

# PURCHASING DEPARTMENT DIVISION OF BUDGET & FINANCE

# PUR-1401 ADDENDUM NO. 5 INVITATION TO BID

# WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER

DATE: Thursday, September 10, 2020

BIDS DUE: Wednesday, September 16, 2020

(Revised Date via Addendum No. 2) 2:00 P.M., (EST/EDT)

To Bidders:

This Addendum is hereby made a part of the Contract Documents on which all bids will be based and is issued to correct and clarify the original documents.

Please acknowledge receipt of this Addendum at the appropriate space on the Proposal Form. This Addendum consists of nine (9) pages and (11) attachments.

NOTE: Washington County government has limited access to the Washington County Administration Complex at 100 West Washington Street, Hagerstown, Maryland until further notice. All Bidders shall allow ample time for delivery of their bid packets. Delivery of bid packets via-courier service or United States Postal Service (USPS) will be accepted. For those bidders who wish to deliver their bid packet in person will need to call 240-313-2330 to schedule an appointment.

ITEM NO. 1: <u>Inquiry</u>: Spec section 122413, Part 1, 1.2, 2, a. – calls out Dual Roller Shades at Exterior Window Locations in Small Classroom B109. Per floor plan 1/A1.4 – there are no Exterior Windows shown. Are we to install shades on the interior window H3 in this room?

<u>Clarification to Addendum No. 4, Item No. 11</u>: Refer to the bid document, Specifications to **DELETE** the requirement for dual shades in B109. **Yes, shades shall be provided for interior window H3.** 

ITEM NO. 2: <u>Inquiry</u>: What material are the countertops in Storage B103, Storage B111, Storage B113 and Storage B101? I do not see where it tells us if it is quartz, solid surface or plastic laminate.

**Response**: All countertops are plastic laminate unless noted otherwise.

**ITEM NO. 3:** *Inquiry*: Are the Bollards at the propane tank to be Type 'A' 'B' or 'C'?

Response: Type "A" bollards. Type "A" bollards shall be **CHANGED** to 6" diameter.

100 West Washington Street, Room 3200 | Hagerstown, MD 21740-4748 | P: 240.313.2330 | F: 240.313.2331 | TDD: 711

**ITEM NO. 4:** <u>Inquiry</u>: What type of bollards are required at the transformer? Do they need covers or paint finish?

<u>Response</u>: Furnish/install bollard type with covers as required by the power company. See Electrical drawings for additional information.

ITEM NO. 5: <u>Inquiry</u>: Please clarify what site signs were installed in phase 1 (stop signs etc.) and what signs we need to include in this phase.

<u>Response</u>: The Contractor on this project is responsible for ADA accessible signs in the parking lots and street name signs. All other signs were included in the separate site package contract previously awarded.

ITEM NO. 6: <u>Inquiry</u>: Drawing A4.4 calls for Type 'B' bollards at the dumpster enclosure (Type B are stainless steel). The civil drawings call for Type A with the plastic covers. Please clarify.

*Response*: The Contractor shall furnish/install Type "C" in this location.

ITEM NO. 7: <u>Inquiry</u>: Please provide a sidewalk concrete detail showing expansion joint spacing, reinforcing requirements, at concrete type.

<u>Response</u>: See concrete sidewalk detail, Attachment "A". Scoring of concrete at main entrance to be as directed in field by the County using the minimum requirements provided.

ITEM NO. 8: <u>Inquiry</u>: Specification Section 011000, page 4, item K tells us to provide wearing course on all existing paving. Does this include the additional paving added along Sharpsburg pike as seen on drawing C1.02? Or was the wearing course along the road completed in the first phase as part of the HOP permit?

<u>Response</u>: Paving along Sharpsburg Pike has been completed and is not part of this contract. The Contractor is responsible for a neat/clean tie-in with the paving already completed along Sharpsburg Pike.

ITEM NO. 9: <u>Inquiry</u>: The wall sections on A2.2 call for the roof to receive "3" concrete Roof". Drawing S0.02 under concrete slabs on permanent steel form says "The Floor Slabs on Permanent Steel Form shall be 5" in Overall Depth...". Please clarify the thickness of the concrete on the roof (future floor slab).

<u>Response</u>: The thickness of the concrete on metal deck for the roof (future second floor) to be 3".

**ITEM NO. 10:** *Inquiry*: Do the allowance amounts listed in specification section 012100 include the cost of material and labor, or are we do add additional labor to our bid for the installation of the items purchased with the allowance amounts?

<u>Response</u>: The allowance amounts only include the cost to purchase materials. All other costs are to be included in the base bid.

**ITEM NO. 11:** *Inquiry*: Do you have a pdf for doc I4.1 - I7.3? It's for the ADA room signage? Saw this in the Appendix.

<u>Response</u>: Pdf plans were provided with the bid documents. See Drawing A6.2 for Signage Schedule.

ITEM NO. 12: <u>Inquiry</u>: Will the conduits feeding the floor boxes in Rooms A134, B102, B106, B110, B112, B116 and B119 be installed in slab on grade? If so, the County's preferred manufacturer recommends the following:

"Install OSP cable in the conduits, terminate / transition the cables at the conduit stub up to plenum rated cables, per BICSI, TIA and NEC guidelines." Is this the preferred method of installation?

<u>Response</u>: On the power and low voltage sides, the specifications state the ENT shall be run in slab and to transition to GRC before coming up into the wall.

ITEM NO. 13: <u>Inquiry</u>: What version of Genetec software is currently running? Please verify.

<u>Response</u>: Washington County current uses Genetec Software Version 5.7; however, the Contractor shall work with the County Information Technologies (IT) Department to program items in and the IT Department will install the latest version.

**ITEM NO. 14:** *Inquiry:* Is security contractor responsible to provide IDS system in this project? Please verify if yes which manufacturer that owner wish to install?

<u>Response</u>: Contractor shall provide Ademco Vista 128BP or approved equal by NAPCO, DMP, DSC or other approved equal, prior to submittal. Intrusion Alarm System shall be non-proprietary installation, being able to be provided by any qualified security contractor.

**ITEM NO. 15:** <u>Inquiry</u>: Do you have IDS drawings that indicate IDS components that you wish for security contractor to install? Please verify.

<u>Response</u>: Contractor shall provide a complete and operational intrusion detection system. Provide Dual Technology Motion Detectors (Ademco DT8050 series or approved equal) in all corridors, provide recessed door contacts on EACH exterior door (separate from access control door contact), provide communications module to

communicate with Washington County 9-1-1 center (Ademco IPCOMM or approved equal), provide four (4) command stations LCD keypads at Security Vestibule A100, Near Exterior Door at Corridor A119 and Near Exterior Door at Corridor B104 and on the IDS panel. Provide Security Alarm Control Panel in Server Room A115. Provide 120-volt power and CAT6 Data cable to Digital Communicator. Provide all shop drawings, product data, testing, Contact ID programming, 1-year Guarantee, demonstration, training and As-Built drawings.

**ITEM NO. 16:** *Inquiry:* Vision Tech is proposing each camera will be recording at 5MP resolutions, 30 fps, continuous recording, 24/7, and 30days video retention. Is it acceptable? Please confirm.

<u>Response</u>: The above recording requirements are correct plus 20% spare capacity per spec 281000-2.1 B. Contractor shall be a qualified Genetec authorized vendor approved by Washington County.

ITEM NO. 17: <u>Inquiry</u>: Project Table of Contents page 8 lists Section 27 4100 Schedule A Equipment List, and Schedule A is referenced in 27 4100 Part 3 Products 3.1 A. Reference Schedule A "Equipment List", however only Section 27 4100 is in Volume 3 of the spec book. Please provide Schedule A Equipment List.

<u>Response</u>: Refer to response to ITEM NO. 1 in Addendum No. 4.

**ITEM NO. 18:** *Inquiry:* On the bid form page 005000-7 and 8, under the Corporate Principal signature section. Is the line spacing 'off'? Sorry just want to be sure and clarify if you require 1 officer (President/V.P.) signature with a witness (Corp. Sec./ Asst. Corp. Sec.) or 2 officer signatures and a witness and of course the notary.

<u>Response</u>: An Officer's signature is required under the Corporate Principal signature with a witness and a notary seal/signature.

ITEM NO. 19: <u>Inquiry</u>: Do you require a signature from the Corporate Secretary and the President on page 7 and also a Witness/attest on page 8? The form or formatting is confusing as there is a line for the Corporate Secretary first before the 'By" line where the President normally signs. May we strike out the words "Corporate Secretary" and type the President or Vice President's name on that line on page 7 and have the President or Vice President sign beside the "By" line? Then have the Corporate Secretary or Asst. Corp. Sec. sign on page 8 in the witness section? Or can you modify the form and reissues those 2 pages? See Attached.

Response: No, do not change the Form of Proposal.

**ITEM NO. 20:** <u>Inquiry</u>: Are the OD-1's an actual overflow roof drain with a 3" dam or a simple pipe stub 3" above roof level?

<u>Response</u>: OD-1 (as specified on the plumbing fixture schedule) is an overflow roof drain (with 2" dam).

**ITEM NO. 21:** <u>Inquiry</u>: Is the intent to have the down spout boots furnished and installed by the site contractor as there is nothing shown on the "P" Drawing relative to D.S. Boots?

<u>Response</u>: Down spouts and boots shall be furnished/installed under this contract. Coordinate with the General Contractor who is responsible to provide them.

ITEM NO. 22: <u>Inquiry</u>: We are in receipt of addendum no. 4. In regarding to item no. 32 regarding warranty term. Thank you for your reference to Bid document, Section 007000, however, that section doesn't clarify if the warranty period is 1 or 2 years. Section 007000 is the general conditions. I reviewed paragraph 3.5 warranty and no warranty term is stated. I reviewed the supplementary conditions and no warranty information is modified. There is no warranty term in the performance bond nor the remainder of the specs. Please provide warranty term specifically to terms to general conditions section 007000 page 13, para 3.5.

<u>Response</u>: The general warranty term is for one-year.

**ITEM NO. 23:** <u>Inquiry</u>: Room Finish Schedule calls for PT-1 to be used for a base as well as a floor tile. Is PT-1 to be a 6"x12" cove base or a 6"x24" floor tile?, as a cove base was not mentioned in the spec section.

*Response*: The base trim for PT-1 to be 6"x12" cove base.

ITEM NO. 24: <u>Inquiry</u>: Spec says... A twenty-four strand OM3 50/125-micron multimode fiber optic backbone is employed between the data MC and each TC for data connectivity within the data MC and the TCs, backbone fiber strands are terminated and housed in rackmount fiber optic enclosures but prints says...(1)50 pr cat 6 for voice, (1) 24 strand OM3 and (1) 24 strand Single mode fibers, (1) 25 pr cat 6 for intercom and 2 cat 6 for data between MDF and each IDF.

*Response*: Refer to Sheet T3.1 Detail #5 Telecom Riser Diagram notes 1,2,3 including previous inquiry responses.

ITEM NO. 25: <u>Inquiry</u>: Is there a option for fusion spliced fiber ends?

<u>Response</u>: Provide fiber splicing and terminations per specifications. Fusion splicing shall be only allowed at specific applications approved by Washington County.

ITEM NO. 26: <u>Inquiry</u>: For the IDF's are the racks free standing or wall mount?

<u>Response</u>: Provide Great Lakes floor mounted racks per spec 271500-2.17.

**ITEM NO. 27:** <u>Inquiry</u>: Per engineering notes on prints, "the A/V equipment will be submitted at a later date". When is this date?

**Response**: This is still to be determined.

**ITEM NO. 28:** <u>Inquiry</u>: Is there a contact at Washington County that may have an idea of what they want in terms of brands and desires regarding the A/V equipment?

Response: This will be determined at a later date.

ITEM NO. 29: Inquiry: Item No. One of Addendum 4 - we aren't doing the AV section now?

**Response**: Refer responses to Items No 1 and 29 in Addendum No 4.

**ITEM NO. 30:** *Inquiry*: We have been asked by a GC to quote the commissioning services for this project. How can I obtain a list of the GC's who may be bidding this project.

Response: Please see an updated Plan Holders List, Attachment "K".

**ITEM NO. 31:** *Inquiry*: Are the two roof top units to have vibration isolation rails between the roof curb and the unit its self? Please advise.

<u>Response</u>: Vibration isolation rails are not required, but full perimeter neoprene gaskets shall be furnished/installed by the Contractor.

**ITEM NO. 32:** <u>Inquiry</u>: Prior to sending pricing to any of the potential bidders for the Spacesaver FreeStyle Lockers, I wanted to check to see if the determination has been made if you would like to take advantage of the county purchasing the lockers off an available contract?

I have the ability to use at least Sourcewell and Omnia Partners/National IPA. Which you are already registered for from my research. There may be two other options available as well.

Would you like to utilize these for procurement rather than the using the pricing from the GCs that can't?

<u>Response</u>: No, Bidders shall bid the Invitation to Bid (ITB) specifications are written.

ITEM NO. 33: <u>Clarification</u>: The County is willing to waive the AISC certification requirements for Section 051200 1.6B Fabricator Qualifications if the fabricator satisfies the following requirements. In the event the fabricator does not have AISC certification, the company must provide evidence of a written quality control program which contains all the

elements addressed in the AISC certifications standards; the company must be able to provide work references evidencing they have been working for a least ten years performing work as a structural steel fabricator; and the company must demonstrate previous work experience in delivering a similar scope of work in size and sophistication.

