

HH ARCHITECTURE

ADDENDUM #1

July 7, 2026

Project Name: 1105 Warehouse Drive
Owner: City of Raleigh
HH Project #: 23-022.02
From: **HH Architecture**
Kelly Walstrum, AIA
kwalstrum@hh-arch.com

Message: Bidders are hereby informed that the following additions, deletions, changes and clarifications supersede and supplement the Contract Documents for the above referenced project. It forms a part of the previously issued documents dated **June 6, 2026** on the cover.

This addendum may include revised pages and drawings, which shall be inserted before the corresponding page or drawings in the previously issued documents.

CLARIFICATIONS

1. Please see attached Pre-Bid Conference meeting Minutes
2. Please see attached Pre-Bid Conference sign-in sheet(s).
3. An optional site visit has been scheduled for 7/9 at 9:30am at 1105 Warehouse Drive.
4. The following questions were asked during the pre-bid conference, subsequent site visit, or in the following days via email:
 - a. QUESTION: Need very specific requirements of "delegated design" with Engineers seal required for this project. Specifically I see: Concrete, Storefronts/ Glass, and Grab Bars. In addition, I see this listed in many other areas that I know subcontractors will not pick up on their bids. This can be very costly later if not properly identified ahead of time.
 - i. **RESPONSE: Delegated design is required for project scope as included project documents.**
 - b. QUESTION: Clarify if any "alternates" are required for this project

- i. **RESPONSE: The project does include alternates listed on sheet G000, detailed in 012300 Alternates, and listed on 000410 Bid Form**
- c. QUESTION: Clarify if any "allowances" are required for this project or a cash allowance.
 - i. **RESPONSE: There are no allowances identified for this project**
- d. QUESTION: Is testing by owner ? (Or suggest a testing allowance be called out)
 - i. **RESPONSE: If testing is required, it will be provided by owner.**
- e. QUESTION: Suggest \$500 per day liquidated damages
 - i. **RESPONSE: Rejected. Liquidated damages is as listed in Article 6 of 000410**
- f. QUESTION: Suggest 180 day duration to allow for longer than normal various material lead times
 - i. **RESPONSE: Rejected. Project duration is as listed in Article 6 of 000410**
- g. QUESTION: When will addendum #1 post ? (I assume you are including a new bid since the roofing is an alternate and the bid does not show this)
 - i. **RESPONSE: Addendum 1 will be posted on 7/7 and includes a new 000410 Bid Form listing alternates detailed in 012300 Alternates**
- h. QUESTION: The lighting schedule says to match existing , and I'm unable to locate any information regarding the existing lighting - please provide information existing lighting to match.
 - i. **RESPONSE: Contractor to field verify existing light fixtures**
- i. QUESTION: There is an alternate for "Towers C & D speakers and amplifiers" listed, but the specs do not mention them under the "alternate" section. Can you provide clarification or description on what this alternate consists of. ?
 - i. **RESPONSE: Alternate has been removed and replaced with correct project alternates**
- j. QUESTION: Is there any software required for this project like E builder ?
 - i. **RESPONSE: There are no software requirements for this project.**
- k. QUESTION: Will the building be occupied ?
 - i. **RESPONSE: The building will remain partially occupied during construction and will be phased. See 011000.**
- l. QUESTION: What is phasing requirements ?
 - i. **RESPONSE: The construction will be phased, see 011000.**
- m. QUESTION: Are OH doors motorized or manual ?

- i. **RESPONSE: The existing overhead doors are motorized and operational. Alternate #4 includes new overhead doors which will also be motorized.**
- n. QUESTION: The YKK YES600 Series, which is the Basis of Design for the Aluminum Storefront, is a 6" thermally broken Aluminum System. The Architectural Drawings clearly show a 2" x 4-1/2" Frames on Sheet A004. Most Storefronts are indeed the 2" x 4-1/2" frame, will that be sufficient?
 - i. **RESPONSE: Basis-of-Design has been updated in 084113 to match drawings. Product: YES 45 TU, Thermally Broken, Center-Set**
- o. QUESTION: The Glazing Schedule on (Sheet A003) of the Architectural Drawings calls for ALL Exterior Glass to GL-2? The Specifications list GL-2 as a Clear / Tempered / Low-E (Sunguard) Insulated Glass. But the Elevations indicate Wire Glass at Windows SF4 & SF5. Please clarify the Glass required for Windows SF4 & SF5.
 - i. **RESPONSE: See glazing schedule on A003. Openings to receive Wired Glass GL-3 are indicated with crosshatch pattern. Details for GL-3 have been added to Section 088000 Glazing**
- p. QUESTION: The Glazing Schedule refers to wired & spandrel glass , is there any of that required on the project?
 - i. **RESPONSE: See glazing schedule on A003. Openings to receive Wired Glass GL-3 are indicated with crosshatch pattern. Details for GL-3 have been added to Section 088000 Glazing**
- q. QUESTION: Any issue rotating 90 degrees to get the horizontal supply / return on long side ?
 - i. **RESPONSE: This is acceptable. Coordinate additional supports with GC if required.**
- r. QUESTION: (Fixture schedule refers to the lighting to match existing) Do you have more information as to what lighting exists? and if not, could you direct to someone who has that information.
 - i. **RESPONSE: Contractor to field verify existing light fixtures**
- s. QUESTION: Do we need to grind , polish, and seal concrete or do we just need to paint over existing concrete with color specified in the finished schedule?
 - i. **RESPONSE: Yes, due to previously applied finishes that are chipping, existing will need to be removed before new finishes can be applied.**
- t. QUESTION: Clarify the alternates , will they update on the bid sheet ? Will they also be updated on the drawing?
 - i. **RESPONSE: The project does include alternates listed on sheet G000, detailed in 012300 Alternates, and listed on 000410 Bid Form**

- u. QUESTION: Confirm whether the 042000.A1 face brick infill locations require CMU back masonry or full depth masonry infill to match the existing load - bearing wall construction . If backup is required, please confirm required wall thickness, CMU size, anchorage/ties, grout/reinforcement requirements, and whether flashing/weepers are required at infill location.
 - i. **RESPONSE: Infill locations to match existing construction.**
- v. QUESTION: Project manual is calling for 6-inch system drawings are showing 4 1/2-inch system. Can you please let us know what it is?
 - i. **RESPONSE: Basis-of-Design has been updated in 084113 to match drawings. Product: YES 45 TU, Thermally Broken, Center-Set**
- w. QUESTION: Drawing are showing wire glass in the front elevation storefront manual is not showing that. Can you please clarify ?
 - i. **RESPONSE: Wired glass has been clarified as GL-3 on A003 and section 088000**
- x. QUESTION: Please provide/confirm the manufacturer and model numbers for the existing light fixtures, lighting fixture types B, C, and EM# so that we can accurately source matching units where designated "new to Match Existing"
 - i. **RESPONSE: Contractor to field verify existing light fixtures**
- y. QUESTION: Confirm that the four (4) light fixtures shown in Room 103 (office) are intended to be Type C.
 - i. **RESPONSE: Yes these are intended to be type 'C' 2x4 fixtures.**
- z. QUESTION: Please clarify if there are existing fixtures in Room 102 (office) , Room 106 (restroom) and Room 107 (restroom). Keynotes 1 & 2 are currently missing from these specific areas on the demolition plan.
 - i. **RESPONSE: Yes existing fixtures in these areas are to be removed. Type C fixtures are to be installed in these areas and connected to the existing lighting circuit serving the area.**
- aa. QUESTION: Please confirm that the exterior light fixture type EM# is to remain completely undisturbed (i.e., it will not be removed, reinstalled, or recircuited)
 - i. **RESPONSE: Existing exterior emergency lights are existing to remain.**
- bb. QUESTION: Since drawings E211 indicates existing receptacles are to be lowered to 18" AFF. Please confirm the exact quantity and types(s) of existing receptacles in rooms 101 ,102,103,104,105,106,107,and 108 that are required to be lowered to 18" AFF.
 - i. **RESPONSE: This will need to be field verified. See below for estimates:**
 - **101 - 9 Receptacles/data**
 - **102 - 6 Receptacles/data**

- **103 - 8 Receptacles/data**
- **104 - 10 Receptacles/data**
- **105 - 10 Receptacles/data**
- **106 - 1 Receptacle**
- **107 - 1 Receptacle**

These are NEMA type 5-20 and 5-15

cc. QUESTION: Confirm if it is acceptable to utilize junction boxes at the original wall locations to extend the existing wiring down to the new 18" AFF receptacle height.

i. **RESPONSE: This is acceptable.**

dd. QUESTION: (Section 013000 requires the General Contractor to prepare coordination drawings. However, the Project Manual does not appear to define the required extent of these coordination drawings or identify any BIM execution requirements.)

- Are coordination drawings required to be developed using BIM model, or will conventional 2D coordination drawings satisfy the specification?

- If BIM is required, please provide the required Level of Development (LOD), model authoring responsibilities, file formats, software requirements, and any BIM Execution Plan or other applicable project requirements.

- If BIM is not required, please clarify the expected scope and level of detail for the coordination drawings referenced in Section 013000.

i. **RESPONSE: 2D coordination drawings are sufficient, no BIM coordination required. Contractor to ensure all subs are coordinated with no conflicts.**

ee. QUESTION: The Trane YSK060AS0M specified in the packaged unit schedule on sheet M600 will not fit on the existing equipment stand due to the location of the duct work connections. The existing Carrier unit, model # 48TME008, has the duct work connecting on the short end of the unit; the Trane duct work connections are on the long end of the unit. This will cause the Trane unit to overhang the platform by approximately 12". Is it acceptable to substitute a Carrier 48FE006 in place of the Trane as the duct connections are on the short end of the unit and will fit on to the existing equipment platform.

i. **RESPONSE: RTU-1 to be Trane model YSK090 instead of YSK060. Equivalent Carrier model # is acceptable. New structure may be required for alternate model.**

ff. QUESTION: Can you please tell me where I can find or can you send me the following forms.

- Identification of MBE Participation.
- Acknowledgement of MWBE Policy.

- Affidavit A-listing good faith effort.
- Affidavit C
- Affidavit D.

i. **RESPONSE: MWBE forms have been included in 000440 MWBE Forms & Affidavits**

gg. QUESTION: During the replacement of Panel A does a generator cost need to be included for temp. power during the outage.

i. **RESPONSE: Since Panel A replacement will impact the entire building, if replacement of panel will take more than one business day, temp power to be provided. Contractor to coordinate shut down with owner.**

DRAWINGS

1. G000 Cover Sheet: **REPLACE** with attached sheet G000.
 - a. Alternates: Added listed alternates
2. A003 Door/Window Schedules & Details: **REPLACE** with attached sheet A003
 - a. Glazing types clarified in legend.
 - b. 'Type' G door type added

SPECIFICATIONS

1. Section 000010 Table of Contents: **REPLACE** with attached section 000010
 - a. 083613 Sectional Doors added
 - b. 093013 Ceramic Tiling removed
2. Section 000410 Bid Form: **REPLACE** with attached section 000410.
 - a. Project alternates added to Article 5
3. Section 000440 MWBE Forms & Affidavits: **ADD** attached section 000440.
4. Section 011000 Summary: **REPLACE** with attached section 0011000
 - a. Project phasing requirements added.
5. Section 012300 Alternates: **REPLACE** with attached section 012300.
 - a. Project alternates listed in Schedule of Alternates
6. Section 083613 Sectional Doors: **ADD** attached section 086313.
7. Section 084113 Aluminum-Framed Entrances and Storefronts: **REPLACE** with attached Section 084113

- a. Basis-of-Design product for Storefront Systems replaced
- 8. Section 088000 Glazing **REPLACE** with attached section 088000
 - a. GL-3 Added
 - b. Door 'Type G' Added

END OF ADDENDUM

HH ARCHITECTURE

MEETING MINUTES

PRE-BID CONFERENCE

Project Name: **1105 Warehouse Drive**
Owner: City of Raleigh

City Bid Number: 274-ES-FO-FY26-DIX1105WH
HH Project #: 23-022.02

Date and Time: June 23, 2026, at 10:00am
Location: 1105 Warehouse Drive
Raleigh, NC 27603

MINUTES

1. Introductions:
 - A. Kelly Walstrum, HH Architecture, introduced the project and the design team.
 - B. The meeting agenda and the sign-in sheet were distributed at the meeting, and all attendees are noted in the attached pre-bid attendance document.
 - C. This is a mandatory pre-bid conference.
2. Points of Contact:
 - A. The Design Team point of contact representing HH Architecture is Kelly Walstrum. Bidders were instructed to address all questions in writing through HH Architecture.
 - i. Phone: 919.828.2301
 - ii. E-mail: kwalstrum@hh-arch.com
 - B. The Owner representative for City of Raleigh Engineering Services:
 - i. Representative: Glen Willert
 - a. Phone Number: 919.996.2989
 - b. Email: glen.willert@raleighnc.gov
3. Project Documents:
 - A. Contractors were informed that complete Bidding Documents may be obtained by emailing the office of HH Architecture at kwalstrum@hh-

arch.com. Electronic documents will be provided at no cost.

4. Communications:

- A. Contractors were instructed to address all questions in writing to HH Architecture and not to ask questions directly to City of Raleigh staff or the designer's consultant team. Answers to all questions will be included in an addendum. Bidders are not to rely on verbal responses; no verbal response is official or binding until and unless it is included in an addendum.
- B. Contractors were asked to separate questions about the specifications or drawings into two sections so that they may be more quickly answered.
- C. The Last Day for Questions: 5:00 PM on July 1, 2026.**
- D. Ask questions early – NO questions will be entertained after this time.

5. Bid Opening:

- A. Sealed Bids will be received until **Tuesday, July 14, 2026, at 2:00 pm** at 1027A N. West St., Raleigh, NC 27603.
- B. All bids received by mail must be received before the time of bid opening.
- C. After Bids are opened, the Owner shall evaluate them in accordance with the methods and criteria set forth in the Instructions to Bidders. The Owner/City Council reserves the right to waive any informality or to reject any or all Bids. Unless all Bids are rejected, Award will be made to the lowest responsible and responsive Bidder, taking into consideration quality, performance and the time specified in the Bid Form for the performance of the Contract.

6. Addendum:

- A. The contractors were informed the last addendum will be issued no later than (7) days prior to bid date. The last addendum will be issued no later than **July 7, 2026**.
- B. All addenda must be acknowledged on the bid proposal form.

7. Bidding Requirements:

- A. Contractors were informed of bidding requirements. The project is single prime. A bid bond of 5% of proposal amount is required. A performance and payment bond are required of the successful bidder at 100% of contract amount
- B. The bid proposal form (and all forms) is located in the Project Manual.
- C. The City of Raleigh MWBE requirements for this project were reviewed:
 - i. This project has an aspirational goal of 15% certified MWBE participation on construction projects of \$300,000 or more.

- ii. All HUB/DBE Certified MWBE participation counts toward the overall 15% goal.
- iii. Good Faith Effort (GFE) requirements apply to all bidders, including MWBE Primes.
- iv. Prime Contractors may use non-certified MWBE subs. However, participation will not count towards the City's 15% goal.
- v. Adjustments can be made to count participation if MWBE achieves certification during the life of the project.
- vi. Certified MWBEs can be found via NC DOA's and NC DOT's on-line directories:
<https://evp.nc.gov/>
<https://www.ebs.nc.gov/VendorDirectory/search.html?s=fn&a=new>
- vii. The City encourages all MWBEs to become HUB/DBE certified. The City's MWBE Program does not certify but are available to assist in the certification preparation process.
- viii. The City recognizes MWBEs certified as:
 - a. Disadvantaged Business Enterprises (DBE) with NCDOT and/or Historically Underutilized Businesses (HUB) with NCDOA/HUB.
- ix. MWBE Documents Due at Bid time:
 - a. "Acknowledgment of MWBE Policy"
 - b. "Identification of Certified MWBEs form"
 - c. "Affidavit A Form" – Listing of Good Faith Efforts. (Please refer to the MWBE Affidavit A Explanation form included in the MWBE forms packet)

OR

 - d. "Affidavit B Form" – Only if intent is to self-perform 100% of the work with own workforce. (If using any subcontractors submit Affidavit A, not Affidavit B)
- x. These forms are located in the project manual.
- xi. The Apparent Lowest, Responsible, Responsive Bidder must submit the following within 3 business days of notification:
 - a. If 15% MWBE goal is met, submit "Affidavit C", along with Letter of Intent for each Certified MWBE subcontractor listed in Affidavit C.
 - b. If 15% MWBE goal is NOT met, submit "Affidavit D", and GFE Supporting Documentation to substantiate each recruitment effort selected on Affidavit A.
- xii. Any further MWBE questions may be directed to the following:
 - a. MWBE Phone: 919-996-5740
 - b. Email: mwbe@raleighnc.gov

8. General Requirements:

- A. The Bidder agrees that the Base Bid Work will be substantially complete within (125) calendar days and will be completed and ready for final payment within (150) calendar days.
- B. Liquidated damages for the project will be assessed at \$1,000 per consecutive calendar day.
- C. Contractors were instructed to refer to specification 011000 "Summary" for use of premises and work hours.
 - i. Schedule of work: 7:00 am – 5:00 pm Monday through Friday.
- D. Bidders were informed to confine construction operations to areas of work. Do not disturb portions of Project site beyond areas in which the Work is indicated.
- E. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
- F. On site parking will be provided for the Contractor.
- G. Partial Owner Occupancy: Owner will occupy Project site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
- H. Contractor is responsible for obtaining all permits, including payment of all fees, with the City of Raleigh permitting. Plans have been submitted for review and will be approved by the time of a Notice to Proceed.

