



SPECIFICATIONS & CONTRACT DOCUMENTS

PAVEMENT MAINTENANCE PROJECT HERITAGE SOUTH SUBDIVISION WINDWOOD SUBDIVISION & CITY HALL PARKING LOT

* * * * *

SEGUIN CITY COUNCIL

Don Keil – Mayor

Ernest Leal

Jeannette “Jet” Crabb

Phil Seidenberger

Tomas V. Castellon, Jr.

Carlos Medrano

Fonda Mathis

Donna Dodgen

Mark Herbold

Douglas G. Faseler, City Manager

Ricardo Cortes, Assistant City Manager

Thalia Patlan Stautzenberger, City Secretary

**Jose (Joe) R. Ramos, Jr., P.E.
City Engineer**

Prepared By
City of Seguin Purchasing Department
and
City of Seguin Engineer/Public Works Department

ADVERTISEMENT FOR BIDS

Sealed proposals addressed to the City Manager of the City of Seguin, Texas will be received at the Seguin City Hall, 205 North River, Seguin, Texas, 78155, until **2:30 P.M., September 1, 2015 (CDST)** for the proposed **Pavement Maintenance Project**. Any bid received after closing time will be returned unopened. The bids will be publicly opened and read aloud at the Seguin City Hall at 3:00 P.M. Bids shall be submitted in a sealed envelope (8 ½” x 11” minimum), clearly marked as follows:

SEALED BIDS

Pavement Maintenance Project

Bid No. TF-2015-40

To be opened at 3:00 P.M., Tuesday Sept. 1, 2015

Principle items of construction will include:

Construct a surface treatment composed of a single or double application of asphalt material, each covered with aggregate, constructed on existing pavements or on the prepared base course or surface in accordance with these specifications. This item shall also govern for the furnishing and placing of aggregates. Quantities for the different types of surfaces and materials will be shown on the plans; Or

The slurry seal shall consist of a mixture of an approved emulsified asphalt, mineral aggregate, mineral filler, water and specified additives, proportioned, mixed and uniformly spread over a properly prepared surface. The completed slurry seal shall leave a homogenous mat, adhere firmly to the prepared surface and have a skid resistant surface texture.

Each bid must be accompanied by a certified or cashier's check, or an approved bidders bond in an amount not less than 5% of the maximum total bid, payable to the City of Seguin, Texas without recourse, as a guarantee that the Bidder will enter into a contract and execute performance and payment bonds on the forms provided, within ten (10) days after the award of contract.

A hardcopy of the proposal forms, plans, and specifications may be examined at the City Hall, 205 N. River, Seguin, Texas and may be obtained from the City of Seguin website www.seguintexas.gov/bid_opportunities

The City of Seguin reserves the right to reject any or all bids and to waive informalities. No bid may be withdrawn within sixty (60) days after the date on which bids are received.

Douglas G. Faseler, City Manager
CITY OF SEGUIN, TEXAS

TABLE OF CONTENTS

	<u>Section</u>
SPECIAL INSTRUCTIONS	00100
PROPOSAL	00200
BID FORMS	00210
EXPERIENCE RECORD	00300
STATEMENT OF QUALIFICATIONS	00400
STANDARD FORM OF AGREEMENT	00500
PERFORMANCE BOND	00600
PAYMENT BOND	00700
GENERAL CONDITIONS OF AGREEMENT	00800
PREVAILING WAGE DECISION	00900
GENERAL CONTRACT CONDITIONS	
CONFLICT OF INTEREST QUESTIONNAIRE	
ATTACHMENT "A" – INSURANCE REQUIREMENTS	
GENERAL CONDITIONS OF BIDDING	
TECHNICAL SPECIFICATIONS	
-ITEM 301S ASPHALTS, OILS AND EMULSIONS	
-ITEM 302S AGGREGATES FOR SURFACE TREATMENTS	
-ITEM 312S SEAL COAT	
-ITEM 320S SINGLE/TWO COURSE SURFACE TREATMENT	