ITEM NO. 34: Refer to the bid document, Section 011000 - Summary of Work, Paragraph 1.3; CHANGE, A. to be as follows:

The Project consists of new construction of a public safety training center facility. Generally, the new construction for the low roof area is designed to carry a future second floor and consists of load bearing masonry walls and structural steel, structural steel beams, steel joists, metal deck and concrete roof deck (future second floor), architectural steel roof trusses and acoustical metal roof deck (for high roof areas) rigid roof (at metal standing seam roof) and tapered rigid roof insulation (at PVC roofing), metal standing seam roof, single ply PVC roofing, masonry brick veneer, exterior fiber cement siding and metal soffit system, aluminum windows, storefront and curtain wall systems, casework and interior finishes along with the specified mechanical, electrical, plumbing and fire protection systems, fire alarm and technology (including rough-ins for A/V equipment) and security systems. A separate site package for this project was bid by Washington County and is in its final stages of construction. Site work for this project includes all remaining site work for the project.

- **ITEM NO. 35:** Section 011000 Summary of Work, Paragraph 1.4.C.3, ADD the following scope of work to be as follows:
  - 1. The Contractor shall furnish/install bicycle rack indicated on Civil drawings.
  - 2. The Contractor shall furnish/install all line striping and pavement markings (double yellow centerline, single white edge lines, and preformed stop bars on entrance roads and single white lines in the parking lots for parking spaces including line striping/markings for ADA parking spaces), as well as provide ADA parking signs and construct concrete safety islands, curbs and sidewalks adjacent to the building as indicated on the contract documents.
- ITEM NO. 36: Refer to the bid document, Section 085653, Security Windows; ADD, specification section in its entirety, (Attachment B).
- **ITEM NO. 37:** Refer to the bid document, Section 096516, Resilient Sheet Flooring; **CHANGE** the following:
  - 1. Paragraph 2.1.A.1, **CHANGE** to be "Armstrong World Industries, Inc."
  - 2. Paragraphs 2.3.A and B **CHANGE** to be as follows:
    - A. Basis-of-Design Product: Subject to compliance with requirements, provide products equal to Armstrong Medintone w/ Diamond 10 Technology (SV1).

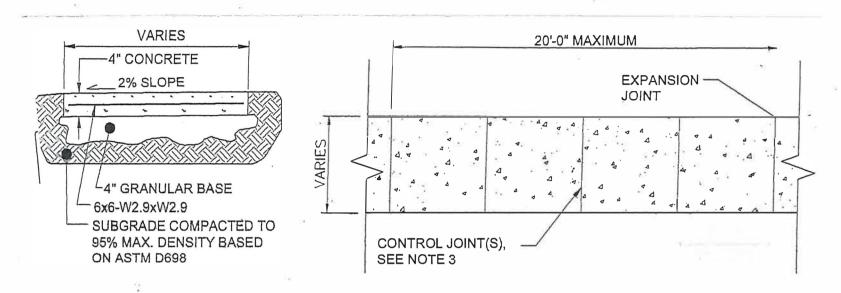
- B. Pattern: Medintone w/ Diamond 10 Technology (SV1).
- **ITEM NO. 38:** Refer to the bid document, Section 09656, Athletic Resilient Tile Flooring; **CHANGE** the following:
  - 1. Paragraph 1.2.A, CHANGE 1 to be as follows:
    - 1. Athletic Resilient **Tile** Flooring (ARF).
  - 2. Paragraph 1.7.A, CHANGE 1 to be as follows:
    - 1. Furnish 3% of extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing content.
- ITEM NO. 39: Refer to the bid document, Section 312000, Earth Moving, Paragraph 3.2.A, Unclassified Excavation; CHANGE beginning of second sentence to be as follows: Where rock or unsuitable soil is encountered, include the.....
- ITEM NO. 40: Drawing E1.0 First Floor Plan Unit A Power, CHANGE the following:
  - 1. NOTES BY SYMBOL, ADD notes 15, 16 and 17 per attached revised drawing.
  - 2. FIRST FLOOR PLAN UNIT A POWER, ADD symbols/notes to the floor plan per the attached revised drawing, (Attachment C).
- ITEM NO. 41: Drawing E1.1 First Floor Plan Unit B Power, CHANGE the following:
  - 1. NOTES BY SYMBOL; ADD note 10 per attached revised drawing.
  - 2. FIRST FLOOR PLAN UNIT B POWER; **ADD** symbols/notes to the floor plan per the attached revised drawing, (Attachment D).
- ITEM NO. 42: Drawing E5.2 Electrical Schedules, Panel LA SECTION 2; CHANGE information on the schedule per attached revised drawing, (Attachment E).
- ITEM NO. 43: Drawing E5.3 Electrical Schedules, Panels LC SECTION 1 and LD SECTION 2; CHANGE information on the schedules per attached revised drawing, (Attachment F).
- ITEM NO. 44: <u>Clarification</u>: Refer to Drawing I4.3, Large Scale Layout Large Classrooms & Collaborative Learning. Countertops in Storage B101 and B103 to be plastic laminate.
- ITEM NO. 45: <u>Clarification</u>: Refer to Drawing I4.4, Large Scale Layouts Classrooms Alternate. Countertops in Storage B111 and B113 to be plastic laminate.
- **ITEM NO. 46:** Drawing S0.02, Structural Notes, CONCRETE SLABS ON PERMANENT STEEL FORMS, REVISE the depth in the first sentence from 5" to be **3"**. See attached revised drawing, (Attachment G).

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- ITEM NO. 47: Drawing S1.13, Fut. 2<sup>nd</sup> Floor/ Roof Framing Plan Area A, ADD and REVISE the following:
  - 1. **ADD** section cuts along column grid "G". See attached revised drawing.
  - 2. **CHANGE** beam size along Grid "G" Between Grids 7 and 8. See attached revised drawing, (Attachment H).
- ITEM NO. 48: Drawing S1.14, Fut. 2<sup>nd</sup> Floor/ Roof Framing Plan Area B, FLOOR FRAMING PLAN NOTES, Note #6; ADD note to read, "PROVIDE CEILING EXTENSIONS IN ALL AREAS." See attached revised drawing, (Attachment I).
- ITEM NO. 49: Drawing S5.02, Typical Masonry Wall Details; CHANGE and ADD the following:
  - 1. Detail 5/S5.02, REVISE note per attached revised drawings.
  - 2. ADD Detail 10/S5.02 Beam Bearing on CMU Wall, per attached revised drawing, (Attachment J).

By Authority of:

Rick F. Curry, CPPO Director of Purchasing



# **CONCRETE SIDEWALK NOTES:**

- 1. INITIAL SITE CLEARING SHALL CONSIST OF COMPLETE REMOVAL OF TOPSOIL AND ORGANIC MATERIAL TO DEPTHS OF APPROVED AND STABLE SOILS. FORM CONCRETE SIDEWALK AT 5'\_0" WIDE OR AS SHOWN.
- 2. CONCRETE MIX FOR SIDEWALK TO BE 3,500 PS) COMPRESSIVE STRENGTH AT 28 DAYS AND MEETING SHA STD. MIX NO. 3. ALL CONCRETE PLACEMENT SHALL BE DESIGNED IN ACCORDANCE WITH A.C.I. SPECIFICATIONS.
- 3. PROVIDE CONTROL JOINTS EVERY 5'-0" MAXIMUM. PROVIDE 1/2" EXPANSION JOINT EVERY 20' O/C MAX.
- 4. PROVIDE 1/2" EXPANSION JOINT FILLER WHERE SIDEWALK ABUTS CURB OR OTHER RIGID STRUCTURE(S)
- 5. BROOM THE SURFACE WITH A FINE-HAIR BROOM AT RIGHT ANGLES TO THE CENTERLINE, TOOL ALL EDGES, JOINTS AND MARKINGS.
- 6. EXPANSION JOINTS OF 1/2" (MIN.) RIGID BITUMINOUS MATERIAL SHALL BE PLACED AT 20' SPACING.
- 7. MARK THE WALK AT 5 FT. INTERVALS WITH A JOINTING TOOL OR AS NOTED ON DRAWINGS.
- 8. AFTER FINISHING APPLY AN APPROVED CURING COMPOUND, PROTECT SIDEWALK FOR 7 DAYS.

# **SECTION 085653 - SECURITY WINDOWS**

## PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

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

# 1.2 SUMMARY

- A. Section Includes:
  - 1. Vision security windows.
  - 2. Fixed, transaction security windows.
  - 3. Speaking Apertures.
- B. Related Requirements:
  - 1. Division 08 Section "General Glazing" for glazing requirements.

# 1.3 COORDINATION

A. Coordinate installation of anchorages for security windows. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in adjacent construction. Deliver such items to Project site in time for installation.

# 1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

## 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, weights and finishes for window units.
- B. Shop Drawings: For security windows.
  - 1. Include plans, elevations, sections, and attachment details.

- 2. Full-size section details of framing members, including internal armoring, reinforcement, and stiffeners.
- 3. Location of weep holes.
- 4. Hardware for sliding window units.
- 5. Glazing details.
- 6. Details of speaking aperture.
- C. Samples for Initial Selection: For frame members with factory-applied color finishes.
- D. Cutaway Sample: Corner of security window, made from 12-inch lengths of full-size components, and showing details of the following:
  - 1. Joinery.
  - 2. Anchorage.
  - 3. Glazing.
  - 4. Flashing and drainage.
- E. Delegated-Design Submittal: For security windows indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

# 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified installer.
- B. Welding certificates.
- C. Product Test Reports: Indicating compliance with requirements performed by a qualified testing agency.
- D. Field quality-control reports documenting inspections of installed products.
  - 1. Field quality-control certification signed by Contractor.
- E. Sample Warranty: For special warranty.
- F. Maintenance data.

## 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer for installation of units required for this Project.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1/D1.1M, "Structural Welding Code Steel."

- 2. AWS D1.2/D1.2M, "Structural Welding Code Aluminum."
- 3. AWS D1.3/D1.3M, "Structural Welding Code Sheet Steel."
- 4. AWS D1.6, "Structural Welding Code Stainless Steel."

# 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Pack security windows in wood crates for shipment. Crate glazing separate from frames unless factory glazed.
- B. Label security window packaging with drawing designation.
- C. Store crated security windows on raised blocks to prevent moisture damage.

## 1.9 FIELD CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

## 1.10 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace security windows that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including deflections exceeding 1/4 inch.
    - b. Failure of welds.
    - c. Excessive air leakage.
    - d. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
  - 2. Warranty Period: Five years from date of Substantial Completion.

# **PART 2 - PRODUCTS**

# 2.1 PERFORMANCE REQUIREMENTS

- A. Basis of Design: Design is based on aluminum impact resistant fixed windows, manufactured by C.R. Laurence Co., Inc. Unit to be Model No. N1EW12A Exterior Glazed Narrow Inset Frame Window and have a Stainless Steel Shelf with Non-Ricochet Bullet Resistant Deal Tray.
- B. Frames: Frames are to be constructed of 6063-T5, .125" thick extruded aluminum. Replacement of glazing shall be from the secure side of the window or wall unit and does not require the removal of the frame from the opening. Shapes and sizes are to be in accordance with the contract drawings. Finish: All aluminum to be Satin anodized.

C. Glazing: Manufacturer's Level 3 Bullet Resistant Glass.

# D. Blast Resistant

 GSA Building Classifications C Blast Resistant in accordance with GSA PBS-P100 Facilities Standards.

# 2.2 SPEAKING APERTURE

- A. Basis of Design: C.R. Laurence Co. Catalog Number N666.
  - 1. Brushed stainless steel or extruded aluminum 6" round Level 3 Bullet Resistant Speak-Thru. Speak hole to be installed 4'-6" above finish floor.

## PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of security windows.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations of security window connections before security window installation.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of security windows.
- D. Inspect built-in and cast-in anchor installations, before installing security windows, to verify that anchor installations comply with requirements. Prepare inspection reports.
  - 1. Remove and replace anchors where inspections indicate that they do not comply with specified requirements. Reinspect after repairs or replacements are made.
  - 2. Perform additional inspections to determine compliance of replaced or additional work. Prepare anchor inspection reports.
- E. For factory-installed glazing materials whose orientation (secure or attack side) is critical for performance, verify installation orientation.
- F. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

A. Coordination: Furnish layouts for cast-in-place anchors, clips, and other security window anchors whose installation is specified in other Sections.

1. Furnish cast-in-place anchors and similar devices to other trades for installation well in advance of time needed for coordinating other work.

3.3 INSTALLATION

A. Install frames and glazing in accordance with manufacturer's printed instructions and recommendations. Repair damaged units as directed (if approved by the manufacturer and the

architect) or replace with new units.

3.4 FIELD QUALITY CONTROL

A. Inspect installed products to verify compliance with requirements. Prepare inspection reports

and indicate compliance with and deviations from the Contract Documents.

B. Perform additional inspections to determine compliance of replaced or additional work.

Prepare inspection reports.

C. Prepare field quality-control certification that states installed products and their installation

comply with requirements in the Contract Documents.

3.5 ADJUSTING

A. Adjust horizontal-sliding, transaction security windows to provide a tight fit at contact points

for smooth operation and a secure enclosure.

B. Adjust transaction drawers to provide a tight fit at contact points for smooth operation and

secure enclosure.

C. Remove and replace defective work, including security windows that are warped, bowed, or

otherwise unacceptable.

3.6 CLEANING AND PROTECTION

A. Clean surfaces promptly after installation of security windows. Take care to avoid damaging

the finish. Remove excess glazing and sealant compounds, dirt, and other substances.