9. Project Description: A brief overview of the project scope was given by the Design Team.

- Renovation of 1105 Warehouse office building. Interior repairs include new ADA restrooms and kitchenette, as well as replacement of plumbing and electrical systems.
- Alternates, see specification section 012300 for more information
 - Remove existing membrane roof and install new roof membrane
 - Re-point existing masonry
 - In-kind replacement of existing HVAC unit
 - New overhead sectional doors in lieu of storefront system
 - Existing Overhead sectional doors to remain in lieu of new storefront system
 - Replace existing exterior doors and frames with new full lite hollow

metal doors and frames.

A site tour was given of the project to all attendees at the end of the meeting.

ATTACHMENTS:

- Pre-Bid Sign-in Sheet

END OF MINUTES

HH ARCHITECTURE

Pre-Bid Attendance
06/23/2026

1105 Warehouse Drive
Raleigh, NC

HH Project #23-022.02

Company	Name	E-mail	Phone
GATE Services	STEVE Bungardner	SBungardner@GATESVC.COM	919 949 3334
Primus Structures	Jim Salino	Jim@primusstructures.com	919 747 1587
HM Kern JASON KEPLER	JASON KEPLER	jkepler@hm.kern.com	336-668-3213
Cypress Electrical	Sam Batchelor	cypress@beauchenecompany.com	984-233 0487
Beau Chone Co.	Michael Schepis	mschepis@beauchenecompany.com	470-955-4154
Pierce Creek Const.	Ryan Mitchell	piercecreekconst@gmail.com	919-208-9467
Gillo Enterprises	David Bizzell	pete@gitlobuilds.com	919-809-2860
Envisicon const.	Blake Dalton	Blake@Envisicon.com	743-216-2895
Central Builders	Katlin Barrett	Katlin@centralbuildersinc.com	336-227-4551

Company	Name	E-mail	Phone
MLG	KEITH ZIONEK	KZIONEK@MLGCONSTRUCTIONLLC.COM	919 427-0987
ICG	Ché Machado	cmachado@ICG-USA.com	743-333-4831
Chapman Construction	Ethan Chapman	Ethan@ChapmanConstructionNC.com	919-4126-6646
IMEG	Harrison Holt	Harrison.Holt@Imegcorp.com	336 420 0054
DIAMOND CONTRACTING	Andy Woon	ANDY@DIAMONDCONTRACTING.COM	919-868-1955
Systems Contractors	Julie Eiler	jeiler@systemscontractors.com	743.281.2402
WC Construction	Joseph Trowell	bids@wcconstructionco.com	(919) 817 3368
CLASSIC ELECTRIC	KELLEN BLAIR	KellenBlair-EC@outlook.com	919-946-2160
CMC Building	Hayleigh Olsen	parin@cmcbuildinginc.com	919-295-6199
MLB Construction	Patrick Hayes	phayes@mlbind.com	919-664-2356
Rum Commercial Roofing	Brianna Andrews	brianna@rlmroofingllc.com	336-263-6688
Aztec Solutions	John Chapman	Chapman John 86@gmail.com	919 592 -2807
Brent Garlington			
Trend Construction, Inc. (GC)	Brent Garlington	bgarlington@trendinc.biz	910-723-3743

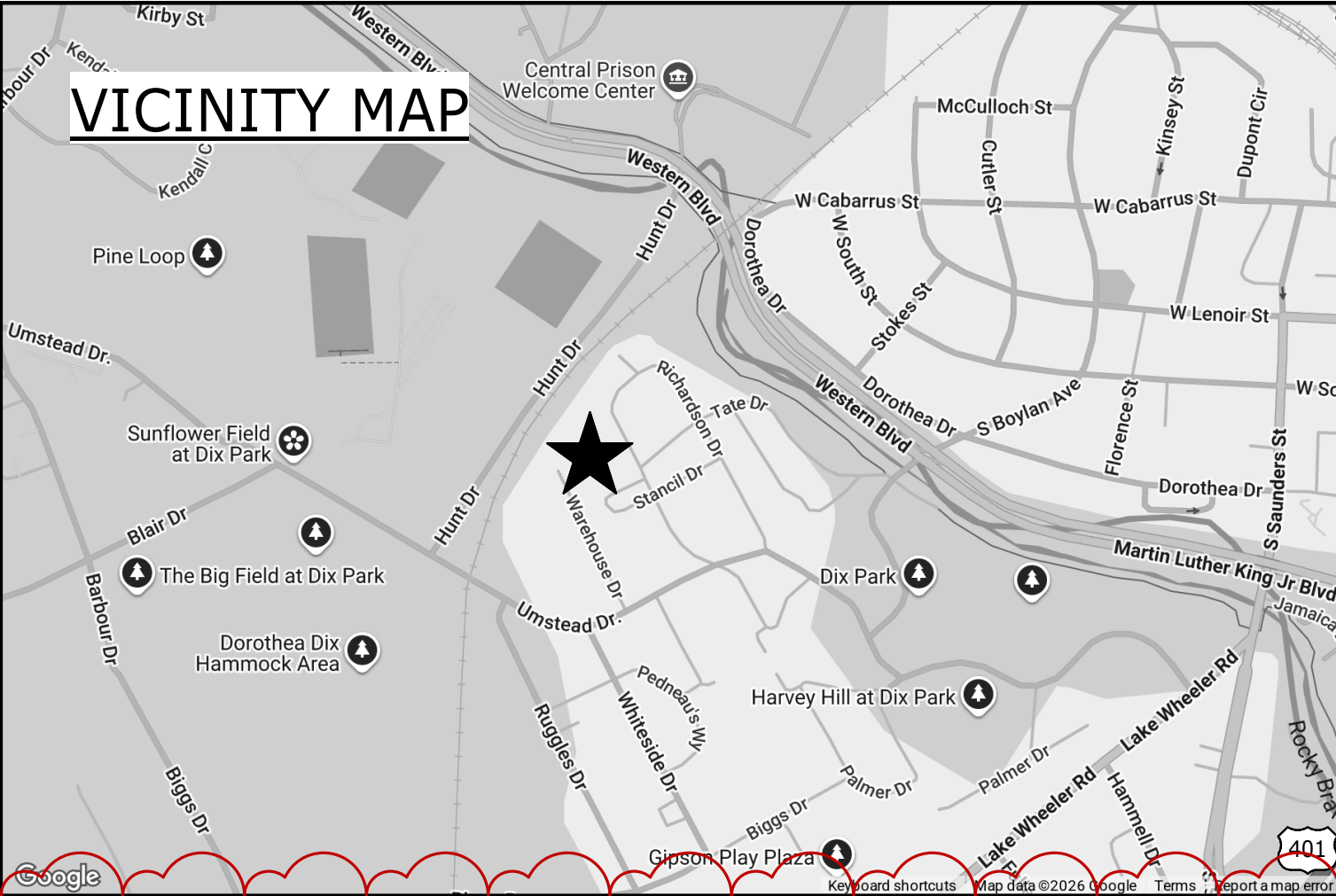
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DIX PARK - 1105 WAREHOUSE DR

RENOVATION

CITY OF RALEIGH

1105 WAREHOUSE DRIVE
RALEIGH, NC 27603



DESIGN TEAM

CITY OF RALEIGH
ENGINEERING SERVICES
ADDRESS: 222 W. HARGETT STREET
RALEIGH, NC 27601
CONTACT: GLEN WILLERT
PHONE: 919.996.2989
EMAIL: glen.willert@raleighnc.gov

ARCHITECT
HH ARCHITECTURE
ADDRESS: 1100 DRESSER COURT
RALEIGH, NC 27609
CONTACT: JENESSA VAN DEEN
PHONE: 919.828.2301
EMAIL: jvandeen@hh-arch.com

CIVIL ENGINEERING
DEWBERRY
ADDRESS: 261 WYCLIFF ROAD, SUITE 410
RALEIGH, NC 27607
CONTACT: MICHAEL URCHUK
PHONE: 321.354.9744
EMAIL: murchuk@Dewberry.com

MECHANICAL, ELECTRICAL, PLUMBING ENGINEERING
IMEG
ADDRESS: 3221 BLUE RIDGE ROAD, SUITE 113
RALEIGH, NC 27612
CONTACT: DAVID WHITNEY
PHONE: 919.855.2030
EMAIL: David.J.Whitney@imegcorp.com

SCHEDULE OF ALTERNATES

- NOTE:** REFER TO PROJECT SPECIFICATIONS FOR ALL INFORMATION RELATED TO ALTERNATES INCLUDED IN THE PROJECT.
- ALTERNATE #1:** **ADD:** REMOVE EXISTING ROOF MEMBRANE AND INSTALL NEW ROOF MEMBRANE
- ALTERNATE #2:** **ADD:** RE-POINT EXISTING MASONRY
- ALTERNATE #3:** **ADD:** REPLACE IN-KIND EXISTING MECHANICAL UNIT
- ALTERNATE #4:** **ADD:** NEW OVERHEAD SECTIONALS DOOR WITH LITES
- ALTERNATE #5:** **DEDUCT:** EXISTING OVERHEAD DOORS TO REMAIN
- ALTERNATE #6:** **ADD:** REPLACE EXISTING EXTERIOR DOORS AND FRAMES WITH FULL LITE

PROJECT NARRATIVE

THIS PROJECT PROPOSES THE RENOVATION OF AN EXISTING ONE-STORY 2,172 SF FIELD OFFICE BUILDING FOR THE CITY OF RALEIGH LOCATED IN DIX PARK IN RALEIGH, NC. THE BUILDING WILL INCLUDE OFFICES AND OPEN WORK AREAS AS WELL AS NEW RESTROOMS AND SUPPORT SPACES. THE BUILDING IS OF LOAD BEARING MASONRY CONSTRUCTION, NON SPRINKLERED, WITH A PRIMARY BUSINESS OCCUPANCY. THE SCOPE OF WORK INCLUDES ASSOCIATED MECHANICAL, ELECTRICAL, AND PLUMBING IMPROVEMENTS.

WARNINGS & NOTES

- WARNING - POSSIBLE PRESENCE OF ASBESTOS**
MATERIALS CONTAINING ASBESTOS MAY BE PRESENT IN THE CONSTRUCTION AREA. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR DISTURB ASBESTOS OR ASBESTOS CONTAINING MATERIAL IN ANY WAY THAT WILL ALLOW THE RELEASE OF ASBESTOS FIBERS INTO THE AIR. THE CONTRACTOR IS HEREBY NOTIFIED THAT UNKNOWN ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN THE CONSTRUCTION AREA. IN THE EVENT THAT SUSPICIOUS MATERIALS ARE ENCOUNTERED THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL WORK IN THE AREA, SECURE THE INVOLVED AREA TO PREVENT IN ADVERTENT CONTAMINATION OR EXPOSURE, AND NOTIFY THE OWNER.
- LEAD-BASED PAINT WARNING**
LEAD-BASED PAINT MAY EXIST ON BUILDING STRUCTURE(S) OR OTHER ITEMS IN THE CONSTRUCTION AREA. THE CONTRACTOR IS HEREBY ADVISED OF THE NEED FOR COMPLIANCE w/ **OSHA STANDARD 1926.62. SUBPART D, TITLED "LEAD", [29 CFR 1919]** DURING WORK WITH ALL LEAD CONTAINING MATERIALS. ALL TESTING AND/OR OTHER COMPLIANCE ACTIVITIES ARE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION DOCUMENTS

06/01/2026

DRAWING LIST

NUM.	NAME
COVER	
G000	COVER SHEET
G001	GENERAL ARCHITECTURAL NOTES
G002	BUILDING CODE SUMMARY (APPENDIX B)
G111	LIFE SAFETY PLAN
4	
ARCHITECTURAL	
A002	INTERIOR WALL TYPES
A003	DOOR/WINDOW SCHEDULES & DETAILS
A004	OPENING DETAILS
A100	DEMO PLAN & FLOOR PLANS
A110	DEMO ROOF PLAN, ROOF PLAN & DETAILS
A200	EXTERIOR ELEVATIONS
A400	REFLECTED CEILING & FINISH PLANS
A510	TYPICAL TOILET ACCESSORIES & CASEWORK DETAILS
A520	ENLARGED PLAN & ELEVATIONS
9	
INTERIOR DESIGN	
ID001	FINISH LEGEND, SCHEDULE, & DETAILS
1	
PLUMBING	
P000	PLUMBING COVERSHEET
P200	LEVEL 01 PLAN - PLUMBING
P300	PLUMBING DETAIL
P400	PLUMBING SCHEDULES

NUM.	NAME
P500	PLUMBING SPECIFICATIONS
P501	PLUMBING SPECIFICATIONS
P502	PLUMBING SPECIFICATIONS
P503	PLUMBING SPECIFICATIONS
8	
MECHANICAL	
M000	HVAC COVERSHEET - PP, V
M201	LEVEL 01 PLAN - HVAC
M400	HVAC DETAILS
M600	HVAC SCHEDULES
M700	MECHANICAL SPECIFICATIONS
M701	MECHANICAL SPECIFICATIONS
6	
ELECTRICAL	
E000	ELECTICAL COVERSHEET
E001	ELECTRICAL LIGHTING COVERSHEET
E201	LEVEL 01 PLAN - ELECTRICAL
E211	LEVEL 01 PLAN - POWER
E300	ELECTRICAL SCHEDULES & POWER RISERS
E400	ELECTRICAL SPECIFICATIONS
E401	ELECTRICAL SPECIFICATIONS
7	
TOTAL SHEETS IN SET: 35	

HH

ARCHITECTURE

1100 Dresser Court
Raleigh, NC 27609
Office 919.828.2301
Email office@hh-arch.com

DIX PARK - 1105 WAREHOUSE DR RENOVATION

CITY OF RALEIGH

1105 WAREHOUSE DRIVE

RALEIGH, NC 27603

HH ARCHITECTURE P.A.
REGISTERED ARCHITECTURE
51670
CORPORATION
NORTH CAROLINA

JENESSA A. VAN DEEN
REGISTERED ARCHITECT
13246
7.1.14
NORTH CAROLINA

NO.	REVISION	DATE
1	PLAN CHECK	06/01/26
2	ADDENDUM 1	07/07/26

JOB NUMBER
23-022

DATE ISSUED
06/01/2026

PROJECT STATUS
CONSTRUCTION DOCUMENTS

SHEET
COVER SHEET

G000

DOOR SCHEDULE														
DOOR NUMBER	ROOM	DOOR						FRAME			HDW	SIGN TYPE	COMMENTS	
		TYPE	WIDTH	HEIGHT	THICK	MAT'L	FINISH	TYPE	MAT'L	FINISH				
101	OFFICE	FG	3' - 0"	7' - 0"	1 3/4"	WD	FACT	1	HM	PT	01			
102	OFFICE	FG	3' - 0"	7' - 0"	1 3/4"	WD	FACT	3A	HM	PT	01			
103	OFFICE	FG	3' - 0"	7' - 0"	1 3/4"	WD	FACT	1	HM	PT	01			
106	RESTROOM	F	3' - 0"	7' - 0"	1 3/4"	WD	FACT	1	HM	PT	02	B		
107	RESTROOM	F	3' - 0"	7' - 0"	1 3/4"	WD	FACT	1	HM	PT	02	B		
108	CLOSET	F	3' - 0"	7' - 0"	1 3/4"	WD	FACT	1	HM	PT	03			
X104	WORK AREA	FG	3' - 0"	7' - 0"	1 3/4"	HM	PT	1	HM	PT	04		EXISTING DOOR TO REMAIN	
X105	WORK AREA	FG	3' - 0"	7' - 0"	1 3/4"	HM	PT	1	HM	PT	04		EXISTING DOOR TO REMAIN	

