SHOWN ON THE ARCHITECTURAL DRAWINGS.
23. EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH SPECIFICATIONS AND AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
24. ALL WORK SHALL COMPLY WITH NFPA 70.
25. ELECTRICAL BRANCH CIRCUITS SHALL NOT SHARE A COMMON NEUTRAL.



ACCESS CONTROL SINGLE DOOR (#1)



ACCESS CONTROL SCHEMATIC (#2)

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	MT HEIGHT UNO
(A)	PLAN NOTE	
	WIRING IN CONDUIT CONCEALED IN CEILING, OR IN WALL. CONDUIT AND WIRE AS REQUIRED BY CODE UNLESS OTHERWISE NOTED.	
	CONDUIT STUBBED OUT	
HA-1	BRANCH CIRCUIT, "HA" DESIGNATES PANEL "1" DESIGNATES CIRCUIT NUMBER	
JB	JUNCTION BOX	
	RECESSED LED LIGHT FIXTURE	
	EMERGENCY LIGHT FIXTURE	
	WALL MOUNTED LIGHT FIXTURE	
	EXIT SIGN WALL MOUNTED WITH REMOTE HEAD.	
S	SINGLE POLE TOGGLE SWITCH.	48" AFF
	DIRECT CONNECTION	
C	CLOSED CIRCUIT TELEVISION CAMERA	
	PANELBOARD, SEE PANEL SCHEDULES ON DRAWINGS FOR RATING AND SIZE	
(S)	SMOKE DETECTOR.	
	FIRE ALARM MANUAL PULL STATION	48" AFF
CR	CARD READER	48" AFF

FIRE ALARM SYSTEM NOTES

1. ALL EXTERIOR DOORS SHALL HAVE A PULL STATION MOUNTED ADJACENT TO THE DOOR. SPACING OF PULL STATIONS SHALL NOT EXCEED 200' ALONG PATH OF EGRESS.
2. FIELD VERIFY LOCATION AND QUANTITY OF AIR HANDLING UNITS GREATER THAN 2000 CFM. PROVIDE A DUCT SMOKE DETECTOR IN THE RETURN AIR DUCT OF EACH UNIT. EACH AIR HANDLER DUCT SMOKE DETECTOR SHALL BE SEPARATELY ANNUNCIATED BY THE FIRE ALARM PANEL AND THE ANNUNCIATOR. PROVIDE REMOTE LED INDICATOR AT CEILING BELOW EACH DETECTOR.
3. FIELD VERIFY LOCATION AND QUANTITY OF ELECTRICAL PANELS. PROVIDE A SMOKE DETECTOR IN EACH OF THESE ROOMS.
4. PROVIDE SMOKE DETECTORS IN CORRIDOR A MAXIMUM 15' FROM EACH END AND A MAXIMUM OF 30' ON CENTER.
5. PROVIDE RATE OF RISE HEAT DETECTORS IN ALL TOILETS.
6. PROVIDE STROBES IN ALL TOILETS.
7. PROVIDE RATE OF RISE HEAT DETECTORS IN ALL UTILITY ROOMS, STORAGE ROOMS, JANITOR CLOSETS, AND LOCKER ROOMS. SPACING SHALL BE PER NFPA 72.
8. PROVIDE FIXED TEMPERATURE HEAT DETECTORS IN ATTICS, COCKLOFTS, FURNACE ROOMS, AND KITCHENS. SPACING SHALL BE PER NFPA 72.
9. PROVIDE HORN/STROBES AS REQUIRED BY NFPA 72. SPACING AND SOUND LEVEL SHALL BE SUCH THAT THE AUDIBLE ALARM CAN BE EFFECTIVELY HEARD ABOVE THE AMBIENT NOISE LEVEL OBTAINED UNDER NORMAL OCCUPIED CONDITIONS.
10. PROVIDE STROBES IN ALL OCCUPIED SPACES EXCEPT COMMON AREAS AS DEFINED IN THE AMERICAN WITH DISABILITIES ACT. SPACING SHALL BE PER NFPA 72.

