



**Babendure Design Group**  
8140 Walnut Hill Ln. #950  
Dallas, Texas 75231  
214.265.1960  
214.265.5552 (fax)  
[www.babendure.com](http://www.babendure.com)

## **City of Clarksville Clarksville, Texas**

Bid Manual  
Community Wayfinding Program -  
Fabrication & Installation  
Package 1 of 2

Issue for Bid  
August 30, 2018

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*Signage & Wayfinding  
Design Specialists*



Date: August 30, 2018

Re: Invitation to Bid  
City of Clarksville  
Community Wayfinding Program - Fabrication & Installation  
Clarksville, Texas

Dear Prospective Bidder:

Enclosed is our signage, graphics, and installation package for the above referenced project. Fully executed bids are due no later than **4:00 pm CST on September 17, 2018**. Submit e-mailed Bid Submittals to the individual who sent the bid invitation to you. Please submit your Bids using only the Bid Forms in the Specifications provided to :

City of Clarksville  
Attn: Tammy Quick  
City Secretary/Interim City Manager  
800 W. Main Street  
Clarksville, Texas 75426  
903.427.3834 ext. 255

Babendure Design Group  
Heather Chandler  
8140 Walnut Hill Lane Suite 950  
Dallas, Texas 75231  
heather@babendure.com  
214.265.1960

Bids submitted on any other forms will not be accepted.

We would like to emphasize the following:

1. It is required that a complete listing of all subcontractors, if applicable, be attached to the bid form at the time of bid submittal, along with a description and percentage of their scope of responsibility.
2. The graphic design requirements shown by the details in these documents are for design intent only and intended to establish basic dimension of units or modules, profiles, sight lines of members, design appearance and intent. Within these limitations, the Signage Contractor is responsible for the complete engineering, fabrication and implementation of the entire graphic system and is required to fulfill the performance requirements, while maintaining the visual design concept as shown, including member sizes, profiles materials and alignment of components as closely as possible, provided they meet performance requirements. The Installation Contractor shall work with the Signage Contractor to ensure that the fabricated signs are property installed in accordance with TxDOT Design and Installation Standards.
3. It is the bidders sole responsibility to completely review all of the bid documents provided, i.e. Design Intent Drawings with notes, Location Plans, Graphics Project Manual, etc. Should any discrepancies be found during your review, you must submit a written request to the Graphic Designer for clarifications, in order to ensure an accurate bid. Submittal of your bid is acknowledgment that you have conducted this review and agree to the accuracy and details of the documentation and/or addenda issued for clarification.
4. Your bid is to be based on actual drawings and TXDOT specifications. TXDOT approved samples will be required on all alternate proposals.

5. The schedule of this project is critical. The dates shown on the Information and Instructions sheet are absolute. All bidders must provide an accurate schedule of fabrication with your bid based on your current manufacturing capacities and existing commitments, as required.
6. If your company should become the successful bidder, this letter and all bid documentation will become part of your Contract and all conditions and specifications will be binding.
7. We reserve the right to reject any and all submittals and/or to waive any irregularities and informalities in the submittal and evaluation process, to award multiple bids on a non-exclusive award basis, and to accept the submittal that we consider to be in our own best interests, without regard to whether or not such bid is the best price or lowest received. The bid may be awarded to a Signage Contractor and a separate Installation Contractor.

Additionally, we cannot emphasize enough the importance of complete and detailed shop drawings and sample submittals. Inaccurate, incomplete, or non-submittal of these requirements can lead to rejection of finished items and/or justification for Contract value adjustments.

An initial coordination meeting may be required with the successful bidder(s), City and/or Graphic Designer(s) upon award of contract.

We will look forward to receiving your affirmation that you will be submitting a bid on this project.

If you have questions please free to contact:

Heather Chandler  
Babendure Design Group  
8140 Walnut Hill Lane, Suite 950  
Dallas, Texas 75231  
214-265-1960  
heather@babendure.com

Sincerely,



Heather H. Chandler  
Principal

CC: James Vaughan  
Tammy Quick, City Secretary/Interim City Manager



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## Bid Instructions

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## PROJECT SCHEDULE

It is extremely important to adhere to the project schedule. It will be the awarded Signage Contractor's and Installation Contractor's responsibility to make sure that these project deadlines are met where applicable — no exceptions.

A. Issued for Bid	August 30, 2018
B. Bidder Clarifications Due	September 06, 2018
C. Bid Submittals Due	September 17, 2018, 4:00 pm CST
D. Award Fabrication/Installation Contract(s) (Letter of Intent)	September 20, 2018
E. Prepare Shop Drawings & Submittals (Including TXDOT review)	October 11, 2018
F. Complete First Review of Shop Drawings and Submittals	October 18, 2018
G. Final Review Owner Review of Shop Drawings and Submittals	November 01, 2018
H. Commence Fabrication	November 01, 2018
I. Installation	Week of January 21, 2019

## BID SUBMITTAL

All bids will be received by The City of Clarksville and Babendure Design Group. Both entities will accept bids by email, followed by a hard copy, or by overnight mail, as long as your bid submittals are received by the date and time referenced above.

- 2.1 Each bidder is required to submit a fabrication and/or installation schedule based on this project, which, if agreed upon, will become a binding part of the final contract agreement. The schedule should be based on your shop's current manufacturing capacities and existing commitments. No bid will be accepted unless a fabrication and/or installation schedule is included. If a multiple award is made, it will be the responsibility of the Signage Contractor and Installation Contractor to work together to meet these deadlines and TxDOT requirements.
- 2.2 Include any notes and/or revisions directly on the bid form. No changes or additional notes will be accepted unless prior approval requested or directed specifically in writing.
- 2.3 Each bidder must provide information on how they will work with another Contractor should the City of Clarksville make multiple awards.
- 2.4 The President or an Officer of the company is required to sign and date the bid form, with the company's name clearly stated.

## AWARD OF CONTRACT

The awarded Signage Contractor and Installation Contractor, if awarded separately, will each be signing a contract directly with the Owner. The day-to-day coordination will be handled directly through Babendure Design Group, and all invoices will be submitted to Babendure Design Group for review, authorization and forward for payment processing by the Owner.

All of the information contained in the Graphics Project Manual, the Design Intent documents and all other information included in this package will become a binding part of the contract.



All of the bidders are responsible for the information contained. If there are any discrepancies contained in these documents, it is the bidder's responsibility to point these items out, in writing, to Babendure Design Group prior to bid submittal.



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## Construction Specifications

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## **CONSTRUCTION SPECIFICATIONS**

### **1.0 Introduction**

The purpose of this document is to serve as a reference which identifies project submittal requirements, materials, finishes, construction specifications, performance requirements and quality controls, as well as Signage Contractor/Fabricator's/Installer's responsibilities and obligations. Signage Contractor/Fabricator/Installer shall furnish and install signs and/or graphics as detailed in the design intent drawings and/or described in these specifications. Signage shall carry messages, symbols and images as specified in the attached Sign Message Schedule. Quantities shall be as called for in the attached Signage Bid Table and should be confirmed by the Signage Contractor/Fabricator/Installer against the Message Schedule.

### **2.0 Definition Of Terms**

#### **2.1 Contract Documents**

Refers to the design intent drawings, specifications, signage message schedule, all bidding addendum and modifications or clarifications incorporated therein during the bid process and before their execution. When applicable, additional addendums provided by Owner, Owner's Representative or General Contractor shall also become part of the contract documents.