1. Lubricate sliding security window hardware.

2. Lubricate transaction drawer hardware.

B. Clean glass of preglazed security windows promptly after installation. Comply with

requirements in Section 088853 "Security Glazing" for cleaning and maintenance.

C. Provide temporary protection to ensure that security windows are without damage at time of

Substantial Completion.

# **END OF SECTION 085653**

01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES
2	08/28/20	BIA	ADDENDUM 4

KEY PLAN





ATTACHMENT D

PROJECT ARE THE PROPERTY OF CRABTREE, ROHRBAUGH & ASSOCIATES.
CRABTREE ROHRBAUGH & ASSOCIATES RETAINS ALL COMMON LAW, STATUTE AND OTHER RESERVED RIGHTS INCLUDING THE COPYRIGHT THERETO. REPRODUCTION OF THE MATERIAL HERIN OR SUBSTANTIAL USE WITHOUT WRITTEN PERMISSION OF CRABTREE, ROHRBAUGH & ASSOCIATES VIOLATES THE COPYRIGHT LAWS OF THE UNITED STATES AND WILL BE SUBJECT TO LEGAL PROSECUTION.

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01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES
2	08/28/20	BIA	ADDENDUM 4

EZ

COORDINATE THE LOCATION OF ALL RECEPTACLES LOCATED ADJACENT TO TACK BOARDS, TACKSTRIPS, AND OTHER PERMANENT WALL FIXTURES. RECEPTACLES SHALL NOT BE LOCATED BEHIND TACK BOARDS AND TACKSTRIPS. SEE ARCHITECTURAL INTERIOR DRAWINGS FOR EXACT LOCATIONS OF TACK BOARDS AND OTHER PERMANENT

PROVIDE 1" CONDUIT TO ALL INTERIOR DOOR FRAMES THAT ARE NOT SCHEDULED TO RECEIVE ELECTRONIC HARDWARE FOR FUTURE INSTALLATION OF CARD READERS, ETC. CONDUITS TO EXTEND FROM

REQUIREMENTS. WHERE CONDUIT AND WIRE PENETRATES THE WALL, THE WALL SHALL NOT ACT AS A SUPPORT. THE RACEWAY SHALL BE INDEPENDENTLY SUPPORTED ON EACH SIDE OF THE WALL. IF THE WALL PENETRATION IS NOT SEALED, PROVIDE SLEEVE TO PROTECT RACEWAY FROM DAMAGE. WALL AND FLOOR PENETRATIONS SHALL BE CUT USING HOLE SAWS OR EQUIVALENT. PENETRATION SHALL NOT

SEE DETAILS FOR CLARIFICATION OF TYPICAL CIRCUIT DESIGNATIONS. PROVIDE POWER TO ALL DOORS WITH HARDWARE REQUIRING POWER

CABLING. INSTALL ALL CABLING FURNISHED BY THE DOOR HARDWARE

SUPPLIER. COORDINATE WITH THE DOOR HARDWARE SUPPLIER FOR A

ALL RECEPTACLES LOCATED IN CEILING SHALL FACE INTO OCCUPIED

FOR ALL RECEPTACLES NOTED AS POWERING TVS OR MONITORS, COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH INTERIOR DRAWINGS TO ENSURE RECEPTACLE AND DATA FALL BEHIND TV. RECEPTACLES INSTALLED WITHOUT PROPER

COORDINATION SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER. COORDINATE LOCATION OF DATA DEVICE WITH POWER BOX. BOXES SHALL BE INSTALLED DIRECTLY ADJACENT TO EACH

CONNECTIONS. PROVIDE CONDUITS FOR ALL DOOR HARDWARE

SPECIFIC LIST OF DOORS REQUIRING POWER AND CABLING

INFORMATION. SEE DETAILS FOR MORE INFORMATION.

INSTALLATION. SEE DOOR HARDWARE SCHEDULE FOR MORE

DOOR FRAME TO POINT ABOVE THE FINISH CEILING FOR EASY

SEE DETAILS FOR FLOOR AND WALL PENETRATION SEALING

INSTALLATION OF WIRING, ETC. IN THE FUTURE.

COORDINATE COUNTERTOP RECEPTACLE LOCATIONS WITH CASEWORK. ENSURE RECEPTACLES ARE NOT BEHIND TALL UNITS. IN AREAS WHERE THERE IS NO CEILING OR CEILING CLOUDS, ALL DEVICES, BOXES, CONDUITS, AND APPEARANCE SHALL BE PAINTABLE ALL CONDUIT AND WIRE SHALL BE RUN TIGHT TO THE STRCTURE. ALL LABELS FOR JUNCTION BOXES, CONDUIT, AND DEVICES WHERE

EVERYTHING IS PAINTED SHALL BE INSTALLED AFTER PAINTING. COORDINATE LOCATION OF ALL FIRE ALARM DEVICES WITH INTERIOR DRAWINGS BEFORE ROUGH-IN. COORDINATE SPECIFICALLY WITH SOUND PANELS, MIRRORS, TACTBOARDS, AND WHITEBOARDS.

# NOTES BY SYMBOL: #

**GENERAL NOTES:** 

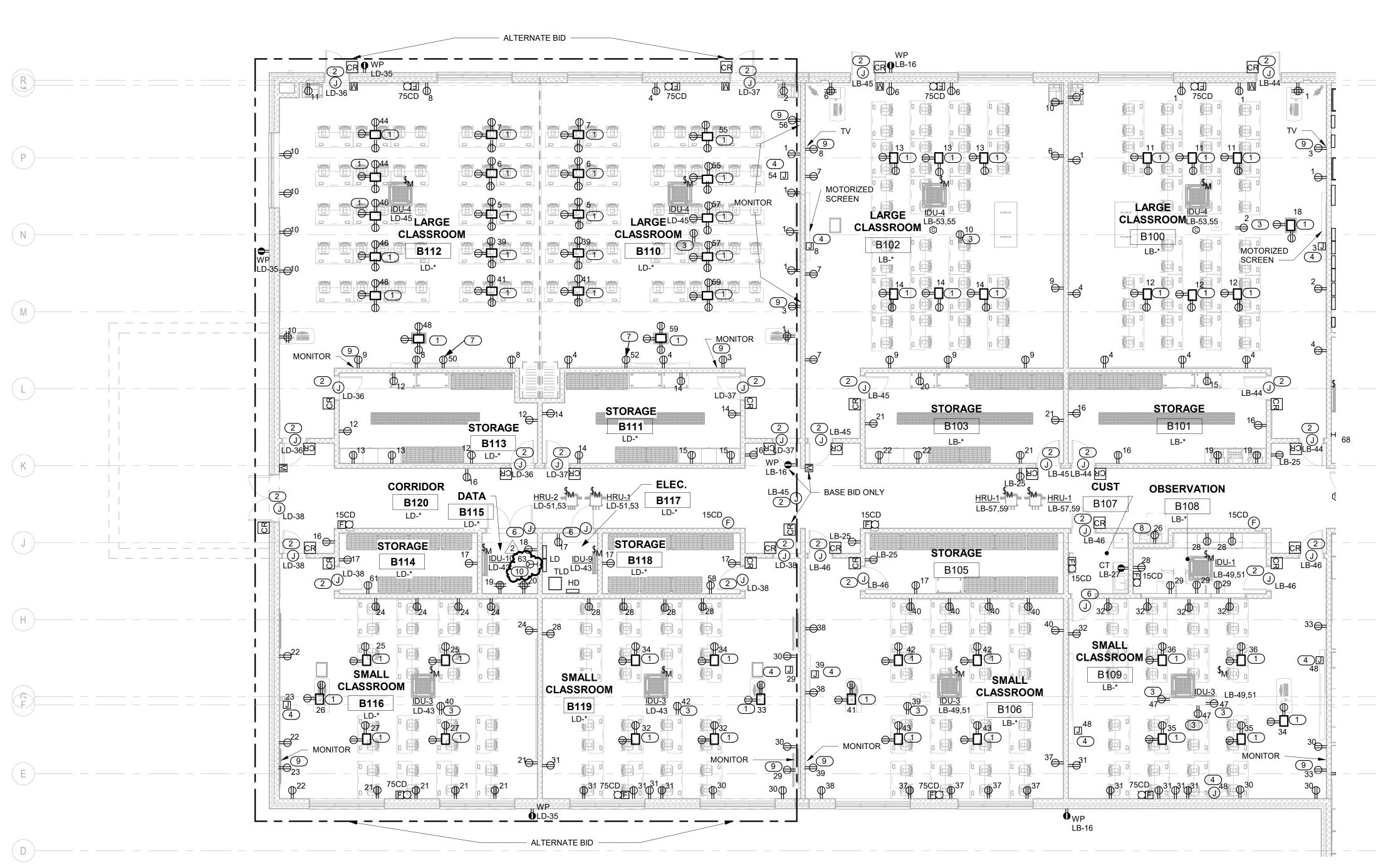
- PROVIDE FOUR COMPARTMENT DIVIDED FLOOR BOX WITH DEVICES INDICATED. BASIS OF DESIGN: WIREMOLD EFB45 SERIES. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO
- USED BY ALL DOORS IN THE GENERAL AREA. FOR FIRE DOORS, PROVIDE SMOKE DETECTORS ON EITHER SIDE OF DOOR WITHIN 5' CONNECTED TO THE DOOR HARDWARE. CONNECT TO FIRE ALARM
- PROVIDE CEILING MOUNTED RECEPTACLE TO POWER PROJECTOR. VERIFY EXACT LOCATION IN FIELD.
- PROVIDE POWER FOR MOTORIZED PROJECTION SCREEN. VERIFY EXACT LOCATION IN FIELD.
- NOT USED.
- PROVIDE 1"C TO DOOR FRAME AND EXTEND TO 6" ABOVE ACCESSIBLE CEILING WITH PULL STRING.
- PROVIDE RECEPTACLE FOR SHORT THROW PROJECTOR. COORDINATE EXACT MOUNTING HEIGHT IN THE FIELD.
- RECEPTACLE FOR EWC SHALL BE INSTALLED TO ENSURE IT IS

# 0

C KEY PLAN

December 18, 2019

**PROJECT** FIRST FLOOR PLAN - UNIT B -3089 1/8" = 1'-0" FILENAME:



1 FIRST FLOOR PLAN - UNIT B - POWER SCALE: 1/8" = 1'-0"

PANE	EL: LA SECTION 1	BUS A	MP:	200A			Α	MPS MA	IN BRI	EAKER	: <u>175</u> A	<u>\</u>								
MOUI	NTING: SURFACE PHASE: 3	WIR	:E: <u>4</u>		VOLT	AGE: <u>2</u>	208/120		AIC:	18,000	<u>0</u>									
		BRE	EAKER	W	IRE	GND		LOAD	ı	KVA/PH	1	LOAD		GND	WII	RE	BREA	KER		
CKT	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	KVA	Α	В	С	KVA	COND	SIZE	SIZE	NO	AMP	Р	CIRCUIT DESCRIPTION	CKT
1	REC - A116	1	20	2	12	12	3/4"	0.9	0.9			0.0					20	1	SPARE	2
3	REC - A115	1	20	2	12	12	3/4"	0.4		0.7		0.4	3/4"	12	12	2	20	1	REC - A115	4
5	REC - A115	1	20	2	12	12	3/4"	0.4			0.9	0.5	3/4"	12	12	2	20	1	REC - A114	6
7	REC - A118, A119	1	20	2	12	12	3/4"	0.5	1.3			0.7	3/4"	12	12	2	20	1	REC - A117	8
9	REC - A117	1	20	2	12	12	3/4"	0.5		1.5		1.0	3/4"	12	12	2	20	1	REC - A117 (ICE MAKER)	10
11	REC - A117 (VENDING)	1	20	2	12	12	3/4"	1.0			2.0	1.0	3/4"	12	12	2	20	1	REC - A117 (VENDING)	12
13	REC - A117 (VENDING)	1	20	2	12	12	3/4"	1.0	2.0			1.0	3/4"	12	12	2	20	1	REC - A117 (VENDING)	14
15	REC - A117 (REFRIG.)	1	20	2	12	12	3/4"	1.0		2.0		1.0	3/4"	12	12	2	20	1	REC - A117 (REFRIG.)	16
17	REC - A117 (MICRO)	1	20	2	12	12	3/4"	1.2			1.7	0.5	3/4"	12	12	2	20	1	REC - A117 (COUNTER)	18
19	REC - A117 (MICRO)	1	20	2	12	12	3/4"	1.2	2.4			1.2	3/4"	12	12	2	20	1	REC - A117 (MICRO)	20
21	REC - A113	1	20	2	12	12	3/4"	0.5		1.3		0.7	3/4"	12	12	2	20	1	REC - A113	22
23	REC - A113	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	REC - CORRIDORS	24
25	REC - A109	1	20	2	12	12	3/4"	1.1	2.2			1.1	3/4"	12	12	2	20	1	REC - A110	26
27	REC - A111	1	20	2	12	12	3/4"	0.7		1.6		0.9	3/4"	12	12	2	20	1	REC - A106, A107, A108	28
29	REC - A112	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	REC - A112	30
31	REC - A101	1	20	2	12	12	3/4"	1.1	1.8			0.7	3/4"	12	12	2	20	1	REC - A102	32
33	REC - A103	1	20	2	12	12	3/4"	1.1		1.8		0.7	3/4"	12	12	2	20	1	REC - A104	34
35	REC - A105	1	20	2	12	12	3/4"	1.0			1.5	0.5	3/4"	12	12	2	20	1	REC - A105	36
37	REC - A105	1	20	2	12	12	3/4"	0.5	1.5			1.0	3/4"	12	12	2	20	1	REC - A105 (REFRIG.) (GFI)	38
39	REC - A105	1	20	2	12	12	3/4"	0.2		1.4		1.2	3/4"	12	12	2	20	1	REC - A105 (MICRO)	40
41	GWH-1	1	20	2	12	12	3/4"	0.5			0.5	0.0	3/4"	12	12	2	20	1	GWH-1	42
						TOT	AL KVA/	PHASE	12.1	10.3	9.6									
					Т	OTAL K	VA SEC	TION 1		31.9										
					Т	OTAL K	VA SEC	TION 2		16.7										