GENERAL FIRE ALARM NOTES

1. PROVIDE ALL MATERIAL AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL A COMPLETE AND OPERABLE FIRE ALARM SYSTEM DEVICES AS INDICATED ON THE DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL WORK AR REQUIRED BY LOCAL AHJ AT NO ADDITIONAL COST TO THE OWNER.
2. IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO PROVIDE A FIRE ALARM SYSTEM IN FULL COMPLIANCE WITH THE LATEST EDITION OF (NFPA 72, WV STATE FIRE CODE, AND ADA).
3. THIS BUILDING WILL BE FULLY SPRINKLED PER NFPA 13.
4. SUPPLY A 120 VOLT CONNECTION AS REQUIRED AT ALL SYSTEMS EQUIPMENT.
5. DEVICES SHOWN ARE APPROXIMATE LOCATIONS. FIELD VERIFY ACTUAL CONDITIONS.
6. DO NOT SUPPORT RACEWAYS FROM PIPES DUCTS OR CEILING SUSPENSION SYSTEM.
7. EXPOSED RACEWAY AND BLANK COVERS SHALL BE PAINTEDTO MATCH EXISTING SURFACES.
8. SURFACES DAMAGED BY THIS CONTRACTOR SHALL BE REPAIRED.
9. WHERE SURFACES ARE REQUIRED TO BE PATCHED OR REPAIRED, SURFACE SHALL BE PAINTED TO MATCH ADJACENT SURFACE.
10. ALL JUNCTION BOX COVERS IN FIRE ALARM RACEWAY SHALL BE PAINTED RED.
11. MOUNTING HEIGHT OF FIRE ALARM STROBE SHALL BE 80" AFF.
12. SYSTEM SHALL INTERFACE WITH HOOD SUPPRESSION SYSTEM PER NFPA.
13. SYSTEM SHALL INTERFACE WITH SHUNT TRIP BREAKERS OR GAS VALVE FOR ALL EQUIPMENT LOCATED UNDER THE KITCHEN HOOD.

FIRE ALARM NOTE:

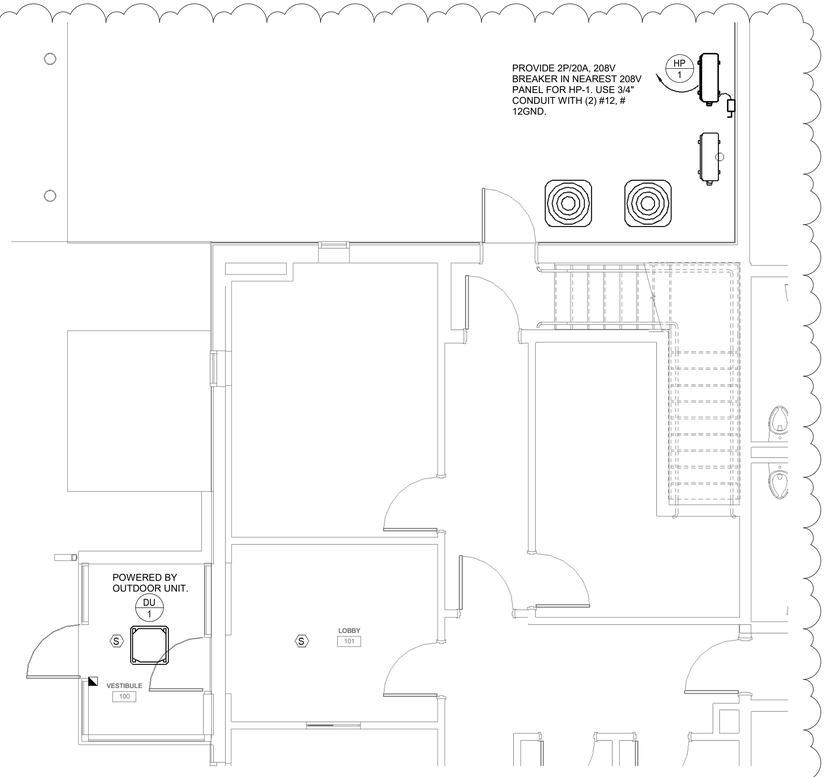
CONNECT NEW DEVICES INTO EXISTING FIRE ALARM SYSTEM. FIELD CONFIRM MANUFACTURER OF EXISTING SYSTEM.

