

SECTION 10 14 40

SIGNAGE AND WAYFINDING

Part 1 GENERAL

1.01 APPLICABLE PROVISIONS OF THE CONDITIONS OF THE CONTRACT AND DIVISION #1, GENERAL REQUIREMENTS, GOVERN WORK IN THIS SECTION.

1.02 DESCRIPTION OF WORK

- A. The Contractor shall fabricate and install signs as indicated in the attached Design Intent Drawings, Sign Locations Plans, and Sign Message Schedules and as specified herein.
- B. Work of this Section includes all labor, materials, equipment and services necessary to complete the signage as shown on the drawings and/or specified herein, but not limited to the following:
 - 1. Custom faux-finish to resemble blackened steel
 - 2. Water-jet cut aluminum letters with faux-finish applied to water-jet cut frosted acrylic letters
 - 3. Compression molded acrylic sign panels with integral braille and integral raised and silkscreened letters
 - 4. Fabricated aluminum sign panels etched graphics and faux-finish to resemble blackened steel
 - 5. Acrylic sign panels with silkscreen graphics
 - 6. Acrylic sign panels with digital direct-to-surface printing
 - 7. Water-jet cut and tinted stainless steel letters
 - 8. Fabricated and tinted stainless steel letters
 - 9. Die-cut vinyl letters
- C. The Contractor is responsible for developing a custom faux-finish on aluminum to resemble blackened steel, see Section 1.09E below. Sample submittals process shall ensure Owner and Designer are satisfied with the proposed method of finish prior to commencement of fabrication of any sign type or sign type prototype.
- D. ADD ALTERNATES: Provide pricing alternates as detailed in the Design Drawings and below:
 - 1. Add Alternate 1: Fabrication and Installation of Sign Type F5 at Location #F5-1-099
 - 2. Add Alternate 2: Fabrication and Installation of all locations of the following Sign Types:

- a. Sign Type W1 (Directional, typical)
 - b. Sign Type W2 (Directional, at stairs)
 - c. Sign Type W3 (Interior Bartlett Theatre Identification)
 - d. Sign Type Y (Orientation Map/Directory)
 3. Add Alternate 3: Fabrication and Installation of signs at the following locations:
 - a. Sign Type F6 at Location F6-1-602
 - b. Sign Type F6 at Location F6-1-603
 - c. Sign Type F7 at Location F7-LL-605
 4. Add Alternate 4: Remove existing signage and patch/repair architectural surface prior to installing new signs at the following locations:
 - a. Sign Type F5 at Location F5-1-600
 - b. Sign Type F6 at Location F6-1-601
- 1.03 RELATED WORK SPECIFIED ELSEWHERE
- A. Entire Project Specification with specific reference to those sections noted above
- 1.04 DEFINITIONS
- A. For the purpose of this document the following definitions shall apply:
 1. Owner shall mean SUNY Fredonia, as represented by State University Construction Fund.
 2. Design Consultant / Architect shall mean Two Twelve, 902 Broadway, Floor 20, New York, NY 10010 and Deborah Berke Partners, 220 Fifth Avenue, New York NY 10001
 3. Sign Contractor shall mean the individual, firm or corporation executing the contract and performing the work under the terms of these Contract Documents.
 4. General Contractor shall mean the individual, firm or corporation responsible for the site and renovation work on and within which the work which forms the subject of this contract is to be installed.
 5. Contract Documents shall mean all drawings, schedules, specifications and other items comprising the contract.
 6. Sign shall mean any sign or graphic work to be installed on the site or applied to an architectural component, or other element described or specified in the Contract Documents.

7. Graphic Components shall mean all typography, illustrations, line drawings, maps, charts, etc. forming part of a sign.
8. Artwork shall mean scalable electronic vector artwork in Adobe Illustrator or Adobe InDesign format for any specific graphic component of individual signs, symbols, logotypes, line drawings, to be used in the production of signs by the Sign Contractor.
9. Graphic Layouts shall mean production ready artwork drawn to an architectural scale demonstrating all Graphic Components and colors of an individual sign type.
10. Character shall mean any visual element of a sign, including letters, numerals, punctuation marks, symbols, etc.
11. Color fill shall mean any paint, ink, dye, varnish or other material used to fill engraved, etched, or incised characters.
12. Paint shall mean any paint, ink, dye, varnish or other coating material.
13. Adhesive shall mean any liquid, aerosol, sheet, tape or foam tape adhesive or solvent bonding system.

1.05 QUALITY ASSURANCE AND PERFORMANCE REQUIREMENTS

A. Delegated Design Requirements:

1. All constructional, engineering and anchoring details indicated on the Design Consultant's drawings are for design intent only. The Sign Contractor shall take full responsibility for the correct and safe engineering of all sign types and the way in which they are supported and anchored without compromising the design intent. The internal structure, dimensions and specifications for all items shall be indicated on the Sign Contractor's shop drawings and shall indicate any alternative details which are necessary to result in a satisfactory and safe final product. The Sign Contractor shall indemnify and hold harmless the Design Consultant against any claim resulting from failure of, or damage caused by, the installed signs.