#### **2.2 Owner**

Shall refer to:

CITY OF CLARKSVILLE  
Contact: Tammy Quick, City Secretary/Interim City Manager  
800 W. Main Street  
Clarksville, Texas 75426  
903.427.3834 ext. 255

#### **2.3 TXDOT Representative**

Shall refer to:

TEXAS DEPARTMENT OF TRANSPORTATION  
Contact: Darius Samuels, PE  
1365 N. Main Street  
Paris, Texas 75460  
Tel : 903.737.9300  
Email: DariousSamuels@txdot.gov

#### **2.4 Graphics Designer**

Shall refer to:

BABENDURE DESIGN GROUP  
Contact: Heather Chandler  
8140 Walnut Hill Lane No. 950  
Dallas, Texas 75231  
Tel : 214.265.1960  
Fax : 214.265.5552  
Email: heather@babendure.com



**2.5 Signage Contractor / Fabricator**

Refers to the group(s), firm(s), organization(s), company or corporation(s) designated as such in an Agreement with the Owner or designated representative of the Owner (such as Owner's Representative, General Contractor or others) and shall apply to any such entity under contractual obligation to perform any fabrication, finishing, printing or other work related to the signs and graphics, as referenced in the Contract Documents.

**2.6 Installation Contractor**

Refers to the group(s), firm(s), organization(s), company or corporation(s) designated as such in an Agreement with the Owner or designated representative of the Owner (such as Owner's Representative, General Contractor or others) and shall apply to any such entity under contractual obligation to perform signage installation as referenced in the Contract Documents.

**2.7 Work**

As employed herein, includes any management, submittal, material, hardware, equipment, construction, labor, installation (if awarded), logistics, service or maintenance, and warranties required to complete the fabrication prescribed in these specifications and contract documents. This shall include, but not limited to, all of the sign types identified in the signage message schedule and design intent drawings.

**2.8 Addenda**

Written communications covering changes, corrections, clarifications and special interpretations of the design intent drawings and specifications, shall become a part of the documents.

**2.9 Substitutions**

When one or more than one product or material is specified and the Signage Contractor desires to offer a substitute product that is not specified and which will completely accomplish the purpose and meet the performance requirements of the contract documents. Refer to Section 6.0 for the conditions governing all substitutions.

Where observed discrepancies occur between contract documents design intent drawings, message schedules, location plans or construction specifications) or within any document section, submit written notice of such discrepancies and any assumption concerning same prior to submittal of bids. Should no written notice be provided, the item or arrangement of better quality, greater quantity, or higher cost shall be deemed included in the bid submittal.

**2.10 Approved, Acceptable or Satisfactory**

Shall be understood as approved by, acceptable with, or satisfactory to the Owner/Owner's Representative/General Contractor/Designer. Equal or satisfactorily approved equal products, materials and substitutions thereof shall be considered only prior to time of bid and must be clearly identified in writing to Owner/Owner's Representative/General Contractor/Designer as such.

**2.11 Not In Contract (N.I.C.)**

Refers to work not included in this contract.

**2.12 Final Completion**

The date when the Graphic Designer finds the entire work as described in the contract documents, acceptable and fully performed, as written in the final certificate of payment.

### **3.0 General Conditions**

#### **3.1 Quality Assurance**

The Signage Contractor shall be responsible for the quality of materials and workmanship required for the execution of the work defined in the contract documents including the materials and workmanship of any entities or individuals who act as their sub-contractors.

The Signage Contractor shall have sole responsibility for conformance with the design intent and no review by the Owner/Owner's Representative/General Contractor/Designer shall release them of this responsibility. The Installation Contractor, if awarded separately, shall have sole responsibility for conformance with the installation specifications contained herein and in accordance with TxDOT requirements and no review by the Owner/Owner's Representative/General Contractor/Designer shall release them of this responsibility.

It is intended that the work described in these documents be of sound, quality construction. The Signage Contractor/Installation Contractor shall be solely responsible for the inclusion of adequate amounts to cover the management, engineering, approvals, construction, delivery, installation, inspection and cleaning of all items indicated, described and/or implied.

#### **3.2 Commencement**

The work described in these contract documents shall only begin when an Owner-authorized, written Contract, Subcontract or Letter of Intent has been issued to the Signage Contractor/Installation Contractor with instructions to proceed, provided all other requirements have been met.

#### **3.3 Contract Administration**

Reviewing the quality and progress of the work and submittals received from the Signage Contractor/Installation Contractor, the Graphic Designer is acting solely for the convenience of the Owner/Owner's Representative/General Contractor in following the work. The Graphic Designer has no responsibility to assist the Signage Contractor/Installation Contractor in the supervision or performance of the work. No action by the Graphic Designer shall in any way relieve the Signage Contractor/Installation Contractor from his responsibility for the performance of the work in accordance with the contract documents, or give rise to any negligence or other action against the Owner or the Graphic Designer or anyone acting for or on behalf of either of them.

Signage Contractor/Installation Contractor shall allow Owner's Representative or an authorized Representative complete access to their plant, excluding such areas or processes judged by the Signage Contractor/Installation Contractor to be of a highly secretive or proprietary nature, for the purpose of inspecting production techniques, materials, or other items related to the work of which the Owner is committed, or which may be contemplated.

Upon notification from the Signage Contractor/Installation Contractor that all work is complete, the Graphic Designer will inspect the final installation for compliance with all approved documents. Additional hours spent by Graphic Designer's personnel on documentation, coordination, and additional site visits required by incorrect, incomplete, or faulty workmanship on the part of the Signage Contractor/Installation Contractor, will result in a back-charge to the Signage Contractor/Installation Contractor's contract equal to the fees and expenses accumulated by the additional hours and efforts expended.

### **3.4 Retainage**

Refers to any payment request or invoice percentage of value to be retained by the Owner/ Owner's Representative/General Contractor as defined in the provisions and conditions governing retainage and as provided in the general conditions or contract agreement of the Owner/Owner's Representative/General Contractor. All payment requests or invoices shall be submitted to the Graphic Designer for initial approval. The Graphic Designer will review all requests for payment or invoices for accuracy and representation of percentage of completion of work, and forward to the Owner/Owner's Representative/General Contractor with any recommendations or comments.

### **3.5 Extensions**

The conditions of such extensions will be regulated by the provisions in the contract or subcontract agreement of the Owner/Owner's Representative/General Contractor.

- A. The following represents the Graphic Designer's standard extension policy, which may or may not be in accordance with the Owner/Owner's Representative/General Contractor requirements:
1. In consideration for an extension in the time required to perform the work as specifically outlined in the contract, the Signage Contractor/Installation Contractor must furnish such justification and supporting evidence as the Owner/Owner's Representative/General Contractor/Designer may deem necessary.
  2. All claims for extensions of time shall be made in writing and submitted to the Graphic Designer within three (3) days of the first instance of the delay. The Signage Contractor/ Installation Contractor shall provide a written estimate of the probable effect of such delay on the progress of work.
  3. A careful review of supporting evidence will be made by the Graphic Designer. Should the Graphic Designer find that the Signage Contractor/Installation Contractor is entitled to any extension in the time allowed for completion of work, the Graphic Designer's determination upon the total number of days to be extended shall be based upon the currently approved schedule and all data relevant to the extension. Such data will be incorporated into the schedule as a revision thereto only upon approval of the Owner/Owner's Representative/ General Contractor.
- B. Subject to other provisions of the contract or subcontract agreement, the Signage Contractor/ Installation Contractor may be entitled to an extension (but no increase in the contract sum) for delays arising from unforeseeable causes beyond the control and without the fault or negligence of the Signage Contractor/Installation Contractor or his subcontractors as follows:
1. Labor disputes and strikes (including strikes affecting transportation) that do, in fact, directly and critically affect the progress of the work. However, an extension on account of an individual labor strike shall not exceed the number of calendar days of said strike.
  2. Acts of God that damage completed work or stored materials.
  3. Abnormal inclement weather. However, an extension for execution of exterior work will not be considered as a result of adverse weather conditions reasonably anticipated.

### **3.6 Artwork**

Provided for spacing and reference only. The Signage Contractor is required to produce artwork for all symbols and lettering, and will submit to the Graphic Designer and TXDOT for review and approval prior to fabrication. All other artwork, as well as final artwork for fabrication (including reproducible film positives) is to be provided by the Signage Contractor.