DOOR & FRAME NOTES

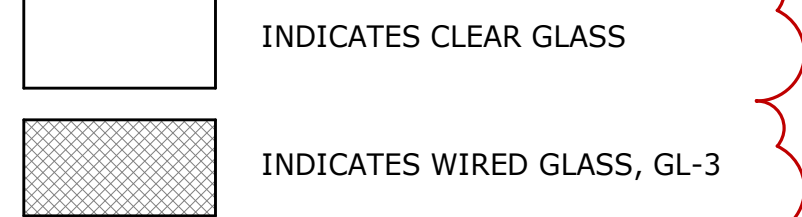
- SEE DETAILS FOR HEAD, JAMB, AND THRESHOLD CONDITIONS AT DOORS.
- ALL HOLLOW METAL FRAMES TO BE 2" WIDE FACE FRAME, U.N.O.
- PROVIDE TEMPERED GLASS AT DOOR AND WINDOW LITES.
- ALL GLAZING TO BE TEMPERED SAFETY GLAZING, U.N.O.
- ALL FRAMES AT MASONRY WALLS 6" DEEP, TYPICAL, U.N.O.
- EXTERIOR DOORS ARE TO BE RECESSED 1-1/2" FROM FACE OF EXTERIOR MASONRY, TYP. U.N.O.
- VERIFY FRAME DEPTH AT ALL WALL CONDITIONS.
- KEYING WITH MEDCO LOCK AND CORE.
- FOR DOOR TYPE 'G' SEE ALTERNATE #4

STOREFRONT TYPES

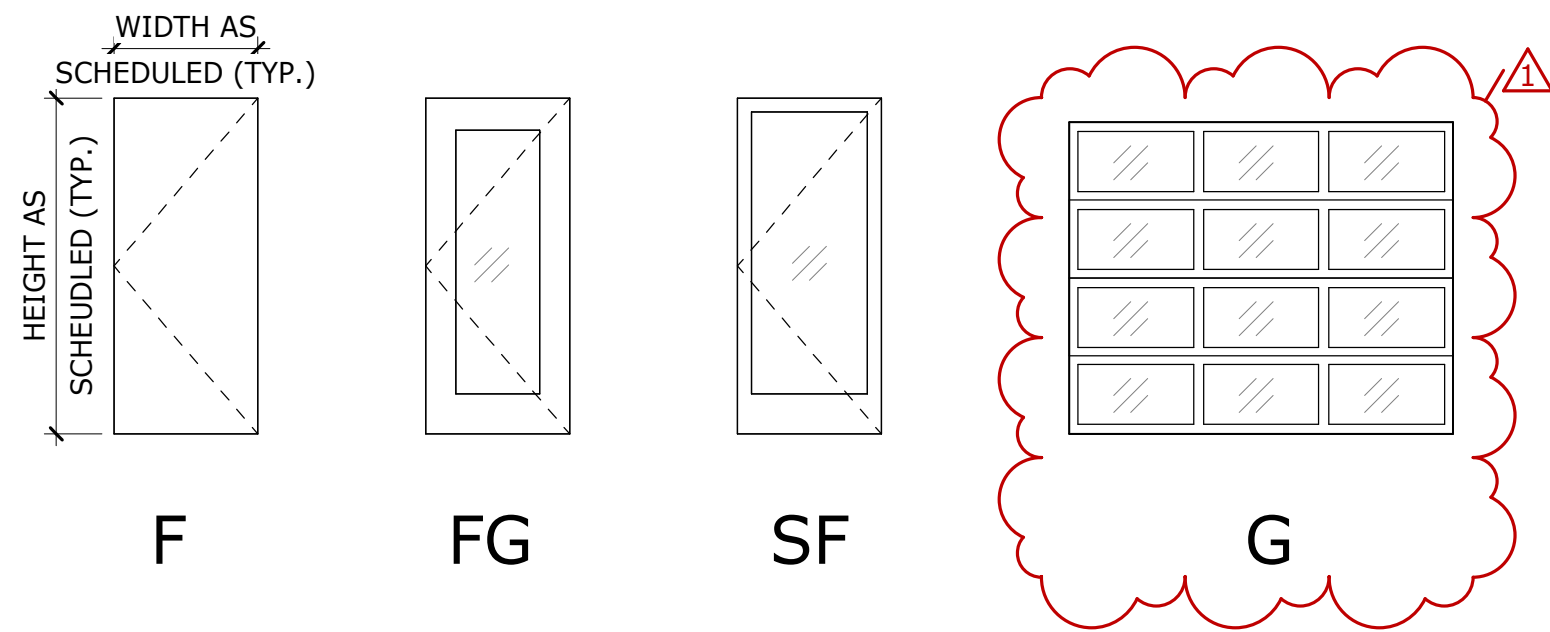


GLAZING SCHEDULE

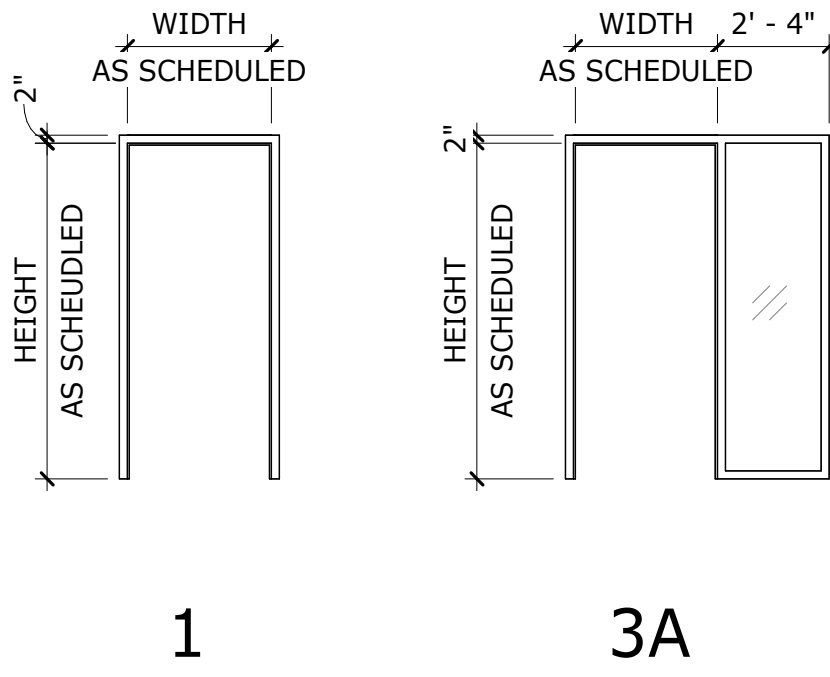
- U.N.O. ALL INTERIOR GLASS TO BE **GL-1**; SEE SPECIFICATIONS
- U.N.O. ALL EXTERIOR GLASS TO BE **GL-2**; SEE SPECIFICATIONS



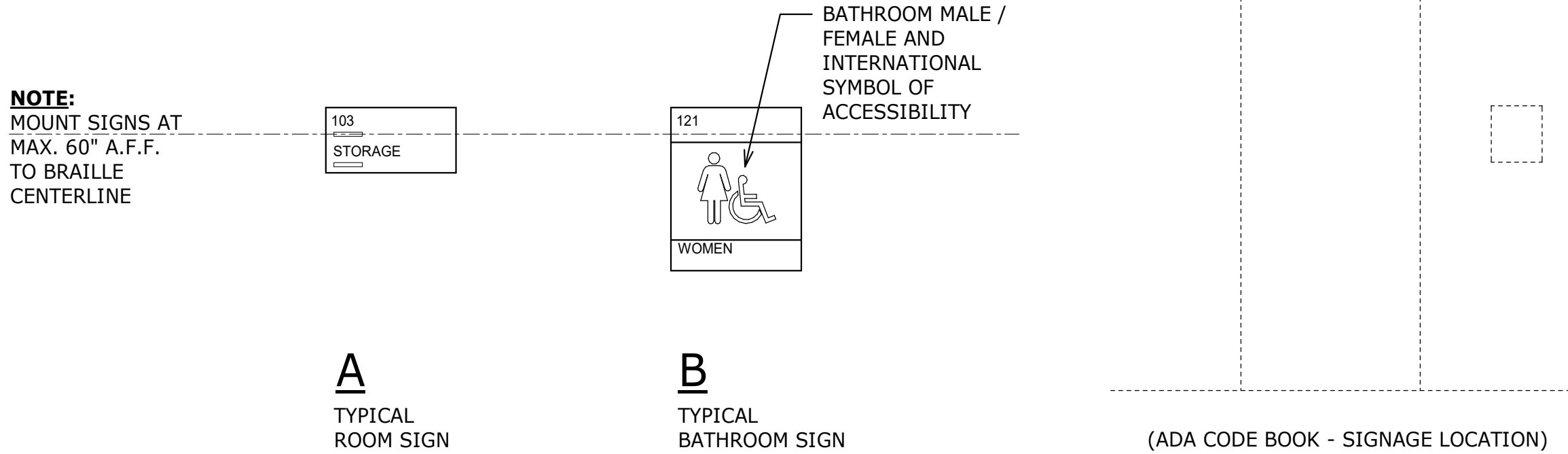
DOOR TYPES



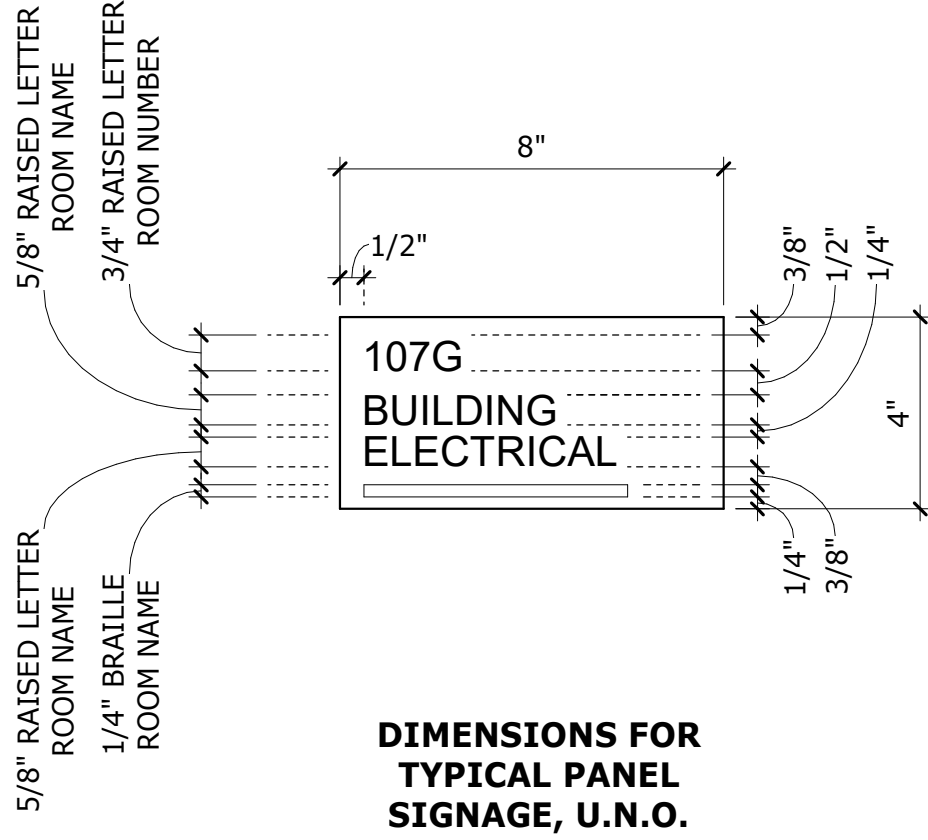
DOOR FRAME TYPES



TYPICAL ROOM SIGNAGE TYPES & PLACEMENT

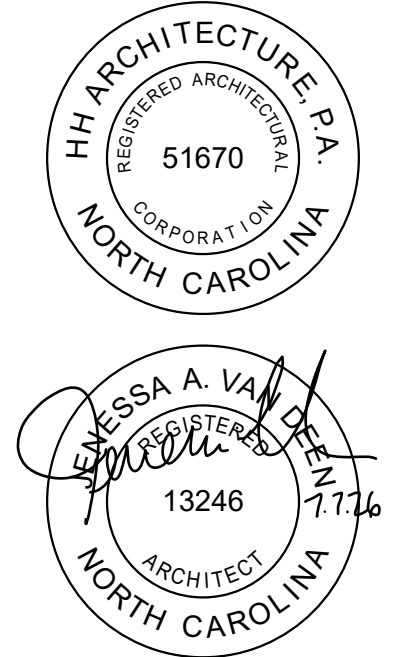


TYPICAL ROOM SIGNAGE SIZES



1100 Dresser Court
Raleigh, NC 27609
Office 919.828.2301
Email office@hh-arch.com

DIX PARK - 1105 WAREHOUSE DR RENOVATION
CITY OF RALEIGH
1105 WAREHOUSE DRIVE
RALEIGH, NC 27603



NO.	REVISION	DATE
1	ADDENDUM 1	07/07/26

JOB NUMBER
23-022
DATE ISSUED
06/01/2026
PROJECT STATUS
CONSTRUCTION DOCUMENTS
SHEET
DOOR/WINDOW SCHEDULES & DETAILS

A003

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City of Raleigh

City of Raleigh Project # 274-ES-FO-FY26-DIX1105WH
HH # 23-022.02

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BID FORM

PROJECT: City of Raleigh – 1105 Warehouse Drive Renovation

CITY BID NO.: 274-ES-FO-FY26-DIX1105WH

BID FROM: _____

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ARTICLE 1 – BID RECIPIENT

- 1.01 This Bid is submitted to:
Glen Willert
City of Raleigh, Integrated Facility Services Department
1027A N. West St.
Raleigh, NC 27603
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this bid, bidder represents that:

- A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Supplemental Conditions - 5.02 as containing reliable Technical Data, and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in SC-5.06 as containing reliable Technical Data.
- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific sequences of construction expressly required by the Bidding Documents; and (3) Bidder’s safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER’S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
 1. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
 2. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
 3. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.A:
 - a. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - b. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - c. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - d. coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

A. For all Work, a Lump Sum of:

_____ Dollars
(\$ _____)

B. For the following Alternates in priority order as selected by the Owner for inclusion in the Project as follows:

- ~~1. Alternate #01 – Tower C & D speakers and amplifiers \$ _____~~
1. **Alternate #01 – Membrane Roof Replacement \$ _____**
2. **Alternate #02 – Re-Point Masonry \$ _____**
3. **Alternate #03 – Replace HVAC Unit \$ _____**
4. **Alternate #04 – Overhead Sectional Doors \$ _____**

5. **Alternate #05 – Existing Overhead Doors to Remain \$** _____
6. **Alternate #06 Exterior Door and Frame Replacement \$** _____

TOTAL BID PRICE (Sum of Items 1 through 6) \$ _____

- 5.02 Bidders are hereby notified that GS 143-128(d), requires all bidders on single prime projects to identify on their Bid form the contractors they have selected for the subdivisions for branches of work for (1) HVAC, (2) Plumbing, (3) Electrical, and (4) General. Accordingly, bidder shall list below applicable selected contractors for the following branches of work (write "N/A" if not applicable or self-performed).

HVAC _____	_____	_____
	Name	License No.
Plumbing _____	_____	_____
	Name	License No.
Electrical _____	_____	_____
	Name	License No.
General _____	_____	_____
	Name	License No.

- A. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.
- B. Bidder acknowledges that the rights of the Owner and the recommendations of the Architect are not to be questioned in the Award of Contracts.
- C. Bidder acknowledges that it is the intention of the Mayor and City Council to let contracts on a basis of the Bids received in accordance with GS 143-129 and in such manner as they deem to be for the best interests of the Owner.
- D. Bidder acknowledges that the Owner reserves the right to accept or reject any or all bids and to waive any informalities in the bidding.
- E. Bidder acknowledges that should the total bid exceed the funds available to construct the project, the Owner reserves the right to reduce the scope of work from the project by deleting certain lump sum or unit price bid items prior to awarding the contract to bring the project within the funds available.
- F. Bidder acknowledges that if this contract is awarded, Bidder must, with every pay request, furnish to the Public Utilities Director of the City of Raleigh an accurate itemized statement of North Carolina Sales Taxes paid on materials, supplies, equipment, and other items charged to this contract, and otherwise fully comply with the "Procedure for Reporting North Carolina Sales Tax Expenditures.". A sales tax form must be submitted even if there is no sales tax incurred.
- G. Bidder agrees to begin work within 10 days from the date of the Notice to Proceed.