SPECIAL INSTRUCTIONS

1. SCOPE OF PROJECT

The City of Seguin (herein called the OWNER) invites proposals for a Street Improvement Project. Principal items of construction will include:

Construct a surface treatment composed of a single or double application of asphalt material, each covered with aggregate, constructed on existing pavements or on the prepared base course or surface in accordance with these specifications. This item shall also govern for the furnishing and placing of aggregates. Quantities for the different types of surfaces and materials will be shown on the plans; Or

The slurry seal shall consist of a mixture of an approved emulsified asphalt, mineral aggregate, mineral filler, water and specified additives, proportioned, mixed and uniformly spread over a properly prepared surface. The completed slurry seal shall leave a homogenous mat, adhere firmly to the prepared surface and have a skid resistant surface texture.

2. PROPOSALS AND METHOD OF BIDDING

2.1 The proposal consists of various major items of work Bidders will provide prices for each item in the proposal. The prices will be entered in the appropriate spaces in both script and figures. Should the Bidder have costs for any incidental work where a bid item does not occur, the costs of such work will be reflected in the unit costs of the bid items in the proposal. No separate payment will be made for any work other than those items occurring in the proposals.

2.2 At the time of proposal submittal, bidders will provide a Contractor Work Plan, which details the approach and scope of the work to be performed. The Contractor Work Plan shall include a proposed schedule for completion of all work to be performed.

2.3 Bidders are hereby notified of the number of calendar days for completion of the project in Article 58 of this section.

2.4 Bidders shall bid on all items of the Bid.

3. OBLIGATION OF BIDDER

At the time of the opening of bids each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation with respect to his bid.

4. RECEIPT AND OPENING OF BIDS

Bids will be received at Seguin City Hall, 205 North River, Seguin, Texas 78155, until **2:30 P.M., September 1, 2015 (CDST)**. Any bid received after closing time will be returned unopened. The bids will be publicly opened and read aloud at the Seguin City Hall at 3:00 p.m. Bids shall be submitted in a sealed envelope (8 ½" x 11" minimum). Clearly marked as follows:

SEALED BIDS

Pavement Maintenance Project

Bid No. TF-2015-40

To be opened at 3:00 P.M., Tuesday Sept. 1, 2015

5. BID SECURITY

- 5.1 Each bid must be accompanied by cash, certified check of the Bidder or a bid bond, duly executed by the Bidder as principal and having as surety thereto a surety company approved by the Owner, in the amount of 5% of the bid. Such cash, checks or bid bonds will be returned within ninety (90) days after the date of the opening of bids, upon demand of the Bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.
- 5.2 Any cash, check, or bid bond is a guarantee that the Bidder will enter into a Contract and execute performance and payment bonds on the forms provided, within ten (10) days after the award of Contract. Failure to execute these documents within the required time shall be justification for the Owner to consider this a forfeiture of the security by the Bidder to the Owner.

6. QUALIFICATIONS OF BIDDER

- 6.1 The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request.
- 6.2 The Owner may request a list of recent projects of equal difficulty and size that the low bidder has performed. Bidders hereby agree to supply such a list prior to award upon request to the Owner. Quantity or proportionate share of the project to be performed by subcontractors not on the prime contractor's payroll will be considered by the Owner.
- 6.3 The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work therein.
- 6.4 Bidders may be required to submit evidence that they have a practical knowledge of the particular Work bid upon, and that they have the financial resources to complete the proposed Work.

6.5 In determining the Bidder's qualifications, the following factors will be considered: work previously completed by the Bidder and whether the Bidder (a) maintains a permanent place of business, (b) has adequate personnel and equipment to do the work properly and expeditiously, (c) has the financial resources to meet all obligations incidental to the Work, and (d) has appropriate technical experience.

6.6 Each Bidder's claim history may be reviewed in the evaluation of the bid. The Bidder may be required to show that he has handled former work so that no just claims are pending against such work. No bid will be accepted from a Bidder who is engaged on any work which would impair his ability to perform or finance his Work.