ACCESS CONTROLS NOTE:

LENEL ACCESS CONTROL SYSTEM TO MATCH THE SYSTEM USED IN THE NEWLY AQUIRED ERMA BYRD BUILDINGS.

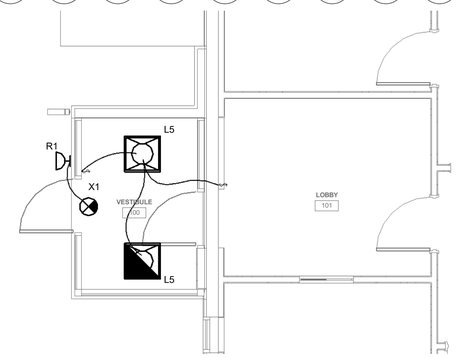
4

2



1 PARTIAL POWER PLAN

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



SPRINKLER NOTE:

EXTEND SPRINKLER COVERAGE FROM EXISTING SCHOOL INTO NEW ADDITION. PROVIDE HYDRAULIC CALCULATIONS AND SHOP DRAWINGS FOR REVIEW.

NOTE:
1. POWER SUPPLIES ARE SPECIFIED BY DIVISION 8 AND SUPPLIED BY GC IN THE LOCATIONS INDICATED. ACCESS CONTROL CONTRACTOR TO COORDINATE WITH THE DOOR HARDWARE SPECIFICATIONS.

2. CONDUIT SHALL BE 1/2" FOR LOW VOLTAGE ACCESS CONTROL WIRING UNLESS LARGER SIZE REQUIRED FOR MANUFACTURER SPECIFIC WIRING.

NOTE:

CONDUIT SHALL BE ROUTED CONCEALED WHERE EVER POSSIBLE. IF CONDUIT MUST BE EXPOSED, MOUNT FLUSH TO WALL AND PAINT TO MATCH ADJACENT SURFACE.

2 PARTIAL LIGHTING PLAN

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

LIGHTING FIXTURE SCHEDULE

MARK	LAMP	MOUNTING	MANUFACTURER	MODEL	DESCRIPTION	NOTES
L5	LED	RECESSED	LITHONIA COOPER COLUMBIA	2X2CLXALO7	2X2 FLAT PANEL LED WHITE FRAME, SATIN WHITE LENS ELECTRONIC DRIVER	120V
R1	LED	Surface	LITHONIA COOPER COLUMBIA	ELA NX	EMERGENCY EGRESS WALL LIGHT	6V
X1	LED	UNIV	LITHONIA COOPER DAY-BRITE	LHQM	EXIT SIGN WHITE BODY RED LETTERS BATTERY REMOTE CAPABLE	120V