- ##### B.
- The approved Sign Contractor shall have at least seven (7) years of experience in the type of work required, shall have a reputation for doing satisfactory work on time; and shall have recently successfully completed similar work. See Section 1.5 for further requirements.

- ##### C.
- Comply with all current codes and requirements of all relevant local and state regulatory agencies, as referenced below. Where so required, tests shall be made and certificates of conformance shall be secured at the expense of the Sign Contractor.

1. ANSI: American National Standards Institute
2. ASTM: American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103 as published in "Compilation of ASTM Standards in Building Codes".

3. ADAAG: Americans with Disabilities Act Accessibility Guidelines,
2010 ADA Standards for Accessible Design

4. 2010 New York State Uniform Fire Prevention and Building Code

5. NFPA: National Fire Protection Association 101, 2009

D. All artwork and templates created by the Sign Contractor for the production of the work under this contract shall be the property of the Owner, and shall be delivered to the Owner upon request. All artwork supplied by the Design Consultant / Owner remain the property of the Design Consultant / Owner and are temporarily supplied for reproduction purposes only.

E. Warranty: See Section 1.12 Below.

1.06 SIGN CONTRACTOR QUALIFICATIONS

- A. Sign Contractor shall provide references of at least ten (10) clients who have used their services to the satisfaction of the Owner and Design Consultant.
- B. Sign Contractor shall provide evidence of successfully completing manufacture and installation of five (5) projects of similar scope and complexity to this bid within the preceding five (5) years.
- C. Sign Contractor must be able to demonstrate that they are in compliance with all workers safety and environmental regulations at their location of manufacture.
- D. Sign Contractor must be able to fabricate in-house at least 70% of the components required to produce this Scope of Work.
- E. Sign Contractor shall post bond equal to the value of the items listed in Sign Program bid documents for the life of the contract.

1.07 BID SUBMISSIONS

- A. Bids must reflect the entire Scope of Work outlined in the enclosed documents and are to be itemized as unit cost line items for the fabrication of individual signs by sign type and as unit cost line items for the installation of individual signs by sign type. Additionally, general conditions, submittals, bonds, taxes, and other miscellaneous costs should be itemized as separate line item costs in the bid response.
- B. If there is a conflict, stated dimensions on the Drawings shall take precedence over scaled dimensions. Should a Bidder find discrepancies in, or omissions from, the contract documents, or be in doubt as to their meaning he shall notify the Design Consultant at once. If it should be found necessary, a written addendum will be sent to each Bidder. Neither the Owner nor the Design Consultant will be responsible for oral instructions.
- C. Sign Contractor shall verify all quantities in the Sign Schedule. Sign Contractor shall be responsible for ensuring that there are no pricing

or tabulation errors in submitted bids and shall not make any claims for extra payment as a consequence of any such errors.

- D. It shall be assumed that the Sign Contractor has inspected the site prior to fabrication, and is aware of all site and operational conditions affecting the fabrication and installation of the work. No extra charges shall be claimed or allowed due to a failure of the Sign Contractor from making such inspections.
- E. Sign Contractor to furnish a schedule indicating the number of weeks required from signing of a Contract to the commencement of installation, and the number of weeks required for completing the installation process. If necessary, separate information can be given for different groups of signs.

1.08 SUB CONTRACTORS

- A. Sign Contractor to project manage the full scope of work as defined in the Contract Documents, as well as fabricate, in-house, at least 70% of the components required to produce this Scope of Work.
- B. Sign Contractor to fully coordinate any items fabricated and installed by subcontractors.
- C. The Bidder shall submit with the price quotation the name of the subcontractor(s) who will be doing any work on this project.
- D. Minority Ownership: Submit evidence of minority ownership and/or identify minority-owned firms that have been successfully utilized on similar projects as a direct sub-contractor within the preceding five (5) years. Project examples are to include a breakdown of the level of minority-owned direct subcontractor inclusion that has been achieved in each project and the type of work performed by each minority subcontractor.

1.09 ACTION SUBMITTALS

- A. All submittals shall occur in the sequence outlined below. Submittals that are out of sequence may be rejected or held for approval pending prerequisite submittals.
- B. Schedule
 - 1. Submit a detailed production and installation schedule for all sign types including dates for submission and approval of all required samples, shop drawings and other submissions required under this contract.
 - 2. Allow (10) ten working days for Design Consultant / Owner review of submittals. Schedule to allow for adequate review and possible re-submittals without jeopardizing the project schedule.
- C. Shop Drawings
 - 1. Submit shop drawings showing proposed details of fabrication and installation of all components. Include plans, elevations, enlarged

details, vertical and horizontal section details, etc. to the degree required to demonstrate full fabrication and installation means and methods. Details not shown are to be at least equal in quality to those detailed.

