PART 1 – GENERAL

1.1 SUMMARY
- A. Section includes:
  1. Interior signage
  2. Exterior Signage
  3. Graphic Enhancements

1.2 PERFORMACE REQUIREMENTS
- A. Provide workmanship and materials, free of defects. Defective is defined to include delamination, abnormal deterioration, fading and discoloration. Weathering, failure of securing to substrates indicated, cracking, corrosion or coating damage, or visible scratches on surfaces.
- B. Signage shall not bear manufacturer's code or other identifying marks on any area or part, which may be visible in the normal positioning, attitude, or use of the sign item.
- C. The drawings are diagrammatic and indicate the aesthetic or "design intent" only. Details shown are intended as a guide for the interfacing of adjacent surfaces.
- D. Ensure that the design of support substrates and structures are adequate and compatible for the performance of all work required.

1.3 SUBMITTALS
- A. Prior to commencement of work, provide shop drawings of all fabricated items.
  1. Show dimensions, details of construction, materials, technical data, and installation instructions for each type of sign required.
  2. Show anchorages and accessory items.
  3. Furnish location template drawings for items supported or anchored to permanent construction.
- B. Submit samples and color match samples for each sign type.
- C. Samples: fabricated with colors and finishes as indicated by Designer.
  1. Submit proofs of artwork, map art, and symbols.
  2. Submit prototype samples for sign types: 1, 12, 16 (one-letter only)(4'x8' Area) and color match samples. Prototypes may be used as actual sign units, if approved by designer/owner
  3. For all sign types, submit complete alphabet numerals, punctuation, materials, and graphics for review prior to start of fabrication. If more than one supplier's cut will be used, submit each cut for review.
- D. Submit signage schedule with copy and spelling for Owner/ Designer review.
- E. Submit Shop Drawing via email to Designer.
- F. Submit templates or samples showing letter or word spacing for each letter, for review and approval.
- G. Submit signed and sealed Structural Engineering drawings for all exterior sign types.

1.4 QUALITY ASSURANCE
- A. Coordinate sign locations with Designer.
- B. Comply with municipal and state code requirements.
- C. Comply with *The Americans with Disabilities Act*, 2004 Edition, ADA Section 4.30 Signage; Section
  4.30.4 Raised and Braille Characters and Pictograms; Section 4.30.5 Finish and Contrast; Section 4.30.6 Mounting and Location and Height.
- D. Field verify all sign locations (interior and exterior) and notify designer of any discrepancies before fabrication of sign units.

1.5 WARRANTY

A. Provide a written warranty for one year from date of substantial completion, for electrical components (except lamps), and a five-year warranty from date of substantial completion on the sign structures and paint finishes.

B. The Contractor shall submit or obtain from his subcontractor and submit on letterhead obtained from the company supplying the Warranty/Guarantee, the following form for the overall project and the work under each section of the specifications. The contractor shall submit all of the Warranty/Guarantees to the Designer, as a prerequisite to the final payment. The period of time shall be one (1) year from the date of the substantial completion, unless otherwise noted under the various sections.

WARRANTY / GUARANTEE

We hereby warrant and guarantee the _____ which we have installed in the _____ project for five (5) year(s) for non-illuminated products electronic ballasts and one (1) year on other electrical components (except lamps) from the date of substantial completion.

We warrant and guarantee that the materials and equipment furnished under this contract are of good quality and new unless otherwise required or permitted by the contract documents; that the work will be free from defects not inherent in the quality required or permitted; and that the work conforms with the requirements of the contract documents.

We agree to repair or replace, to the satisfaction of the Designer, any or all work not conforming to the contract documents, including substitutions not properly approved and authorized, workmanship or materials that prove defective within the warranty /guarantee period. This warranty/guarantee excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. Any work which may be damaged or displaced by the abuse, modifications not executed by the Contactor, improper or insufficient maintenance or improper operation shall also be executed.

Any repairs or replacements shall bear an additional twelve (12) month guarantee, in addition to any remaining warranty period, as herein stated, dated from the final acceptance of repairs or replacement.

In the event of our failure to comply with the above-mentioned conditions within a reasonable time after being notified in writing, we collectively and separately do hereby authorize the Owner to proceed to have defects repaired and made good at our expense, and will pay the costs and charges; therefore, immediately upon demand.