NOTES:
1. VERIFY CEILING CONSTRUCTION TYPE WITH ARCHITECTURAL DRAWINGS TO DETERMINE WHETHER RECESSED LIGHTING FIXTURES SHALL BE FLANGE OR GRID TYPE MOUNTING.
2. DIRECTIONAL INDICATOR ON EXIT SIGNS SHALL COMPLY WITH NFPA 101 SECTION 5-10.4.1.2.
3. VERIFY VOLTAGE TO OPERATE FIXTURE WITH ELECTRICAL DRAWINGS.
4. LIGHT FIXTURES SHALL COME COMPLETE WITH NECESSARY MOUNTING HARDWARE.
5. ALL RECESSED FLUORESCENT LIGHT FIXTURES SHALL BE PAINTED AFTER FABRICATION.
6. ANY REQUEST FOR SUBSTITUTION TO THE LIGHTING FIXTURE SCHEDULE SHALL BE OF EQUAL OR HIGHER QUALITY AS DETERMINED BY THE ENGINEER. ANY PERSON REQUESTING TO SUBSTITUTE FIXTURES MUST SUBMIT IN BOUND FORM A COLLECTION OF THE MANUFACTURER'S CUT SHEETS TO BE REVIEWED BY THE ENGINEER A MINIMUM OF (TWENTY-ONE) 21 DAYS PRIOR TO BID. ACCEPTED SUBSTITUTIONS SHALL BE REFLECTED IN AN ADDENDUM.
7. SUPPLY HANGING BAR KITS WITH ALL RECESSED DOWN LIGHTS.
8. ALL OPEN RATED METAL HALIDE LIGHT FIXTURES TO HAVE OPEN RATED LAMPS AND SOCKETS.
9. EMERGENCY BATTERY PACK FOR FLUORESCENT LIGHT FIXTURES SHALL BE RATED TO SUPPLY A MINIMUM OF 600 INITIAL LUMENS.
10. WHERE LIGHT FIXTURES ARE SHOWN CONTROLLED BY TWO SWITCHES, FOR TWO LEVEL CONTROL, CONNECT THE OUTSIDE LAMPS TO ONE SWITCH AND THE INSIDE LAMP(S) TO THE OTHER SWITCH. PROVIDE FIXTURE WITH BALLASTS AS NECESSARY.

JASON E HARTER REGISTERED PROFESSIONAL ENGINEER 017278 STATE OF WEST VIRGINIA 03.09.2026

BID DOCUMENTS
03.09.2026

2	4/24/26	Addendum 3
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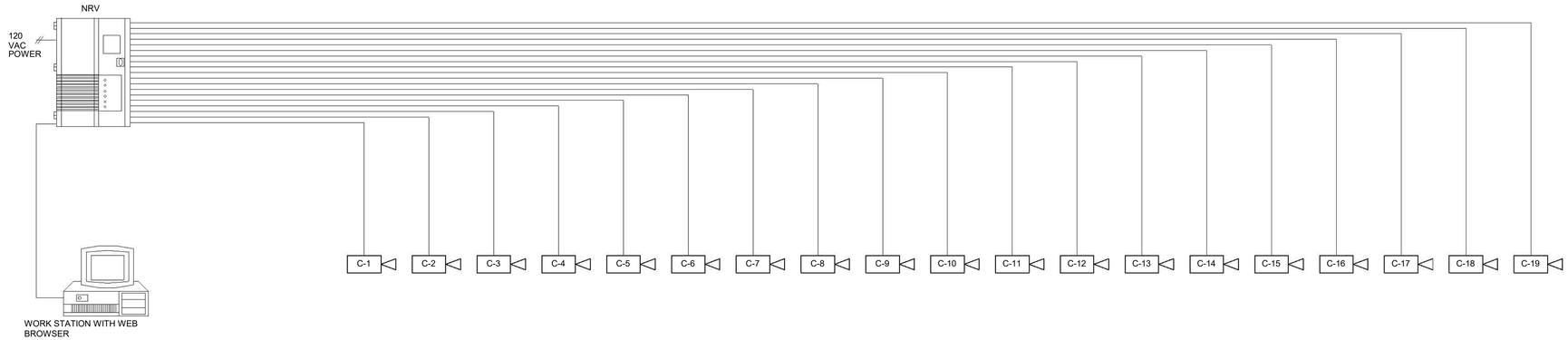
ELECTRICAL DETAILS

OMNI ARCHITECTS

E-3.1r

Project No: 2024008.001 **Drawn by:** Staff



GHENT CAMERA RISER DIAGRAM

NO SCALE

NOTE:
RISER IS SCHEMATIC. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL NECESSARY EQUIPMENT AND WIRING FOR A FULLY FUNCTIONAL SYSTEM IN COMPLIANCE WITH CONTRACT DOCUMENTS. REFER TO CAMERA EQUIPMENT MANUFACTURER'S INSTALLATION GUIDE.