2. Drawings shall be printed at an architectural scale sufficient to read all details. Include large-scale details of construction, anchorages and accessory items.
 - a. Installation elevation to be a minimum of $1/2" = 1'-0"$
 - b. Sign Elevations to be a minimum of $3/4" = 1'-0"$
 - c. Section details of small sign types to be a minimum of $6" = 1'-0"$
 - d. Section details of large sign types to be a minimum $3" = 1'-0"$
3. Connections, angles, shapes and details shown in Design Intent Drawings are suggestive. Sign Contractor is responsible for proper engineering of all sign components.
4. All components are to be sized, reinforced and detailed as required for their particular application and location. All connections into existing surfaces are to be field verified and / or fully coordinated with architectural conditions prior to submitting sign shops drawings.
 - a. Where sizes of signs may be affected by dimensions of surfaces on which they are installed, verify dimensions by field measurement. Show recorded measurements on shop drawings.
5. Shop Drawings should demonstrate coordination with field verified conditions.
 - a. For individual letters (Sign Types F1, F4, F5)
 - 1). Demonstrate coordination with any seams or obstructions in the architectural surface to which they will be installed.
 - 2). Clearly and accurately show, with easily readable lines all elements and their intended spacing.
 - 3). For pin mounted letters include locations of pin mounts.
6. Confer with the Design Consultant regarding any critical items, and advise the Design Consultant of any significant discrepancies in field measurements or operational difficulties.
7. All variations from the Contract Documents shall be shown on the shop drawings and shall be specifically identified as such by the Contractor. All proposed variations shall equal or surpass the requirements of the originally specified items with regard to appearance, finish, material qualities, size, etc.
8. Sign Contractor shall provide a licensed engineer's details to provide suitable materials, gauges, footings, anchors, materials compatibility, structural integrity, etc., as required for proper and secure mounting or installation and in accordance with all local sign codes. Show all anchorages and accessory items.

D. Graphic Layouts

1. Submit full-size hard copy laser prints of fabrication-ready artwork of **each unique sign location**, as outlined in the Message Schedule, showing all components and messages. Label each layout with its location number. Indicate all color breaks. Submittal will be reviewed by the Design Consultant for letter, word, and line spacing, as well as, overall size, sharpness, alignment, accuracy of letterform, and copy composition.
2. Typesetting shall have proper letter, word and line spacing as specified in the Design Documents. Characters shall be sharp, accurately aligned on their baseline, and of consistent density.
3. Copy shown on any drawings and templates is intended as a guideline for layout and type size only. Refer to the Message Schedule for exact wording for each layout.
4. Layouts that do not fit full-size on 11"x17" paper may be submitted at half- or one quarter-full size only. All submittals must be able to be read with an architectural scale.

E. Material and Finish Samples

1. Three (3) sets of 4" x 4" samples for each type of material, color, and finish combination specified.
 - a. Paint and Coatings: For each color specified, submit samples with paint and clear coat finish if specified. Paint color match to be shop applied, manufacturer's lab samples are not acceptable.
 - b. Silkscreen Inks: For each graphic and background combination specified, submit samples with painted background, silkscreen text, and clear coat finish if specified.
2. Faux-Finish requirement: Submit up to 5 initial samples of variations of required faux-finish for review and selection by Design Consultant and Owner.
3. Substrates: Color match samples to be prepared on actual sign material substrates, in typical thickness required by designs, and employing all actual processes specified in Contract Documents. Clearly indicate on the back: the color specification, date, and submittal number.
4. Design Consultant's review of samples will be for color and texture only. Compliance with all other requirements is the exclusive responsibility of the Sign Contractor. One (1) set of samples will be kept by the Design Consultant as a record to match against completed installation and for future reference.

F. Full Workmanship Prototypes

1. One (1) complete or partial prototype sample as noted in the Prototype Schedule below shall be fabricated for review, testing and

approval by Owner/Design Consultant, prior to manufacture of any of the final signs of any type for installation.