- H. Bidder agrees that should the Owner reduce the scope of work by 25% or less of the Total Bid price prior to award of the contract, the lump sum and the unit price on all bid items shall remain unchanged.
- I. Bidder agrees that in the case of failure on his part to execute the said Contract and the Bonds within 15 consecutive calendar days after written notice being given of the award of the Contract, the check, cash or Bid Bond accompanying this Bid shall be paid into the funds of the Owner's Account set aside for this Project, as liquidated damages for such failure; otherwise the check, cash or Bid Bond accompanying this Bid shall be returned to the Bidder.
- J. Bidder agrees to provide all necessary tools, machinery, equipment, apparatus, and all other means necessary to do all the work and will furnish all labor, materials and all else required to complete such Contract as may be entered into, in the manner prescribed in and in accordance with the terms of the Specifications and Contract and in accordance with the true intent and meaning thereof, and in accordance with the Plans and/or Drawings and the requirements of the Engineers under them, in a first class manner.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Base Bid Work will be substantially complete within **(125)** calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06.B of the General Conditions within **(150)** calendar days after the date when the Contract Times commence to run.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages of **\$1,000** per calendar day in the event of failure to complete the Work within the Contract Times. This amount is agreed upon as the proper measure of liquidated damages the Owner will sustain, per day, by the failure of the undersigned to complete the work, within the stipulated time, and it is not to be construed, in any sense, as a penalty.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security in the form of a Bid Bond or Certified Check (Section 00430);
 - B. In accordance with GS 143-128.2(c), Bidder shall identify on its bid the minority businesses that it will use on the project and the total dollar value of the bid that will be performed by the minority businesses and list the good faith efforts (Affidavit A) made to solicit participation. A Bidder that will perform all of the work with its own workforce may submit an Affidavit B to that effect in lieu of the affidavit A required above.
 - 1. Nondiscrimination Agreement (Section 00440);
 - 2. Use of MWBE Businesses (Section 00440);
 - 3. Identification of Minority Business Participation (Section 00440), and;
 - 4. Affidavit A, Listing of Good Faith Effort, or Affidavit B, Intent to Perform Contract with Own Workforce (Section 00440).
 - C. Contractor's Certificates, Affidavit of Organization and Authority of Sworn Statement (Section 00441);

- D. City of Raleigh – Contractor’s Poor Performance Policy (Section 00442);
 - E. Non-Collusive Affidavit (Section 00443);
 - F. Notice to Contractor Regarding Intrusions Beyond Project Limits (Section 00444);
 - G. Evidence of authority to do business in the state of the Project (i.e., copy of contractor’s license);
- 7.02 Submit the Bidder’s Checklist as provided in the bidding documents with the bid submittal. The Checklist shall be completed and included as the first page of the submittal.
- 7.03 After the bid opening the Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low Bidder, the Bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:
- A. An Affidavit (C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the goal established by the Owner and indicated in the Instruction to Bidders, paragraph Minority Participation Goals. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort; or,
 - B. Affidavit (D) of its good faith effort to meet the goal. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.
- 7.04 Bidder understands that if this Bid is accepted by the Owner, Bidder shall not substitute for the subcontractors named in the Bid Documents except as allowed in the Supplementary Conditions.

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

- 9.01 Bidder’s License
- A. Number: _____
 - B. Classification: _____
 - C. Limitation: _____
 - D. Employer’s Tax ID No.: _____
 - E. Business Address: _____
 - F. Phone No.: _____ Fax No.: _____
 - G. Contact Person: _____ E-mail Address: _____
 - H. Phone No. w/ Ext.: _____
- 9.02 This Bid is submitted by:
- If Bidder is:
- An Individual**

Name (typed or printed): _____

By: _____

(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

The Organization and Internal Affairs of the Partnership are governed by the laws of the State of: _____

By: _____

(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title (typed or printed): _____

Attest: _____

(Signature of Corporate Secretary)

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____

(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title (typed or printed): _____

(CORPORATE SEAL)

Attest: _____

(Signature of Corporate Secretary)

Date of Qualification to do business in North Carolina is ____/____/____.

Limited Liability Company - LLC

Name of LLC: _____

Name of State under whose Laws the Limited Liability Company was formed:

By: _____

(Signature of Manager)

Name (typed or printed): _____

Title (typed or printed): _____

INFORMATION FOR BIDDERS REGARDING COMPLIANCE WITH THE CITY OF RALEIGH'S MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISE (MWBE) PROGRAM

Policy

In accordance with North Carolina law, the City of Raleigh encourages and provides an equal opportunity for Certified Minority and Women-Owned Business Enterprises (MWBE) to participate in all aspects of the City's contracting and procurement programs.¹ The prime contractor or a first-tier subcontractor on a construction manager at risk (CMAR) project (collectively, "Bidder") shall be required to identify participation of MWBE businesses in its proposal, and document how that participation will be achieved. Bidders are subject to the City's MWBE subcontracting requirements (including good faith efforts as applicable), regardless if a Bidder is itself a Certified MWBE.²

The City has an aspirational goal of 15% of the total contract amount to be performed by MWBE businesses in contracts awarded by the City for: (i) construction and building projects of \$300,000 or more; and (ii) construction and building projects of \$100,000 or more that have any state funding.

Definitions

Certified Minority Business (MWBE)

A business which:

- a. At least fifty-one percent (51%) is owned by one or more Minority Persons or Socially and Economically Disadvantaged Individuals; or in the case of a corporation, in which at least fifty-one percent (51%) of the stock is owned by one or more Minority Persons or Socially and Economically Disadvantaged Individuals;
- b. The management and daily business operations are controlled by one or more Minority Persons or Socially and Economically Disadvantaged Individuals; and
- c. Is certified in one of the MWBE categories as defined by the NC Department of Administration/Historically Underutilized Business (HUB) and the NC Department of Transportation/Disadvantaged Business Enterprise (DBE).

Minority Person

A person who is a citizen or lawful permanent resident of the United States and who is:

- a. Black, that is, a person having origins in any of the black racial groups in Africa;
- b. Hispanic, that is, a person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;
- c. Asian American, that is, a person having origins in any of the original peoples of the Far East, Southeast Asia, Asia, the Indian subcontinent, or the Pacific Islands;
- d. American Indian, that is, a person having origins in any of the original peoples of North America; or
- e. Non-minority Female.

Socially and Economically Disadvantaged Individual

Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities. Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged.³

¹ See, N.C.G.S. §§ 143-128.2, 143-128.4, 143-129, and 143-131.

² See, City of Raleigh SOP 505-2.

³ See, 15 U.S.C. 637.

Bidder Responsibilities

Bidders agree to comply with all the terms and conditions of the City of Raleigh's Minority and Women-Owned Business Enterprise (MWBE) Program. Bidders must use good faith efforts (if applicable) to meet participation goals through the award of subcontracts to certified MWBE businesses consistent with City policy and North Carolina law.

Pre-Bid Opening

The City's Solicitation Documents include forms that: (a) capture information about MWBEs and any other subcontractors or suppliers that a Bidder intends to use on a contract ("Identification of MWBE Participation") and (b) affidavits to be completed by the Bidder.

Identification of MWBE Participation

The "Identification of MWBE Participation" must be completed by the Bidder on the City's form and submitted with its bid. If the project work is to be self-performed by the Bidder, the Bidder must so designate by checking the appropriate box on the form. For all Bidders which will not be self-performing the project work, the "Identification of MWBE Participation" form must be completed in its entirety. The Bidder must list on the City's form all MWBE businesses which will be construction subcontractors, vendors, or suppliers (collectively, "Subcontractors") on the project, and the total dollar value of its bid that will be performed by MWBEs. The failure to complete the "Identification of MWBE Participation" form in its entirety, or the failure to submit a completed "Identification of MWBE Participation" form with its bid, will render the bid non-responsive and the Bidder's bid will not be considered for award. The City will only credit MWBE participation for those Subcontractors listed on the "Identification of MWBE Participation" form.

Affidavit A: Listing of Good Faith Efforts

If the Bidder intends to subcontract any portion of the project work on a contract, an Affidavit A must be properly executed and submitted with its bid, listing the good faith efforts the Bidder made to achieve MWBE subcontracting goals for the contract prior to submitting its bid. The Affidavit A must be completed using the City's form. A minimum of fifty (50) good faith efforts points is required, the failure to achieve at least 50 points is grounds for rejection of a bid.

Affidavit B: Intent to Perform Contract with Own Workforce

In lieu of an Affidavit A, a Bidder that intends to perform 100% of the project work on a contract with its own current workforce may submit an Affidavit B with its bid. In submitting an Affidavit B, a Bidder certifies that the Bidder does not customarily subcontract elements of this type of project, and normally performs, has the capability to perform, and will perform all elements of the project work on the contract with its own current workforce. The Affidavit B must be completed using the City's form.

The failure to submit a properly executed Affidavit A or Affidavit B with a bid will render the bid non-responsive and the bid will not be considered for award.

Bid Opening

At the project bid opening, the total MWBE participation for each bid will be recorded. Upon being named the apparent low bidder, the Bidder must comply with the following:

- a. If the Bidder submitted an Affidavit B with its bid indicating its intent to perform 100% of the project work on the contract with its own current workforce, then the Bidder is not required to resubmit its Affidavit B or to submit any additional affidavits (i.e., Affidavit C or Affidavit D). The City, in its discretion, may request that the Bidder submit additional information or documentation, including, but not limited to, information relating to the Bidder's subcontracting history and its ability to perform all elements of the project work on the contract with its own current workforce.

- b. If the Bidder submitted an Affidavit A with its bid and the amount of MWBE participation as a percentage of the total contract price meets or exceeds the applicable goal, then the Bidder must submit to the City an Affidavit C within three (3) business days after being notified by City Staff that it is the apparent low bidder. The Bidder must complete the Affidavit C in its entirety using the City's form.
- c. If the Bidder submitted an Affidavit A with its bid and the amount of MWBE participation as a percentage of the total contract price does not meet the applicable goal, then the Bidder must submit an Affidavit D to the City within three (3) business days after being notified by City Staff that it is the apparent low bidder. The Bidder must complete Affidavit D in its entirety on the City's form. In conjunction with the Affidavit D, the Bidder must include supplemental documentation of the good faith efforts made to meet the applicable goal. The City, in its discretion, may request that the Bidder submit additional information or documentation, including, but not limited to, information or documentation relating to any good faith efforts claimed by the Bidder, and completion of the City's Good Faith Negotiation Form and Solicitation Form. Good faith efforts can be demonstrated using, among other factors, the following:
 - i. Attending pre-solicitation or pre-bid meetings that are scheduled by the City to inform MWBE firms of contracting, subcontracting, and supply opportunities.
 - ii. Advertising in general circulation, trade association, or minority-focus media concerning subcontracting opportunities.
 - iii. Providing written notice, to a reasonable number of specific MWBE firms that their interest in the contract is being solicited, at least 10 days before bids are due, to allow MWBE firms time to participate.
 - iv. Following up initial solicitation of interest by contacting MWBE firms to determine with certainty whether the MWBE firms are interested.
 - v. Identifying and selecting portions of the work to be performed by MWBE firms in order to increase the likelihood of MWBE participation (including where appropriate, breaking down contracts into economically feasible units to facilitate MWBE participation).
 - vi. Providing interested MWBE firms with equal access to plans, specifications, and requirements of the contract.
 - vii. Negotiating fairly with interested MWBE firms, not rejecting MWBE firms as unqualified without sound reasons based on a thorough investigation of their capabilities.
 - viii. Using the services of the City's MWBE office; available minority community organizations; minority contractors' groups; local, state, and federal minority business offices; and other organizations that provide assistance in the recruitment and placement of MWBE firms.
 - ix. Assisting interested MWBE firms in need of equipment, loan capital, lines of credit or joint pay agreements to secure loans, supplies or letters of credit, including waiving credit that is ordinarily required.
 - x. Assisting interested MWBE firms in obtaining bonding, insurance, or providing alternatives to bonding or insurance for Subcontractors.
 - xi. Negotiating joint venture and partnership arrangements with minority businesses to increase the opportunities for minority participation when possible.
 - xii. Provide for quick pay agreements and policies to enable minority contractors and suppliers to meet cash flow demands.

For each unmet MWBE participation goal, for which an Affidavit D is submitted, a Bidder must earn at least fifty (50) good faith efforts points. The failure to achieve at least fifty (50) points is grounds for rejection of a bid. All

actions necessary to earn good faith efforts points must occur prior to bid opening. In determining whether a Bidder has made good faith efforts, the City will evaluate the efforts made by the Bidder and will determine compliance with regard to quantity, intensity, and results of these efforts prior to recommendation of award.

Post-Award

Payment

For purposes of this section the word "Contractor" means both the prime contractor and the CMAR for CMAR projects. The Contractor must submit a completed **Payment Affidavit - Subcontractor / Supplier Utilization Form** with each payment application, including periodic payments and final payment. Payment applications will not be processed by the City until a completed Payment Affidavit – Subcontractor/ Supplier Utilization Form is submitted. Within seven (7) days of receipt by the Contractor of a periodic or final payment from the City, the Contractor must pay each first-tier Subcontractor based on work completed or services provided under each subcontract. If the Contractor has made a quick pay commitment with any MWBE Subcontractor, they must comply with the provisions of their quick pay commitment.

Changing a Certified MWBE Subcontractor

If the situation arises that it becomes necessary to terminate, replace, or reduce the work of a MWBE Subcontractor counted toward a committed MWBE subcontracting goal, the Contractor must submit a completed **Request to Change MWBE Subcontractor** form to the applicable department project manager and the City's MWBE Program Manager. Any change in the work of a MWBE Subcontractor, including its termination and/or replacement, must first be approved by the City based upon good cause shown. Any further explanation or detail to the City in addition to what is identified in the Request to Change MWBE Subcontractor form must be on company letterhead. Good faith efforts shall apply to the selection of any substitute Subcontractor.

ACKNOWLEDGMENT OF MWBE POLICY
[PURSUANT TO N.C.G.S. § 143-128.2]

The City's policy is to encourage bidders in the participation of MWBE businesses. A presentation of that policy has been made at the pre-bid or pre-proposal conference. By submission of a bid or proposal in response to this solicitation, the Bidder consents to all the terms and conditions of the City of Raleigh Minority and Women-Owned Business Enterprise (MWBE) Policy. A copy of the policy may be provided upon request by the Business Engagement & Opportunities Division, or online at www.raleighnc.gov.

Bidder recognizes that the City of Raleigh encourages and provides equal opportunity for MWBE businesses to participate in all aspects of the City's contracting and procurement. The City's MWBE participation aspirational goal is at least fifteen percent (15%) of the total contract amount to MWBEs on construction projects of \$300,000 or more and building related contracts of \$100,000 or more that include any State funding. The Bidder on the subject Contract/Proposal must document good faith efforts to provide meaningful participation by MWBEs in the performance of the Contract. Bidder agrees that the City may reject a bid for MWBE Policy violations, including but not limited to, providing inaccurate information or for failure to provide required MWBE documentation.

The Prime Contractor will be required to identify participation of MWBE businesses and how that participation will be achieved. Bidder must identify anticipated subcontractors, including any Minority & Women-Owned Businesses, intended to be used. Bidder further agrees, if awarded a Contract, it will, upon request, submit to the City, the proper affidavit identifying the workforce actually utilized on the Contract. All MWBE related bid documents have been provided to the Bidder. MWBE information provided by the Bidder is subject to the NC Public Records Act. Bidder acknowledges that the City must be notified of any change of subcontractors, suppliers, or subconsultants.

To the extent permitted by North Carolina law, the Bidder for themselves, their agents, officials, directors, officers, members, representatives, employees, and contractors agree not to discriminate in any manner or in any form based on actual or perceived age, mental or physical disability, sex, religion, creed, race, color, sexual orientation, gender identity or expression, familial or marital status, economic status, veteran status or national origin in connection with this Contract/Proposal or its performance. The Bidder agrees to conform with the provisions and intent of Raleigh City Code §4-1004 in all matters related to this Contract/Proposal. This provision is incorporated herein for the benefit of the City of Raleigh and its residents and may be enforced by an action for specific performance, injunctive relief, or any other remedy available at law or equity. This section shall be binding on the successors and assigns of all parties with reference to the subject matter of the Contract/Proposal.

I have read and understand the City of Raleigh's MWBE policy.