### **3.7 Field Verification**

Field verification and dimensions shall be taken by the Signage Contractor/Installation Contractor prior to preparation of shop drawings and fabrication where possible. Signage Contractor/Installation Contractor is to immediately notify the Graphic Designer of any discrepancies identified between field conditions and the design intent drawings or specifications. Allow time and make accommo-

dations for trimming and fitting of signage components wherever the taking of field measurements before fabrication might delay work.

All supplementary parts necessary to complete each item of work shall be furnished by the Signage Contractor, even though such parts may not be definitively shown or specified in the Design Intent or specifications documents. All anchors and other fasteners for securing work to the construction as well as provision and/or coordination of any and all blocking required for secure attachment shall be included.

## **4.0 Signage Contractor Responsibilities**

### **4.1 Engineering Responsibility**

The graphic design requirements shown by the details on the sign type drawings are for design intent only and intended to establish basic dimensions of units or modules, profiles and sight lines of members, colors, finishes, messaging and graphic appearance of the program. Within these limitations, the Signage Contractor is responsible for engineering, fabrication and implementation of the entire system, and to make whatever modifications of, and additions to the details as may be required to achieve TXDOT Design Standards. The Signage Contractor must maintain the visual design intent concept as shown, including alignment of components, materials, colors, finish and function.

The Signage Contractor shall supplement the general design intent shown with complete and detailed shop drawings of all sign types in the system and submit to the Graphic Designer and TXDOT for review and approval. The shop drawings shall include major aspects of the system proposed, such as dimensioned elevations, sections, shapes, methods for connections of components and joints, how temperature movement is handled, electrical diagrams and requirements, illumination methods, venting, maintenance access requirements, and anchorage to structure.

Engineered and stamped shop drawings by a professional structural engineer, licensed in the state of Texas, to be submitted with Signage Contractor shop drawings for any sign types indicated in the design intent drawings, required by TXDOT.

The Signage Contractor shall supplement the general design intent shown with complete and detailed shop drawings of all sign types in the system and submit to the Graphic Designer for review and approval. The shop drawings shall include major aspects of the system proposed, such as dimensioned elevations, sections, shapes, methods for connections of components and joints, how temperature movement is handled, electrical diagrams and requirements, illumination methods, venting, maintenance access requirements, and anchorage to structure.

Engineered and stamped shop drawings by a professional structural engineer, licensed in the state of the project site, to be submitted with Signage Contractor shop drawings for any sign types indicated in the design intent drawings, required by local authorities having jurisdiction or that pose any risk of liability through structural failure.

### **4.2 Statement of Application**

The Signage Contractor, by commencing the work of the project, accepts and assumes complete responsibility as a part of his warranty of the work, to assure that all assembled components and parts (if awarded installation) shown or required within the work of this project comply with the contract documents. The Signage Contractor shall further warrant:

- A. That all components specified, or required, to satisfactorily complete the fabrication and installation, are compatible with each other and with the conditions of installation and expected use;
- B. The overall effective integration, correctness and quality of individual parts and the entirety of the work;
- C. Compatibility with adjoining substrate, materials and work by other trades;
- D. There shall be no premature material failures due to improper design, engineering or fabrication of the work or system. All products and materials are to fully perform to their normal life expectancy.

#### **4.3 Execution**

The Signage Contractor shall be responsible for all work done under this contract (with the exception of installation if awarded separately), including but not limited to:

- A. Faulty or improper work of subcontractor(s), vendor(s) and others under them by subcontract or otherwise;
- B. Diligent and professional execution of work and giving their full and complete attention and supervision to same until completed;
- C. All delays caused by neglect on their part or of those under them by subcontract or otherwise;
- D. Compliance or conformance with all laws, ordinances, regulations and guidelines bearing on the conduct or construction of the work as drawn and specified.
- E. Obtaining, at their own cost, inspection certificates which may be required of the project by local authorities, or any other governing body. The Signage Contractor shall procure and pay for all permits, licenses and approvals necessary for the execution of the work.

#### **4.4 Submittals**

By the approval and submission of shop drawings and samples, the Signage Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalogue numbers and similar data or will do so, and that he has checked and coordinated each shop drawing and sample with the requirements of the work and the contract documents. Refer to Section 5.0 for a list of required submittals.

#### **4.5 Special Instructions**

Halt the graphics work when notified of a proposed change, or if unsatisfactory results are anticipated. Notify the Graphic Designer immediately and proceed only after receiving additional instructions from the Graphic Designer and/or Owner.

#### **4.6 Acts and Omissions**

The Signage Contractor is responsible for having free access to the premises for the purpose of acquainting himself with the conditions, delivering furnishings and equipment and performing the work under this contract. He should cooperate with the separate trades who may currently be working on the premises, integrating the work with that of others, all to the best interest of the project and its orderly completion. Damages to the building contents, when such damages result from the use of faulty materials or negligent workmanship, shall be the responsibility of the Signage Contractor.

#### **4.7 Protection and Handling of Products**

Store all graphic items under cover and off the ground. Handle in such a manner so as to protect surfaces and to prevent damage during storage, installation, and throughout remaining construction. Protect exposed finishes by covering with adhesive paper or other suitable covering where adhesive is not appropriate for finish material. Apply covering prior to shipment from the fabricating or finishing shop. Covering shall not adversely affect finish. Remove protective coverings when there is no longer any danger of damage to the graphics work from other work yet to be performed.

#### **4.8 Shipping and Transportation**

If applicable and contracted for, Signage Contractor will be responsible for proper shipping and transportation of all signage to the job site and will specify whether it will be common carrier or on his own trucks. Signage Contractor will be liable for all damage incurred during shipping and loss of time in the installation schedule.

#### **4.9 Storage of Equipment of Materials**

If applicable and contracted for, space for storage of equipment or materials prior to installation will be determined and if approved, designated by the Owner/Owner's Representative/General Contractor. The Signage Contractor must give advance notice of deliveries and space requirement so that proper provision may be considered. If deliveries are to be made to the premise at times other than normal working hours, the Signage Contractor will be required to reimburse Owner for any overtime costs incurred by the Owner.

#### **4.10 Warranty**

Upon final completion and acceptance, the Signage Contractor will warrant for a period of no less than one year all work and materials to be in full and complete accordance with the contract documents and agreement between Owner/Owner's Representative/General Contractor and Signage Contractor, and requirements appertaining thereto; that all work and materials are free from any and all defects and imperfections, and fully meet the manufacturer's published performance criteria for the use and purposes for which each and every part is specified.

The Signage Contractor also agrees that, should any defect develop or appear, which the Graphic Designer and/or Owner finds was not caused by improper use, or installation if awarded separately, the Signage Contractor shall promptly, upon demand, fully correct, substitute and make good any such defective material without any cost to the Owner and will save the Owner harmless against any claim, demand, loss or damage by reason of any breach of this warranty.

The period of this warranty shall commence on the date on which the Graphic Designer determines the Signage Contractor has met all Final Completion requirements. The period of said warranty shall be in accordance with TXDOT.

## **5.0 Installation Contractor's Responsibility (If awarded to Signage Contractor, the Signage Contractor shall then assume these responsibilities as well)**

### **5.1 Cooperation with Signage Contractor**

The Installation Contractor shall work with the Signage Contractor to ensure that the fabricated signs are properly installed in accordance with TxDOT Design and Installation Standards.

### **5.2 Statement of Application**

The Installation Contractor, by commencing the work of the project, accepts and assumes complete responsibility as a part of his warranty of the work, to assure that all assembled components and parts shown or required within the work of this project comply with the contract documents. The Installation Contractor shall further warrant:

- A. That all components specified, or required, to satisfactorily complete the installation, are compatible with each other and with the conditions of installation and expected use;
- B. The overall effective integration, correctness and quality of individual parts and the entirety of the work;
- C. Compatibility with adjoining substrate, materials and work by other trades;
- D. There shall be no premature installation failures due to improper engineering or installation of the work or system. All products and materials are to fully perform to their normal life expectancy.