48.6

135

TOTAL KVA

TOTAL AMPS PANEL

PANE	L: LB SECTION 1	BUS A	MP:	200A			Α	MPS MA	NN BRI	EAKER	: 175A									
	ITING: <u>SURFACE</u> PHASE: <u>3</u>	WIR			VOLT	AGE: <u>2</u>	208/120			18,000		<del>-</del>								
OVT	OIDQUIT DESCRIPTION	BRE	EAKER	W	IRE	GND	COND	LOAD	ı	KVA/PH	ł	LOAD	COND	GND	WII	RE	BREA	KER	CIDCUIT DESCRIPTION	OKT
CKT	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	KVA	Α	В	С	KVA	COND	SIZE	SIZE	NO	AMP	Р	CIRCUIT DESCRIPTION	CKT
1	REC - B100	1	20	2	12	12	3/4"	0.7	1.3			0.5	3/4"	12	12	2	20	1	REC - B100	2
3	REC - B100	1	20	2	12	12	3/4"	1.0		1.7		0.7	3/4"	12	12	2	20	1	REC - B100	4
5	REC - B100	1	20	2	12	12	3/4"	1.0			1.7	0.7	3/4"	12	12	2	20	1	REC - B102	6
7	REC - B102	1	20	2	12	12	3/4"	0.5	1.5			1.0	3/4"	12	12	2	20	1	REC - B102	8
9	REC - B102	1	20	2	12	12	3/4"	0.7		1.7		1.0	3/4"	12	12	2	20	1	REC - B102	10
11	FLOOR REC - B100	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	FLOOR REC - B100	12
13	FLOOR REC - B102	1 20 2 12 12 3/4" 0.7 1.4 0.7 3/4" 12 12 2 20 1 FLOOR REC - B102	FLOOR REC - B102	14																
15	REC - B101	1	20	2	12	12	3/4"	0.5		0.9		0.4	3/4"	12	12	2	20	1	REC - EXTERIOR	16
17	REC - B105	1	20	2	12	12	3/4"	0.2			0.5	0.4	3/4"	12	12	2	20	1	FLOOR BOX B106	18
19	REC - B101	1	20	2	12	12	3/4"	0.4	0.9			0.5	3/4"	12	12	2	20	1	REC - B103	20
21	REC - B103	1	20	2	12	12	3/4"	0.5		0.9		0.4	3/4"	12	12	2	20	1	REC - B103	22
23	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	24
25	REC - B104	1	20	2	12	12	3/4"	0.7	1.2			0.5	3/4"	12	12	2	20	1	REC - EWC (GFI)	26
27	REC - B107	1	20	2	12	12	3/4"	0.2		0.7		0.5	3/4"	12	12	2	20	1	REC - B108	28
29	REC - B108	1	20	2	12	12	3/4"	0.5			1.1	0.5	3/4"	12	12	2	20	1	REC - B109	30
31	REC - B109	1	20	2	12	12	3/4"	0.9	1.8			0.9	3/4"	12	12	2	20	1	REC - B109	32
33	REC - B109	1	20	2	12	12	3/4"	1.0		1.4		0.4	3/4"	12	12	2	20	1	REC - B109	34
35	FLOOR REC - B109	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	FLOOR REC - B109	36
37	REC - B106	1	20	2	12	12	3/4"	0.9	1.4			0.5	3/4"	12	12	2	20	1	REC - B106	38
39	REC - B106	1	20	2	12	12	3/4"	1.0		1.9		0.9	3/4"	12	12	2	20	1	REC - B106	40
41	REC - B106	1	20	2	12	12	3/4"	0.4			1.1	0.7	3/4"	12	12	2	20	1	FLOOR REC - B106	42
						ТОТ	AL KVA/	PHASE	9.6	9.2	7.3									
					Т	OTAL K	VA SEC	TION 1		26.0										
					Т	OTAL K	VA SEC	TION 2		11.6										
								AL KVA		37.6										
						TOTAL	AMPS	PANEL		104										

	EL: LA SECTION 2 BUS AN NTING: SURFACE PHASE:			RE: <u>4</u>			MPS MA AGE: <u>20</u>	IN BREA	KER:		18,00	<u>0</u>								
		BRE	AKER	W	IRE	GND		LOAD	ŀ	(VA/PH	ł	LOAD		GND	WI	RE	BREA	KER		T
CKT	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	KVA	Α	В	С	KVA	COND	SIZE	SIZE	NO	AMP	Р	CIRCUIT DESCRIPTION	CKT
43	REC - C100	1	20	2	12	12	3/4"	0.7	1.4			0.7	3/4"	12	12	2	20	1	REC - C100	44
45	REC - C100	1	20	2	12	12	3/4"	0.9		1.7		0.8	3/4"	12	12	2	20	1	REC - C100	46
47	REC - C100	1	20	2	12	12	3/4"	0.4			0.7	0.4	3/4"	12	12	2	20	1	REC - C100	48
49	REC - EXTERIOR	1	20	2	12	12	3/4"	0.7	1.0			0.3	3/4"	12	12	2	20	1	DOOR HARDWARE - C-100	50
51	DOOR HARDWARE	1	20	2	12	12	3/4"	1.0		2.3		1.3	3/4"	12	12	2	20	1	DOOR HARDWARE	52
53	DOOR HARDWARE	1	20	2	12	12	3/4"	0.8			1.3	0.5	3/4"	12	12	2	20	1	FLOOR BOX	54
55	FLOOR BOX	1	20	2	12	12	3/4"	0.5	0.8			0.2								56
57				_				0.4		0.6		0.2	3/4"	12	12	2	15	2	HRU - A106	58
59	IDU - A117 & A141	2	15	2	12	12	3/4"	0.4			0.5	0.1								60
61								0.1	0.2			0.1	3/4"	12	12	2	15	2	HRU - A116 & A117	62
63	IDU - A114 & A115	2	15	2	12	12	3/4"	0.1		0.6		0.5	3/4"	12	12	2	20	1	REC - AV RACK RM A118	64
65								0.2			0.7	~	3/4"	12	12	~	~~~	1	REC CORRIDOR TV	66
67	IDU - A104, A105, A109, & A110	2	15	2	12	12	3/4"	0.2	0.7			0.5	3/4"	10	10	2	30	1	UPS RACK	68
69	IDII A404 A400 8 400		45		40	40	0/4"	0.156		0.7	7	0.5	3/4"	10	10	2	30	1	AV RACK	70
71	IDU - A101, A102, & 103	2	15	2	12	12	3/4"	0.156			0.7	0.5	3/4"	10	10	2	30	1	AV RACK	72
73	IDU- A111 & A112	2	15	2	12	12	3/4"	0.2	0.7			0.5	3/4"	12	12	2	20	1	SECURITY RACK	74
75	150-4111 & 4112		13		12	12	3/4	0.2		0.2		0.0	<b>\</b>				20	<b>)</b>	SPARE	
77	REC - A104	1	20	2	12	12	3/4"	0.5			0.5	0.0					20	1	SPARE	78
79	REC - A103	1	20	2	12	12	3/4"	0.7	1.2			0.5	3/4"	12	12	2	20	1	MOTORIZED SCREENS	80
81	REC - A102	1	20	2	12	12	3/4"	0.7		1.7		1.0	3/4"	12	12	2	20	1	ROLLER SHADES	82
83	REC - A111	1	20	2	12	12	3/4"	0.5			1.5	1.0	3/4"	12	12	2	20	1	ROLLER SHADES	84
						TOT	AL KVA/	PHASE	6.1	7.7	6.0									
						TOT	AL KVA	PANEL		19.7										
						TOTAL	AMPS	PANEL		55										

ANE	L: <u>LB SECTION 2</u> BUS	S AMP: <u>2</u>	<u>00A</u>			Αľ	MPS MAIN	N BREA	KER:	MLO										
1OUI	NTING: <u>SURFACE</u> PHA	SE: <u>3</u>	WIF	RE: <u>4</u>		VOLTA	AGE: <u>208</u>	<u>3/120</u>		AIC	18,00	<u>0</u>								
CKT	CIRCUIT DESCRIPTION	BRE	EAKER	W	IRE	GND	COND	LOAD	ŀ	KVA/PH	1	LOAD	COND	GND	WII	RE	BREA	KER	CIRCUIT DESCRIPTION	СКТ
) (	GINGOIT DEGGNII TION	Р	AMP	NO	SIZE	SIZE	COND	KVA	Α	В	С	KVA	COND	SIZE	SIZE	NO	AMP	Р	CIRCUIT BESCRIFTION	OKI
43	FLOOR REC - B106	1	20	2	12	12	3/4"	0.7	1.7			1.0	3/4"	12	12	2	20	1	DOOR HARDWARE	44
<b>1</b> 5	DOOR HARDWARE	1	20	2	12	12	3/4"	1.3		2.5		1.3	3/4"	12	12	2	20	1	DOOR HARDWARE	46
7	CEILING REC - PROJECTORS	1	20	2	12	12	3/4"	1.0			2.2	1.2	3/4"	12	12	2	20	1	MOTORIZED PROJECTION SCREEN	48
19	IDII D406 D400 8 D400	2	15		10	10	2/4"	0.2	0.7			0.5	3/4"	12	12	2	20	1	P-1	50
1	IDU - B106, B108, & B109	2	15	2	12	12	3/4"	0.2		0.2		0.0					20	1	SPARE	52
3								0.2			0.2	0.0					20	1	SPARE	54
5	IDU - B100 & B102	2	15	2	12	12	3/4"	0.2	0.7			0.5	3/4"	12	12	2	20	1	C100 - MONITOR	56
7								0.1		0.7		0.5	3/4"	12	12	2	20	1	C100 - MONITOR	58
9	HRU - B104	2	15	2	12	12	3/4"	0.1			0.7	0.5	3/4"	12	12	2	20	1	C100 - MONITOR	60
1	INTERIOR LIGHTING CONTACTOR	1	20	2	12	12	3/4"	0.2	0.7			0.5	3/4"	12	12	2	20	1	C100 - MONITOR	62
3	EXTERIOR LIGHTING CONTACTOR	1	20	2	12	12	3/4"	0.2		1.3		1.1	3/4"	12	12	2	20	1	ROOF - REC	64
5	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	66
7	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	68
9	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	70
'1	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	72
3	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	74
5	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	76
7	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	78
9	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	80
1	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	82
33	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	84
						TOTA	AL KVA/P	HASE	3.9	4.7	3.1									
						TOT	AL KVA P	ANEL		11.6										

ATTACHMENT E **DRAWING E5.2** 





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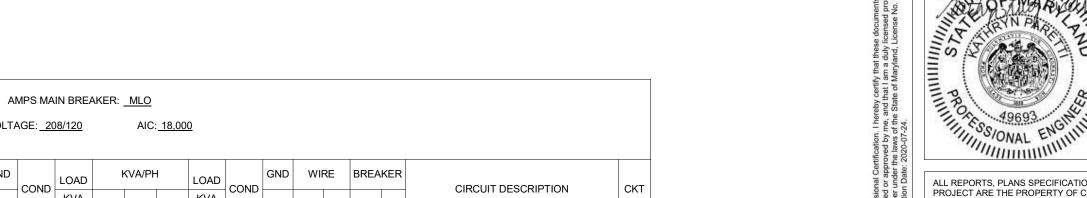
	MM-DD-YR	NAME	DESCRIPTION OF CHANGES
2	08/28/20	BIA	ADDENDUM 4