7. TIME OF COMPLETION AND LIQUIDATION DAMAGES

Bidder must agree to commence on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the construction of the project within the number of calendar days proposed on the last sheet of the proposal, or pay as liquidated damages the sum for each consecutive calendar day thereafter as hereinafter provided in the General Information.

8. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with his delivery of the executed Contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of the Contract and for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions included herein. The Surety on such bond or bonds shall be duly authorized surety company satisfactory to the Owner.

9. POWER OF ATTORNEY

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

10. LAWS AND REGULATIONS

The Bidder's attention is directed to the fact that all applicable State laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though written out in full.

11. SUBCONTRACTS

11.1 The Bidder is specifically advised that any person, firm or other party to whom it is proposed to award a Contract under this Contract must be acceptable to the Owner and Engineer.

11.2 The Bidder shall provide a list of all major subcontractors and vendors with his bid. Failure to provide may constitute a rejection of the bid.

12. PAYMENTS

On or before the 25th day or each month, the Contractor shall prepare and submit to the Engineer an application for payment showing as completely as practicable the total value of the work done by the Contractor up to and including the last day immediately preceding the date of such application and the value of all sound materials delivered on the site of the work that are to be fabricated into work.

The Engineer shall verify Contractor's application, shall either approve or modify the total value of the work done by the Contractor and the value of Materials delivered to the site, and shall submit to Owner such application for payment as approved or modified with Engineer's verification affixed thereto on or before the 5th days of the month following the receipt of the application from Contractor.

The Owner shall pay the Contractor on or before the 25th day of the month in which the Owner receives the approved application from the Engineer the total amount of the approved and verified application, less five (5) percent of the amount thereof, which five (5) percent shall be retained until final payment, and further less all previous payments and all further sums that may be retained by the Owner under the terms of this Agreement. It is understood, however, that in case the whole work be near to completion and some unexpected and unusual delay occurs due to no fault or neglect on the part of the Contractor, the Owner may, upon written recommendation of the Engineer, pay a reasonable and equitable portion of the retainage to the Contractor, or the Contractor, at the Owner's option, may be relieved of the obligation to fully complete the work and, thereupon, the Contractor shall receive payment of the balance due him under the contract subject only to the conditions stated under "Final Payment." Any such payments of retainage by Owner to Contractor prior to final payment must be agreed to in writing by the surety or sureties on Contractor's payment and performance bonds.

The Contractor shall submit to the Engineer, copies of the material invoices with the application for payment. No payment will be made to the Contractor until the quantities or work submitted have been checked and verified by the Engineer.

13. METHOD OF AWARD

13.1 An award will be made to only **one** Contractor. The award may be made for the lowest base bid **or** the lowest base bid including alternate bid item(s), if applicable.

13.2 The Owner reserves the right to waive informalities, to reject any or all bids, and to accept the bid most advantageous to the public interest. The right is also reserved to increase or decrease the total proposal amount by 25%, by increasing or decreasing quantities if the total proposal exceeds or is below the funds available. The right is also reserved to eliminate any item(s) in the proposal if the total proposal exceeds the funds available.

14. ENGINEER

The word "Engineer" as used herein refers to the City Engineer or his designated staff.

15. TRAFFIC CONTROL

15.1 The Contractor will be responsible for furnishing and using all barricades, warning lights, signs, etc. necessary to protect his work and maintain traffic flow satisfactory to the Owner and TXDOT. Warning devices shall be as required in the Texas Manual on Uniform Traffic Control Devices. All work scheduling shall be coordinated with the City staff, and be approved by the City staff before work can proceed. **No separate** payment will be made for traffic control. A Traffic Control Plan may possibly be required by TX DOT, including all Traffic Control Permits in scope of project.

16. OWNERSHIP OF PROJECT

Until final acceptance of the total project by the Owner and Engineer, the Contractor shall take full responsibility for the welfare of the partially completed work. Damage to the Contractor's work from any cause shall be repaired at the Contractor's expense.