### **5.3 Execution**

The Installation Contractor shall be responsible for all work done under this contract, including but not limited to:

- A. Faulty or improper work of subcontractor(s), vendor(s) and others under them by subcontract or otherwise;
- B. Diligent and professional execution of work and giving their full and complete attention and supervision to same until completed;
- C. All delays caused by neglect on their part or of those under them by subcontract or otherwise;
- D. Compliance or conformance with all laws, ordinances, regulations and guidelines bearing on the conduct or construction of the work as drawn and specified.

### **5.4 Submittals**

By the approval and submission of response, the Installation Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalogue numbers and similar data or will do so.

### **5.5 Special Instructions**

Halt the installation work when notified of a proposed change, or if unsatisfactory results are anticipated. Notify the Graphic Designer immediately and proceed only after receiving additional instructions from the Graphic Designer and/or Owner.

### **5.6 Acts and Omissions**

The Installation Contractor is responsible for having free access to the premises for the purpose of acquainting himself with the conditions, delivering furnishings and equipment and performing the work under this contract. He should cooperate with the separate trades who may currently be working on the premises, integrating the work with that of others, all to the best interest of the project and its orderly completion. Damages to the building contents, when such damages result from the use of faulty materials or negligent workmanship, shall be the responsibility of the Installation

Contractor (with the exception of faulty material or negligent workmanship of the Signage Contractor as determined by the Owner or Graphic Designer, if awarded separately).

#### **5.7 Protection and Handling of Products**

Store all signage items under cover and off the ground. Handle in such a manner so as to protect surfaces and to prevent damage during storage, installation, and throughout remaining construction. Protect exposed finishes by covering with adhesive paper or other suitable covering where adhesive is not appropriate for finish material. Remove protective coverings when there is no longer any danger of damage to the signage work from other work yet to be performed.

#### **5.8 Shipping and Transportation**

Installation Contractor, if applicable and contracted for, will be responsible for proper shipping and transportation of all signage to the job site and will specify whether it will be common carrier or on his own trucks. Installation Contractor will be liable for all damage incurred during shipping and loss of time in the installation schedule.

#### **5.9 Storage of Equipment of Materials**

Space for storage of equipment or materials prior to installation will be determined and if approved, designated by the Owner/Owner's Representative/General Contractor. The Installation Contractor must give advance notice of deliveries and space requirement so that proper provision may be considered. If deliveries are to be made to the premise at times other than normal working hours, the Installation

Contractor will be required to reimburse Owner for any overtime costs incurred by the Owner.

#### **5.10 Warranty**

Upon final completion and acceptance, the Installation Contractor will warrant for a period of no less than one year all work and installation materials to be in full and complete accordance with the contract documents and agreement between Owner/Owner's Representative/General Contractor and Installation Contractor, and requirements appertaining thereto; that all work and materials are free from any and all defects and imperfections, and fully meet the manufacturer's published performance criteria for the use and purposes for which each and every part is specified.

The Installation Contractor also agrees that, should any defect in the installation develops, which the Graphic Designer and/or Owner finds was not caused by improper use (or failed or faulty fabrication by Signage Contractor, if awarded separately), the Installation Contractor shall promptly, upon demand, fully correct and make good any such failed installation or defective installation material without any cost to the Owner and will save the Owner harmless against any claim, demand, loss or damage by reason of any breach of this warranty.

The period of this warranty shall commence on the date on which the Graphic Designer determines the Installation Contractor has met all Final Completion requirements. The period of said warranty shall be in accordance with TXDOT.



## **6.0 Submittals (If bidding on signage fabrication only)**

All required submittals and shop drawings are to be delivered to the Graphic Designer for distribution.

### **6.1 Schedule**

A detailed graphic project schedule by phases of production is to be submitted by the successful bidder no later than within five (5) days of receiving notice or award of the project contract or subcontract. The submitted schedule will be consistent with that submitted in the bid process with only additional details and minor adjustments included.

### **6.2 Materials, Colors & Control Samples**

Submit four (4) 3" x 3" samples of each material, color and finish of exposed components and accessories, or final material substrate to be used in the work.

They are as follows:

VINYLS: Color	Color Spec
V-1 White	3M Diamond Grade DG3 4090 White
V-2 Brown	3M Diamond Grade DG3 4099 Brown
V-3 Deep Green	Avery SC 900-790-0 / SC 96900

These samples shall be utilized for review and approval of conformance with the design intent and specifications documents. One set of approved samples will be returned to the Signage Contractor, the remainder will become the property of the Graphic Designer and used as control samples for inspection of the completed work, unless otherwise noted. The Signage Contractor is responsible for the prompt revision of and immediate re-submittal of rejected samples. Failure to achieve timely approval of samples will not result in any project schedule extensions.

These samples shall become the property of the Graphic Designer and used as control samples for inspection of the completed work.

### **6.3 Shop Drawings**

Submit one (1) reproducible set of shop drawings in tabloid format (11" x 17") for the manufacturing, fabrication and installation of signage and graphic work at large scale. Show all appropriate level of details for joining, adhesions, assembly, electrical diagramming, illumination sources, maintenance access, functional aspects, graphic applications, materials, finishes, anchorage and any accessory items.

- A. Acceptance or approval of shop drawings does not in any way change the specifications or requirements of the contract documents. Contract documents may only be changed in writing.
- B. The Signage Contractor is responsible for reviewing their shop drawings for conformance with the contract documents and notifying, in writing, the Graphic Designer of any variation from the documents.
- C. Changes, corrections or revisions to the shop drawings are to be promptly made by the Signage Contractor, as directed by the Graphic Designer, and resubmitted for final review.
- D. The Signage Contractor is responsible for the timely submittal or re-submittal of shop drawings in order to meet the project schedule.

### **6.4 Copy Layouts**

Full size copy layouts are to be provided for each sign type, each unique message layout, i.e., one-line, two-line, three-line and alternate message layouts for each sign type. Copy layouts are to be referenced by Message Schedule item number for ease of reference.

### **6.5 Manufacturer's Data**

Submit one (1) copy of the manufacturer's printed specifications, anchorage details and installation, and maintenance instructions for products to be used in the fabrication of signs and graphics work. The Signage Contractor is also responsible for providing Material Safety Data Sheets (MSDS) for any products and materials delivered, installed or utilized on the project site.

### **7.0 Substitutions (If bidding on signage fabrication only)**

The design intent drawings and specifications of this project are to be utilized as the basis for all bidding, award, construction and installation. The Signage Contractor is responsible for thoroughly reviewing the contract documents and must submit any requests for substitutions prior to submittal of bids and award of contract.

#### **7.1 Pre-Bid Substitution Required Evidence**

Request for substitutions of products, materials or processes other than those specified will be accompanied by the evidence that the proposed substitution,

- A. Is equal in quality and serviceability to the specified item;
- B. Will not entail changes in details and construction of related work;
- C. Will be acceptable in consideration of the required design and artistic effect;
- D. Will provide a cost advantage to the Owner.

#### **7.2 Post Award Substitution Approvals**

Any substitutions requested after the award of the contract will be considered only under these cases:

- A. When the specified product is not available;
- B. When a certain product or process is specified, a warranty of performance is required, and, in the judgment of the Signage Contractor, the specified product or process will not produce the desired results;
- C. When such substitution, in the opinion of the Graphic Designer, is in the best interest of the Owner;
- D. Proposed substitutions must be made within five (5) days after the award of the contract, except when circumstances are beyond the Signage Contractor's control.