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CAMERA RISER

OMNI ARCHITECTS

E-3.2

Project No: 2024008.001 **Drawn by:** Author

SECTION 280513 - CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Coaxial cabling.
   2. RS-232 cabling.
   3. RS-485 cabling.
   4. Low-voltage control cabling.
   5. Control-circuit conductors.
   6. Fire alarm wire and cable.
   7. Identification products.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Cable tray layout, showing cable tray route to scale, with relationship between the tray and adjacent structural, electrical, and mechanical elements.

C. Qualification Data: For qualified layout technician, installation supervisor, and field inspector.

D. Source quality-control reports.

E. Field quality-control reports.

F. Operation and maintenance data.

1.3 QUALITY ASSURANCE

A. Testing Agency Qualifications: An NRTL.
   1. Testing Agency's Field Supervisor: Currently certified by BICSI as an RCDD to supervise on-site testing.

B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   1. Flame-Spread Index: 25 or less.
   2. Smoke-Developed Index: 50 or less.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

PART 2 - PRODUCTS

2.1 PATHWAYS

A. Support of Open Cabling: NRTL labeled for support of Category 6 cabling, designed to prevent degradation of cable performance and pinch points that could damage cable.

B. Conduit and Boxes: Comply with requirements in Division 26 Section "Raceway and Boxes for Electrical Systems." Flexible metal conduit shall not be used.
   1. Outlet boxes shall be no smaller than 2 inches wide, 3 inches high, and 2-1/2 inches deep.

2.2 BACKBOARDS

A. Backboards: Plywood, 3/4 by 48 by 96 inches. Comply with requirements for plywood backing panels in Division 06 Section "Rough Carpentry".

B. Paint Backboards with (1) coat of primer, (2) coats paint to match adjacent walls.

2.3 RS-232 CABLE

A. Standard Cable: NFPA 70, Type CM.
   1. Paired, 2 pairs, No. 22 AWG, stranded (7x30) tinned copper conductors.
   2. Polypropylene insulation.
   3. Individual aluminum foil-polyester tape shielded pairs with 100 percent shield coverage.
   4. PVC jacket.
   5. Pairs are cabled on common axis with No. 24 AWG, stranded (7x32) tinned copper drain wire.
   6. Flame Resistance: Comply with UL 1581.

B. Plenum-Rated Cable: NFPA 70, Type CMP.
   1. Paired, 2 pairs, No. 22 AWG, stranded (7x30) tinned copper conductors.
   2. Plastic insulation.
   3. Individual aluminum foil-polyester tape shielded pairs with 100 percent shield coverage.
   4. Plastic jacket.
   5. Pairs are cabled on common axis with No. 24 AWG, stranded (7x32) tinned copper drain wire.
   6. Flame Resistance: Comply with NFPA 262.

2.4 RS-485 CABLE

A. Standard Cable: NFPA 70, Type CM or CMG.
   1. Paired, 2 pairs, twisted, No. 22 AWG, stranded (7x30) tinned copper conductors.
   2. PVC insulation.
   3. Unshielded.

4. PVC jacket.
5. Flame Resistance: Comply with UL 1581.

B. Plenum-Rated Cable: NFPA 70, Type CMP.
1. Paired, 2 pairs, No. 22 AWG, stranded (7x30) tinned copper conductors.
2. Fluorinated ethylene propylene insulation.
3. Unshielded.
4. Fluorinated ethylene propylene jacket.
5. Flame Resistance: NFPA 262, Flame Test.

2.5 LOW-VOLTAGE CONTROL CABLE

A. Paired Cable: NFPA 70, Type CMG.
1. 1 pair, twisted, No. 16 AWG, stranded (19x29**)** tinned copper conductors.
2. PVC insulation.
3. Unshielded.
4. PVC jacket.
5. Flame Resistance: Comply with UL 1581.