_____
(Signature of Contractor or Subcontractor)

_____
Date

_____
(Signature of Contractor) only where subcontractor is major signee

1.6 MAINTENANCE CONTRACT

A. Provide the Owner with a written maintenance contract which, if accepted by the Owner, shall become effective on the expiration date of written warranty.

PART 2 – PRODUCTS

2.1 GENERAL

A. Signs and sign elements: conform to the layout and proportions as indicated.

1. Materials: new stock free from defects impairing strength, durability and appearance.
2. Fabrication: In accordance with the highest standards of the trade. All signs and components complete and free from visual and structural / mechanical flaws.
3. Use no fabrication materials or procedures that will in any way change the visual quality or have an adverse effect on materials and surfaces.
4. Letter Forms: aligned to maintain a base line parallel to the sign format. Margins shall be maintained as indicated by sign type drawings.
5. Edges of Letter Forms: sharp and clean with no edge build-up of bleeding. All surfaces of Letter Forms: without pinholes or defects.
6. Units adequately vented to dissipate heat and properly vented and drained to prevent water containment. All unit openings: backed with a non-ferrous fine screen mesh and shall not directly inlet water condensation or contaminants.
7. Units constructed of vandal-resistant construction materials, methods, and aluminum, steel, and non-aluminum metallic surfaces. Components: non-ferrous and/or rust-proofed. All joints and seams sealed and weather-proofed.
8. Pop rivets will not be acceptable as a method of mechanical fastening.

B. Symbols, Typography, and Color:

1. Copy on drawings is for layout purposes only.
2. Stated dimensions shall take precedence over scale dimensions. If the drawings are not scaled, notation “not to scale” occurs on the drawing.
3. The graphic configuration of signs is ultimately governed by original art for each sign as approved by Designer and Owner.
4. Original art shall conform to the dimensions and general configuration shown on sign type drawings/diagrams. In the event of conflict between original art and drawings, notify Designer immediately for resolution of the discrepancy.
5. Colors to match color selected by the Owner from the full range of colors in the Pantone Matching System; PANTONE, INC., 55 Knickerbocker Road, Moonachie NJ 07074.
6. The signage schedule is a consolidate reference which gives the location code, sign copy, mounting surface and/or mounting device, and information which is not conducive to exclusive categorization. Verify exact copy on signs with the Designer.
7. Letter forms: using upper case with initial caps in sizes shown and /or scheduled.
8. Letter height: identified as “cap” letter height.
9. Letter spacing: optical, but in accordance with example shown.
10. Directional arrow: as indicated.
11. Prior to fabrication of signage, verify copy and spelling with Owner’s representative and Designer.

2.2 MATERIALS / FABRICATION

INTERIOR SIGNAGE:

A. Provide materials: new stock, free from defects impairing strength, durability, and appearance.
   1. Aluminum:
      a. Aluminum plate, angles, channels, extrusions, and other structural items fabricated from alloy 6061-T6, 6063-T5, or other alloy as required for applicable function and use as recommended by the ALUMINUM COMPANY OF AMERICA, KAISER ALUMINUM, REYNOLDS ALUMINUM or equivalent manufacturer.
      b. Aluminum used for all exposed surfaces: a minimum thickness of 0.125” with a painted finish as selected by Designer.
      c. Aluminum used for concealing framing of signage: a minimum thickness of 0.125” with a mill finish.
      d. Provide aluminum of the best commercial quality with the various form straight and true. Replace materials, which have scratches, scars, creases or buckles.
      e. Welded joints: heli-arc welded in conformance with the American Welding Society and the Aluminum Association’s specifications.
   2. Fasteners: non-corrosive type fasteners, nonconductive or insulated when joining non-compatible materials. **Vandal-resistant fasteners** are required on signs as indicated in project message schedule. Proposed vandal-resistant fasteners shall be submitted to the Designer for review and approval.
   3. Reproduction Process:
      a. Silk Screening:
         1) Silk screening: executed from photo screens prepared from original art. Hand-cut screens will not be accepted.
         2) Silk screen printing: executed in such a manner that all edges and corners of finished letter forms are true and clean. Letter forms: true and level.
         3) Digital Printing: executed in such a manner that all edges and corners are true and clean.
      b. Ink and Paints:
         1) Inks and paints for silk screen and imprinted surfaces: provide a type compatible with the surface on which it is applied and as recommended by manufacturer.
         2) Do not use paint or ink that will fade, discolor, or delaminate as a result of proximity to ultraviolet light source or heat.
         3) Include the cost of priming other surfaces (pre-treatments) in the work as part of the finished surface work.
         4) Inks and Paints: evenly applied and without pinholes, scratches, orange peeling, application marks and dust particles. Workmanship in connection with finishes and formation of the letters shall conform to the highest standards of the trade.
         5) Paints:
            a) Akzo Nobel, 136 Milton Park Abingdon, Oxon OX14 4SB United Kingdom