6

**PROJECT** 

ELECTRICAL SCHEDULES

December 18, 2019



/IOUN	NTING: <u>SURFACE</u> PHASE: <u>3</u>	WIR	RE: <u>4</u>		VOLT	AGE: <u>2</u>	208/120		AIC	: <u>18,000</u>	<u>0</u>									
		BRE	EAKER	w	IRE	GND		LOAD		KVA/PH	1	LOAD		GND	WIF	RE	BREA	KER		
CKT	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	KVA	Α	В	С	KVA	COND	SIZE	SIZE	NO	AMP	Р	CIRCUIT DESCRIPTION	CI
1	REC - A137, A138, & A140	1	20	2	12	12	3/4"	1.1	2.6			1.5	3/4"	12	12	2	20	1	WASHER (GFI)	
3	REC - A139, A120	1	20	2	12	12	3/4"	1.1		3.5		2.4	0/4"	40	40	0	20		DDVED	
5	REC - A135	1	20	2	12	12	3/4"	0.4			2.8	2.4	3/4"	10	10	3	30	2	DRYER	
7	REC - A135	1	20	2	12	12	3/4"	0.4	0.9			0.5	3/4"	12	12	2	20	1	REC - A134	
9	REC - A134	1	20	2	12	12	3/4"	0.7		1.4		0.7	3/4"	12	12	2	20	1	REC - A134	,
<b>/</b>	REG-134		~26~	V	12	12/	34"	Pi			1.4	0.4	3/4"	12	12	2	20	1	REC - A134	٠
13	REC - UPS	1	30	2	10	10	3/4"	0.5	0.9			0.4	3/4"	12	12	2	20	1	REC - A134	
15	SPAR COLOR	لېل	20	ب	V	<b>U</b>	<u>ب</u>	0.0		0.4		0.4	3/4"	12	12	2	20	1	REC - A119	١.
17	REC - EWC (GFI)	1	20	2	12	12	3/4"	0.5			0.9	0.4	3/4"	12	12	2	20	1	REC - A125	Τ.
19	REC - A124	1	20	2	12	12	3/4"	0.4	1.3			0.9	3/4"	12	12	2	20	1	REC - A126	:
21	REC - EWC (GFI)	1	20	2	12	12	3/4"	0.5		0.9		0.4	3/4"	12	12	2	20	1	REC - A121	:
23	REC - A122	1	20	2	12	12	3/4"	0.4			0.9	0.5	3/4"	12	12	2	20	1	REC - A121	:
25	REC - A122	1	20	2	12	12	3/4"	0.4	1.1			0.7	3/4"	12	12	2	20	1	REC - A123	:
27	REC - A123	1	20	2	12	12	3/4"	0.7		1.9		1.2	3/4"	12	12	2	20	1	REC - A123 (TREAD MILL)	1
29	REC - A123	1	20	2	12	12	3/4"	0.2			1.4	1.2	3/4"	12	12	2	20	1	REC - A123 (TREAD MILL)	3
31	REC - EXTERIOR	1	20	2	12	12	3/4"	0.5	1.1			0.5	3/4"	12	12	2	20	1	REC - EXTERIOR	1
33	DOOR HARDWARE	1	20	2	12	12	3/4"	1.3		2.5		1.3	3/4"	12	12	2	20	1	DOOR HARDWARE	3
35	REC - A123	1	20	2	12	12	3/4"	0.7			1.7	1.0	3/4"	12	12	2	20	1	REC - A123 (TREAD MILL)	3
37	REC - A123 (TREAD MILL)	1	20	2	12	12	3/4"	1.0	2.0			1.0	3/4"	12	12	2	20	1	REC - A123 (TREAD MILL)	3
39	HANDS FREE FAUCET / FLUSH VALVE	1	20	2	12	12	3/4"	1.2		2.0		0.8	3/4"	12	12	2	20	1	HANDS FREE FAUCET / FLUSH VALVE	4
41	HANDS FREE FAUCET / FLUSH VALVE	1	20	2	12	12	3/4"	0.8			1.7	0.9	3/4"	12	12	2	20	1	HANDS FREE FAUCET / FLUSH VALVE	4
						TOT	AL KVA/	PHASE	9.7	12.6	10.7									
					Т	OTAL K	VA SEC	TION 1		33.0										
					Т	OTAL K	VA SEC	TION 2		1.7										
							TOT	AL KVA		34.7										

MOU	NTING: <u>SURFACE</u> PHASE	: <u>3</u>	WIR	E: <u>4</u>		VOLTA	AGE: <u>20</u>	08/120		AIC:	18,00	<u>0</u>								
		BRE	EAKER	W	IRE	GND		LOAD		KVA/PH	ł	LOAD		GND	WI	RE	BREA	KER		
CKT	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	KVA	А	В	С	KVA	COND	SIZE	SIZE	NO	AMP	Р	CIRCUIT DESCRIPTION	CKT
43	HANDS FREE FAUCET / FLUSH VALVE	1	20	2	12	12	3/4"	0.6	0.6			0.0					20	1	SPARE	44
45	TV RECEPTACLES - A123	1	20	2	12	12	3/4"	0.4		0.4		0.0					20	1	SPARE	46
47	REC - A126	1	20	2	12	12	3/4"	0.7			0.7	0.0					20	1	SPARE	48
49	IDII A404 0 A400		45		40	40	0/48	0.3	0.3			0.0					20	1	SPARE	50
51	IDU - A121 & A122	2	15	2	12	12	3/4"	0.3		0.3		0.0					20	1	SPARE	52
53	IDII A400		45		40	40	0/48	0.2			0.2	0.0					20	1	SPARE	54
55	IDU - A123	2	15	2	12	12	3/4"	0.2	0.2			0.0					20	1	SPARE	56
57	IDII A440 A404 A400 8 A440		45	0	40	40	0/4"	0.2		0.2		0.0					20	1	SPARE	58
59	IDU - A119, A134, A138, & A140	2	15	2	12	12	3/4"	0.2			0.2	0.0					20	1	SPARE	60
61	LIDU. A400		45	_	40	40	3/4"	0.3	0.3			0.0					20	1	SPARE	62
63	HRU - A120	2	15	2	12	12	3/4	0.3		0.3		0.0					20	1	SPARE	64
65	IDII A424 A425 8 A426		15	_	10	40	3/4"	0.2			0.2	0.0					20	1	SPARE	66
67	IDU - A124, A125, & A126	2	15	2	12	12	3/4	0.2	0.2			0.0					20	1	SPARE	68
69	IDU - A135 & A136	2	15	2	12	12	3/4"	0.1		0.1		0.0					20	1	SPARE	70
71	150 - A100 & A100		10		12	12	3/4	0.1			0.1	0.0						1	PREPARED SPACE	72
73	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	74
75	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	76
77	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	78
79	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	80
81	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	82
83	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	84
						TOT	AL KVA/	PHASE	1.5	1.2	1.4									
						TOT	AL KVA	PANEL		4.2										

l	PANE	EL: LD SECTION 1	BUS A	AMP: _	<u>200A</u>			Α	MPS MA	AIN BR	EAKER	: <u>175</u> 4	<u>A</u>								
 	MOU	NTING: <u>SURFACE</u> PHASE: <u>3</u>	WIR	RE: <u>4</u>		VOLT	AGE: _2	208/120		AIC	18,000	<u>0</u>									
			BRE	EAKER	W	IRE	GND		LOAD		KVA/PH	1	LOAD		GND	WI	RE	BREA	KER		
	CKT	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	KVA	А	В	С	KVA	COND	1	SIZE	NO	AMP	Р	- CIRCUIT DESCRIPTION	CK
	1	REC - B110	1	20	2	12	12	3/4"	0.9	1.9			1.0	3/4"	12	12	2	20	1	REC - B110	2
l	3	REC - B110	1	20	2	12	12	3/4"	0.8		1.3		0.5	3/4"	12	12	2	20	1	REC - B110	4
!	5	FLOOR REC - B110, B112	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	FLOOR REC - B110, B112	6
7 FLOOR REC - B110, B112						REC - B112	8														
J	9 REC - B112 1 20 2 12 12 3/4" 0.8 1.7 0.9 3/4" 12 12 2 20 1 REC - B112						REC - B112	10													
I	11	REC - B112	1	20	2	12	12	3/4"	1.0			1.5	0.5	3/4"	12	12	2	20	1	REC - B113	12
	13	REC - B113	1	20	2	12	12	3/4"	0.4	0.9			0.5	3/4"	12	12	2	20	1	REC - B111	14
	15	13     REC - B113     1     20     2     12     12     3/4"     0.4     0.9     0.5     3/4"     12     12     2     20     1     REC - B111       15     REC - B111     1     20     2     12     12     3/4"     0.4     0.9     0.5     3/4"     12     12     2     20     1     REC - B120						REC - B120	16												
1	17	REC - B114, B117, B118	1	20	2	12	12	3/4"	0.5			0.7	0.2	3/4"	12	12	2	20	1	REC - B115	18
1	19	REC - B115	1	20	2	12	12	3/4"	0.4	0.7			0.4	3/4"	12	12	2	20	1	REC - B115	20
	21	REC - B116	1	20	2	12	12	3/4"	0.9		1.4		0.5	3/4"	12	12	2	20	1	REC - B116	22
1	23	REC - B116	1	20	2	12	12	3/4"	0.8			1.7	0.9	3/4"	12	12	2	20	1	REC - B116	24
i	25	FLOOR REC - B116	1	20	2	12	12	3/4"	0.7	1.1			0.4	3/4"	12	12	2	20	1	FLOOR REC - B116	26
	27	FLOOR REC - B116	1	20	2	12	12	3/4"	0.7		1.6		0.9	3/4"	12	12	2	20	1	REC - B119	28
1	29	REC - B119	1	20	2	12	12	3/4"	0.8			1.3	0.5	3/4"	12	12	2	20	1	REC - B119	30
1	31	REC - B119	1	20	2	12	12	3/4"	0.9	1.6			0.7	3/4"	12	12	2	20	1	FLOOR REC - B119	32
	33	FLOOR REC - B119	1	20	2	12	12	3/4"	0.4		1.1		0.7	3/4"	12	12	2	20	1	FLOOR REC - B119	34
<b>I</b>	35	REC - EXTERIOR	1	20	2	12	12	3/4"	0.5			1.5	1.0	3/4"	12	12	2	20	1	DOOR HARDWARE	36
ı	37	DOOR HARDWARE	1	20	2	12	12	3/4"	1.0	2.3			1.3	3/4"	12	12	2	20	1	DOOR HARDWARE	38
	39	FLOOR REC - B110, B112	1	20	2	12	12	3/4"	0.7		0.9		0.2	3/4"	12	12	2	20	1	REC - B116	40
	41	FLOOR REC - B110, B112	1	20	2	12	12	3/4"	0.7			0.9	0.2	3/4"	12	12	2	20	1	REC - B119	42
1							TOT	AL KVA/I	PHASE	9.7	8.9	9.1									
- 1						Т	OTAL K	VA SEC	TION 1		27.7										
						Т	OTAL K	VA SEC	TION 2		0.7										
1								TOTA	AL KVA		28.4										
1							TOTA	AMPS	PANEL		79										

401.14	NITING: CUIDEAGE BUAGE	. 0	\A/!F	n=. 4		\/OI T	AOF: 0	00/400		۸۱۵	. 40.00	0								
IOUI	NTING: <u>SURFACE</u> PHASE	: <u>3</u>	VVIF	RE: <u>4</u>		VOLI	AGE: <u>2</u>	<u>08/120</u>		AIC	: <u>18,00</u>	<u>0</u>								
KT	CIRCUIT DESCRIPTION	BRE	EAKER	W	IRE	GND	COND	LOAD		KVA/PI	1	LOAD	COND	GND	WII	RE	BREA	KER	CIRCUIT DESCRIPTION	СКТ
,r. ı	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	KVA	А	В	С	KVA	COND	SIZE	SIZE	NO	AMP	Р	- CIRCUIT DESCRIPTION	CKI
43								0.2	1.0			0.7	3/4"	12	12	2	20	1	FLOOR - B112	44
45	DU - B115, B116, B117, & B119	2	15	2	12	12	3/4"	0.2		1.0		0.7	3/4"	12	12	2	20	1	FLOOR - B112	46
47	IDII - B440 0 B440		45		40	40	0/48	0.2			0.9	0.7	3/4"	12	12	2	20	1	FLOOR - B112	48
49	- IDU - B110 & B112	2	15	2	12	12	3/4"	0.2	0.3			0.2	3/4"	12	12	2	20	1	REC - B112	50
51	- HRU - B120	2	15	2	12	12	3/4"	0.1		0.3		0.2	3/4"	12	12	2	20	1	REC - B110	52
53	11KO - B120		13	2	12	12	3/4	0.1			0.5	0.4	3/4"	12	12	2	20	1	SCREEN - B110	54
55	FLOOR BOX B110	1	20	2	12	12	3/4"	0.7	0.9			0.2	3/4"	12	12	2	20	1	REC - B110	56
57	FLOOR BOX B110	1	20	2	12	12	3/4"	0.7		0.9		0.2	3/4"	12	12	2	20	1	REC - B118	58
59	FLOOR BOX B110	1	20	2	12	12	3/4"	0.7			0.7	0.0					20	1	SPARE	60
	REP-R/14		70	<b>V</b>	12	12/	3/4"	The state of the s	0.2			0.0					20	1	SPARE	62
63	REC - UPS	1	30	2	10	10	3/4"	0.5		0.5		0.0					20	1	SPARE	64
05	SAR CONTRACTOR OF THE PARTY OF	مہر	20	ىر				0.0			0.0	0.0					20	1	SPARE	66
67	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	68
69	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	70
71	PREPARED SPACE	1						0.0			0.0	0.0					20	1	SPARE	72
73	PREPARED SPACE	1						0.0	0.0			0.0					20	1	SPARE	74
75	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	76
77	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	78
79	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	80
81	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	82
33	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	84
								/PHASE	2.4	2.7	2.1									
						ТОТ	AL KVA	PANEL		7.2										

ELECTRICAL SCHEDULES

December 18, 2019

6

**PROJECT** 

3089

E5.3

Attachment F



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01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES
	08/28/20	BIA	ADDENDUM 4

# ALL CONCRETE WORK, REINFORCING PLACEMENT FORMWORK AND SHORING SHALL BE INSPECTED UNDER THE SUPERVISION OF THE WASHINGTON COUNTY INSPECTOR AND THE SPECIAL INSPECTOR. CONCRETE QUALITY CONTROL, INSPECTION AND TESTING SHALL BE

# CONSTRUCTION PRACTICES:

WET STICKING OF DOWELS INTO THE FOOTING WILL NOT BE ACCEPTED. DOWELS SHOULD BE PROPERLY PLACED AND TIED TO LONGITUDINAL FOOTING REINFORCING IN ACCORDANCE WITH CRSI.

IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS, ACI 301 AND THE LOCAL BUILDING CODE REQUIREMENTS.