Signature

Printed Name and Title

Company

Date

IDENTIFICATION OF MWBE PARTICIPATION

Formal Contracts & Construction Contracts Equal or Exceeding \$300,000

This Identification of MWBE Participation Form is for the purpose of capturing information regarding the utilization of MWBEs and other subcontractors and suppliers on Formally Bid City Contracts and Construction Contracts equal or exceeding \$300,000. MWBE participation is encouraged for all City of Raleigh contracting opportunities. Please refer to the City's MWBE Policy for any contract specific requirements.

Copy this Form as needed.

BIDDER NAME			
PROJECT NAME			
PROJECT NUMBER		CITY DEPARTMENT	
CONTRACT TYPE	☐ Construction ☐ Services ☐ Other _____ *		
☐ PRIME IS MWBE	Classification: _____ ☐ Certified with NCHUB ☐ Certified with NCDOT-DBE	BID SUBMITTAL DATE	

MWBE Classifications: American Indian (AI), Asian American (AA), Black/African-American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

*For Professional Services Contracts, please use the Identification of MWBE Participation for Professional Services Form

☐ WORK TO BE SELF-PERFORMED

Check this box only if you intend to perform 100% of the work on this Project/Contract with your own current work forces, and you normally perform and have the capability to perform all elements of this work on this Project/Contract with your own current work forces.

MWBE SUBCONTRACTORS

Complete the chart below for all MWBE subcontractors that you intend to use on this Project/Contract regardless of dollar amount.

Company Name	MWBE Classification	Description of Services	Percentage of Total Contract*	Total Projected Utilization (\$)*

MWBE Classifications: American Indian (AI), Asian American (AA), Black/African-American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

*If the proposal is subject to an RFQ process, you may enter "N/A".

Total Estimated MWBE Utilization* \$ _____

Total Proposal Amount* \$ _____

Percent Estimated MWBE Utilization* _____ %

(Total Estimated MWBE Utilization divided by Total Bid Amount)

*If the proposal is subject to an RFQ process, you may enter "N/A".

AFFIDAVIT A
Listing of Good Faith Efforts (GFE)

Affidavit of _____
(Name of Bidder)

Project Name			
Project Number			
Total Project Bid		Bid Submittal Date	

Total Available GFE Points: 155		Minimum Number GFE Points Required: 50	
POINTS	GOOD FAITH EFFORT (GFE)		
☐	10	Contacted MWBE businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government-maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.	
☐	10	Made construction plans, specifications and requirements available for review by prospective MWBE businesses or provided these documents at least 10 days before bids are due.	
☐	15	Broken down or combined elements of work into economically feasible units to facilitate MWBE business participation.	
☐	10	Worked with MWBE businesses trade, community, or contractor organizations identified by the MWBE Office and included in the bid documents that provide assistance in recruitment of MWBE businesses.	
☐	10	Attended pre-bid meetings schedule by the public owner.	
☐	20	Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.	
☐	15	Negotiated in good faith with interested MWBE businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a MWBE business based on lack of qualification should have the reasons documented in writing.	
☐	25	Provided assistance to MWBE businesses in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted MWBE businesses in obtaining the same unit pricing with the bidder's suppliers in order to help MWBE businesses in establishing credit.	
☐	20	Negotiated joint venture and partnership arrangements with MWBE businesses in order to increase opportunities for MWBE businesses participation on a public construction or repair project when possible.	
☐	20	Provided quick pay agreements and policies to enable MWBE business contractors and suppliers to meet cash flow demands.	
Total GFE Points _____			

The undersigned certifies the preceding representation is a true and accurate statement of Good Faith Efforts made toward the participation of MWBE businesses in the performance of this Project/Contract. Failure to provide accurate and truthful information is a violation of the City of Raleigh MWBE Policy and may result in the sanctions prescribed therein.

This the ____ of _____, 20____

Signature

Printed Name/Title

AFFIDAVIT B
Intent to Perform Contract with Own Workforce

Affidavit of _____
(Name of Bidder)

Project Name			
Total Project Bid		Bid Submittal Date	
Project Number			
☐ PRIME IS MWBE	Classification: _____	☐ Certified with NCHUB ☐ Certified with NCDOT-DBE	

*MWBE Classifications: American Indian (AI), Asian American (AA), Black/African-American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

The Bidder hereby certifies having read and understood the City of Raleigh MWBE Policy, and affirms that it is the intent of the Bidder to **perform 100% of the work** required for the above-named Contract.

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform **all elements of work on this project** with the Bidder's own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the City of Raleigh in support of the above statement. If additional scopes of work are added after the Bidder has been awarded the Contract, then the Bidder agrees to make a Good Faith Effort to utilize Minority and Women-Owned Business Enterprises (MWBEs), as applicable, where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____

State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of _____ 20__

Notary Public _____ My commission expires _____

SEAL

AFFIDAVIT C
MWBE SUBCONTRACTOR UTILIZATION COMMITMENT

This affidavit is to be provided by the Prime Contractor within three (3) business days after notification by the City of being the apparent lowest, responsible, responsive bidder (LRRB) if the portion of the work to be performed by MWBE Businesses equals or exceeds fifteen percent (15%) of the total contract price. *Copy this Form as needed.*

SECTION 1. PROJECT INFORMATION

Project Name			
Project Number		City Department	
Project Manager			
Phone Number		Email Address	
Bidder		Contact Name	
Phone Number		Email Address	
☐ PRIME IS MWBE	Classification: _____ ☐ Certified with NCHUB ☐ Certified with NCDOT-DBE	Bid Submittal Date	
Prime to Perform	\$ _____	Prime to Perform	_____ %

Total Base Bid Amount \$ _____

Total Contract Amount (including Contingency) \$ _____

Total MWBE Subcontractor / Supplier Utilization \$ _____

Percent MWBE Subcontractor Utilization (Total MWBE \$ divided by Total Base Bid) _____ %

SECTION 2. MWBE SUBCONTRACTORS

Complete the chart below for all MWBE subcontractors to be used on this Project/Contract regardless of dollar amount.

Company Name	Contact Information (Name, Email, Phone)	MWBE Classification	Description of Services	Percentage of Total Contract	Total Projected Utilization (\$)

*MWBE Classifications: American Indian (AI), Asian American (AA), Black/African-American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

Letters of Intent Submitted Upon Notice from the City

Within three (3) Business Days after receiving a request from the City (or within such longer time as may be communicated by the City in writing), Bidders must submit a separate Letter of Intent for each MWBE listed on Affidavit C. Each Letter of Intent must be executed by both the MWBE and the Bidder. The City shall not count proposed MWBE utilization for which it has not received a Letter of Intent by this deadline.

Adding Subcontractors or Suppliers After Submitting This Form

Nothing in this Affidavit shall be deemed to preclude you from entering into subcontracting arrangements after submission of this form. However, per the City of Raleigh MWBE Policy, you must comply with the following:

- You must maintain the level of MWBE participation proposed on this Affidavit throughout the duration of the Contract, except as may be otherwise specifically allowed by the City.
- If you need to terminate or replace a MWBE, you must complete a Request to Change a MWBE Subcontractor Form.
- If the scope of work on the Contract increases, or if you elect to subcontract any portion of work not identified on this form as subcontracted, then you must comply with City of Raleigh MWBE Policy, including Good Faith Efforts.
- A Letter of Intent must also be submitted for each MWBE you add subsequent to contract award.

Signature

Your signature below indicates that the undersigned firm certifies and agrees that:

- a. You have complied with all provisions of the City of Raleigh MWBE Policy;
- b. The information provided is a true and accurate statement of MWBE businesses intended to be used as subcontractors, subconsultants, or suppliers in the performance of this Project/Contract; and
- c. Failure to provide accurate and truthful information or to properly document such compliance in the manner and within the time periods established by the City of Raleigh MWBE Policy shall constitute a violation of the City of Raleigh MWBE Policy and may result in the sanctions prescribed therein, including rejection of your bid.

This the ____ of _____, 20 ____

Signature

Printed Name/Title

AFFIDAVIT D
GOOD FAITH EFFORTS (GFE) AND STATEMENT OF GFE COMPLIANCE

This affidavit is to be provided by the Prime Contractor within three (3) business days after notification by the City of being the apparent lowest, responsible, responsive bidder (LRRB) if the Bidder has not fully met the established MWBE Goal (15%) for this Project. The Bidder must document it has met the GFE requirements by completing this Form. GFE Points will be calculated independently by the City.

SECTION 1. PROJECT INFORMATION

Project Name			
Project Number		City Department	
Project Manager			
Phone Number		Email Address	
Bidder		Contact Name	
Phone Number		Email Address	
☐ PRIME IS MWBE Classification: _____ ☐ Certified with NCHUB ☐ Certified with NCDOT-DBE		Bid Submittal Date	
Prime to Perform	\$ _____	Prime to Perform	_____ %

Total Base Bid Amount \$ _____

Total Contract Amount (including Contingency) \$ _____

Total MWBE Subcontractor / Supplier Utilization \$ _____

Percent MWBE Subcontractor Utilization (Total MWBE \$ divided by Total Base Bid) _____ %

SECTION 2. MWBE SUBCONTRACTORS

Complete the chart below for all MWBE subcontractors to be used on this Project/Contract regardless of dollar amount.

Company Name	Contact Information (Name, Email, Phone)	MWBE Classification	Description of Services	Percentage of Total Contract	Total Projected Utilization (\$)

*MWBE Classifications: American Indian (AI), Asian American (AA), Black/African-American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

SECTION 3. GOOD FAITH EFFORTS

Below is a list of Good Faith Efforts as defined in the City's MWBE Policy. To the left of each item is the number of points assigned to that item. Please place an "X" in the first column for each item you are claiming credit. Please provide any documentation, if available. Failure to achieve the minimum number of GFE points stated in the box below may constitute grounds for rejection of your bid.

NOTE: All actions necessary to earn GFE Points must be undertaken prior to Bid Opening.

Total Available GFE Points: 155		Minimum Number GFE Points Required: 50	
POINTS		GOOD FAITH EFFORT (GFE)	
☐	10	Contacted MWBE businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government-maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.	
☐	10	Made the construction plans, specifications and requirements available for review by prospective MWBE businesses or providing these documents to them at least 10 days before the bids are due.	
☐	15	Broken down or combined elements of work into economically feasible units to facilitate MWBE business participation.	
☐	10	Worked with MWBE businesses trade, community, or contractor organizations identified by the MWBE Office and included in the bid documents that provide assistance in recruitment of MWBE businesses.	
☐	10	Attended pre-bid meetings schedule by the public owner.	
☐	20	Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.	
☐	15	Negotiated in good faith with interested MWBE businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a MWBE business based on lack of qualification should have the reasons documented in writing.	
☐	25	Provided assistance to MWBE businesses in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted MWBE businesses in obtaining the same unit pricing with the bidder's suppliers in order to help MWBE businesses in establishing credit.	
☐	20	Negotiated joint venture and partnership arrangements with MWBE businesses in order to increase opportunities for MWBE businesses participation on a public construction or repair project when possible.	
☐	20	Provided quick pay agreements and policies to enable MWBE business contractors and suppliers to meet cash flow demands.	
Total GFE Points (Claimed by Bidder) _____		Total GFE Points (Assessed by City) _____	

Letters of Intent Submitted Upon Notice from the City

Within three (3) Business Days after receiving a request from the City (or within such longer time as may be communicated by the City in writing), Bidders must submit a separate Letter of Intent for each MWBE listed on this Affidavit D. Each Letter of Intent must be executed by both the MWBE and the Bidder. The City shall not count proposed MWBE utilization for which it has not received a Letter of Intent by this deadline.

Adding Subcontractors or Suppliers After Submitting This Form

Nothing in this Affidavit shall be deemed to preclude you from entering into subcontracting arrangements after submission of this form. However, per the City of Raleigh MWBE Policy, you must comply with the following:

- You must maintain the minimum level of MWBE participation proposed on this Affidavit throughout the duration of the Contract, except as may be otherwise specifically allowed by the City.
- If you need to terminate or replace a MWBE, you must complete a Request to Change a MWBE Subcontractor Form.
- If the scope of work on the Contract increases, or if you elect to subcontract any portion of work not identified on this form as subcontracted, then you must comply with City of Raleigh MWBE Policy, including Good Faith Efforts.
- A Letter of Intent must also be submitted for each MWBE you add subsequent to contract award.

Signature

Your signature below indicates that the undersigned firm certifies and agrees that:

- a. You have complied with all provisions of the City of Raleigh MWBE Policy;
- b. The information provided is a true and accurate statement of Certified MWBE businesses intended to be used as subcontractors, subconsultants, or suppliers in the performance of this Project/Contract; and
- c. Failure to provide accurate and truthful information or to properly document such compliance in the manner and within the time periods established by the City of Raleigh MWBE Policy shall constitute a violation of the City of Raleigh MWBE Policy and may result in the sanctions prescribed therein, including rejection of your bid.

This the ____ of _____, 20 ____

Signature

Printed Name/Title

Letter of Intent

In accordance with City of Raleigh MWBE Policy, within three (3) Business Days after receiving a request from the City (or within such longer time as may be communicated by the City in writing), a Bidder must submit a separate Letter of Intent for each MWBE subcontractor listed on Affidavit C or Affidavit D, as may be applicable.

Project Name	
Project Number	

Section 1: TO BE COMPLETED BY THE BIDDER

Name of Bidder					
Address					
Contact Person					
Telephone		E-mail		Fax	

If the Bidder has entered into a Quick Pay Agreement, in association with this Letter of Intent and as defined in the City's MWBE Policy, please attach a copy of the executed Agreement with the undersigned MWBE.

Identify in complete detail the scope of work to be performed or item(s) to be supplied by the MWBE.

Cost of Work to be Performed by MWBE \$ _____

Section 2: TO BE COMPLETED BY MWBE SUBCONTRACTOR

Name of MWBE					
Address					
Contact Person					
Telephone		E-mail		Fax	

Upon execution of a Prime Contract with the City for the above referenced project, the Bidder certifies that it intends to utilize the MWBE listed above, and that the description, cost and percentage of work to be performed by the MWBE as described above is accurate. The MWBE firm certifies that it has agreed to provide such work/supplies for the amount stated above.

BIDDER	_____	_____
	Signature	Date

	Print Name and Title	
MWBE	_____	_____
	Signature	Date

	Print Name and Title	

CONTRACT SUBCONTRACTOR IDENTIFICATION FORM*Building Project/Construction Contracts*(This form **MUST** be submitted within 30 days after award of the Contract)

This Final Subcontractor Identification Form is to provide a list of all subcontractors that the Contractor will use in the performance of the Contract with the City, in accordance with NCGS §143-128.2. *Copy this Form as needed.*

CONTRACTOR NAME			
PROJECT NAME			
PROJECT NUMBER		CITY DEPARTMENT	
☐ PRIME IS MWBE	Classification: _____ ☐ Certified with NCHUB ☐ Certified with NCDOT-DBE	CONTRACT AWARD DATE	

MWBE Classifications: American Indian (AI), Asian American (AA), Black/African American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

☐ **WORK TO BE SELF-PERFORMED**

Check this box **only** if you intend to perform 100% of the work on this Project/Contract with your own current work forces, and you normally perform and have the capability to perform all elements of this work on this Project/Contract with your own current work forces.

ALL CONTRACT SUBCONTRACTORS

Complete the chart below for **all** subcontractors that will be used on this Contract regardless of dollar amount.

Company Name	Contact	Description of Service/Trade	Total (\$)
	Name:		
☐ Certified MWBE ☐ Registered Raleigh SCS	E-mail:	Address:	
	Name:		
☐ Certified MWBE ☐ Registered Raleigh SCS	E-mail:	Address:	
	Name:		
☐ Certified MWBE ☐ Registered Raleigh SCS	E-mail:	Address:	
	Name:		
☐ Certified MWBE ☐ Registered Raleigh SCS	E-mail:	Address:	
	Name:		
☐ Certified MWBE ☐ Registered Raleigh SCS	E-mail:	Address:	
	Name:		
☐ Certified MWBE ☐ Registered Raleigh SCS	E-mail:	Address:	
	Name:		
☐ Certified MWBE ☐ Registered Raleigh SCS	E-mail:	Address:	

Certification must be with NCHUB or the NCDOT-DBE. Proof of Certification may be required upon request by the City.