The Signage Contractor shall furnish with their request such shop drawings, specification samples, performance data and other information as may be required of them to assist the Owner/Owner's Representative/General Contractor/Graphic Designer in determining whether the proposed substitution is acceptable. The burden of proof shall be upon the Signage Contractor.

#### **7.3 Warranty Of Substitution**

Regardless of the evidence submitted or any review or independent investigation by the Owner or the Graphic Designer, a request for a substitution of products, materials, or processes is a warranty by the Signage Contractor to the Owner and Graphic Designer that the requested substitution:

- A. Is equal in quality and serviceability to the specified item;
- B. Will not entail changes in details and construction of related work;
- C. Will be acceptable in consideration of the required design intent and artistic or graphic effect;
- D. Will not involve any change in cost to the Owner other than that specified in an accompanying request for a change order.

#### **7.4 Requests for Substitutions**

6.4 The Signage Contractor must submit requests for substitutions to the Graphic Designer and TXDOT in writing, providing the required information and samples for evaluation and consideration.

The Signage Contractor must also identify the addition to or reduction in costs, if any, to the project. Substitution must be approved in writing by the Graphic Designer and TXDOT before they may be used.

## **8.0 Fabrication (If bidding on signage fabrication only)**

Shop fabrication and tolerances shall conform to the highest standards of the industry. All items shall be shop fabricated so far as practicable. Perform high-quality, professional workmanship. Attach materials with sufficient strength, number and spacing of attachments as to not fail until materials joined are broken or permanently deformed. Fabricate all work to be truly straight, plumb, level and square, with seamless or hair line joints, and to sizes, shapes and profiles indicated on the approved shop drawings.

### **8.1 Shop Assembly**

Pre-assemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units with alignment points for reassembly and coordinated installation (with Installation Contractor, if awarded separately).

### **8.2 Materials Suitable for Welding**

All materials shall conform to applicable American Welding Society (AWS) specifications for welding by Installation Contractor. All welds shall develop capacity of members being joined unless specific length or extent is noted on the shop drawings. Type of alloy filler metal and electrodes to be that which is recommended by producer of the metal to be welded, and as required for color match, strength and compatibility in the fabricated items.

### **8.3 Flatness of Panels**

Panels shall show no visual distortion when viewed in installed position. All panel faces shall be of such flatness that when measured, the maximum slope of the surface at point, measured from the nominal plane of the surface, shall not exceed 1.0%. Any panel not meeting these requirements is subject to rejection by the Graphic Designer and replacement by the Signage Contractor.

### **8.4 Wind Loading**

Exterior signs shall be designed to withstand wind pressure loadings of 30 psf (146.5 kg/sq.m) on the gross area of the exposed units, acting in all directions or to meet and/or exceed all TXDOT codes, whichever is greater. The Signage Contractor will be required to have structural elements of exterior signs stamped by an engineer licensed in the state of Texas. Standard and approved methods of fabrication will be required by the Graphic Designer.

### **8.5 Thermal Movement**

Design, fabricate and install component parts to provide for expansion and contraction over a temperature range for the material and adjoining materials of 150 degrees Fahrenheit (83.3 degrees Celsius), without buckling, sealant joint failure, glass breakage, undue stress on members or anchors, and other detrimental effect.

### **8.6 Corrosion Protection**

Coat concealed metal surfaces which will be in direct contact with concrete, masonry, wood or dissimilar metals, in exterior work, and work to be built into exterior and below grade walls and decks, with a heavy coat of bituminous paint. Do not extend coating onto exposed surfaces.

### **8.7 Metric Conversion**

Stock or standardized materials sized in metric and not equivalent to U.S. standard may be provided if approved.

#### **8.8 Other**

Holes for bolts and screws shall be drilled. Parts to receive hardware shall be countersunk. Fasteners shall be of basic metal and alloy, matching finished color and texture as the metal being fastened, unless otherwise indicated. There shall be no exposed fasteners; all fasteners shall be concealed. Exposed ends and edges shall be milled smooth, with corners slightly rounded. Joints exposed to weather shall be formed to exclude water.

Joints shall be fastened flush to conceal reinforcement, or welded where thickness of section permits. Contact surfaces of connected members shall be ground true. Parts shall be so assembled that joints will be tight and practically unnoticeable, without use of filling compound.

Form work to the required shapes and sizes, with true curves, lines and angles. Provide necessary receptor lugs and brackets for assembly of units. Use concealed fasteners wherever possible. Plates for mounting hardware shall be welded in place.

#### **9.0 Installation (If bidding on installation services only)**

The installation of finished materials shall be under the general direction of the Graphic Designer in accordance with applicable specifications, design intent drawings and signage location plans, where provided.

#### **9.1 Preparation**

Coordinate with the Signage Contractor to ensure proper installation of items having integral anchors which are to be embedded in concrete or masonry construction. Coordinate delivery with Signage Contractor, if applicable, of such items to applicable trades for installation in advance of field work and final installation of signage.

#### **9.2 Delivery to Premise**

Unless indicated to the contrary, items of loose material shall be delivered, un-crated, assembled, set in proper place and installed ready for use, free from breakage, blemishes or other defects. All site deliveries must be coordinated with the Owner/Owner's Representative/General Contractor/Designer at least 24 hours in advance of delivery and any associated field work. Secure storage of materials on site will not be provided and is the responsibility of the Installation Contractor over the course of the installation.

#### **9.3 Inspection**

Examine the substrate and the conditions under which the materials are to be installed. Do not proceed with the work until unsatisfactory conditions detrimental to the timely and proper completion of the work have been corrected. Installation Contractor is to immediately notify the Owner/Owner's Representative/General Contractor/Designer of such conditions.

#### **9.4 Anchors and Inserts**

Furnish inserts and anchoring devices which must be set in concrete or built into masonry for installation of this work to related trade in advance of their work and the installation of final signage. Provide setting shop drawings, templates, instructions and directions for installation of anchorage devices, as the Installation Contractor is responsible for the proper placement of all anchors and inserts. Provide toothed steel or lead shield expansion bolt devices for drilled-in-place anchors and

inserts for exterior installation and confirm with Owner/Owner's Representative/General Contractor that proposed substrate is appropriate to receive drilled-in-place mounting hardware. Provide all components with exposed surfaces matching the texture and finish of item anchored.

#### **9.5 Cutting, Fitting and Placement**

Perform all cutting, drilling and fitting required for installation. Set the work accurately in location, alignment and elevation, plumb, level and true, measured from established lines and levels. Provide temporary bracing or anchors as required.

Form tight joints with exposed connection accurately fitted with uniform reveals and spaces for sealants and joint fillers. Where cutting, welding and grinding are required for proper shop fitting and jointing of the work, restore finishes to eliminate any evidence of such corrective work.

Do not cut or abrade finishes which cannot be completely restored in the field. Return items with such finishes to the shop for required alterations, followed by complete refinishing or provide new units at Signage Contractor's option.

#### **9.6 Erection**

All surfaces shall be covered with protective cover non-deleterious to finish for protection until final installation or erection. Complete all connections in proper alignment and tighten bolts securely. Leveling is to be done only by instruments; measuring equal distances from existing building surfaces will not be acceptable as a basis of level and/or plumb. After erection, all surfaces marred during erection should be returned to original finish and all exposed bolts, bolt heads, etc., shall be retouched to match background or specified color.

#### **9.7 Welding**

Any and All welding procedures shall conform to applicable American Welding Society (AWS) specifications and be accomplished by personnel qualified within the previous two years under AWS specifications. All welds shall develop capacity of members being joined unless specific length or extent is noted on the shop drawings.

#### **9.8 Electrical**

Electrical signage shall conform to UL 48 specifications and shall display the required UL label. All electrical lighting and power devices contained within or upon signage devices, which are required as part of the illumination system such as lamps, sockets, internal wiring, switches, ballasts, power supplies, transformers, etc., shall be included. Additionally, the Installation Contractor is responsible for electrical connection only of signage items. Power distribution to required locations shall be coordinated by the Installation Contractor but is the responsibility of the Owner or their designated agent unless otherwise specified in the design intent drawings or specifications.