2. Prior to fabrication of partial prototypes, Sign Contractor to submit clarification drawings to Design Consultant for review and approval, detailing all elements to be included in each unique partial section prototype. Prototypes to clearly demonstrate all materials, finishes, fasteners, structure, mounting methods, detailing, etc. that are part of the complete sign type.
3. All Prototypes to be prepared pending final approval of shop drawings, graphic layouts, and samples noted above.
4. Design Consultant reserves the right to adjust final details, sizes, colors, materials and finishes to be incorporated in the production of the final signs.
5. After inspection and approval all samples must be delivered to the Design Consultant and will become his property as a record to match against completed installation. In no event shall any samples, whether approved or not, be permanently installed as part of the finished work.
6. Prototype Schedule
 - a. Full Prototypes
 - 1). Sign Type A1
 - 2). Sign Type B2
 - 3). Sign Type M1
 - 4). Sign Type D2
 - 5). Sign Type J3
 - 6). Sign Type W1
 - b. Partial Prototypes
 - 1). Sign Type F1 Helvetica Light (1) Upper Case "R" and Helvetica Bold (1) Lower Case "s"
 - 2). Sign Type F4 (1) Upper Case "R" and (1) Lower Case "a"
 - 3). Sign Type F5 (1) Upper Case "R"
 - 4). Sign Type Y (1) 12" x 12" portion including map

G. Installation Templates

1. In addition to any other submissions required for Sign Types F1, F4, F5: on-site review of installation templates may be required for each location at the time of installation. See Section 3.4 INSTALLATION.

1.10 DELIVERY STORAGE AND HANDLING

- A. Clearly label the contents of all packages.
- B. Deliver, store and handle all packages so as to protect them from any kind of damage. Inspect all components for evidence of damage at site

before installation. Damaged materials shall not be incorporated into the work and shall be removed from the site immediately.

- C. The Contractor shall replace at his own expense all work judged damaged or defective before Substantial Completion.

1.11 MAINTENANCE MANUAL

- A. Before Substantial Completion, provide the Owner with one copy of clearly written instructions for proper maintenance of all work including any electrical systems. Instructions shall address periodic cleaning, service access, painting, color specifications, replacement procedures, etc.
- B. Extra Materials: Deliver to the Owner or facility's management, in manufacturer's original packaging, and store at the project site where directed.
 - 1. Furnish one (1) quart of each paint and finish color for touch-up purposes

1.12 FUTURE PRICING GUARANTEES

- A. Furnish cost information for future purchases, guaranteed for 2 years from the date of completion of this Contract, for all sign types listed in the pricing schedule. Information shall include costs for items ordered individually as well as minimum order requirements in order to obtain price breaks.

1.13 WARRANTY

- A. General: The following warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Sign Warranty: Submit five-year written warranty, signed by the Sign Contractor and Installer, warranting that the architectural signage and/or finishes will not develop excessive fading or excessive non-uniformity of color or shade and will not crack, peel, pit or corrode or otherwise fail as a result of defects, within the warranty period, make necessary repairs or replacement at the convenience of the Owner or facility's management. Failures include, but are not limited to, the following:
 - 1. "Excessive Fading": A change in appearance which is perceptible and objectionable as determined by the Design Consultant when visually compared with the original color range standards.
 - 2. "Excessive Non-Uniformity": Non-Uniform fading during the period of the guarantee, to the extent that adjacent panels have a color difference greater than the original acceptance range of color.

3. "Will Not Pit or Otherwise Corrode": No Pitting or other type of corrosion discernible from a distance of 10'-0", resulting from the natural elements in the atmosphere at the project site.
 4. Coating degradation
 5. Chalking
 6. Structural failure
 7. Delamination of applied graphics
 8. Delamination or degradation of applied anti-graffiti coatings
- C. Defects or faulty materials found during the warranty period will be identified to Sign Contractor by Owner. Such defective materials are to be repaired and/or replaced at Sign Contractors own expense, together with any damage to furnishings, fixtures, finishes, or other equipment that may be damaged as a result of these effects.
- D. If Sign Contractor shall fail to repair, replace, rebuild, or restore defective or damaged work promptly after receiving notice, Owner shall have the right to have the work completed by others in the same manner as provided for in the completion of a defaulted contract, and to deduct the cost thereof from the amount so deposited hereunder. The balance, if any, shall be returned to Sign Contractor without interest. If the amount so deposited is insufficient to cover the cost of such work, Sign Contractor shall be liable to pay such deficiency on demand by Owner.
- E. Owner certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding, or restoring any damaged or defective work when performed by one other than Sign Contractor and this cost shall be binding and conclusive as to the amount thereof upon Sign Contractor.

PART 2 – Product

2.01 MATERIALS

A. Acrylic Sheet

1. ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).
2. The edges of acrylic sheet components shall be smooth and free of saw marks, chips, cracks or other blemishes and shall be square to the face. All visible edges are to be hand or machine polished unless specified otherwise. Flame polishing shall not be permitted.
3. Size and cut acrylic sheet scheduled to be "glazed" or contained in a frame, as required to allow for expansion and contraction.
4. Use special care in fabrication and installation of acrylic sheets to prevent scratching, staining or other imperfections.
5. When there is no possibility of danger from other work to be performed, remove protective coverings on acrylic sheets and remove scratches using approved acrylic polish. Remove internal and external dust and other dirt. Treat surfaces with an anti-static polish on completion.
6. Provide complete cleaning instructions recommended by acrylic manufacturer for safe cleaning of acrylic sheets.