4. Photopolymer:
   a. Sign panels shall consist of a light-sensitive coating (photopolymer) on a polyester backing.
   b. Sign panels to be either backed up with clear acrylic and mechanically fastened to back plate, or as indicated on drawings.
   c. Matte Acrylic Enamel:
      1) All surfaces of photopolymer sign panels to be painted with a matte acrylic enamel and sealed with a matte finish polyurethane sealer for durability.
5. Vinyl Die Cut Letters:
   a. Legends, arrows and logotypes on non-illuminated signs, unless otherwise noted, shall be precision die cut from “Oracal” brand vinyl shall be free of trapped air bubbles, wrinkles and tears. All copy shall be applied straight and true with proper inter-letter and inter-word spacing.
6. Fasteners, anchors, and hardware: of prime commercial quality.
   a. Hardware: non-conductive and/or insulated when joining non-compatible material. Paint for shop coating and field touch-up of dissimilar metal connecting members, including anchors and clips, shall be alkali-resistant, bituminous paint.
   b. Vandal-resistant fasteners shall be used whenever possible.
7. Acrylic Plastic:
   a. Acrylic: minimum thickness of 3/16”, as manufactured by ROHM & HAAS, or Designer approved equivalent.
   b. Acrylic: polished finish, unless otherwise noted on drawings (face and returns).
8. All adhesives and adhesive tapes required for plastic, glass, and metal shall be a type recommended for the particular usage by the manufacturer and guaranteed to meet the general and structural support criteria indicated.
9. Mechanical Fastener:
   a. Gyford standoff mechanical fastener. Mechanical fastener shall be vandal resistant. See drawings for size specifications.
10. LED: Single message band to 20” width x 4” height with standard UL plus. Programmable. Red LED lights.
11. Scintilla Lumina: thickness ¾” as manufactured by Sensitile Scintilla Lumina, 1735 Holmes road, Ypsilanti, MI 48198; Tel: 313-872-6314.

EXTERIOR SIGNAGE:

A. Provide materials: new stock, free from defects impairing strength, durability, and appearance.

1. Aluminum:
   a. Aluminum plate, angles, channels, extrusions, and other structural items fabricated from alloy 6061-T6, 6063-T5, or other alloy as required for applicable function and use as recommended by the ALUMINUM COMPANY OF AMERICA, KAISER ALUMINUM, REYNOLDS ALUMINUM or equivalent manufacturer.
   b. Aluminum used for all exposed surfaces: a minimum thickness of 0.125” with a painted finish as selected by Designer.
   c. Aluminum used for concealing framing of signage: a minimum thickness of 0.125” with a mill finish.
   d. Provide aluminum of the best commercial quality with the various form straight and true. Replace materials, which have scratches, scars, creases or buckles.
   e. Welded joints: heli-arc welded in conformance with the American Welding Society and the Aluminum Association’s specifications.
2. Fasteners: non-corrosive type fasteners, nonconductive or insulated when joining non-compatible materials. **Vandal-resistant fasteners** are required on signs as indicated in project message schedule. Proposed vandal-resistant fasteners shall be submitted to the Designer for review and approval.
3. Reproduction Process:
   a. Silk Screening:
      1) Silk screening: executed from photo screens prepared from original art. Hand-cut screens will not be accepted.
      2) Silk screen printing: executed in such a manner that all edges and corners of finished letter forms are true and clean. Letter forms: true and level.
   b. Ink and Paints:
      1) Inks and paints for silk screen and imprinted surfaces: provide a type compatible with the surface on which it is applied and as recommended by manufacturer.
      2) Do not use paint or ink that will fade, discolor, or delaminate as a result of proximity to ultraviolet light source or heat.
      3) Include the cost of priming other surfaces (pre-treatments) in the work as part of the finished surface work.
      4) Inks and Paints: evenly applied and without pinholes, scratches, orange peeling, application marks and dust particles. Workmanship in connection with finishes and formation of the letters shall conform to the highest standards of the trade.
      5) Paints:
         a) Akzo Nobel, 136 Milton Park Abingdon, Oxon OX14 4SB United Kingdom