THE SPECIAL INSPECTOR SHALL PERFORM CONCRETE TESTS PER SECTION 3.15 OF SPECIFICATION SECTION 03 30 00. THE SPECIAL INSPECTOR SHALL SUBMIT WRITTEN TEST REPORTS TO THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER. THE ARCHITECT AND STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ALL TESTS THAT DO NOT MEET THE PROJECT SPECIFICATIONS WITHIN 24 HOURS.

# SLAB ON GRADE

PROVIDE A MINIMUM THICKNESS REINFORCED CONCRETE SLAB AS NOTED ON THE PLANS ON A CONTINUOUS VAPOR RETARDER/BARRIER OVER DRAINAGE FILL. THE WELDED WIRE REINFORCING SHALL BE PLACED AT 1/3 THE SLAB THICKNESS BELOW THE TOP SURFACE OF THE SLAB. THE DRAINAGE FILL SHALL BE ASTM C33, SIZE 57.

CONTRACTOR'S OPTION - PROVIDE SYNTHETIC POLYPROPYLENE REINFORCING FIBERS IN PLACE OF WELDED WIRE MESH IN THE SLAB ON GRADE. FIBERS SHALL BE ADDED AT THE CONCRETE PLANT PER THE FIBER MANUFACTURER'S RECOMMENDATIONS. CONCRETE WITH FIBER REINFORCING SHALL HAVE HIGH RANGE WATER REDUCER PER ASTM C494, TYPE F OR G.

# STRUCTURAL MASONRY

ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH FOLLOWING STANDARDS:

BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES - ACI 530/ASCE 5

SPECIFICATIONS FOR MASONRY STRUCTURES ACI 530.1/ASCE 6

SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF LOAD BEARING CONCRETE MASONRY PUBLISHED BY NATIONAL CONCRETE MASONRY ASSOCIATION.

ALL LOAD BEARING MASONRY WALLS SHALL BE INSPECTED IN ACCORDANCE WITH THE WASHINGTON COUNTY REQUIREMENTS.

THE MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY (F'm) SHALL BE 1500 PSI PER ACI 530.

THE MINIMUM NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS SHALL BE 1900 PSI PER ACI 530.

HOLLOW AND SOLID LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND ASTM C145.

MORTAR SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM TENTATIVE SPECIFICATIONS FOR MORTAR FOR UNIT MASONRY, ASTM C270, TYPE S MORTAR. HOLLOW UNITS SHALL BE LAID WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. SOLID UNITS SHALL BE LAID WITH FULL HEAD AND BED JOINTS. FIELD TESTED MORTAR IS REQUIRED TO ACHIEVE SPECIFIED DESIGN STRENGTHS.

MASONRY GROUT SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI, COMPLYING WITH ASTM C476.

REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. ALL VERTICAL MASONRY REINFORCING SHALL BE INSTALLED IN FULLY GROUTED CELLS AS SHOWN ON THE DRAWINGS. PROVIDE BAR SPLICES PER THE CMU BAR SPLICE CHART IN THE GENERAL NOTES.

PROVIDE JOINT REINFORCING, DUR-O-WALL OR EQUAL, EVERY BLOCK COURSE BELOW GRADE AND EVERY OTHER BLOCK COURSE ABOVE GRADE UNLESS OTHERWISE SHOWN ON ARCHITECTURAL WALL SECTIONS. JOINT REINFORCING SHALL BE CONTINUOUS AND SHALL BE PROVIDED IN ALL WALLS WITHOUT EXCEPTION. MASONRY JOINT REINFORCING SHALL BE LADDER TYPE COLD-DRAWN STEEL WIRE CONFORMING TO ASTM A82 AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 AFTER FABRICATION. WHERE WALLS ABUT EACH OTHER, AND AT OUTSIDE CORNERS, PROVIDE PREFABRICATED TEE-TYPE AND CORNER TRUSS TIES. PROVIDE MINIMUM 6" LAP BETWEEN ADJACENT PIECES OF JOINT REINFORCING.

CONTROL JOINTS SHALL BE SPACED WITHIN 4'-0" MAXIMUM OF THE VENEER JOINTS SHOWN ON THE ARCHITECTURAL DRAWINGS AND AT A MAXIMUM SPACING OF 25' - 0" ON CENTER. JOINTS MUST BE 24" FROM WALL OPENINGS TYPICAL.

DISCONTINUE JOINT REINFORCING AT CONTROL JOINTS

PROVIDE TIES FOR MASONRY VENEER WALLS AS DETAILED ON ARCHITECTURAL DRAWINGS. SHEET METAL TIES FOR VENEER ARE NOT ACCEPTABLE. WIRE TIES MUST BE USED.

PROVIDE FLEXIBLE TIES ON STEEL BEAMS AND COLUMNS AT MASONRY WALLS TO PREVENT LATERAL MOVEMENT OF THE WALLS. THE TIES SHALL BE SPACED AT 16" ON CENTER.

ALL MASONRY WALLS SHALL BE TEMPORARILY BRACED IN AN APPROVED MANNER DURING CONSTRUCTION UNTIL MORTAR HAS ATTAINED THE DESIGN STRENGTH, AND UNTIL FLOOR AND ROOF MEMBERS HAVE BEEN PLACED AND ANCHORED THERETO. SUBMIT BRACING DRAWINGS IN ACCORDANCE WITH OSHA REQUIREMENTS: DRAWINGS AND CALCULATIONS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH SUBMITTALS NOTES.

# **CONSTRUCTION PRACTICES:**

- WET STICKING OF VERTICAL REINFORCING INTO GROUTED CELLS FOR LAPS IS UNACCEPTABLE. LAP AND TIE BARS PER ACI.
- ALL BELOW GRADE WALLS ARE TO BE GROUTED SOLID.
- GROUT TOP COURSE SOLID AT ALL TRANSITIONS IN WALL CONSTRUCTION FROM LARGER SIZE BLOCK TO SMALLER SIZE BLOCK. PROVIDE GROUT SCREEN AS REQUIRED.
- USE VIBRATORS TO CONSOLIDATE GROUT IN MASONRY WALLS. RODDING WILL NOT BE PERMITTED.

# **BEARING ON MASONRY**

UNLESS OTHERWISE NOTED, PROVIDE TWO COURSES OF SOLID GROUTED BLOCK EIGHT INCHES WIDE BY ONE FOOT FOUR INCHES MINIMUM LENGTH AT ALL BEAM BEARING POINTS. PROVIDE A BEARING PLATE 3/4"x6"x8" UNDER ALL STEEL BEAMS BEARING ON MASONRY UNLESS OTHERWISE SHOWN.

# MASONRY WALL LINTELS

PROVIDE LINTELS FOR ALL OPENINGS IN LOAD-BEARING MASONRY WALLS AS SHOWN ON THE STRUCTURAL DRAWINGS ON SHEET \$5.01

ALL OPENINGS EXCEEDING 1'-0" IN WIDTH IN NON-LOAD-BEARING MASONRY PARTITIONS MUST HAVE EITHER A PRECAST CONCRETE LINTEL OR A MASONRY BOND BEAM. NON-BEARING MASONRY PARTITIONS ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR OPENING SIZE, OPENING LOCATION, AND LINTEL TYPE. REFER TO THE CMU LINTEL SCHEDULE IN THE DETAILS FOR LINTEL SIZE AND REINFORCING.

MECHANICAL OPENINGS HAVE NOT BEEN SHOWN ON THE STRUCTURAL DRAWINGS. PROVIDE LINTELS FOR ALL MECHANICAL OPENINGS PER THE LINTEL SCHEDULE. DUCT OPENINGS THROUGH BEARING WALLS ARE TO BE LOCATED BETWEEN THE BEAMS/JOISTS, PROVIDING 1'-0" MINIMUM CLEAR FROM EDGE OF MASONRY OPENING TO STEEL BEARING. DUCTS ARE NOT TO BE LOCATED DIRECTLY UNDER STEEL BEARING.

# NOTES:

- PROVIDE HORIZONTAL JOINT REINFORCING AT 8" O.C. FOR TWO COURSES ABOVE ALL LINTELS. EXTEND THE JOINT REINFORCING 12" BEYOND THE LINTELS AT EACH END OF THE LINTELS.
- BOND BEAM LINTEL REINFORCING TO EXTEND MINIMUM 16" BEYOND END OF OPENING. GROUT BOND BEAM SOLID
- PROVIDE BEARING AT EACH END OF MASONRY LINTELS AS SHOWN IN THE DETAILS OS S5.02.

STRUCTURAL STEEL

ALL STEEL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 360-10, BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

ALL STEEL W SHAPES SHALL BE ASTM A992, GRADE 50. ALL ANGLES, CHANNELS, BENT PLATES, FLAT STOCK AND OTHER MISC. METAL SHAPES SHALL BE ASTM A36 UNLESS NOTED OTHERWISE. ALL CONNECTIONS SHALL BE WELDED OR BOLTED.

STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A501 OR ASTM A53, TYPE E OR S.

HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A500, GRADE B

ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36

SHOP AND FIELD FASTENERS SHALL BE ASTM A325 HIGH STRENGTH BOLTS IN BEARING TYPE CONNECTIONS, UNLESS NOTED OTHERWISE.

NATURAL CAMBER OF STEEL BEAMS TO BE FABRICATED WITH CAMBER "UP". ANY ADDITIONAL CAMBER TO BE FABRICATED WITH CAMBER "UP". ERECTION OF ALL BEAMS TO BE CAMBER "UP".

PROVIDE ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) AT THE STEEL EXPOSED TO PUBLIC VIEW, INCLUDING STEEL ROOF TRUSSES, CANOPY FRAMING, AND COLUMNS WHERE VISIBLE. SEE S4.10 FOR ADDITIONAL REQUIREMENTS.

HOLES SHALL NOT BE CUT THROUGH BEAMS AND COLUMNS UNLESS INDICATED OR APPROVED BY THE STRUCTURAL ENGINEER.

WELDING SHALL BE DONE ONLY BY AWS CERTIFIED WELDERS. WELD IN ACCORDANCE WITH THE AWS "STANDARD CODE" FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. USE E70XX ELECTRODES.

STRUCTURAL STEEL SURFACES CAST INTO CONCRETE AND MASONRY AND STEEL TO RECEIVE FIREPROOFING SHALL BE UNPAINTED.

PROVIDE ADEQUATE BRACING AND GUY-WIRING FOR STEEL MEMBERS DURING STEEL ERECTION PRIOR TO FLOOR AND ROOF CONSTRUCTION. THE STEEL FRAME SHALL BE PLUMB WITHIN THE TOLERANCES IN THE AISC AND PROJECT SPECIFICATIONS. STEEL COLUMNS HAVE BEEN NOT BEEN DESIGNED AS SELF SUPPORTING, AND MUST BE ADEQUATELY BRACED DURING ERECTION.

MASONRY SUPPORTED BY STEEL MEMBERS SHALL NOT BE PLACED UNTIL PERMANENT ANCHORAGE AND BRACING SYSTEMS HAVE BEEN INSTALLED AND UNTIL THE CONCRETE ON THE FLOOR DECKS HAS ATTAINED ITS DESIGN STRENGTH.

THE FABRICATOR IS RESPONSIBLE FOR THE SELECTION, DESIGN AND DETAILING OF ALL CONNECTIONS NOT FULLY DETAILED ON THE CONTRACT DOCUMENTS. TYPICAL CONNECTION DETAILS ARE INDICATED ON THE DRAWINGS FOR DESIGN INTENT ONLY. THE FABRICATOR SHALL HAVE A REGISTERED PROFESSIONAL ENGINEER PREPARE THE CONNECTION DESIGNS, AND THE DESIGNS SHALL BE SUBMITTED FOR REVIEW WITH THE SHOP DRAWINGS.

G.C. OPTION AT COLUMN BASE PLATES-LEVELLING NUTS MAY BE USED IN LIEU OF LEVELLING PLATES SHOWN. USE 1" GROUT WITH LEVELING NUTS.

SEE THE "CONTRACTOR RESPONSIBILITES" AND "SUBMITTAL" NOTES FOR ADDITIONAL STEEL SHOP DRAWING REQUIREMENTS.

STRUCTURAL STEEL EXPOSED TO WEATHER

ALL EXPOSED STEEL SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AFTER FABRICATION. APPLY ZINC PRIMER TO BOLTED AND WELDED CONNECTIONS IN THE FIELD.

# STEEL JOISTS

OPEN WEB STEEL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE. ALL JOISTS SHALL BE ANCHORED TO STEEL BEAMS AND BEARING PLATES WITH A MINIMUM 1/8" FILLET WELD 2" LONG ON EACH SIDE OF THE JOIST.

ROOF JOISTS TO BE DESIGNED FOR A NET UPLIFT LOAD AS CALCULATED FROM THE COMPONENTS AND CLADDING CHARTS.