Total Contract Amount

\$ _____

Total MWBE Utilization

\$ _____

Percent MWBE Utilization

(Total MWBE Utilization divided by Total Contract Amount)

_____ %

APPENDIX E - CERTIFIED SUBCONTRACTOR / SUPPLIER PAYMENT APPLICATION FORM

Contractors must submit this form with each request for payment from the City of Raleigh, including any invoice or request for final payment. Requests for payment are limited to work that has been completed and approved for all subcontractors and suppliers in connection with the Contract. Copy this form as needed. The Contractor on the Prime Contract (i.e., Prime) is responsible for collecting and submitting this Appendix E from all subsequent lower tier contractors.

Section 1: PROJECT INFORMATION

Project Name		Contractor Name	
Total Contract Amount	\$	Pay App #/Contract ID #	
Total MWBE Sub (\$/%)	\$	Invoice Amount	\$
Payment Period	___/___/20___ through ___/___/20___		City Department
FINAL PAYMENT ☐ Check only when submitting Final Pay Request.		Project Completion Date	

Section 2: PAYMENTS TO SUBCONTRACTORS

Complete the chart below for all MWBE subcontractors used on the Project/Contract regardless of dollar amount.

Company Name	MWBE Classification	Work Performed	Percentage of Total Contract	Percent of Subcontract Completed	Payment this Period	Cumulative Payments to Date

*MWBE Classifications: American Indian (AI), Asian American (AA), Black/African-American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

Section 3: PAYMENTS TO SUPPLIERS

All suppliers providing goods under City contracts must be listed on the Sales Tax Statement submitted with each pay request. The City may request, on a case-by-case basis, that the Contractor require certain suppliers to be registered in the Raleigh Supplier Connection System and may withhold payment of any amounts due the Contractor in the event the Contractor fails to comply with such request.

The undersigned certifies the preceding chart is a true and accurate statement of all payments that have been made to subcontractors on this Project/Contract, and that all Suppliers providing goods under this contract have been listed in the Sales Tax Statements submitted to the City in connection with this Payment Appendix E. If no subcontractors or suppliers are listed on the preceding chart or Sales Tax Statements, the undersigned certifies that no subcontractors or suppliers were used in performing the Project/Contract for the payment period indicated. Failure to provide accurate and truthful information is a violation of the City of Raleigh MWBE Policy and may result in the sanctions prescribed therein.

This _____ day of _____ 20____

Signature

Print Name and Title

To be completed by City for FINAL PAYMENT

Total Paid to Contractor \$	Proposed MWBE Amount \$	MWBE Commitment: _____%
☐ Prime Contractor MWBE		
Total Paid to Subcontractors \$	Total to MWBE Subcontractors \$	MWBE Final: _____%

REQUEST TO CHANGE A MWBE SUBCONTRACTOR

Contractors must submit this form for **any request** to change any MWBE subcontractor or supplier in connection with the Contract. The Contractor on the Prime Contract (i.e. prime) is responsible for collecting and submitting this form from all subsequent lower tier contractors.

PROJECT NAME			
PROJECT MANAGER		CONTRACT NUMBER	
PRIME CONTRACTOR		CONTACT NAME	
PHONE NUMBER		E-MAIL ADDRESS	
DATE OF CHANGE		CITY DEPARTMENT	

SECTION 1: PREVIOUS REQUESTS FOR CHANGE

☐ **NO PREVIOUS REQUEST FOR THIS PROJECT/CONTRACT.**

Complete the chart below for all previous Requests to Change a MWBE Subcontractor.

Date of Request	Subcontractor's Company Name	MWBE Classification	Request Approved: Y/N	Work Performed

MWBE Classifications: American Indian (AI), Asian American (AA), Black/African-American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

Section 2: CURRENT MWBE SUBCONTRACTOR INFORMATION

CURRENT MWBE SUBCONTRACTOR			
SERVICE PROVIDED			
PERCENT OF TOTAL CONTRACT	_____ %	PERCENT OF SUBCONTRACT COMPLETE	_____ %
TOTAL AMOUNT OF SUBCONTRACT	\$ _____	TOTAL AMOUNT PAID TO DATE	\$ _____

Section 3: PROPOSED ACTION (SELECT ONE)

☐ **WORK TO BE SELF-PERFORMED**

Check this box **only** if the work previously performed by the above MWBE subcontractor will be performed with your own current work forces, and you normally perform and have the capability to perform all elements of this work on this Project/Contract with your own current work forces.

☐ **REPLACE MWBE SUBCONTRACTOR**

Section 4: REASON FOR CHANGE (SELECT AT LEAST ONE)

- ☐ The listed MWBE, after having had a reasonable opportunity to do so, fails or refuses to execute a written contract.
- ☐ The listed MWBE is bankrupt or insolvent.
- ☐ The listed MWBE fails or refuses to perform the subcontract or furnish the listed materials.

- ☐ The work performed by the listed subcontractor is unsatisfactory according to industry standards and is not in accordance with the plans and specifications.
- ☐ The subcontractor is substantially delaying or disrupting the progress of the work.
- ☐ Other - explain in detail on company letter head and attach to this Request.

Section 5: NEW SUBCONTRACTOR INFORMATION (IF APPLICABLE)

Complete the information below for the new MWBE subcontractor requested to be changed on the Project/Contract.

Company Name	Contact Person	MWBE Classification	Work to be Performed	Amount of Subcontract	Subcontractor's Percentage of Total Contract

MWBE Classifications: American Indian (AI), Asian American (AA,) Black/African-American (B), Hispanic (H), Non-Minority Female (NMF), Socially/Economic Disadvantaged (D)

If new subcontractor(s) is not MWBE, attach documentation of Good Faith Efforts (Affidavit A).

This the ____ of _____, 20____

Signature _____ Printed Name/Title _____

TO BE COMPLETED BY CITY

SIGNATURE:

Original Total Contract Amount: \$_____

Original Total MWBE Participation _____ %

PRINT NAME:

New Total Contract Amount: \$_____

New Total MWBE Participation _____ %

DATE:

Contract Amount Impact Increase \$_____ Decrease \$_____ No Change ☐

MWBE Participation Change Increase _____ % Decrease _____ % No Change ☐

☐ APPROVED

☐ REJECTED

NOTES:



Minority and Women-owned Business Enterprise Program (MWBE)

Explanation of Affidavit A

A Listing of the Good Faith Effort (GFE)

Company has made a good faith effort to recruit minority businesses in accordance with N.C. Gen. Stat. § 143-128.2 and represents that it has performed the following (**check all that apply; note that a minimum of fifty (50) points must be achieved**):

Examples of ways to satisfy requirements are given for each criterion below:

- ☐ 1. (10 points) Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
 - *Provide a list of potential bidders with proof of acknowledged responses (i.e. quotes)*
 - *Provide confirmation of notification at least 10 days before bid date*
 - *Newspaper/trade ads do not qualify as GFE notification*
- ☐ 2. (10 points) Made the construction plans, specifications and requirements available for review by prospective minority businesses, or provided these documents to them at least 10 days before the bids are due.
 - *Provide confirmation of notification at least 10 days before bid date*
 - *Include in the notice that plan specs are available in office/online (location/link) and at no cost to MWBEs*
 - *Newspaper/trade ads do not qualify as GFE notification*
- ☐ 3. (15 points) Broke down or combined elements of work into economically feasible units to facilitate minority participation.
 - *Provide confirmation of solicitation that include subcontracting opportunities (i.e. itemize or group trades such as flooring/trim or divide one sub does flooring and another sub does trim)*
- ☐ 4. (10 points) Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
 - *Obtain letter or other documentation from one of these organizations indicating that you are working with them in the recruitment of minority businesses – NCMWBE Coordinators Network, The Institute, NCIEDI or HCAC.*
 - *A list of organizations can be found at www.raleighnc.gov/mwbe*

- ❑ 5. (10 points) Attended pre-bid meetings scheduled by the public owner.
 - ***Attendance is recorded (make sure you sign-in)***
- ❑ 6. (20 points) Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
 - ***Include one of the following statements in solicitation to MWBEs as it applies:***
 - ***Bonds are not required for this project***
 - ***Bidder will assist in procuring bonds or insurance if necessary***
- ❑ 7. (15 points) Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
 - ***“MWBE Solicitation Form” is attached to the Explanation Affidavit A Form***
 - ***Provide completed MWBE Solicitation Form to document the following:***
 - ***Did not receive low quotes from MWBEs***
 - ***Bidder accepted other low quotes from MWBEs***
 - ***Written reasons for rejection of any low quotes from MWBEs***
- ❑ 8. (25 points) Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder’s suppliers in order to help minority businesses in establishing credit.
 - ***Indicate in solicitation the following are available: equipment, loan capital, lines of credit, or joint pay agreements for qualified MWBEs or any other needs.***
 - ***Document recent history of doing joint pay agreements such as “in the recent past, we have done joint pay agreements (lines of credit, waiving of credit, etc.) with the following MWBEs (x company, y company, z company) and intend to offer the same on this project for qualified MWBEs”***
 - ***Provide letter from vendor/supplier indicating that they will give the same pricing to MWBEs quoting to you as vendor/supplier gives directly to you***
- ❑ 9. (20 points) Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
 - ***Indicate in solicitation that opportunities to negotiate joint venture and partnership arrangements are available***
- ❑ 10. (20 points) Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash flow demands.
 - ***Indicate in solicitation that quick pay agreements are available for certified MWBEs to include payment terms (i.e., Net 30).***
 - ***Document recent history of doing quick pay agreements such as “in the recent past, we have done quick pay agreements with the following MWBE’s (x company, y company, z company) and intend to offer the same on this project for qualified MWBE’s”***

SOLICITATION FORM

Copy this Form as needed to document MWBE contacts.

The Bidder must make the required contacts no less than ten (10) Days before Bid Opening to receive credit for this Good Faith Effort. All contacts must be verifiable with supporting documentation reflecting the methods and content of the solicitation. All documentation must be submitted with this form.

A Bidder must submit this Solicitation Form within the time specified in the City Solicitation Documents. If no time period is specified in the City Solicitation Documents, the Bidder must submit this form within three (3) Business Days after the City requests it.

SECTION 1. PROJECT INFORMATION

Project Name			
Project Number		City Department	
Bidder		Number MWBEs Contacted	

SECTION 2. SOLICITATION INFORMATION

If "No" is checked for "Selected" below, the Bidder must document the reasons for rejecting each bid submitted by a MWBE on the Good Faith Negotiation Form.

MWBE FIRM		CONTACT PERSON	
SCOPE OF WORK			
INITIAL CONTACT	DATE: ____/____/20____	METHOD (select all used):	☐ Email ☐ Telephone ☐ Fax ☐ In-Person ☐ Mail
FOLLOW-UP	DATE: ____/____/20____	METHOD (select all used):	☐ Email ☐ Telephone ☐ Fax ☐ In-Person ☐ Mail
RESPONSE	☐ No Response	☐ Not Bidding	☐ Bidding (\$_____) ☐ Other (Explain)
SELECTED	☐ Yes	☐ No (Explain)	

MWBE FIRM		CONTACT PERSON	
SCOPE OF WORK			
INITIAL CONTACT	DATE: ____/____/20____	METHOD (select all used):	☐ Email ☐ Telephone ☐ Fax ☐ In-Person ☐ Mail
FOLLOW-UP	DATE: ____/____/20____	METHOD (select all used):	☐ Email ☐ Telephone ☐ Fax ☐ In-Person ☐ Mail
RESPONSE	☐ No Response	☐ Not Bidding	☐ Bidding (\$_____) ☐ Other (Explain)
SELECTED	☐ Yes	☐ No (Explain)	

MWBE FIRM		CONTACT PERSON	
SCOPE OF WORK			
INITIAL CONTACT	DATE: ____/____/20____	METHOD (select all used):	☐ Email ☐ Telephone ☐ Fax ☐ In-Person ☐ Mail
FOLLOW-UP	DATE: ____/____/20____	METHOD (select all used):	☐ Email ☐ Telephone ☐ Fax ☐ In-Person ☐ Mail
RESPONSE	☐ No Response	☐ Not Bidding	☐ Bidding (\$_____) ☐ Other (Explain)
SELECTED	☐ Yes	☐ No (Explain)	

SECTION 011000 - SUMMARY

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:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Work performed by Owner.
 - 4. Work under Owner's separate contracts.
 - 5. Owner-furnished/Owner-installed (OFOI) products.
 - 6. Contractor's use of site and premises.
 - 7. Coordination with occupants.
 - 8. Work restrictions.
 - 9. Specification and Drawing conventions.
 - 10. Miscellaneous provisions.
- B. Related Requirements:
 - 1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
 - 2. Section 017300 "Execution" for coordination of Owner-installed products.

1.3 DEFINITIONS

- A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

1.4 PROJECT INFORMATION

- A. Project Identification: 1105 Warehouse Drive Renovation
 - 1. Project Location: 1105 Warehouse Drive, Raleigh, NC 27603
- B. Owner: City of Raleigh.
 - 1. Owner's Representative: Glen Willert
- C. Architect: HH Architecture.
 - 1. Architect's Representative: Kelly Walstrum

- D. Architect's Consultants: Architect has retained the following design professionals, who have prepared designated portions of the Contract Documents:
 - 1. IMEG: Mechanical, electrical and plumbing engineering.
- E. Web-Based Project Software: Project software will be used for purposes of managing communication and documents during the construction stage.
 - 1. See Section 013100 "Project Management and Coordination." for requirements for using web-based Project software.

1.5 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:
 - 1. SCOPE OF WORK IS THE RENOVATION OF AN APPROXIMATELY 2,172 SF FIELD OFFICE BUILDING. THE SCOPE WILL INCLUDE THE ADDITION OF AN ADA RESTROOM AND NEW ARCHITECTURAL FINISHES. TO SUPPORT THE ABOVE MODIFICATIONS; SCOPE OF MEP WORK WILL INCLUDE MODIFICATION TO POWER, PLUMBING, HVAC, AND LIGHTING AS NEEDED. Scope includes all other Work indicated in the Contract Documents.
- B. Type of Contract:
 - 1. Project will be constructed under a single prime contract.

1.6 PHASED CONSTRUCTION

- A. ***Construct the Work in phases, with each phase substantially complete as indicated. Owner will occupy portion of building outside of work area. Coordinate access with Owner.***
 - 1. ***Phase 1 Work Area 105***
 - 2. ***Phase 2 Work Area 104***
- B. ***Before commencing Work of each phase, submit an updated copy of Contractor's construction schedule, showing the sequence, commencement and completion dates, and move-out and -in dates of Owner's personnel for all phases of the Work.***

1.7 WORK PERFORMED BY OWNER

- A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.
- B. Preceding Work: Owner will perform the following construction operations at Project site. Those operations are scheduled to be substantially complete before Work under this Contract begins.
 - 1. Exterior Guardrail
 - 2. Interior Lighting
 - 3. Carpeting in Office 101
 - 4. Ceiling in Offices 101 and 103

5. Power and data for workstations in Work Area 105

- C. Subsequent Work: Owner will perform the following additional work at site after Substantial Completion. Completion of that work will depend on successful completion of preparatory Work under this Contract.
 - 1. Key fob access control.

1.8 WORK UNDER OWNER'S SEPARATE CONTRACTS

- A. Work with Separate Contractors: Cooperate fully with Owner's separate contractors, so work on those contracts may be carried out smoothly, without interfering with or delaying Work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under Owner's separate contracts.
- B. Preceding Work: Owner will award separate contract(s) for the following construction operations at Project site. Those operations are scheduled to be substantially complete before Work under this Contract begins.

1.9 OWNER-FURNISHED/OWNER-INSTALLED (OFOI) PRODUCTS

- A. The Owner will furnish and install products indicated.
- B. Owner-Furnished/Owner-Installed (OFOI) Products:
 - 1. Soap Dispenser~~<Insert description, in separate subparagraphs, for each Owner-furnished/Owner-installed product>.~~
 - 2. Paper Towel Dispenser
 - 3. Toilet Paper Dispenser

1.10 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Unrestricted Use of Site: Each Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

- D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.11 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
 - 1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
 - 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
 - 3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
 - 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.12 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work to between 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.
 - 1. Weekend Hours: 48 hours notice.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 - 2. Obtain Owner's written permission before proceeding with utility interruptions.

- D. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances within the existing building is not permitted.
- E. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- F. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.
 - 1. Maintain list of approved screened personnel with Owner's representative.