B. Plenum-Rated, Paired Cable: NFPA 70, Type CMP.
1. 1 pair, twisted, No. 16 AWG, stranded (19x29) tinned copper conductors.
2. PVC insulation.
3. Unshielded.
4. PVC jacket.
5. Flame Resistance: Comply with NFPA 262.

C. Paired Lock Cable: NFPA 70, Type CMG.
1. 1 pair, twisted, No. 18 AWG, stranded (19x30**)** tinned copper conductors.
2. PVC insulation.
3. Unshielded.
4. PVC jacket.
5. Flame Resistance: Comply with UL 1581.

D. Plenum-Rated, Paired Lock Cable: NFPA 70, Type CMP.
1. 1 pair, twisted, No. 18 AWG, stranded (19x30) tinned copper conductors.
2. Flourinated ethylene propylene insulation.
3. Unshielded.
4. Plastic jacket.
5. Flame Resistance: NFPA 262, Flame Test.

2.6 CONTROL-CIRCUIT CONDUCTORS

A. Class 1 Control Circuits: Stranded copper, Type THHN-THWN, complying with UL 83, in raceway.

B. Class 2 Control Circuits: Stranded copper, Type THHN-THWN, complying with UL 83, in raceway.

C. Class 3 Remote-Control and Signal Circuits: Stranded copper, Type TW or TF, complying with UL 83.

2.7 FIRE ALARM WIRE AND CABLE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Comtran Corporation.
   2. Draka Cableteq USA.
   3. Genesis Cable Products; Honeywell International, Inc.
   4. Rockbestos-Suprenant Cable Corp.
   5. West Penn Wire; a brand of Belden Inc.

B. All fire alarm wiring and cabling shall be in conduit.

C. General Wire and Cable Requirements: NRTL listed and labeled as complying with NFPA 70, Article 760.

D. Signaling Line Circuits: Twisted, shielded pair, size as recommended by system manufacturer.

   1. Circuit Integrity Cable: Twisted shielded pair, NFPA 70, Article 760, Classification CI, for power-limited fire alarm signal service Type FPL. NRTL listed and labeled as complying with UL 1424 and UL 2196 for a 2-hour rating.

E. Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 deg C, color-coded insulation.

   1. Low-Voltage Circuits: No. 16 AWG, minimum.
   2. Line-Voltage Circuits: No. 12 AWG, minimum.

   3. Multiconductor Armored Cable: NFPA 70, Type MC, copper conductors, Type TFN/THHN conductor insulation, copper drain wire, copper armor with red identifier stripe, NTRL listed for fire alarm and cable tray installation, plenum rated, and complying with requirements in UL 2196 for a 2-hour rating.

2.8 IDENTIFICATION PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Brady Corporation.
   2. HellermannTyton.
   3. Kroy LLC.
   4. PANDUIT CORP.

B. Comply with UL 969 for a system of labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

C. Comply with requirements in Division 26 Section "Identification for Electrical Systems."

2.9 SOURCE QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to evaluate cables.

B. Factory sweep test coaxial cables at frequencies from 5 MHz to 1 GHz. Sweep test shall test the frequency response, or attenuation over frequency, of a cable by generating a voltage whose frequency is varied through the specified frequency range and graphing the results.

C. Cable will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 INSTALLATION OF PATHWAYS

A. Cable Trays: Comply with NEMA VE 2 and TIA-569-B.

B. Comply with TIA-569-B for pull-box sizing and length of conduit and number of bends between pull points.

C. Comply with requirements in Division 26 Section "Raceway and Boxes for Electrical Systems." for installation of conduits and wireways.