#### **9.9 Protective Coverings**

Restore protective coverings which have been damaged during shipment or installation of the work. Remove protection when requested for inspection of finishes and replace. Retain protective coverings intact and remove simultaneously from similar finished items to preclude non-uniform oxidation and discoloration. Remove protective coverings only when there is no possibility of damage from other work yet to be performed at the same location.

#### **9.10 Cleaning of Premises**

The Installation Contractor shall use special care in the disposition of excess materials and rubbish. Rubbish shall not be allowed to accumulate but shall be consistently collected and removed at the completion of this work, on a daily basis.

Storage for paint materials, preparation and mixing, shall be in well lit and ventilated central location but shall not be allowed on finished or carpeted flooring. Ample protection by means of drop cloths or layers of paper must be provided for existing apparatus or parts of the building.

Adequate safeguards shall be provided against fire by placing oils, rags and waste in self-closing metal receptacles and shall be removed from the work and storage area at the end of each work shift. Under no circumstances will they be allowed to accumulate.

## **10.0 Materials And Finishes (If bidding on signage fabrication only)**

### **10.1 Aluminum**

Aluminum used for exposed structural elements shall be T-5 mill aluminum, thickness as shown on the design intent drawings. Aluminum used for concealed framing of signage shall be 6063 T-5 alloy with mill finish.

#### 10.1.1 Extrusions

Shapes and thicknesses as shown and as required to fulfill requirements, but not less than 1/8" (3.2 mm) thick, unless otherwise shown. Suitable alloy and temper for extruding with adequate structural characteristics and suitable for finishing as specified.

#### 10.1.2 Sheets and Plates

Sizes and minimum gauges as shown and as required to fulfill performance requirements. Sheets that are roller/stretcher leveled 3003-H14 or 5052-H34 and conforming with ASTM B-209 are suitable alloy and temper for forming and fabrication requirements and suitable for finishing as specified.

#### 10.1.3 Finishing

Aluminum finishes shall be acrylic polyurethane two-part catalyzed coating system. All coating applications shall be prepared and spray applied in the factory by skilled technicians. All surfaces shall be mechanically sanded removing all grain lines, striations, and surface blemishes, cleaned with non-abrasive scouring pads, rinsed, and air-dried prior to receiving coatings.

- A. Coatings shall be prepared as designated by manufacturers latest literature for surface preparation and application but in no case less than one (1) applicable self etching primer coat and two (2) final full coats. All finished surfaces shall be uniform.
- B. Colors shall match color designations as indicated in the design intent drawings and specifications.

#### 10.1.4 Anodizing

Exterior Application: For a clear anodized (natural) finish use AA-M21C22A41 with a minimum 0.7 mil (0.02 mm). For a color anodized finish use AA-M21C22A42 with a minimum 0.7 mil (0.02mm) to match samples provided by Graphic Designer.

Interior Application: For a clear anodized (natural) finish use AA-M21C22A31 with a minimum 0.4 mil (0.01 mm). For a color anodized finish use AA-M21C22A32 with a minimum 0.4 mil (0.01 mm) to match samples provided by Graphic Designer.

### **10.2 Steel**

#### 10.2.1 Materials & standards

Structural Steel Shapes and Plates: ASTM A 36

Steel Plate for Cold Forming: ASTM A 283, Grade C

Hot Rolled Steel Bars: ASTM A 108, Grade as selected by Signage Contractor.

Steel Pipe: ASTM A 53, Type E, F or S, at Signage Contractor's option, Grade A, black finished unless shown as galvanized, standard weight (Schedule 40) unless otherwise shown or specified.

Hot-Formed Rectangular Tubing: ASTM A butt welded, cold finished and stress relieved.

Cold-Drawn Steel Tubing: ASTM A 512, sunk drawn, butt welded, cold finished and stress relieved.

Steel Sheet for Cold Forming: ASTM A 569, hot-rolled sheet steel of commercial quality, pickled and oiled, free of defects which would impair the work.

Galvanized Steel Sheet: ASTM A 526, commercial quality.

#### 10.2.2 Finishes

Primer: Provide one of the following, unless steel indicated to receive galvanized finish:

- A. Dimetcote No. 4, Amercote Corporation
- B. Tnemec Zinc 92, Tnemec Company
- C. Carbo Zinc II, Carboline Company

## **11.0 Materials And Finishes (If bidding on installation only)**

### **11.1 Rough Carpentry**

#### 11.1.1 Lumber

Provide Construction Grade or No. 2 Grade lumber complying with PS 20.

- A. Decay Treated: Provide above ground lumber in contact with roofing, flashing, sheet metal, masonry concrete, damp-proofing and waterproofing that is pressure-treated with water-borne preservatives complying with AWPB LP-2 and AWPA C2. Dry lumber to maximum moisture content of 19% after treatment.
- B. Fire-Retardant Treated: For all interior blocking, provide lumber which is UL labeled fire-retardant FR-S. Dry lumber to maximum moisture content of 19% after treatment.

#### 11.1.2 Plywood

Provide APA trademarked Exposure 1 C-D veneer performance rated plywood panels with span rating for span indicated if thickness is not shown. Provide UL listed Class A fire-retardant treated plywood for telephone and electrical mounting panels and all interior plywood.

#### 11.1.3 Plywood Backing Panels

Provide APA trademarked, UL labeled, fire-retardant treated, C-D Plugged Exposure 2 panels not less than 5/8" thick and complying with PS 1. Provide treatment that yields a flame spread rating of not more than 25 when tested according to ASTM E84.

#### 11.1.4 Fasteners

Provide nails, screws, and fasteners appropriate for intended use.

#### 11.1.5 Wood for Paint Finish

Provide Pine or Poplar materials or Medium Density Overlay (MDO) plywood with paintable surfaces on both sides. Follow manufacturers instruction for priming and painting surfaces.

### **11.2 Concrete**

#### 11.2.1 Reference Standards

Strictly comply with the following referenced standards: ACI 318, ACI 614, ACI 306, ACI 347, ACI 315, ACI 302 and CRSI Manual of Standard Practice.

#### 11.2.2 Portland Cement Concrete

Comply with ASTM C94. Proportion mixes in compliance with ACI 301. Provide concrete having minimum 3000 psi compressive strength at 28 days, 3" to 4" slump, 4% to 6% entrained air for concrete exposed to freezing and 2% to 4% for all other concrete, and minimum 5.5 sacks of cement per cubic yard of concrete. Concrete to be placed only when ambient temperatures are 40 degrees F (5 Degrees C) or greater unless concrete can be warmed during curing processes. Additives are not to be used to prevent concrete from freezing.

#### 11.2.3 Reinforcing

Provide ASTM A615, Grade 60, new, deformed rebars. Provide ASTM A185, new, rectangular welded wire fabric. Reinforcing bars are not to be welded.

#### 11.2.4 Excavations

Excavations will be in accordance with engineered shop drawings. All debris, water and loose soil to be removed prior to concrete pouring. Base of foundation to terminate well below local frost lines. Open excavations are not to be abandoned for any reason without first barricading with appropriate materials and markings clearly indicating the construction area. All excavations to be coordinated with all local utility agencies or "one call" services prior to any work.

#### 11.2.5 Formwork

Installation Contractor's option for material selection, but it shall be suitable to provide straight, flat, accurately aligned and shaped surfaces within specified tolerances. All formwork to be removed, properly disposed of and any exposed surfaces of concrete to be troweled smooth.

#### 11.2.6 Installation

Securely construct and brace formwork to provide concrete members and structures of sizes, shapes, elevations, profiles, alignments, and positions indicated within specified tolerances. Place and tie reinforcing in position and secure against displacement. All formwork to be removed, properly disposed of and any exposed surfaces of concrete to be troweled smooth.