1.13 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
 - 3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
 - 4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.
- C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
 - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 011000

SECTION 012300 - ALTERNATES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.2 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 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 alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 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. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates 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

A. Alternate No. 1: Roof Replacement

- 1. Base Bid: Existing membrane roof to remain as indicated on the drawings.**
- 2. Alternate: In lieu of the base bid, provide new PVC roof membrane and insulation as indicated on the drawings.**

B. Alternate No. 2: Repoint Masonry.

- 1. Base Bid: Existing Brick Mortar to remain as indicated on the drawings.**
- 2. Alternate: In lieu of the base bid, remove and repoint existing Brick Mortar on building exterior as indicated on the drawings.**

C. Alternate No. 3: HVAC Replacement.

- 1. Base Bid: Existing HVAC unit to remain**
- 2. Alternate: In lieu of the base bid, provide new RTU-1 as indicated on the drawings.**

D. Alternate No. 4: New Overhead Sectional Doors.

- 1. Base Bid: Provide new storefront system as indicated on the drawings.**
- 2. Alternate: In lieu of the base bid, provide new overhead sectional doors 'Type G' as indicated on the drawings.**

E. Alternate No. 5: Existing Sectional Doors.

- 1. Base Bid: Provide new storefront system as indicated on the drawings.**
- 2. Alternate: In lieu of the base bid, existing overhead doors to remain as indicated on the drawings.**

F. Alternate No. 6: Exterior Doors.

- 1. Base Bid: Existing Doors X104 and X105 to remain as indicated on the drawings.**
- 2. Alternate: In lieu of the base bid, provide new doors 'Type FG' and frames as indicated on the drawings.**

END OF SECTION 012300

SECTION 083613 - SECTIONAL DOORS

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. Sectional-door assemblies.
- B. Related Requirements:

1.3 ACTION SUBMITTALS

- A. Product Data: For each type and size of sectional door and accessory.
 - 1. Include construction details, material descriptions, dimensions of individual components, profile door sections, and finishes.
 - 2. For power-operated doors, include rated capacities, operating characteristics, electrical characteristics, and furnished accessories.
- B. Shop Drawings: For each installation and for components not dimensioned or detailed in manufacturer's product data.
 - 1. Include plans, elevations, sections, and mounting details.
 - 2. Include details of equipment assemblies. Indicate dimensions, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Include points of attachment and their corresponding static and dynamic loads imposed on structure.
 - 4. Include diagrams for power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
 - 1. Sample Warranties: For manufacturer's warranty and finish warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sectional doors to include in maintenance manuals.
- B. Manufacturer's warranty.
- C. Finish warranty.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer for both installation and maintenance of units required for this Project.

1.7 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of sectional doors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including, but not limited to, excessive deflection.
 - b. Failure of components or operators before reaching required number of operation cycles.
 - c. Faulty operation of hardware.
 - d. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use; rust through.
 - e. Delamination of exterior or interior facing materials.
 - 2. Warranty Period: Three years from date of Substantial Completion.
- B. Finish Warranty: Manufacturer agrees to repair or replace components that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS, GENERAL

- A. Source Limitations: Obtain sectional doors from single source from single manufacturer.
 - 1. Obtain operators and controls from sectional door manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Provide sectional doors that comply with performance requirements specified without failure from defective manufacture, fabrication, installation, or other defects in construction and without requiring temporary installation of reinforcing components.
- B. Structural Performance, Exterior Doors: Capable of withstanding the design wind loads.
 - 1. Design Wind Load: [As indicated on Drawings].
 - 2. Deflection Limits: Design sectional doors to withstand design wind loads without evidencing permanent deformation or disengagement of door components.
 - a. Deflection of door sections in horizontal position (open) shall not exceed 1/120 of door width.
 - b. Deflection of horizontal track assembly shall not exceed 1/240 of door height.
 - 3. Operability under Wind Load: Design sectional doors to remain operable under design wind load, acting inward and outward.

- C. Seismic Performance: Provide sectional doors that withstand the effects of earthquake motions determined in accordance with ASCE/SEI 7.
 - 1. Component Importance Factor: 1.0.

2.3 SECTIONAL-DOOR ASSEMBLY (DOOR TYPE "R")

- A. Steel Sectional Door: Provide sectional door formed with hinged sections and fabricated so that finished door assembly is rigid and aligned with tight hairline joints; free of warp, twist, and deformation; and complies with requirements in DASMA 102.
 - 1. Manufacturers: Basis-of-Design: Aluminum Glass Door, Model 521S, by Overhead Door Corporation, or equal products by one of the following:
 - a. Raynor.
 - b. Wayne-Dalton.
- B. Operation Cycles: Door components and operators capable of operating for not less than 10,000 operation cycles. One operation cycle is complete when door is opened from closed position to the open position and returned to closed position.
- C. Air Infiltration: Maximum rate of 0.4 cfm/sq. ft. (2.03 L/s per sq. m) when tested in accordance with ASTM E283 or DASMA 105.
- D. U-Value: 0.052 Btu/sq. ft. x h x deg F (0.295 W/sq. m x K).
- E. Aluminum Sections: ASTM B221 (ASTM B221M) extruded-aluminum stile and rail members of alloy and temper standard with manufacturer for type of use and finish indicated; in minimum thickness required to comply with requirements; with rail and stile dimensions and profiles indicated on Drawings; and with overlapped or interlocked weather- and pinch-resistant seal at meeting rails.
 - 1. Door-Section Thickness: 1-3/4 inches (44 mm).
 - 2. Section Reinforcing: Continuous horizontal and diagonal reinforcement as required to stiffen door and for wind loading. Ensure that reinforcement does not obstruct vision lites.
 - a. Hardware Locations: Provide reinforcement for hardware attachment.
 - 3. Insulated Stiles and Rails: Fill stiles and rails manufacturer's standard polyurethane expanding foam.
 - 4. Glazed Panels: Manufacturer's standard, aluminum-framed section with glazing sealed with glazing tape and aluminum glazing bead. Glazing as follows:
 - a. Float Glass: 3 mm thick and complying with ASTM C1036, Type I, Class 1 (clear), Quality-Q3.
 - b. Tempered Glass: 3 mm thick and complying with ASTM C1048, Kind FT (fully tempered), Condition A (uncoated), Type I, Class 1 (clear), Quality-Q3.
 - c. Insulating Glass Units: Manufacturers' standard unit with tempered glass lites complying with ASTM C1048, Kind FT (fully tempered), Condition A (uncoated), Type I, Class 1 (clear), Quality-Q3.
 - 5. Solid Aluminum Panels: ASTM B209 (ASTM B209M), alloy and temper standard with manufacturer for use and finish indicated.
 - a. Description: 1/2-inch- (12.7-mm-) thick overall insulated panel composed of 0.050-inch (1.3-mm) aluminum interior and exterior panels with an extruded polystyrene (EPS) core.

- b. Attachment to Frame: Sealed with glazing tape and aluminum glazing bead.
 - c. Aluminum Surface: Smooth.
 - 6. Perforated Aluminum Panels: ASTM B209 (ASTM B209M), alloy and temper standard with manufacturer for use and finish indicated.
 - a. Description: 0.50 inch (1.3 mm) thick, with mill finish, 0.312-inch (7.9-mm) square perforations on 0.5-inch (12.7-mm) centers, and a total open area of 39 percent.
 - b. Attachment to Frame: Sealed with glazing tape and aluminum glazing bead.
 - 7. <Insert panel requirements>.
- F. Track: Manufacturer's standard, galvanized-steel, standard-lift track system. Provide complete system including brackets, bracing, and reinforcement to ensure rigid support of ball-bearing roller guides.
- 1. Material: Galvanized steel, ASTM A653/A653M, minimum G60 (Z180) zinc coating.
 - 2. Size: [As recommended in writing by manufacturer for door size, weight, track configuration and door clearances indicated on Drawings].
 - 3. Track Reinforcement and Supports: Provide galvanized-steel members to support track without sag, sway, and vibration during opening and closing of doors. Slot vertical sections of track spaced 2 inches (51 mm) apart for door-drop safety device.
 - a. Vertical Track: Incline vertical track to ensure weathertight closure at jambs. Provide [continuous angle] attached to track and wall.
 - b. Horizontal Track: Provide continuous reinforcing angle from curve in track to end of track, attached to track and supported at points by laterally braced attachments to overhead structural members.
- G. Weather seals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom top and jambs of door. [Provide combination bottom weather seal and sensor edge for bottom seal.]
- H. Windows: Manufacturer's standard window units of shape and size and in locations indicated on Drawings. Set glazing in vinyl, rubber, or neoprene glazing channel. Provide removable stops of same material as door-section frames. Provide the following glazing:
- 1. Clear Float Glass: 3 mm thick and complying with ASTM C1036, Type I, Class 1, Quality-Q3.
 - 2. Insulating Glass Units: Manufacturer's standard.
- I. Hardware: Heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless steel, or other corrosion-resistant fasteners, to suit door type.
- 1. Hinges: Heavy-duty, galvanized-steel hinges of not less than 0.079-inch (2.01-mm) nominal coated thickness at each end stile and at each intermediate stile, in accordance with manufacturer's written recommendations for door size.
 - a. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is impossible.
 - b. Provide double-end hinges where required for doors more than 16 ft. (4.88 m) wide unless otherwise recommended by door manufacturer in writing.
 - 2. Rollers: Heavy-duty rollers with steel ball bearings in case-hardened steel races, mounted to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Match roller-tire diameter to track width.
 - a. Roller-Tire Material: [Case-hardened steel].
 - 3. Push/Pull Handles: Equip each door with galvanized-steel lifting handles on each side of door, finished to match door.

J. Locking Device:

1. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.
2. Locking Device Assembly: Fabricate with cylinder lock, spring-loaded deadbolt, operating handle, cam plate, and adjustable locking bars to engage through slots in tracks.
 - a. Lock Cylinders: Cylinders standard with manufacturer.
 - b. Keying: Keyed to building keying system.
 - c. Keys: Three for each cylinder.
3. Chain Lock Keeper: Suitable for padlock.
4. Safety Interlock Switch: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.

K. Counterbalance Mechanism:

1. Torsion Spring: Adjustable-tension torsion springs complying with requirements of DASMA 102 for number of operation cycles indicated, mounted on torsion shaft.
2. Cable Drums and Shaft for Doors: Cast-aluminum cable drums mounted on torsion shaft and grooved to receive door-lifting cables as door is raised.
 - a. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of torsion shaft.
 - b. Provide one additional midpoint bracket for shafts up to 16 ft. (4.88 m) long and two additional brackets at one-third points to support shafts more than 16 ft. (4.88 m) long unless closer spacing is recommended in writing by door manufacturer.
3. Cables: Galvanized-steel, multistrand, lifting cables with cable safety factor of at least 5 to 1.
4. Cable Safety Device: Include a spring-loaded steel or bronze cam mounted to bottom door roller assembly on each side and designed to automatically stop door if lifting cable breaks.
5. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.
6. Bumper: Provide spring bumper at each horizontal track to cushion door at end of opening operation.

L. Manual Door Operator:

1. Push-Up Operation: Lift handles and pull rope for raising and lowering doors located on inside and outside of bottom section; with counterbalance mechanism designed so that required lift or pull for door operation does not exceed 25 lbf (111 N).
2. Chain-Hoist Operator: Consisting of endless steel hand chain, chain-pocket wheel and guard, and gear-reduction unit with a maximum 25 lbf (111 N) force for door operation. Provide alloy-steel hand chain with chain holder secured to operator guide.

M. Electric Door Operator: Electric door operator assembly of size and capacity recommended by door manufacturer for door and operation cycles specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, control stations, control devices, integral gearing for locking door, and accessories required for proper operation.

1. Comply with NFPA 70.
2. Control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6; with NFPA 70, Class 2 control circuit, maximum 24 V ac or dc.

3. Safety: Listed in accordance with UL 325 by a qualified testing agency for commercial or industrial use; moving parts of operator enclosed or guarded if exposed and mounted at 8 ft. (2.4 m) or lower.
 4. Usage Classification: Standard duty, up to 25 cycles per hour and up to 90 cycles per day.
 5. Operator Type: Manufacturer's standard for door requirements.
 6. Motor: Reversible-type with controller (disconnect switch) for exterior, dusty, wet, or humid motor exposure. Use adjustable motor-mounting bases for belt-driven operators.
 - a. Motor Size: As required to start, accelerate, and operate door in either direction from any position, at a speed not less than 8 in./sec. (203 mm/s) and not more than 12 in./sec. (305 mm/s), without exceeding nameplate ratings or service factor.
 - b. Electrical Characteristics:
 - 1) Phase: Single phase.
 - 2) Volts: 115 V.
 7. Limit Switches: Equip motorized door with adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.
 8. Obstruction Detection: Automatic external entrapment protection consisting of automatic safety sensor capable of protecting full width of door opening. Activation of device immediately stops and reverses downward door travel.
 - a. Monitored Entrapment Protection: [Photoelectric sensor] designed to interface with door-operator control circuit to detect damage to or disconnection of sensor and complying with requirements in UL 325.
 - b. Unmonitored Entrapment Protection: Pneumatic sensor edge, black, located within weatherseal mounted to bottom bar.
 9. Control Station: Surface mounted, three-position (open, close, and stop) control.
 - a. Operation: Push button.
 - b. Interior-Mounted Unit: Full-guarded, surface-mounted, standard-duty, weatherproof-type, NEMA ICS 6, Type 4 enclosure.
 10. Emergency Manual Operation: Chain type designed so required force for door operation does not exceed 25 lbf (111 N).
 11. Emergency Operation Disconnect Device: Hand-operated disconnect mechanism for automatically engaging manual operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.
 12. Motor Removal: Design operator so motor can be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.
- N. Metal Finish: Comply with NAAMM/NOMMA's "Metal Finishes Manual for Architectural and Metal Products (AMP 500-06)" for recommendations for applying and designating finishes.
1. Factory Prime Steel Finish: Compatible with field-applied finish and in manufacturer's standard color. Comply with coating manufacturer's written instructions for cleaning, pretreatment, application, and minimum dry film thickness.
 2. Anodized Aluminum Finish: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
 - a. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.
 - 1) Color: As selected by Architect from manufacturer's full range.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrate construction and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; in accordance with manufacturer's written instructions.
- B. Tracks:
 - 1. Fasten vertical track assembly to opening jambs and framing with fasteners spaced not more than 24 inches (610 mm) apart.
 - 2. Hang horizontal track assembly from structural overhead framing with angles or channel hangers attached to framing by welding or bolting, or both. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.
- C. Accessibility: Install sectional doors, switches, and controls along accessible routes in compliance with regulatory requirements for accessibility.
- D. Power-Operated Doors: Install automatic garage doors openers in accordance with UL 325.

3.3 STARTUP SERVICES

- A. Engage a factory-authorized service representative to perform startup service.
 - 1. Complete installation and startup checks in accordance with manufacturer's written instructions.
 - 2. Test and adjust controls and safety devices. Replace damaged and malfunctioning controls and equipment.

3.4 ADJUSTING

- A. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion.
- B. Lubricate bearings and sliding parts as recommended by manufacturer.
- C. Adjust doors and seals to provide weather-resistant fit around entire perimeter.

- D. Touchup Painting Galvanized Material: Immediately after welding galvanized materials, clean welds and abraded galvanized surfaces and repair galvanizing to comply with ASTM A780/A780M.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain sectional doors.

END OF SECTION 083613

SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

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: Final.
 - 1. Storefront framing.
 - 2. Manual-swing entrance doors.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For aluminum-framed entrances and storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.
 - 1. Include details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
 - 2. Include full-size isometric details of each type of vertical-to-horizontal intersection of aluminum-framed entrances and storefronts, showing the following:
 - a. Joinery, including concealed welds.
 - b. Anchorage.
 - c. Expansion provisions.
 - d. Glazing.
 - e. Flashing and drainage.
 - 3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
 - 4. Include point-to-point wiring diagrams showing the following:
 - a. Power requirements for each electrically operated door hardware.
 - b. Location and types of switches, signal device, conduit sizes, and number and size of wires.