D. Install manufactured conduit sweeps and long-radius elbows whenever possible.

E. Pathway Installation in Equipment Rooms:
1. Position conduit ends adjacent to a corner on backboard where a single piece of plywood is installed or in the corner of room where multiple sheets of plywood are installed around perimeter walls of room.
2. Install cable trays to route cables if conduits cannot be located in these positions.
3. Secure conduits to backboard when entering room from overhead.
4. Extend conduits 3 inches above finished floor.
5. Install metal conduits with grounding bushings and connect with grounding conductor to grounding system.

F. Backboards: Install backboards with 96-inch dimension vertical. Butt adjacent sheets tightly, and form smooth gap-free corners and joints.

3.2 INSTALLATION OF CONDUCTORS AND CABLES

A. Comply with NECA 1.

B. General Requirements for Cabling:
1. Terminate all conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, and cross-connect and patch panels.

2. Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches and not more than 6 inches from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
3. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Install lacing bars and distribution spools.
4. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
5. Cold-Weather Installation: Bring cable to room temperature before dereeling. Heat lamps shall not be used for heating.
6. Pulling Cable: Do not exceed manufacturer’s instructions as to allowable pulling tension. Monitor cable pull tensions.

3.3 FIRE ALARM WIRING INSTALLATION

A. Comply with NECA 1 and NFPA 72.

B. Wiring Method: Install wiring in metal raceway according to Division 26 Section "Raceway and Boxes for Electrical Systems."
   1. Install plenum cable in environmental air spaces, including plenum ceilings.
   2. Fire alarm circuits and equipment control wiring associated with the fire alarm system shall be installed in a dedicated raceway system. This system shall not be used for any other wire or cable.

C. Wiring within Enclosures: Separate power-limited and non-power-limited conductors as recommended by manufacturer. Install conductors parallel with or at right angles to sides and back of the enclosure. Bundle, lace, and train conductors to terminal points with no excess. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with the fire alarm system to terminal blocks. Mark each terminal according to the system's wiring diagrams. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.

D. Cable Taps: Use numbered terminal strips in junction, pull, and outlet boxes, cabinets, or equipment enclosures where circuit connections are made.

E. Color-Coding: Color-code fire alarm conductors differently from the normal building power wiring. Use one color-code for alarm circuit wiring and another for supervisory circuits. Color-code audible alarm-indicating circuits differently from alarm-initiating circuits. Use different colors for visible alarm-indicating devices. Paint fire alarm system junction boxes and covers red.

F. Risers: Install at least two vertical cable risers to serve the fire alarm system. Separate risers in close proximity to each other with a minimum one-hour-rated wall, so the loss of one riser does not prevent the receipt or transmission of signals from other floors or zones.

G. Wiring to Remote Alarm Transmitting Device: 1-inch conduit between the fire alarm control panel and the transmitter. Install number of conductors and electrical supervision for connecting wiring as needed to suit monitoring function.

3.4 CONTROL-CIRCUIT CONDUCTORS

A. Minimum Conductor Sizes:
   1. Class 1 remote-control and signal circuits, No. 14 AWG.
   2. Class 2 low-energy, remote-control and signal circuits, No. 16 AWG.
   3. Class 3 low-energy, remote-control, alarm and signal circuits, No. 12 AWG.

3.5 FIRESTOPPING

A. Comply with requirements in Division 07 Section "Penetration Firestopping."

3.6 GROUNDING

A. For low-voltage wiring and cabling, comply with requirements in Division 26 Section "Grounding and Bonding for Electrical Systems."

3.7 IDENTIFICATION

A. Comply with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

3.8 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:
   1. Visually inspect cable jacket materials for UL or third-party certification markings. Inspect cabling terminations to confirm color-coding.
   2. Visually inspect cable placement, cable termination, grounding and bonding.

   3. Coaxial Cable Tests: Comply with requirements in Division 27 Section "Master Antenna Television System."

C. Document data for each measurement. Print data for submittals in a summary report that is formatted using Table 10.1 in BICSI TDMM as a guide, or transfer the data from the instrument to the computer, save as text files, print, and submit.

D. End-to-end cabling will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

END OF SECTION 280513