HORIZONTAL OR DIAGONAL BRIDGING SHALL BE USED IN COMPLIANCE WITH REQUIREMENTS OF THE STEEL JOIST INSTITUTE. BRIDGING ANGLE SIZES SHALL BE AS RECOMMENDED BY SJI, FOR THE SPACINGS INDICATED. THE CONTRACTOR SHALL COORDINATE BRIDGING LOCATIONS WITH MECHANICAL DUCTWORK AND MECHANICAL UNIT LOCATIONS. ANCHOR BRIDGING TO MASONRY WALLS AS SHOWN ON THE DRAWINGS AND PER THE STEEL JOIST MANUFACTURER. COORDINATE BRIDGING ATTACHMENT WITH INSTALLATION OF DECK

STRUCTURAL DRAWINGS ARE NOT INTENDED TO STAND ALONE, BUT WORK IN CONJUCTION WITH THE ARCHITECTURAL DRAWINGS. JOIST MANUFACTURER TO COORDINATE WITH BOTH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DIMENSIONS, DETAILING, EDGE OF JOIST LOCATIONS, TOP CHORD EXTENSIONS, ETC. JOIST LOCATIONS ARE TO BE COORDINATED BY THE G.C. WITH DUCTWORK CURTAIN WALL LOCATIONS, EXHAUST FANS AND OTHER ROOF PENETRATIONS, ROOF TOP UNITS, ETC. ADJUST JOIST LOCATIONS AS REQUIRED WITHIN THE MAXIMUM SPACING LIMITS PROVIDED. JOISTS ARE NOT TO BEAR ACROSS WALL CONTROL JOINTS. ADJUST JOIST LOCATIONS AS REQUIRED SO AS NOT TO STRADDLE THE JOINT WITH THE JOIST BEARING PLATE. THE CENTERLINE OF JOIST IS TO BE A MINIMUM OF 6" FROM THE CENTERLINE OF THE CONTROL JOINT, PROVIDE ADDITIONAL JOISTS AS REQUIRED TO COORDINATE WITH OTHER TRADES WHILE MAINTAINING MAXIMUM SPACINGS NOTED ON PLANS.

JOISTS INDICATED ON PLANS TO BE DESIGNED BY THE JOIST MANUFACTURER ARE TO BE SUBMITTED WITH CALCULATIONS, STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. JOIST MANUFACTURER IS RESPONSIBLE FOR COORDINATING SNOW BUILD UP LOADS, BASKETBALL BACKSTOP LOADS, MECHANICAL EQUIPMENT LOADS, AND ANY OTHER CONCENTRATED LOADS IDENTIFIED IN THE CONSTRUCTION DOCUMENTS. G.C. IS TO COORDINATE MAGNITUDE OF LOADS AND LOCATIONS WITH RESPECTIVE SUBCONTRACTORS AND MANUFACTURERS AND PROVIDE TO THE JOIST MANUFACTURER FOR USE IN DESIGN.

INDIVIDUAL PIPE HANGERS FOR PIPING SUPPORT ARE PERMITTED ON NEW OR EXISTING JOISTS AS FOLLOWS:

- 1. NO MORE THAN 300 POUNDS TO BE SUPPORTED ON ANY INDIVIDUAL JOIST. MULTIPLE HANGERS MAY BE LOCATED ON ONE JOIST
- AS LONG AS THE COMBINED SUPPORTED WEIGHT OF THOSE HANGERS DOES NOT EXCEED 300 POUNDS. ADDITIONAL JOIST REINFORCING IS TO BE USED IF HANGER LOCATION IS FURTHER THAN 3" FROM THE JOIST PANEL POINT.

# STEEL ROOF DECK

THE ROOF DECK SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND CODE OF RECOMMENDED STANDARD PRACTICE OF THE STEEL DECK INSTITUTE. SUBMIT SHOP DRAWINGS INDICATING THE ROOF DECK SECTION PROPERTIES MEET OR EXCEED THE FOLLOWING MINIMUM SPECIFICATIONS:

3-1/2" DEEP ACOUSTIC, 20 GAGE, Sp = 0.66 IN\*\*3/FT. Ip = 1.75 IN\*\*4/FT., YIELD STRENGTH = 40,000 PSI (GALVANIZED) - DOVETAIL

CONNECT THE STEEL ROOF DECK TO THE SUPPORTS WITH MINIMUM 3/4" DIAMETER PUDDLE WELDS AT 36/4 PATTERN. SIDELAPS SHALL BE FASTENED WITH #12 SELF DRILLING SCREWS OR 1.5" FILLET WELDS AT 36" O.C.

1-1/2" DEEP, 20 GAGE Sp = 0.227 IN\*\*3/FT. Ip = 0.205 IN\*\*4/FT., YIELD STRENGTH = 33,000 PSI (GALVANIZED) - WIDE RIB B DECK

CONNECT THE STEEL ROOF DECK TO THE SUPPORTS WITH MINIMUM 3/4" DIAMETER PUDDLE WELDS AT 24/3 PATTERN. SIDELAPS SHALL BE FASTENED WITH #12 SELF DRILLING SCREWS OR 1.5" FILLET WELDS AT 36" O.C.

REFER TO THE ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR SIZES AND LOCATIONS OF ALL ROOF OPENINGS.

STRUCTURAL DRAWINGS ARE NOT INTENDED TO STAND ALONE, BUT WORK IN CONJUCTION WITH THE ARCHITECTURAL DRAWINGS. DECK MANUFACTURER TO COORDINATE WITH BOTH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DIMENSIONS, DETAILING, EDGE OF DECK LOCATIONS, ETC.

NO PIPING, CONDUIT, LIGHT FIXTURES, OR MECHANICAL DUCTWORK IS TO BE SUPPORTED FROM THE METAL ROOF DECK.

**CONCRETE SLABS ON PERMANENT STEEL FORM** 

THE FLOOR SLABS ON PERMANENT STEEL FORM SHALL BÉ 3" IN OVERALL DEPTH AND REINFORCED WITH 6X6-W2.1XW2.1 WELDED WIRE REINFORCING. SUBMIT SHOP DRAWINGS INDICATING THE FORM DECK SECTION PROPERTIES MEET OR EXCEED THE FOLLOWING MINIMUM SPECIFICATIONS:

9/16" DEEP, 26 GAGE, Sp = 0.043 IN\*\*3/FT.

 $Ip = 0.015 IN^{**}4/FT.$ , YIELD STRENGTH = 60,000 PSI. (GALVANIZED)

CONNECT THE STEEL FLOOR DECK TO THE SUPPORTS AS NOTED IN PROJECT SPECIFICATIONS.

REFER TO THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZES AND LOCATIONS OF ALL FLOOR SLAB OPENINGS. NO PIPING, CONDUIT, LIGHT FIXTURES, OR MECHANICAL DUCTWORK IS TO BE SUPPORTED FROM THE METAL FLOOR DECK.

GROUPS OF FLOOR PENETRATIONS IN THE SLAB. CREATED BY CORE DRILLING FOR UTILITIES. MUST BE CONSIDERED A FLOOR OPENING AND REINFORCED WITH ANGLE FRAMES PER THE TYPICAL DETAILS. THE FOLLOWING GUIDELINES SHOULD BE USED IN DETERMINING IF A GROUPING OF CORE DRILLED PENETRATIONS CONSTITUTES A FLOOR OPENING.

- IF THERE IS LESS THAN 4" BETWEEN ADJACENT PENETRATIONS, AND THERE ARE FOUR OR MORE PENETRATIONS
- 2. IF ANY GROUPING OF PENETRATIONS ENCOMPASSES AN AREA GREATER THAN 12" SQUARE, IN ANY DIRECTION, AND THERE IS NOT AT LEAST FOUR INCHES BETWEEN ADJACENT PENETRATIONS.

# COLD FORMED METAL FRAMING (CFMF)

THE SUGGESTED COLD FORMED METAL FRAMING SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS IS TO BE USED AS A GUIDELINE ONLY BY THE CFMF CONTRACTOR. BEFORE PROCEEDING WITH WORK, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS, STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER, IN ACCORDANCE WITH THE "CONTRACTOR" RESPONSIBILITIES" AND "SUBMITTAL" NOTES ABOVE AND THE REQUIREMENTS NOTED BELOW. SHOP DRAWINGS ARE TO INCLUDE ERECTION PLANS AND DETAILS, INCLUDING MEMBER SIZES, SPACING, BRIDGING, CONNECTION DETAILS, FASTENER REQUIREMENTS, AND ALL OTHER INFORMATION RELEVANT TO THE CONSTRUCTION OF THE COLD FORMED METAL FRAMING.

THE DESIGN, FABRICATION AND ERECTION OF ALL COLD FORMED METAL FRAMING SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING STANDARD SPECIFICATIONS:

THE AMERICAN IRON AND STEEL INSTITUTE: "LIGHT GAGE COLD-FORMED STEEL DESIGN MANUAL"

ALL COLD FORMED METAL FRAMING SHALL CONFORM TO ASTM C955.

ALL COLD FORMED METAL FRAMING SUBJECT TO WIND LOADING (INCLUDING ROOF RAFTER OR ROOF TRUSS MEMBERS) SHALL BE DESIGNED IN COMPLIANCE WITH THE COMPONENTS AND CLADDING SECTION OF THE BUILDING CODE.

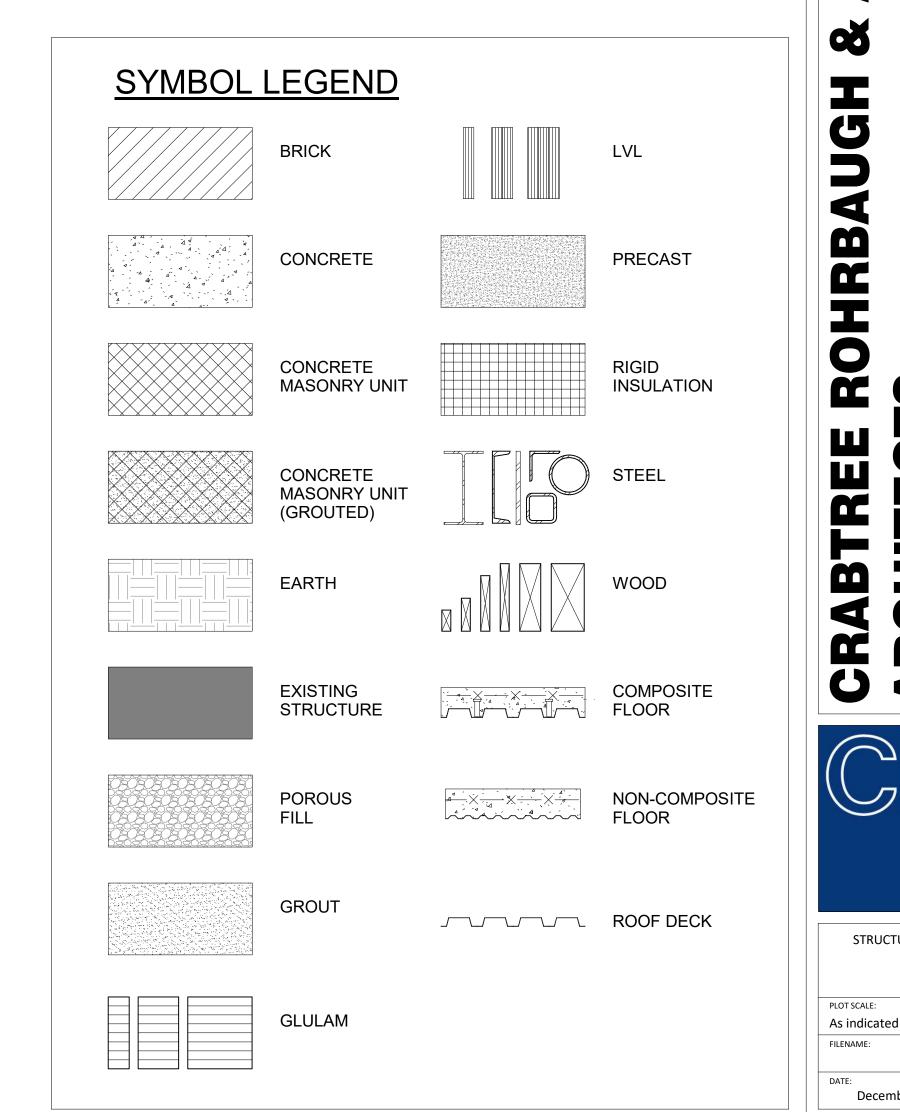
ALL COLD FORMED MEMBERS SHALL BE GALVANIZED PER ASTM A1003 WITH A MINIMUM G60 COATING.

THE MAXIMUM COLD FORMED MEMBER SPAN/DEFLECTION RATIO SHALL BE AS FOLLOWS: WIND LOADS BRICK VENEER L/600

CEMENT BOARD L/360

WALL FRAMING IS TO BE MINIMUM 20 GAGE (33 MILS) AT A MAXIMUM SPACING OF 24" ON CENTER. WALL FRAMING AT BRICK VENEER IS TO BE MINIMUM 18 GAGE (43 MILS). MAXIMUM STUD SPACING AT BRICK VENEER IS TO BE 16" ON CENTER. WHERE HIGHER MINIMUM GAGES ARE SPECIFIED ON THE DRAWINGS, REDUCTION IN GAGE WILL NOT BE CONSIDERED.