#### 11.2.7 Finishing

Steel trowel slab surfaces to provide hard, slick, smooth, uniform planes within specified tolerances. Do not add cement, sand, water or mortar to slab surfaces.

## **12.0 Miscellaneous Products (If bidding on signage fabrication only)**

### **12.1 Adhesives**

#### 12.1.1 Foam Tape

1/16" (1.6 mm) thick, double-faced, white pressure sensitive urethane foam adhesive tape, one of the following:

- A. 3M Company: No. 4016
- B. Spectape of Texas: No. ST1116

1/32" (.08 mm) thick, double-faced, white pressure sensitive urethane foam adhesive tape, one of the following

- A. 3M Company: No. 4032
- B. Spectape of Texas: No. ST1132

#### 12.1.2 Film Tape

4 mil (0.1 mm) thick, double-faced pressure sensitive film tape, one of the following:

- A. 3M Company: No. 415
- B. Macbond: No. SB1786 or No. 0530-IS-0303-KA1100

#### 12.1.3 Silicone



FS TT-S-001543, Class A, one of the following:

- A. General Electric: Silicone Sealant #1200
- B. Dow Corning: Building Sealant #781

#### 12.1.4 Epoxy

Two component thermosetting epoxy adhesive with 100% solids content, one of the following:

- A. Miracle Adhesives: No. NP-428
- B. Hughson Chemicals: Chemlok #304

### **12.2 Silkscreen Inks**

All inks, paints and lacquers required for silkscreened or imprinted surfaces or other specified surfaces, shall be a type made for the surface material on which it is to be applied and recommended by the manufacturer of the ink or paint. Exact identification of all ink and paint shall be noted on the shop drawings, together with data describing the method of application and if other than "air"-dried drying. All silkscreen inks shall be made by a manufacturer with experience in production and consistency of such inks for the purposes and surfaces involved.

#### 12.2.1 General Requirements

All screen printing specified shall be executed from photo screens prepared from reproductions of the copy specified. The Signage Contractor shall submit full-size copy layouts to be used to the Graphic Designer for approval. All above work is to be included in this contract. No hand-cut screens will be accepted.

Prime coats or other surface pre-treatment, where recommended by the manufacturer for inks, paints or lacquers, shall be included in the work (and noted on the shop drawings) as part of the finished surface work at no additional cost to the Owner/Owner's Representative/General Contractor/Graphic Designer.

All screen printing shall be executed in such a manner that all edges and corners of finished letterforms and graphic devices are true and clean. Letterforms with rounded positive or negative corners, edge build-up or bleeding, double images, etc., will not be accepted. No paint, ink or lacquer that will fade, discolor or delaminate as a result of proximity to UV light source or heat there from shall be used. All inks, paints and lacquers shall be evenly applied and without pinholes, scratches, orange peeling, application marks, etc. Rear-illuminated panels containing the above or other defects which cause light leaks in surface areas specified to be covered will not be accepted. Workmanship in connection with finishes and formations of letters and/or graphics shall conform to the standards of the trade and shall be acceptable to the Graphic Designer.

#### 12.2.2 Manufacturers

Provide silkscreen inks in colors and sheen as specified by the Graphic Designer and as manufactured by one of the following or approved equal:

- A. Naz-Dar Company  
Shawnee, KS 66227
- B. Wornow Products Department  
Dexter Corporation  
Industry, California
- C. Colonial Printing Ink Company  
East Rutherford, New Jersey

### **12.3 Vinyl**

This specification defines basic materials and fabrication methods for markings/graphics to be used by the Signage Contractor for computer cut and applied graphics. No deviation from these specifications is permissible without the written approval of the Owner, TXDOT, or Graphic Designer. The Signage Contractor shall certify that all markings/graphics conform to these specifications, and will be replaced without additional cost to the Owner if they fail to meet this requirement.

#### 12.3.1 Reflective

The marking film shall be 3M ScotchLite™ reflective sheeting, series 680, 580 or 480, or others as approved by the Owner or Graphic Designer. The Signage Contractor shall verify all City and State traffic codes for grade of reflective vinyl, and shall use high intensity vinyl when required by code. If the codes do not specify, then engineering grade vinyl is acceptable.

#### 12.3.2 Letterforms

**Size:** Letterforms shall be sized as specified or indicated in the design intent drawings, and shall be only in typography specified. Letter size for the appropriate sign types shall be as shown on submitted shop drawings and copy layouts. Alternate letterforms, typography or letter size will not be accepted.

**Spacing:** Letter and word spacing shall be in accordance with the MUTCD standards. The Signage Contractor shall furnish to the Graphic Designer for approval, full-size spacing patterns or copy layouts for each message specified. No work shall be executed from spacing patterns or copy layouts not approved by the Graphic Designer.

#### 12.3.3 Installation

Install vinyl graphics in accordance with the manufacturers instruction, to the highest standards of the industry and as illustrated in shop drawings. All work shall be performed by skilled technicians, especially trained and experienced in this product installation. All surfaces to be cleaned, dry and free of blemish. Completed vinyl installations to be free of wrinkles, bubbles or other defects.

#### 12.3.4 General Requirements

- A. A. Color, copy and logotype rendition shall be approved by TXDOT, Owner, or Graphic Designer prior to production.
- B. Graphics shall be weather-resistant and shall not be affected by oil, water, salt spray or alcohol.
- C. Size, colors and shape of markings to be fabricated in accordance with 3M Product Bulletin for each item. Marking shall be produced and installed in accordance with 3M Instruction Bulletin No. 5.
- D. All cut edges (i.e. laser, kiss cut, guillotined, etc.) shall be smooth and free of ragged areas.
- E. Markings shall be packaged in substantial cartons which will protect against physical damage in shipping and handling and against dirt or moisture.

### 12.4 **ScotchPrint® Digitally Printed Graphics**

#### 12.4.1 Application

Follow 3M product bulletin and instruction bulletins in their entirety per the required material and application. Provide digitally printed graphics in colors, textures and patterns specified by the Graphic Designer and per approved sample submittals.

#### 12.4.2 ScotchPrint Film Series 8620 ES

**Method of Decoration:** 8620 ES base film with matte over laminate 8911 or 8931 and 8700 toners.  
**Base Film:** Marking Film #8620 ES White, Product Bulletin 8000/8600, Instruction Bulletin 4.7.  
**Application Tape:** 3M Application Tape #SCPM-3, Instruction Bulletin 4.3.

Overlaminating Film: ScotchPrint Film #8911, Product Bulletin 8000, Instruction Bulletin 4.8; ScotchPrint #8931, Product Bulletin 8000, Instruction Bulletin 4.8.  
Related Literature: ScotchPrint Toners, Product Bulletin 8700; Surface Preparation (Non-Vehicular), Instruction Bulletin 5.1;  
Application Procedures: ControlTac Plus (Corrugated) Instruction Bulletin 5.4; and ControlTac Plus (Flat and Curved), Instruction Bulletin 5.6;  
Removal Procedures: Instruction Bulletin 6.5

#### 12.4.3 ScotchPrint Film Series 8640 ES

Method of Decoration: 8640 ES base film with matte over laminate 8911 or 8931 and 8700 toners.  
Base Film: Marking Film #8640 ES White, Product Bulletin 8000/8600, Instruction Bulletin 4.7.  
Application Tape: 3M Application Tape #SCPM-3, Instruction Bulletin 4.3.  
Over laminating Film: ScotchPrint Film #8911 or #8931, Product Bulletin 8000, Instruction Bulletin 4.8; Related Literature: ScotchPrint Toners, Product Bulletin 8700; Surface Preparation (Non-Vehicular), Instruction Bulletin 5.1; Application Procedures: ControlTac Plus (Corrugated) Instruction Bulletin 5.4; and ControlTac Plus (Flat and Curved), Instruction Bulletin 5.6;  
Removal Procedures: Instruction Bulletin 6.5

#### 12.4.4 Manufacturing

Markings must be manufactured using materials and procedures described in the appropriate manufacturers Product and Instruction Bulletins and only by 3M Scotchprint Graphics Authorized Manufacturers.