B. Frosted Acrylic for Sign Panels

1. Premium quality manufactured by Lucite International, Evonik Industries, Arkema Inc. or approved equal.
2. First surface frosted and second surface back-paint as specified. All edges clear polished finish.
3. Compression molded to achieve integral raised letters and integral raised braille to ensure compliance with ADA Standards for Accessible Design, Chapter 7.

C. Frosted Acrylic for Letters

1. Premium quality manufactured by Lucite International, Evonik Industries, Arkema Inc. or approved equal. Acrylite Satinice (P95) White WM31 SC

D. Non-Glare Acrylic

1. Premium quality manufactured by Lucite International, Evonik Industries, Arkema Inc. or approved equal. Acrylite non-glare (P99) Colorless 0A000 AR

E. Aluminum

1. Aluminum extrusions shall be of alloy and temper recommended by aluminum producer for type of use and finish and with not less than strength and durability properties specified in ASTM B221 for 6063-T5.
2. Aluminum sheet shall be of 6061-T6, 5005, or 5052-H38 alloys and temper as recommended by aluminum producer or finisher for use type and finish indicated, and with not less than strength and durability properties specified in ASTM B209 for 5005-H15. Sheet and plate shall be shop primed and of best architectural quality; stretcher leveled and visually flat.
3. Aluminum Castings: ASTM B 26, of alloy and temper recommended by aluminum producer and finisher for casting process used and for use and finish indicated.
4. Fabrication
 - a. Aluminum shall be of best commercial quality and their various forms shall be straight and true. There shall be no scratches, scars, creases or buckles.
 - b. Where aluminum is shop fabricated, all joints, returns and the like shall be properly joined together and welded edges shall be ground smooth to proper aluminum finish.
 - c. Aluminum in contact with dissimilar metals shall have bituminous or other protective coating to prevent electrolytic action.
5. Finishes
 - a. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
 - b. Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating, and painting.
 - c. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of 1.5 mils, matte finish.
 - d. Color: As indicated on Contract Documents.

F. Structural Steel

1. Steel Sheet: Uncoated, cold-rolled, ASTM A 1008, commercial steel, Type B, exposed or electrolytic zinc-coated, ASTM A 591, with steel sheet substrate complying with ASTM A 1008, commercial steel, exposed.

2. Steel Members Fabricated from Plate or Bar Stock: ASTM A 529 or ASTM A 572, 42,000-psi minimum yield strength.
3. Reinforcing bars for concrete footings to be ASTM A 615 / A 615M, Grade 60, as required by engineering.
4. Galvanized Steel Sheet: ASTM A 653, G90 coating, either commercial or forming steel.
5. Fabrication
 - a. Surface Preparation: Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
 - b. All steel shall be galvanized in accordance with ASTM-A123.
 - c. For steel exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names, or roughness.

G. Stainless Steel

1. Stainless-Steel Sheet: ASTM A 240 or ASTM A 666, stretcher-leveled standard of flatness. Type 304 for interior applications and Type 316 or 316L for exterior applications.
2. Finishes
 - a. Color as indicated on Contract Documents.

H. Welding

1. Welding materials and practices shall conform to the requirements of the latest edition of American Welding Society code for steel and aluminum. Shop welders shall be certified by AWS. Welding rods shall be of a composition compatible to the base metal being welded.
2. Fabrication shall be accomplished using the highest standards of workmanship. All pieces shall be saw cut and carefully fit together. All visible connections shall be full welded and ground flush and smooth. All visible surfaces and connections shall be without visible grounding marks, surface differentiation or variation.

I. Hardware

1. Anchor bolts shall conform to ASTM-A576 with a minimum yield strength of 50,000 PSI. Hexagonal nuts and washers shall be furnished with each bolt.
2. High strength bolts (other than anchor bolts), nuts and washers shall conform to ASTM-A325.
3. Nelson type threaded studs shall be low carbon mild steel with a minimum yield strength of 50,000 PSI.

4. Non-ferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance and to prevent staining of surrounding surfaces. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.
5. Where mechanical fasteners and hardware are required, they shall be of adequate thickness, length and construction to properly secure the sign unit. Any visible portion of any mounting device shall be finished to match adjacent sign surface, unless otherwise specified.
6. All exposed screws shall be countersunk and painted to match adjacent surface unless otherwise noted.
7. Metal fasteners and hardware in contact with dissimilar metals shall have a protective coating or neoprene shields to prevent electrolytic action.