17. REPLACEMENT OF MISCELLANEOUS IMPROVEMENTS

The Contractor shall repair or replace all existing utilities, water mains, fences, concrete walls, sidewalks, concrete curbs and concrete pavement, signs, culverts, asphalt pavement, building walls and attachments and other miscellaneous improvements damaged by the Contractor due to his operations on this project, to a condition equal to or better than their condition before construction, at no additional expense to the Owner. No direct payment will be made for this item.

18. MAINTENANCE GUARANTEE

18.1 The Contractor shall maintain and guarantee the work, which he does against defective workmanship and materials for a period of one (1) year from the date of final acceptance of the work by the Owner.

18.2 Prior to the expiration of the one (1) year warranty period, the City will conduct a thorough inspection of the improvements to verify the integrity of the project. This inspection will include visual examination of the improvements and may include other inspection techniques to verify the integrity of the improvements.

18.3 Where defective workmanship and/or materials are discovered, requiring repairs to be made under this guarantee, all such repair work shall be done by the Contractor at his own expense within five (5) days after written notice of such defect has been given to him by the Owner. Should the Contractor fail to repair such defective workmanship and/or materials within five (5) days after being notified, the Owner may make the necessary repairs and charge the Contractor with the actual cost of all labor and materials required.

18.4 The Contractor shall arrange to have his faithful performance bond run for a period of one (1) year after the date of completion of the construction work to cover his guarantee as set forth above.

19. CLEAN-UP

- 19.1 The Contractor shall at all times keep the jobsite as free from all material, debris, and rubbish as is practicable and shall remove same from any portion of the job site when it becomes objectionable in the opinion of the Engineer.
- 19.2 After construction work is completed and before final acceptance of improvements by Owner, Contractor shall remove all debris from site of project, including all existing debris to an approved place of disposal. Temporary structures, forms, equipment, objectionable rocks, concrete and other debris shall be remove in such a manner as to leave the site of work in a neat and presentable condition throughout; and restore in an acceptable manner all property damaged in the progress of this work. No direct payment will be made for clean-up.
- 19.3 Materials cleared from project shall not be deposited on adjacent public or private property without written permissions of the Owner's thereof filed with Owner's Agent; and any materials so deposited shall be leveled and left in a condition satisfactory to the Owner's Agent.

20. EXCAVATION

Excavation in this Contract shall be **unclassified**. There is no separate pay item under this Contract for excavation and its cost shall be included in such pay items as are provided in the Contract and proposal.

21. AFFIDAVIT OF BILLS PAID

Upon completion of the project and final acceptance by the Owner and Engineer, the Contractor shall be required to furnish the Owner with an Affidavit certifying that all suppliers and subcontractors have been paid, before final payment will be made by Owner.

22. ADDENDA AND INTERPRETATIONS

- 22.1 No interpretation of the meaning of the plans, specifications or other prebid documents will be made to any bidder orally. Every request for such interpretations should be in writing addressed to Twila Wood, Purchasing Manager, City of Seguin, PO Box 591, Seguin, Texas 78156-591, or by email to twood@seguintexas.gov , and to be given consideration must be received at least seven (7) days prior to the date fixed for the opening of bids.
- 22.2 Any and all such interpretations and supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be emailed to all prospective bidders (at the respective addresses furnished for such purposes), not later than five (5) days prior to the date fixed for the opening of bids. Addenda will be posted on the City's website: www.seguintexas.gov/bid_opportunities Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

23. EXISTING UTILITIES

- 23.1 Existing surface and subsurface structures (gas mains, water mains, sewer mains, storm sewers, telephone cables, sprinkler systems, etc.) are shown on the plan if their location has been determined, but it shall be the responsibility of the Contractor to avoid damaging these existing structures whether or not they are shown on the plans. The Owner and Engineer assume no responsibility for failure to show any or all of those structures on the plans or to show them in their exact location. It is mutually agreed that such failure to show these structures will not be considered sufficient basis for claims for additional compensation for extra work or for increasing the pay quantities in any manner whatsoever. If any structure is damaged by the Contractor it shall be his responsibility to repair the damage at his own expense and restore the structure to its functional use.
- 23.2 Contractor shall locate and determine (verify if depth is shown on plans) elevation of all existing underground utilities. If a utility is found to be in conflict with proposed grades, the Engineer shall be contacted and grades adjusted to avoid conflict. **No separate pay.**