4. Steel:
   a. Structural steel sections, channels, tubing, and angles shall meet the requirements of ASTM A-36, with factory-prime paint coating.
   b. Steel shall have a galvanized finish.
5. Vinyl Die Cut Letters:
   a. Legends, arrows and logotypes on non-illuminated signs, unless otherwise noted, shall be precision die cut from “Scotchlite” brand “Flat Top” wide angle engineer grade reflective sheeting as manufactured by the 3M COMPANY. “Scotchcal” brand vinyl sheeting, as manufactured by the 3M COMPANY shall be free of trapped air bubbles, wrinkles and tears. All copy shall be applied straight and true with proper inter-letter and inter-word spacing.
6. Window Graphics:
   a) As manufactured by Oracal Series 3676 (60%printable)
7. Fasteners, anchors, and hardware: of prime commercial quality.
   a. Hardware: non-conductive and/or insulated when joining non-compatible material. Paint for shop coating and field touch-up of dissimilar metal connecting members, including anchors and clips, shall be alkali-resistant, bituminous paint.
   b. Vandal-resistant fasteners shall be used whenever possible.
8. Acrylic Plastic:
   a. Acrylic: minimum thickness of 3/16”, as manufactured by ROHM & HAAS, or Designer approved equivalent.
   b. Acrylic: matte finish, unless otherwise noted on drawings.
9. All adhesives and adhesive tapes required for plastic, glass, and metal shall be a type recommended for the particular usage by the manufacturer and guaranteed to meet the general and structural support criteria indicated.
10. All electrified signs shall have photocells.
11. Banner material:
    a) 13 oz. material
    b) Sewn pockets

PART 3 – EXECUTION

3.1 EXAMINATION
A. Examine existing conditions of the Project, including elements subject to damage or to movement during cutting and patching.
B. After uncovering work, examine the conditions affecting the installation of products, or performance of the work.
C. Report unsatisfactory or questionable conditions to the Owner and Designer in writing; do not proceed with the work until the Owner has provided further instructions.

3.2 PREPARATION
A. Provide adequate temporary support to assure the structural value and integrity of the affected portion of the work.
B. Provide devices and methods to protect other portions of the Project from damage.
C. Provide protection from the elements for that portion of the Project, which may be exposed by cutting and patching work.

3.3 INSTALLATION
A. Install in accordance with manufacturer’s recommendations; attach units rigidly; mount plumb and level.

B. Take care during installation to assure that signs are not damaged or scratched. Repair or replace signs showing damage, as directed by the Designer.
C. Installation: Comply with applicable codes and ordinances.
D. Coating and shop coating and field touch-up of dissimilar metal connecting members, including anchors and clips: alkali-resistant, bituminous paint.
E. Provide signs and components complete and free from visual and structural or mechanical flaws.
F. Do not use fabrication or installation materials or procedures that will in any way change the visual quality or have an adverse effect on the existing materials and surfaces on the structure.
G. Restore interior aspects adversely altered or damaged by signage installation or signage removal, to original condition and appearance.

3.4 LETTER SPACING
A. Letter spacing: optical and in accordance with example shown.
B. Letter forms:
1. All letter forms shall be so aligned as to maintain a base line parallel to the sign format. Margins shall be maintained as indicated by sign type diagrams.
2. All edges of letter forms shall be sharp and clean with no edge build-up or bleeding.

3.5 PERFORMANCE
A. Execute work so as to interfere as little as possible with functioning and normal operations of the site.
B. Execute cutting and demolition by methods, which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs. Fabricator shall repair all damaged areas to match the surrounding finishes.
C. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes.
D. Restore work which has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents.
E. Refinish entire surfaces to provide an even finish to match adjacent finishes.
1. For continuous surfaces, refinish to nearest intersection.
2. For an assembly, refinish the entire unit.

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END OF SECTION 10 400