J. Adhesives and Tapes

1. Adhesives required in fabrication and installation of exterior components shall be compatible with the materials to be laminated or adhered and **shall only be used as redundant to mechanical fasteners.**
2. Use silicone and epoxy adhesives recommended for exterior applications in accordance with the recommendations of the manufacturer of the adhesives and the material to be laminated or adhered.
3. Surfaces on which adhesives are to be applied shall be smooth, clean and free of dust, dirt, grease, fingerprints or other foreign matter.
4. Adhesives shall be guaranteed not to deteriorate, discolor, delaminate or fail in adhesion for any reason including exposure to heat, sunlight, weathering or other environmental conditions.
5. Adhesives shall not change the color of, or in any way deteriorate, the materials to which they are being applied.
6. Visible joints shall be even and free from air bubbles and other defects.
7. Adhesive Tapes
 - a. VHB mounting tapes for permanent installation shall be premium quality double-coated acrylic tape such as manufactured by 3M (VHB Tape) or approved equal. Urethane foam tapes will not be allowed.
 - b. Unless otherwise indicated, when used for permanent installation, adhesive mounting tape shall be 1/2" wide and 1/16" thick. Coverage shall be at least one continuous strip of tape at four-inch intervals. No tape shall be closer than 1/4" from the edge of any component.

8. Construction Adhesives

- a. Silicone adhesives shall be clear, ready-to-use, high performance, premium quality materials, such as manufactured by General Electric (GE 1200), or approved equal.
- b. Epoxy adhesives shall be two-component, thermal-setting, premium quality materials such as manufactured by Devcon (Two-Ton Epoxy), or approved equal.

K. Tactile Signs

1. Interior Tactile Signs

- a. 3/8" thick frosted acrylic.
- b. Compression molded to achieve integral raised letters and integral raised braille to assure compliance with the ADA Standards for Accessible Design: Chapter 7 and New York State Uniform Fire Prevention and Building Code.
- c. Process instructions for manufacturer approved methods, equipment, and fabrication techniques. Use only computer generated, professional grade film. Vellum film is not acceptable.
- d. Use Matthews or Carbit automotive grade acrylic polyurethane finishes. Lacquer-based finishes are not acceptable.

L. Vinyl

1. Provide opaque or translucent film as specified with repositionable adhesive backing, suitable for interior and exterior applications. Use positionable and pressure activated adhesive. Apply adhesive only when minimum application temperature is 40°F (4°C), and maximum application temperature is 100°F (38°C). Provide film with a seven (7) year exposure life, when applied in accordance with manufacturer's recommended procedures.

M. Sign Panels: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner.

1. Coordinate dimensions and attachment methods to produce message panels with closely fitting joints. Align edges and surfaces with one another in the relationship indicated.
2. All edges to be eased and finished smooth with no visible tool marks.
3. Increase thickness or reinforce with concealed stiffeners or backing materials as needed to produce surfaces without distortion, buckles, warp, or other surface deformations.

2.02 FINISHES

A. Paints, Inks, Coatings

1. All colors shall be exactly reproduced as specified and shall match submitted samples.
2. Paint Manufacturer:
 - a. Matthews Paint Company, 400 South Mercantile Court, or Approved Equal
3. Ink Manufacturer
 - a. Nazdar Ink Technologies, or approved equal
4. All exposed surfaces of exterior signs to receive satin finish anti-graffiti UV clear coating
 - a. Matthews Paint Super Satin Clearcoat: 1.24 low VOC, acrylic polyurethane clear coat with 10 year life expectancy, or approved equal.
5. All paint shall be applied using a high pressure spray in dust-free conditions and shall be allowed to dry or cure properly before being moved.
6. Painted surfaces and other applied finishes shall have a smooth, even finish and be free of imperfections, marks, scratches, embedded dirt, wave patterns or other irregularities.
7. Paint required in fabrication, including paint for lettering, screened copy, subsurface copy, etc. shall be compatible with the materials to which it is applied and shall be guaranteed not to cause discoloration, deterioration or delamination for any reason, including exposure to heat, sunlight, weathering or other environmental conditions.
8. Inks for silkscreen graphics shall be non-glare, eggshell, or semi-matte unless otherwise specified on drawings.
9. Paints shall be precisely identified on the shop drawings and submitted samples.
10. Prime coats or other surface pre-treatments, where recommended by the manufacturer of the paint, shall be included in the work.

B. Aluminum Faux-Finish

1. Finish to have the appearance of blackened-steel. Use paint, tints, clear coats as required to create slightly mottled, matte finish, approximately 90% black color overall. Final finish, including etched graphics, to have exterior durability minimum of 5 years.

2.03 GRAPHICS AND PROCESSES

A. General

1. Graphics shall be highest quality with sharp lines and smooth curves. Images shall be uniform colors and free from streaks or spotting.
2. Scalable vector art for Symbols as shown on Symbols page of Contract Documents shall be provided digitally by Design Consultant in Adobe Illustrator format for placement on final sign layouts. All other artwork required shall be produced by the Sign Fabricator.
3. Sign Fabricator shall apply messaging from Message Schedule to provide all unique sign layouts that comply with requirements indicated for size, style, spacing, content, position, material, finishes, and colors of letters, numbers, and other graphic devices shown on the Contract Documents.