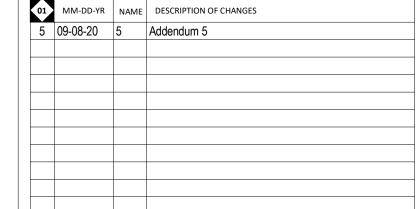
THE COLD FORMED METAL FRAMING FABRICATOR SHALL FURNISH ALL COLD FORMED METAL FRAMING, BRIDGING, BRACING, ANCHORS, CONNECTORS, SHIMS, WELDING AND ATTACHMENTS





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# REVISIONS



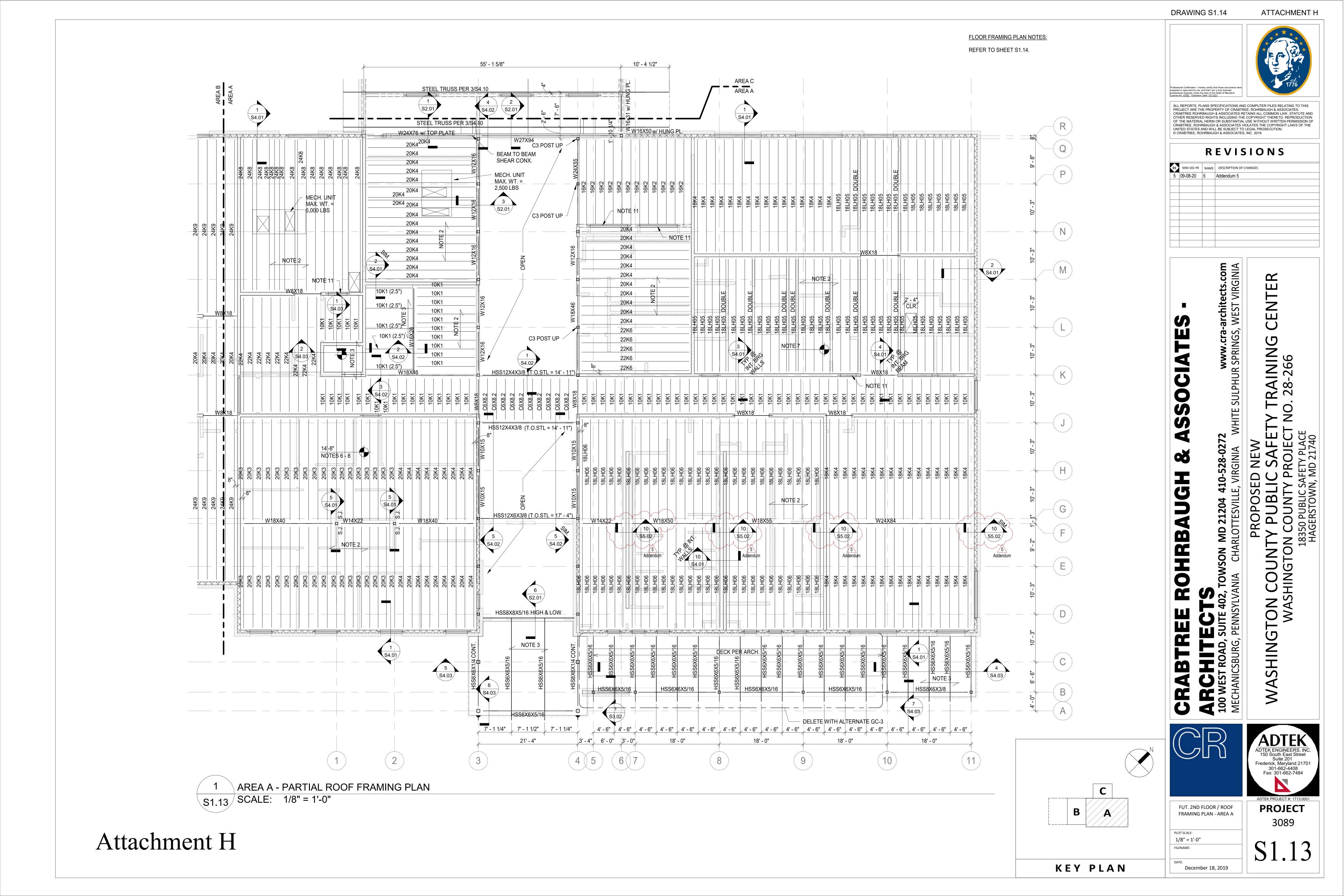
Frederick, Maryland 21701

STRUCTURAL NOTES

December 18, 2019

**PROJECT** 3089

Attachment G



# FLOOR FRAMING PLAN NOTES

- 1. SEE SHEETS S0.01 THRU S0.02 FOR STRUCTURAL NOTES AND SHEETS S4.01 THRU S5.03 FOR TYPICAL DETAILS. THE TYPICAL DETAILS APPLY WHEREVER THE CONDITION EXISTS UNLESS DETAILED OTHERWISE.
- 2. THE SLAB SYSTEM SHALL BE A 3" NORMAL WEIGHT CONCRETE SLAB ON 9/16" FORM DECK (3" TOTAL THICKNESS), THREE SPANS CONTINUOUS. SEE STRUCTURAL NOTES SHEETS FOR DECK PROPERTIES.
- THE ROOF SYSTEM SHALL BE 1-1/2" STEEL ROOF DECK, CONTINUOUS. SEE STRUCTURAL NOTES SHEETS FOR DECK PROPERTIES.
- THE SYMBOL C1 REFERS TO DESIGNATIONS IN THE COLUMN SCHEDULE LOCATED ON SHEET S0.3.
- ALL CMU WALLS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE REINFORCED PER THE 12. FOUNDATION PLAN. PROVIDE DOWELS TO SLAB OR STRUCTURE TO MATCH. REBAR SHALL BE CENTERED IN CELL U.N.O. GROUT REINFORCED CELLS SOLID.
- ALL JOISTS SHALL HAVE 5" JOIST SEATS UNLESS NOTED PROVIDE CEILING EXTENSIONS IN ALL AREAS.
- THE BOTTOM OF DECK ELEVATIONS SHALL BE TYPICALLY 3" BELOW FINISHED FLOOR UNLESS NOTED ON PLANS THUS: B.O. DECK = ±X'-X" REFERENCED FROM ELEVATION 0'-0".
- THE TOP OF BEAM AND JOIST BEARING ELEVATIONS SHALL BE TYPICALLY 8" BELOW THE FINISHED FLOOR SLAB UNLESS NOTED ON THE PLANS THUS: T.O.S.=±X'-X" REFERENCED

- SJ (STRUT JOIST) INDICATES THAT THE BOTTOM CHORD OF THE STEEL JOIST SHALL BE EXTENDED TO THE COLUMN. SEE DETAIL 5/S4.01.
- THE CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL FLOOR OPENINGS AND EQUIPMENT SUPPORTS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SUB-CONTRACTORS. SEE DETAILS 7/S4.01. PROVIDE ADDITIONAL JOISTS AS REQUIRED AT OPENINGS OR MECH., ELEC., PLUMBING EQUIPMENT. THE MAXIMUM OPERATING WEIGHT FOR EQUIPMENT SHALL BE AS NOTED ON THE PLAN.
- SEE THE LINTEL SCHEDULE IN THE STRUCTURAL NOTES ON \$5.01 FOR ALL LINTELS IN MASONRY WALLS UNLESS NOTED OTHERWISE. SEE THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE SIZE, LOCATION, TYPE, AND FIRE RATING OF ALL MASONRY OPENINGS. SEE 5/S5.01 FOR LINTELS IN CAVITY WALLS.
- ALL INTERIOR WALLS ON THIS PLAN ARE BELOW THE ROOF FRAMING, UNLESS NOTED
- REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN. CONTRACTOR SHALL COORDINATE BETWEEN THE STRUCTURAL AND ARCHITECTURAL DRAWINGS.
- SEE THE ARCHITECTURAL DRAWINGS FOR THE SIZE AND LOCATION OF ALL NON-BEARING
- 15. SMP INDICATES A SOLID MASONRY PIER. SEE DETAIL 3/S5.01.
- PROVIDE JAMB REINFORCING PER 8/S5.01 AT ALL MASONRY OPENINGS. JAMB REINFORCING TO BE FULL HEIGHT OF WALL WITH MATCHING DOWELS TO SLAB OR STRUCTURE, AS REQUIRED.

AREA B - PARTIAL ROOF FRAMING PLAN

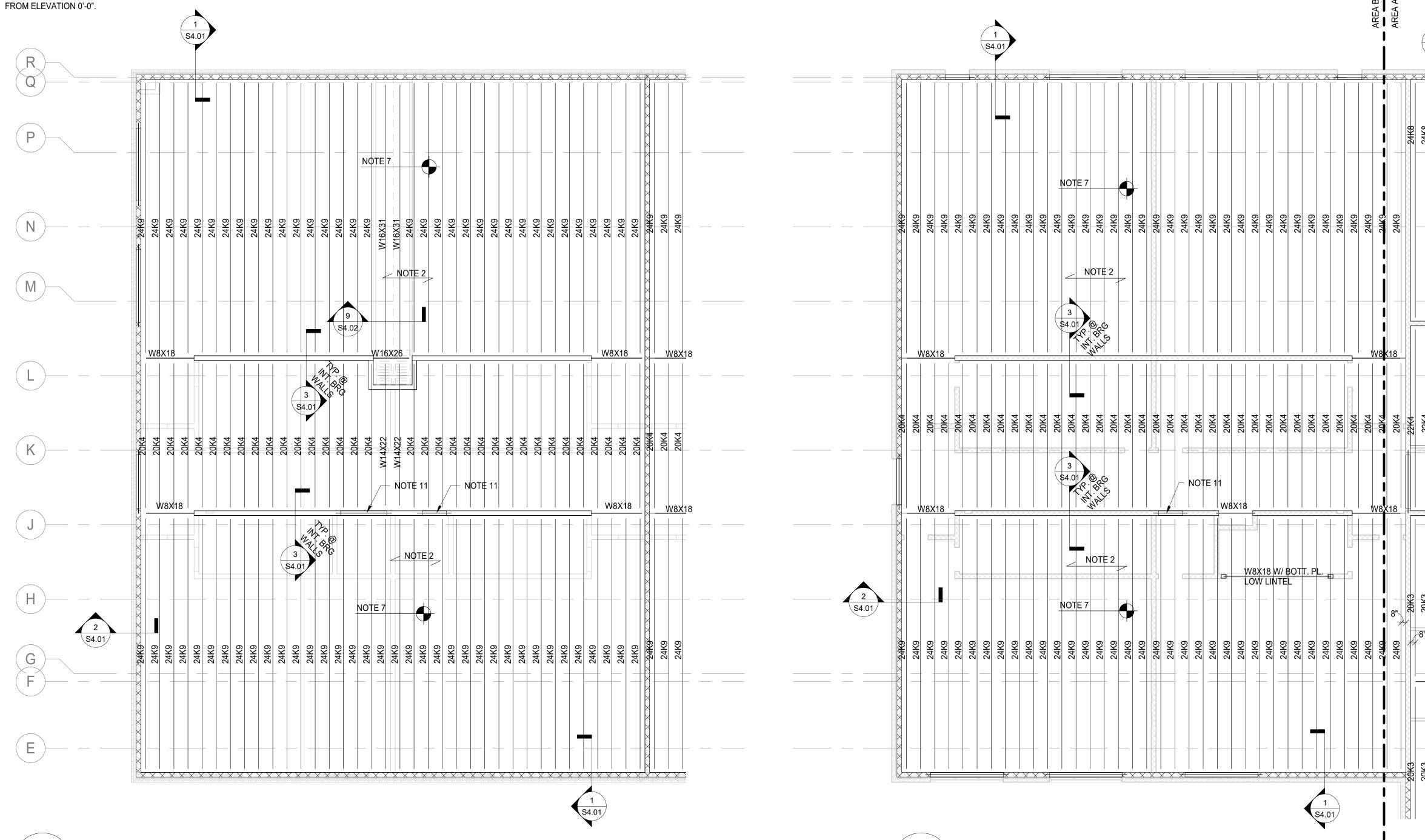
S1.14 SCALE: 1/8" = 1'-0"

UNLESS NOTED OTHERWISE ON PLAN, ASSUME THE FOLLOWING ULTIMATE (FACTOR) REACTIONS AT BEAM ENDS:

W8's AND W10's USE R = 15 kips USE R = 25 kips W12's

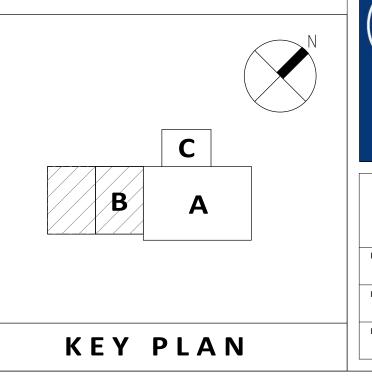
USE R = 40 kips USE R = 55 kips

W14's AND W16's W18's AND W21's W24's AND UP USE R = 75 kips



AREA B - PARTIALROOF FRAMING PLAN - ALTERNATE S1.14 | SCALE: 1/8" = 1'-0"

Attachment I



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01 MM-DD-YR NAME DESCRIPTION OF CHANGES

**PROJECT** 

FUT. 2ND FLOOR / ROOF FRAMING PLAN - AREA B 1/8" = 1'-0"

December 18, 2019

3089

	T			P.O		1	1			
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			BLVD							
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			7380 Coca Cola Drive						
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SSPICE ITECTION SOLUTIONS	Jan 13 Ediana	, toodant Excoative	1	1.1961310111	1,4,5	21,72			Too are a responsible to the second of the s

			1341 Hughes Ford			1			
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	Rommel	Business Development	7798 Waterloo Road						
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			OCE1 Oaklaigh Dood						
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			Road						
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			5301F Kings Court						
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			726 Governor Bridge						
	Amanda		Rd.				(440) =00 0=04	(222) 222	
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			17250 New Lenox Rd.						
Carlson Brothers, Inc.	Mark Carlson	Vice-President	17230 New Lellox Na.	Joliet	l <sub>II</sub>	60433	(815) 531-3400	(815) 531-3401	mcarlson@carlson-construction.net
Carison Brothers, me.	Width Carison	Vice i resident	188 Success Drive	301100		00 100	(613) 331 3 100	(813) 331 3 181	
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