#### 12.4.5 Graphics Installation

Surface preparation and application of markings must use the materials, methods and tools described in the appropriate Product and Instruction Bulletins. All work shall be performed by skilled technicians, especially trained and experienced in this product installation.

#### 12.4.6 Technical Assistance

Any technical questions relating to the 3M products referred to in the specification should be directed to 3M Commercial Graphics Technical Service at 800-328-3908.

#### 12.4.7 Manufacturers

Identified as 3M Scotchprint Graphics Authorized Manufacturers

- A. Vomela 800.240.9279
- B. Lowen Color Graphics 888.765.6936
- C. Craftsmen Industries 800.373.3575
- D. Approved Equal

## **13.0 Paints And Coatings (If bidding on signage fabrication only)**

### **13.1 Acrylic Polyurethane**

#### 13.1.1 Grip Gard®

Grip Gard® approved automotive type paint systems manufactured by Akzo Nobel or approved equal. Signage Contractor shall be approved by the manufacturer for application of paint or coating system.

The spray area and substrate must be warm and have adequate airflow. Application of primers, top-coats, and clear coats should never take place in temperatures under 60°F/16°C. Substrates should also be brought to or above this temperature guideline before applying any primer or topcoat.

Signage Contractor shall apply paint system strictly observing the manufacturer's recommendations regarding application technique using internal mix conventional spray equipment. Apply as to achieve 100% coverage at the rate of 150 square feet per gallon or as manufacturer recommends.

Overall appearance must match specified color and pattern of approved samples. Pattern and sheen should be uniform. If primer is visible through paint when inspected, paint coverage will be considered incomplete and disapproved by the Owner or Graphic Designer. Should the Owner or Graphic Designer disapprove of the applied coating, the Signage Contractor shall bear all costs to complete paint finish.

13.1.2 Manufacturer  
Akzo Nobel Coatings Inc.  
5555 Spalding Drive  
Norcross, GA 30092  
800.618.1010  
www.signfinishes.com

13.1.3 Matthews  
Matthews acrylic polyurethane enamels as manufactured by the Matthews Paint Company, a division of PPG. Signage Contractor shall be approved by the manufacturer for application of paint or coating system.

The spray area and substrate must be warm and have adequate airflow. Application of primers, top-coats, and clear coats should never take place in temperatures under 60°F/16°C. Substrates should also be brought to or above this temperature guideline before applying any primer or topcoat. Signage Contractor shall apply paint system strictly observing the manufacturer's recommendations regarding application technique using internal mix conventional spray equipment. Apply as to achieve 100% coverage at the rate of 150 square feet per gallon or as manufacturer recommends.

Overall appearance must match specified color and pattern of approved samples. Pattern and sheen should be uniform. If primer is visible through paint when inspected, paint coverage will be considered incomplete and disapproved by the Owner or Graphic Designer. Should the Owner or Graphic Designer disapprove of the applied coating, the Signage Contractor shall bear all costs to complete paint finish.

13.1.4 Manufacturer  
Matthews Paint  
760 Pittsburgh Drive  
Delaware, OH 43015  
Ph: 800.323.6593

### **13.2 Bituminous Paint**

Cold-applied asphalt mastic for application to materials required to isolate dissimilar metals.

### **13.3 Paint Enamels**

Provide high quality sign lettering paints; colors to match those specified and applied per manufacturers instruction regarding application techniques. Apply to achieve 100% coverage at manufacturers recommended rate of coverage per gallon.

#### 13.3.1 Manufacturers

Use paints as manufactured by the following, or approved equal:

- A. Ronan Paints: 800.247.6626
- B. Chromatic Paint, One-Shot Lettering Enamel: 773.646.2778

Shop paint all steelwork using the following systems:

- A. Surface Preparation: SSPC-SP6 Commercial Blast Cleaning
- B. Application: Follow coating manufacturer's printed directions.
- C. Material: 10-99 Tnemec Primer
- D. Number of Coats: One
- E. Dry Film Thickness: 2.0 mills minimum
- F. Volume Solids: 55.0 ± 2.0% minimum

#### 13.3.2 Inspection

Visually evaluate surface preparation by comparison with pictorial standards in accordance with SSPC-Vis 1. Measure dry film thickness with a magnetic film thickness gauge in accordance with SSPC-PA2. Visually inspect dried film for runs, sags, dry spray, overspray, imbedded particles and missed areas. Repair defective or damaged areas in accordance with manufacturers instruction.

#### 13.3.3 Stacking and Shipping

Keep primed steel off the ground by placing on wooden supports and keep members from touching each other by using wooden separators for stacking. Take measures to avoid damaging prime coat while stacking, loading or unloading and use wooden protectors to prevent damage from chain or cable cinches.

### **13.4 Polyurethane Enamel**

Provide an aliphatic polyurethane enamel with ultraviolet inhibitors, lightfast, weather abrasions and wear resistant.

#### 13.4.1 Manufacturers

Use polyurethane enamels as manufactured by the following, or approved equal:

- A. Chemglaze Series: Hughson Chemical Division, Lord Corporation: 877.275.5673
- B. Imron: DuPont de Nemours & Company



**B D G**

**Babendure Design Group**

8140 Walnut Hill Ln. #950

Dallas, Texas 75231

214.265.1960

214.265.5552 (fax)

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## Bid Forms

**CITY OF CLARKSVILLE**

COMMUNITY WAYFINDING PROGRAM - FABRICATION

**SIGNAGE CONTRACTOR'S BID FORM**

ISSUED FOR BID 08.30.18

Sign Type ID	Quantity	Fabrication Unit Cost	Fabrication Extended Cost
Highway Guide Sign - 8" Text - Location 10	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 8" Text - Location 12	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 8" Text - Location 14	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 1	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 2	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 3	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 4	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 5	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 6	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 7	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 8	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 9	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 11	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 13	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 3" Text - Location A	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 3" Text - Location B	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 3" Text - Location C	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 3" Text - Location D	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 3" Text - Location E	1	<input type="text"/>	<input type="text"/>

Sign Type ID	Quantity	Fabrication Unit Cost	Fabrication Extended Cost
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**This form is for bidding on sign fabrication.**  
If you do not wish to bid on fabrication, leave this form blank.

To bid on sign installation, please use the form titled Installation Contractor's Bid Form.

<b>SUB TOTAL</b>	
Tax Exempt	Not Applicable
Permits	Not Applicable
<b>GRAND TOTAL</b>	
Trip Charge	

\_\_\_\_\_  
Bid Submitted By (Company Name)

\_\_\_\_\_  
Address

\_\_\_\_\_  
Date Submitted

\_\_\_\_\_  
Signature of Officer



**CITY OF CLARKSVILLE**

COMMUNITY WAYFINDING PROGRAM - INSTALLATION

**INSTALLATION CONTRACTOR'S BID FORM**

ISSUED FOR BID 08.30.18

Sign Type ID	Quantity	Installation Unit Cost	Installation Extended Cost
Highway Guide Sign - 8" Text - Location 10	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 8" Text - Location 12	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 8" Text - Location 14	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 1	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 4" Text - Location 2	1	<input type="text"/>	<input type="text"/>
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Highway Guide Sign - 4" Text - Location 13	1	<input type="text"/>	<input type="text"/>
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Highway Guide Sign - 3" Text - Location B	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 3" Text - Location C	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 3" Text - Location D	1	<input type="text"/>	<input type="text"/>
Highway Guide Sign - 3" Text - Location E	1	<input type="text"/>	<input type="text"/>