B. Typography and Layout

1. The contractor is responsible for purchasing specified typefaces.
 - a. The typeface in use for the Project is Helvetica Neue in multiple weights as specified on the Drawings.
2. The layout of the copy on the drawings and the wording indicated is for placement only. Should any conflict arise in the final copy layout, notify the Design Consultant before proceeding. In no event shall size, number of lines of copy or specified letter, word and/or line spacing be modified to get copy to fit.

C. Braille

1. Grade 2 with rounded or domed shape to conform with American National Standards ICC/ANSI A117.1 as referenced on Article 1.9.
2. Sign Contractor is responsible for all braille message translations.

D. Silkscreening

1. Silk screening shall be highest quality, with sharp lines, no sawtooths, or uneven ink coverage.
2. Screens shall be photographically reproduced.
3. Background ink shall be process inks as recommended by manufacturer of substrate employed.
4. Ink application through screens: 1 flood pass and 1 print pass. Images: uniform color and ink thickness; free from squeegee marks and lines.
5. Signs: dry in adequate racks with 2 in. spacing for ample air flow and forced air drying and curing.

6. Package signs only after they have dried completely per ink manufacturer's time allowances

E. Dimensional Letters

1. Water-Jet Cut

- a. Provide characters with square-cut, smooth, eased edges of materials and thickness indicated for each Sign Type.

2. Fabricated

- a. Form exposed faces and sides of characters to produce surfaces free from warp and distortion. Include internal bracing for stability and attachment of mounting accessories.

F. Die-Cut Vinyl Letters

1. Provide right-reading or reverse-reading characters and graphics as indicated by the Contract Documents. Electronically cut from vinyl film with adhesive backing.

G. Digital Direct-to-Surface Printing

1. Large format flat bed UV curable graphics shall be full-color CMYK + White of at least 300 dpi.
2. Colors shall exhibit full coverage without any transparency or knockouts unless specified. Where necessary, a white base layer shall be laid down prior to color printing to achieve maximum color vibrancy. Where necessary, multiple passes shall be employed to achieve suitable color densities.

PART 3 – Execution

3.01 GENERAL INSTRUCTIONS

- A. It shall be assumed that the Contractor has inspected the site and is aware of all site and operational conditions affecting the fabrication and installation of the work. No extra charges shall be claimed or allowed due to a failure of the Contractor from making such inspections.
- B. Failure to request clarification of any inadequacy, omission or conflict will not relieve the Contractor of responsibility.
- C. All work shall be performed in accordance with the written schedule agreed on by Owner, Design Consultant and Sign Installer. In any case where work cannot be completed on schedule, the Contractor shall supply temporary signs at no additional expense to the Owner.

3.02 FABRICATION

- A. All submissions shall be reviewed and have received final approval by Design Consultant, in addition to stamped engineering drawings where required, prior to fabrication of project sign requirements.
- B. Confer with the Design Consultant regarding all critical items and advise the Design Consultant of any significant discrepancies in field measurements or operational difficulties prior to fabrication. Obtain the Design Consultant's written approval for any resulting deviations from the specifications and/or approved shop drawings that may become necessary.
- C. All work shall be constructed as complete systems, including all stiffeners, fasteners, welding, sealants, jointing, miscellaneous pieces and material thicknesses, etc.
- D. Unless otherwise shown on the Drawings, all members shall be continuous lengths without seams. Work shall be formed to profiles indicated on the Drawings.
- E. Where material lengths require joints, all joints shall be flush. Similar materials at joints shall be either bonded or welded together, or shall be lap jointed to provide for expansion. All joints to be light proof.
- F. Preassemble signs in the shop to the greatest extent possible to minimize field assembly. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in a location not exposed to view after final assembly. All work "broken down" shall be erected so that all parts fit accurately with hairline joints.
- G. Work shall be performed by competent workmen and shall be of the best quality, free from defects impairing strength, durability and

appearance. All items shall be made of new materials and be uniform in detail design and finish.

- H. Methods of fabrication, joining, finishing and installation of all components and work shall be according to the manufacturer's instructions for the use of any products, materials, fittings and equipment used in their construction.
- I. All details of construction are to be engineered with appropriate strength materials and finished to withstand the potential rigors of their installed locations.

3.03 PERMITS

- A. Sign Contractor shall obtain all permits required by Local Authorities for installation of signs.