- C. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.
- D. Entrance Door Hardware Schedule: Prepared by or under supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.
- E. Delegated-Design Submittal: For aluminum-framed entrances and storefronts indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and field testing agency.
- B. Sample Warranties: For special warranties.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For aluminum-framed entrances and storefronts to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
 - 1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

1.8 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures, including, but not limited to, excessive deflection.
 - b. Noise or vibration created by wind and thermal and structural movements.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

- d. Water penetration through fixed glazing and framing areas.
 - e. Failure of operating components.
 - 2. Warranty Period: 10 years from date of Final Acceptance.
- B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.
- 1. Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Warranty Period: 20 years from date of Final Acceptance.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain all components of aluminum-framed entrance and storefront system, including framing spandrel panels and accessories, from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design aluminum-framed entrances and storefronts.
- B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrances and storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
- 1. Aluminum-framed entrances and storefronts shall withstand movements of supporting structure, including, but not limited to, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
 - 2. Failure also includes the following:
 - a. Thermal stresses transferring to building structure.
 - b. Glass breakage.
 - c. Noise or vibration created by wind and thermal and structural movements.
 - d. Loosening or weakening of fasteners, attachments, and other components.
 - e. Failure of operating units.
- C. Structural Loads:
- 1. Wind Loads: As indicated on Drawings.
 - 2. Other Design Loads: As indicated on Drawings.
- D. Deflection of Framing Members: At design wind pressure, as follows:
- 1. Deflection Normal to Wall Plane: Limited to edge of glass in a direction perpendicular to glass plane not exceeding 1/175 of the glass edge length for each individual glazing lite

- or an amount that restricts edge deflection of individual glazing lites to 3/4 inch, whichever is less.
2. Deflection Parallel to Glazing Plane: Limited to 1/360 of clear span or 1/8 inch, whichever is smaller.
 - a. Operable Units: Provide a minimum 1/16-inch clearance between framing members and operable units.
- E. Structural: Test according to ASTM E 330/E 330M as follows:
1. When tested at positive and negative wind-load design pressures, storefront assemblies, including entrance doors, do not evidence deflection exceeding specified limits.
 2. When tested at 150 percent of positive and negative wind-load design pressures, storefront assemblies, including entrance doors and anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
 3. Test Durations: As required by design wind velocity, but not less than 10 seconds.
- F. Air Infiltration: Test according to ASTM E 283 for infiltration as follows:
1. Fixed Framing and Glass Area:
 - a. Maximum air leakage of 0.06 cfm/sq. ft. at a static-air-pressure differential of 6.24 lbf/sq. ft.
 2. Entrance Doors:
 - a. Single Doors: Maximum air leakage of 0.5 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft.
- G. Water Penetration under Static Pressure: Test according to ASTM E 331 as follows:
1. No evidence of water penetration through fixed glazing and framing areas, including entrance doors, when tested according to a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft.
- H. Water Penetration under Dynamic Pressure: Test according to AAMA 501.1 as follows:
1. No evidence of water penetration through fixed glazing and framing areas when tested at dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft.
 2. Maximum Water Leakage: According to AAMA 501.1. Water leakage does not include water controlled by flashing and gutters, or water that is drained to exterior.
- I. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes.
1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
 2. Thermal Cycling: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested according to AAMA 501.5.
 - a. High Exterior Ambient-Air Temperature: That which produces an exterior metal-surface temperature of 180 deg F.
 - b. Low Exterior Ambient-Air Temperature: 0 deg F.
 - c. Interior Ambient-Air Temperature: 75 deg F.

2.3 STOREFRONT SYSTEMS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide YKK AP America Inc; ~~YES 600~~ **YES 45 TU, Thermally Broken, Center-Set** or a comparable product by one of the following:
 - 1. Kawneer North America, an Arconic company.
 - 2. Oldcastle BuildingEnvelope™.
 - 3. U.S. Aluminum; a brand of C.R. Laurence.
- B. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
 - 1. Exterior Framing Construction: Thermally broken.
 - 2. Interior Vestibule Framing Construction: Nonthermal.
 - 3. Glazing System: Retained mechanically with gaskets on four sides.
 - 4. Glazing Plane: Front.
 - 5. Fabrication Method: Field-fabricated stick system.
 - 6. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
 - 7. Steel Reinforcement: As required by manufacturer.
- C. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.
- D. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with non-staining, nonferrous shims for aligning system components.

2.4 ENTRANCE DOOR SYSTEMS

- A. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing or automatic operation.
 - 1. Door Construction: 2- to 2-1/4-inch overall thickness, with minimum 0.125-inch- thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated and fillet welded or that incorporate concealed tie rods.
 - a. Thermal Construction: High-performance plastic connectors separate aluminum members exposed to the exterior from members exposed to the interior.
 - 2. Door Design: As indicated Wide stile; 5-inch nominal width.
 - 3. Glazing Stops and Gaskets: Beveled, snap-on, extruded-aluminum stops and preformed gaskets.
 - a. Provide nonremovable glazing stops on outside of door.

2.5 ENTRANCE DOOR HARDWARE

- A. Entrance Door Hardware: Hardware not specified in this Section is specified in Section 087100 "Door Hardware."
- B. Cylinders: As specified in Section 087100 "Door Hardware."

2.6 GLAZING

- A. Glazing: Comply with Section 088000 "Glazing."
- B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
- C. Glazing Sealants: As recommended by manufacturer.

2.7 MATERIALS

- A. Sheet and Plate: ASTM B 209.
- B. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
- C. Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.
- D. Structural Profiles: ASTM B 308/B 308M.
- E. Steel Reinforcement:
 - 1. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
 - 2. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
 - 3. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.
 - 4. Primer: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM, and prepare surfaces according to applicable SSPC standard.

2.8 ACCESSORIES

- A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding fasteners and accessories compatible with adjacent materials.
 - 1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
 - 2. Reinforce members as required to receive fastener threads.
- B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
 - 1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123/A 123M or ASTM A 153/A 153M requirements.
- C. Concealed Flashing: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding flashing compatible with adjacent materials.
- D. Bituminous Paint: Cold-applied asphalt-mastic paint containing no asbestos, formulated for 30-mil thickness per coat.

- E. Rigid PVC Filler.
- F. Wall-to-Mullion Closure Trim:
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Mullion Mate Pro by Gordon or comparable product meeting the following requirements:
 - a. Lateral Movement: Complying with seismic, thermal, wind and cyclic requirements per ASTM E1399/E1399M.
 - b. Minimum STC Rating: 50.
 - c. Finish: Match adjacent storefront framing.
 - d. Fire Rating: Match adjacent wall rating requirements; UL-2079.

2.9 FABRICATION

- A. Form or extrude aluminum shapes before finishing.
- B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- C. Fabricate components that, when assembled, have the following characteristics:
 - 1. Profiles that are sharp, straight, and free of defects or deformations.
 - 2. Accurately fitted joints with ends coped or mitered.
 - 3. Physical and thermal isolation of glazing from framing members.
 - 4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
 - 5. Provisions for field replacement of glazing from interior for vision glass and exterior for spandrel glazing or metal panels.
 - 6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.
- E. Structural-Sealant-Glazed Framing Members: Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.
- F. Storefront Framing: Fabricate components for assembly using head-and-sill-receptor system with shear blocks at intermediate horizontal members.
- G. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.
 - 1. At interior and exterior doors, provide compression weather stripping at fixed stops.
- H. Entrance Doors: Reinforce doors as required for installing entrance door hardware.
 - 1. At pairs of exterior doors, provide sliding-type weather stripping retained in adjustable strip and mortised into door edge.
 - 2. At exterior doors, provide weather sweeps applied to door bottoms.

- I. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed entrance door hardware before applying finishes.
- J. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.10 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare surfaces that are in contact with structural sealant according to sealant manufacturer's written instructions, to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.

3.3 INSTALLATION

- A. General:
 - 1. Comply with manufacturer's written instructions.
 - 2. Do not install damaged components.
 - 3. Fit joints to produce hairline joints free of burrs and distortion.
 - 4. Rigidly secure nonmovement joints.
 - 5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
 - 6. Seal perimeter and other joints watertight unless otherwise indicated.
- B. Metal Protection:
 - 1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
 - 2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- C. Set continuous sill members and flashing in full sealant bed, as specified in Section 079200 "Joint Sealants," to produce weathertight installation.

- D. Install components plumb and true in alignment with established lines and grades.
- E. Install operable units level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation.
- F. Install glazing as specified in Section 088000 "Glazing."
- G. Install weatherseal sealant according to Section 079200 "Joint Sealants" and according to sealant manufacturer's written instructions to produce weatherproof joints. Install joint filler behind sealant as recommended by sealant manufacturer.
- H. Entrance Doors: Install doors to produce smooth operation and tight fit at contact points.
 - 1. Exterior Doors: Install to produce weathertight enclosure and tight fit at weather stripping.
 - 2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware according to entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

3.4 ERECTION TOLERANCES

- A. Erection Tolerances: Install aluminum-framed entrances and storefronts to comply with the following maximum tolerances:
 - 1. Plumb: 1/8 inch in 10 feet; 1/4 inch in 40 feet.
 - 2. Level: 1/8 inch in 20 feet; 1/4 inch in 40 feet.
 - 3. Alignment:
 - a. Where surfaces about in line or are separated by reveal or protruding element up to 1/2 inch wide, limit offset from true alignment to 1/16 inch.
 - b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch wide, limit offset from true alignment to 1/8 inch.
 - c. Where surfaces are separated by reveal or protruding element of 1 inch wide or more, limit offset from true alignment to 1/4 inch.
 - 4. Location: Limit variation from plane to 1/8 inch in 12 feet; 1/2 inch over total length.

END OF SECTION 084113

SECTION 088000 - GLAZING

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. Glass for windows, doors, interior borrowed lites, storefront framing, glazed curtain walls.
 - 2. Glazing sealants and accessories.

1.3 DEFINITIONS

- A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.
- B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.
- C. IBC: International Building Code.
- D. Interspace: Space between lites of an insulating-glass unit.

1.4 COORDINATION

- A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Glass Samples: For each type of the following products; 12 inches square.
 - 1. Coated glass.
 - 2. Insulating glass.
 - 3. Glass Applique: 4" x full scale length of product.

- C. Glazing Accessory Samples: For sealants and colored spacers, in 12-inch lengths. Install sealant Samples between two strips of material representative in color of the adjoining framing system.
- D. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.
- E. Delegated-Design Submittal: For glass 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 Installer manufacturers of insulating-glass units with sputter-coated, low-E coatings glass testing agency and sealant testing agency.
- B. Product Certificates: For glass.
- C. Sample Warranties: For special warranties.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications for Insulating-Glass Units with Sputter-Coated, Low-E Coatings: A qualified insulating-glass manufacturer who is approved and certified by coated-glass manufacturer.
- B. Installer Qualifications: A qualified installer who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.
- C. Glass Testing Agency Qualifications: A qualified independent testing agency accredited according to the NFRC CAP 1 Certification Agency Program.
- D. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1.9 FIELD CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
 - 1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or are below 40 deg F.

1.10 WARRANTY

- A. Manufacturer's Special Warranty for Insulating Glass: Manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.
 - 1. Warranty Period: 10 years from date of Final Acceptance.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Guardian Industries Corp.; Guardian Glass, LLC; SunGuard™; or a comparable product by one of the following:
 - 1. AGC Glass Company North America, Inc.
 - 2. PPG Industries, Inc.; Vitro Architectural Glass.
 - 3. Pilkington North America.
- B. Source Limitations for Glass: Obtain from single source from single manufacturer for each glass type.
 - 1. Obtain tinted glass from single source from single manufacturer.
 - 2. Obtain reflective-coated glass from single source from single manufacturer.
- C. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design glazing.

- C. Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined according to the NCBC 2018 and ASTM E 1300.
 - 1. Design Wind Pressures: As indicated on Structural Drawings, See S-001.
 - 2. Thickness of Patterned Glass: Base design of patterned glass on thickness at thinnest part of the glass.
 - 3. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 1 inch, whichever is less.
 - 4. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites.
- D. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.
- E. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
 - 1. For monolithic-glass lites, properties are based on units with lites 6 mm thick.
 - 2. For laminated-glass lites, properties are based on products of construction indicated.
 - 3. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
 - 4. U-Factors: Center-of-glazing values, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program, expressed as Btu/sq. ft. x h x deg F.
 - a. Maximum U-Factor per NCECC: 0.45 U-Factor.
 - 5. Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 - a. Maximum SHGC per NCECC: 0.25 Maximum.
 - 6. Visible Reflectance: Center-of-glazing values, according to NFRC 300.

2.3 GLASS PRODUCTS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. GANA Publications: "Glazing Manual."
 - 2. AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR A7, "Sloped Glazing Guidelines."
 - 3. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Guidelines for Sloped Glazing."
 - 4. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."
- B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

- C. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of IGCC.
- D. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than the thickness indicated.
- E. Strength: Where annealed float glass is indicated, provide annealed float glass, heat-strengthened float glass, or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened float glass is indicated, provide heat-strengthened float glass or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where fully tempered float glass is indicated, provide fully tempered float glass.

2.4 GLASS PRODUCTS

- A. Clear Annealed Float Glass: ASTM C 1036, Type I, Class 1 (clear), Quality-Q3.
- B. Fully Tempered Float Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- C. Heat-Strengthened Float Glass: ASTM C 1048, Kind HS (heat strengthened), Type I, Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- D. Ceramic-Coated Vision Glass: ASTM C 1048, Condition C, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3; and complying with Specification No. 95-1-31 in GANA's "Engineering Standards Manual."

2.5 INSULATING GLASS

- A. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190.
 - 1. Sealing System: Dual seal, with manufacturer's standard primary and secondary sealants.
 - 2. Perimeter Spacer: Thermally broken aluminum.
 - 3. Desiccant: Molecular sieve or silica gel, or a blend of both.

2.6 GLAZING SEALANTS

- A. General:
 - 1. Compatibility: Compatible with one another and with other materials they contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
 3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.
- B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Dow Corning Corporation.
 - b. GE Construction Sealants; Momentive Performance Materials Inc.
 - c. Pecora Corporation.
 - d. Tremco Incorporated.

2.7 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
 2. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

2.8 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, with requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
- F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

- G. Mineral-Wool Board Spandrel Insulation: ASTM C 612, Type IA; faced on one side with foil-scrim-kraft or foil-scrim-polyethylene vapor retarder, with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84. Nominal density of 4.0 lbs/cu. Ft (65kg/ cu. m), thermal resistivity of 4.3 def F x h x sq ft./Btu x in. at 75 deg F (29.8 K x m/W at 24 deg C); ASTM E 2307 tested as part of a perimeter fire containment system for glass spandrel curtain wall fire containment; Thickness: 2-inches.
- H. Decorative Films: See Finish Legend.

2.9 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.
 - 1. Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
 - a. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
- B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.
- C. Grind smooth and polish exposed glass edges and corners.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
 - 2. Presence and functioning of weep systems.
 - 3. Minimum required face and edge clearances.
 - 4. Effective sealing between joints of glass-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.
- B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are readily identifiable. Do not use materials that leave visible marks in the completed Work.

3.3 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.
- C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.
- D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- F. Provide spacers for glass lites where length plus width is larger than 50 inches.
 - 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
 - 2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.
- H. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- I. Set glass lites with proper orientation so that coatings face exterior or interior as specified.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.
- K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.

- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first, then to jambs. Cover horizontal framing joints by applying tapes to jambs, then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until right before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glass lites in openings on setting blocks, and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.5 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- E. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or

spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.7 CLEANING AND PROTECTION

- A. Immediately after installation remove nonpermanent labels and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains.
 - 1. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.
- C. Remove and replace glass that is damaged during construction period.
- D. Wash glass on both exposed surfaces not more than four days before date scheduled for inspections that establish date of Final Acceptance. Wash glass as recommended in writing by glass manufacturer.

3.8 MONOLITHIC GLASS SCHEDULE

- A. Glass Type GL-1: Clear fully tempered float glass.
 - 1. Minimum Thickness: 6 mm.
 - 2. Safety glazing required.

3.9 INSULATING GLASS SCHEDULE

- A. Glass Type GL-2: Low-E-coated, clear insulating glass.
 - 1. Basis-of-Design Product: SunGuard™ SNX 51/23 on UltraClear by Guardian Glass.
 - 2. Overall Unit Thickness: 1 inch.
 - 3. Minimum Thickness of Each Glass Lite: 6 mm.
 - 4. Outdoor Lite: Fully tempered float glass.
 - 5. Interspace Content: Air.
 - 6. Indoor Lite: Fully tempered float glass.
 - 7. Low-E Coating: SunGuard™ SNX 51/23, sputtered on second surface.
 - 8. Winter Nighttime U-Factor: 0.20 maximum.
 - 9. Summer Daytime U-Factor: 0.17 maximum.
 - 10. Visible Light Transmittance: 50 percent minimum.

11. Solar Heat Gain Coefficient: 0.23 maximum.
12. Safety glazing required.

B. Glass Type GL-3: Wired insulating glass.

- 1. Basis-of-Design Product: WireLite by Technical Glass Products***
- 2. Overall Unit Thickness: 1 inch***
- 3. Minimum Thickness of Each Glass Lite: 6 mm.***
- 4. Outdoor Lite: Diamond Clear, 3/4"***
- 5. Interspace Content: Air.***
- 6. Indoor Lite: Fully tempered float glass.***

END OF SECTION 088000