24. PRECONSTRUCTION CONFERENCE

After award and execution of a contract between the Owner and Contractor, a formal preconstruction conference will be held in City Hall prior to commencement of the work. This conference will include review of technical specifications in order to insure clarity as to the type of construction machinery to be used, construction methods to be used, and materials to be used, obligations of both the Contractor and the City forces, personnel, safety, issues/requirements, meetings, control of the project, guaranty/warranty, and the method of inspection and decision-making to be used during this project.

25. ORDER OF CONSTRUCTION/WORKING HOURS

- 25.1 The Contractor shall submit to the Engineer prior to the pre-construction conference a construction schedule, which shall meet the Engineer's approval before construction can begin.
- 25.2 Generally, the Contractor shall perform all construction activities between 8:00a.m. To 5:00p.m., Monday through Friday only. However, the Contractor may be allowed to work weekends and holidays upon the Engineer's written approval. Contractor shall be responsible for paying all costs, fees, etc. related to Owner representatives during hours on weekends, holidays, and outside 8:00 am to 5:00 p.m.
- 25.3 The Contractor shall keep the Owner and the Owner's Engineer informed as to his construction progress. Because of traffic congestion, the contractor may be required to schedule construction in some areas between the hours of 8:30am and 4:00pm, OR 8:00pm and 4:00am if the City staff or Engineer determines it to be necessary. Contractor will be required to perform work in a fashion that will cause the least amount of inconvenience to the general public.
- 25.4 The Contractor will be required to totally complete portions of the project prior to proceeding with other portions. The Contractor shall submit to the Engineer prior to the preconstruction conference a construction schedule which shall meet the Engineer's approval before construction can begin. All work scheduling shall be coordinated with City

staff and approved by City staff before work can proceed. The Contractor will be required to have someone on call 24 hours per day during the course of the project.

26. LABOR FORCE

- 26.1 The Contractor may bring his superintendent, foreman, sub-foreman, machine operators, and sufficient key men to round his organization.
- 26.2 The Contractor shall abide by the Wage and Hour Laws of the State and must not pay less than the rates legally prescribed.
- 26.3 The Contractor shall maintain his superintendent or foreman onsite for the duration of the project and have at least two employees whom are a 24hour contact. Subcontractor employees shall not be considered the superintendent or foreman on site.

27. CONTRACTOR'S RESPONSIBILITY AND LIABILITY FOR PERFORMANCE OF WORK

- 27.1 Is expressly understood and agreed to be the Contractor that, regardless of the extent of inspection and supervision provided by the Owner and the Engineer, it is the Contractor's responsibility to perform and complete work in accordance with the drawings and specifications, and that the Owner and Engineer have no liability or responsibility whatever to the Contractor for any work performed by the Contractor which is not in accordance with the drawings and specifications regardless of the time when discovered and whether discovered at any time during the course of construction or after acceptance of the work.
- 27.2 The Engineer shall inform the Contractor of any work that is not in accordance with the drawings and specifications when it becomes known to him. If any work is performed which is not in accordance with drawings and specifications and is not discovered until a later time, neither the Owner nor the Engineer shall have any responsibility to the Contractor, or be liable to the Contractor for the correction or removal of unsatisfactory work or of any work subsequently performed or affected by it.
- 27.3 The correction or removal of such unsatisfactory work and the replacement with satisfactory work shall be performed by the Contractor at his own expense, and is understood to be fully included in his contract requirements, without any additional compensation or claims upon the Owner or Engineer.