3.04 INSTALLATION

- A. Install the work in a well organized and timely manner. Whenever possible, the work shall be installed as one continuous activity. The installation process shall be coordinated to accommodate the needs of both the Owner and Design Consultant.
- B. Coordinate all scheduling and installation procedures with the Owner, Design Consultant, General Contractor and others to avoid delays or additional costs.
- C. Inform the Design Consultant, at least two weeks in advance, of any intended installation and arrange, at the Design Consultant's convenience to have all patterns in place, and initial signs of each type ready for installation and approval by the Design Consultant on site before proceeding with the rest of the installation. It is important that such approval processes be organized efficiently so that approvals can take place in a timely manner.
- D. Sign Contractor is responsible for verifying all field conditions and dimensions prior to fabrication and installation. Should Sign Installer find any discrepancies during installation, they shall notify the Design Consultant at once, to await clarification, prior to proceeding.
- E. Prepare all encountered surfaces as required to receive signage.
- F. Install all signs at the locations and heights specified in the Contract Documents.
 - 1. Mount signs at projection distance from wall surface indicated.
 - 2. All signs shall be installed level and plumb and parallel to the surface upon which they are mounted, unless otherwise specified.
 - 3. Use mounting methods of the type described and in compliance with the manufacturer's instructions.

4. For signs installed at exterior locations, include all elements recommended by manufacturers and good practice to insure weatherproofing for internal and external parts and materials.
5. Where appropriate, notify Design Consultant in writing of any visual or physical conflicts. Neither the Owner nor the Design Consultant will be responsible for oral instructions.
- G. Follow recommendations and instructions for installation as provided by component manufacturers. Notify the Design Consultant in writing if such installation will not provide permanent, rigid installation within site conditions.
- H. Dimensional Characters: Mount characters using fastening methods to comply with approved shop drawings and/or as required by character form, wall construction, and condition of exposure. Provide heavy paper template pattern to establish character spacing and to locate holes for fasteners.
- I. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using the methods indicated below:
 1. Vinyl-Tape Mounting: Use double-sided foam tape to mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.
 - a. Adhesive foam mounting tape shall be 1/2" wide and 1/16" thick. Coverage shall be at least one continuous strip of tape at four inch intervals. No tape shall be closer than 1/2" from the edge of any component
 2. Silicone-Adhesive Mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach sign units to irregular, porous, or vinyl-covered surfaces. Use double-sided vinyl tape where recommended by the sign manufacturer to hold the sign in place until the adhesive has fully cured.
 3. Shim Plate Mounting: Provide 3/16-inch-thick concealed acrylic shim, at all locations indicated. Attach the plate with fasteners and anchors suitable for secure attachment to the substrate. Attach panel sign units to the plate using the method specified above.
- J. Bracket-Mounted Signs: Provide brackets, fittings, and hardware for mounting signs that project at right angles from walls and ceilings to comply with approved shop drawings and/or as required by wall construction and condition of exposure. Attach brackets and fittings securely to walls and ceilings with concealed fasteners and anchoring devices to comply with manufacturer's written instructions.
- K. No installation procedures or materials shall be used that will in any way change the visual quality or in any manner have an adverse effect on adjacent materials and surfaces.
- L. Protect all adjacent surfaces from damage during installation. Restore or replace any damaged surfaces to original condition and appearance.

3.05 CLEANING AND PROTECTION

- A. All work shall be provided with suitable protective coverings during shipment and installation. Remove and replace protective coating for inspection when requested. Final removal of protective coatings shall take place only when there is no danger of damage from further work, and all protective coatings shall be removed simultaneously from similarly finished items to prevent uneven oxidation or discoloration.
- B. Remove packing and construction materials from the site. Leave premises broom clean and ready for work under other contracts or ready for use. Vacuum any carpets and spot clean where if necessary.
- C. All existing exterior surfaces within (5) feet of installed signs to be returned to the same condition and quality that was present before the installation of signage, including material, finish, grading, and landscaping.
- D. At completion of the installation, clean soiled sign surfaces in accordance with the manufacturer's instructions. Exposed surfaces of all work shall be left clean and free of glue, fingerprints, dirt, grease, dust or any other imperfections.
- E. Protect units from damage until acceptance by the Owner
- F. Names, stamps and decals of manufacturers, installers or maintainers of signs shall not be visible in the finish work.

3.06 INSPECTION AND PUNCHLIST

- A. Provide access to the Design Consultant to inspect all work in progress at the site of fabrication and/or installation.
- B. Final Punch List will be conducted by Owner and Design Consultant.

3.07 CLOSE OUT SUBMISSIONS

- A. Maintenance Manual: Sign Contractor shall turn over to Owner all operating and maintenance data, warranties, and bonds, spare parts, and maintenance materials as applicable.
- B. Record Drawings: Provide the following
 - 1. One (1) digital copy of As-Built shop drawings, including Graphic Layouts, no larger than 11 x 17. Drawings are to include all final notes, dimensions and drawing.
 - 2. One (1) digital copy of final Sign Location Plans
 - 3. One (1) Record Set of Specifications including addenda and contract modifications.
 - 4. One (1) Record set Product Data, insert into maintenance manual when required as part of operations and maintenance.

End of Section