28. NOTIFICATION OF CONSTRUCTION PROGRESS

- 28.1 Contractor shall keep the Owner and Engineer informed at all times with respect to the progress of the Services and the results obtained there from. Without limitation of the generality of the immediately preceding sentence, Contractor shall furnish verbal reports to Engineer as requested but no less than on a weekly basis specifying the days spent and Work accomplished by Contractor since the preceding report; and promptly notify Engineer in writing of all accidents, claims (including, without limitation, asserted liens, and other encumbrances), and losses arising out of or in connection with the Services.

28.2 The Contractor shall give the Engineer 48 hours' notice for inspection of any subsurface activity.

28.3 If work is delayed or behind schedule, the Contractor shall submit additional progress reports at such intervals as Engineer may request. Each progress report shall include sufficient description of current and anticipated delaying factors, their effect on the construction schedule, and proposed actions that the Contractor will take to complete the project within the time allotted. If considered necessary, the Engineer will schedule additional meetings to discuss progress with the Contractor.

29. CHANGE OF LOCATION

No change in the alignment is contemplated; however, should a change be necessary, the Owner reserves the right to make such changes; unless it can be clearly shown that such changes would result in an undue hardship on the Contractor, no extra compensation will be allowed the Contractor.

30. SEARCHING FOR EXISTING UTILITIES

Existing sewer mains may be difficult to locate. The approximate location of these facilities has been shown on the plans ("EXISTING UTILITIES" above), and City forces with budget constraints have not produced exact locations. The Contractor will be required to excavate and locate these facilities, and to conduct such investigations as necessary to perform the work contemplated on the plans. The Owner will provide liaison with property owners and the limited information it has concerning existing locations, sizes, materials, etc., but any delays or investigations required of the Contractor shall be deemed incidental to the project. **No separate payment will be made.** No machine time will be provided by the Owner in this regard.

31. SALVAGE RIGHTS

31.1 All materials and appurtenances of any kind, etc., excavated, removed, or produced during the project by the Contractor shall be delivered to the Owner's yard, if desired by Owner. No separate payment will be made.

31.2 If the Owner desires not to keep these materials, they shall be disposed of properly and according to current laws. No separate payment will be made.

31.3 The City of Seguin does not have an active landfill.

32. DISPOSAL OF EXCAVATED MATERIALS

All excavated materials not used in backfilling will be disposed of by the Contractor at a site obtained by the Contractor and approved by the Owner. Disposal of excavated materials shall be in accordance with all rules and regulations of the Texas Commission on Environmental Quality (TCEQ). Any pieces of material such as broken concrete, asphalt, or pipe measuring twelve inches (12") or larger in any dimension, shall be disposed of by the Contractor at an approved landfill or as directed by the Owner. Spoil areas shall be leveled with a motor grader for future mowing. The Contractor shall include in his bid the cost to dispose of the materials.

33. SUBMITTAL DATA

The Contractor shall furnish submittals for any such parts of the work and equipment as set forth in the specifications and indicated on the plans. The procedures for review of the submittals shall be as follows:

33.1 The Contractor shall submit to the Engineer for his review, four (4) prints of drawings, plus whatever number of prints the Contractor desires to be returned to him. The submittal prints shall be accompanied by a letter of transmittal, which shall be of the form supplied by or approved by the Engineer.

33.2 When a drawing is satisfactory to the Engineer, the number of prints the Contractor desires returned to him will be stamped or marked, "Approved as Corrected" or "Approved as Submitted", will be dated and will be returned to the Contractor by letter.

33.3 Should a drawing be unsatisfactory to the Engineer, he will stamp thereon "Revise and Resubmit" or "Rejected", and will return one (1) or more copies thereof to the Contractor with the necessary corrections and changes indicated. The Contractor must make such corrections and changes, and again submit at least four (4) prints of the drawings for approval. The Contractor shall revise and resubmit the working drawings, as required by the Engineer, until satisfactory review thereof is obtained.

33.4 The Contractor shall allow sufficient time for preliminary review, correction and re-submission, and final review of all working (shop) drawings. The Contractor should allow not less than fourteen (14) days for each review. Drawings of items critical to job progress, when requested in writing by the Contractor, will be given priority review.

34. SANITARY FACILITIES

The Contractor shall provide chemical toilet facilities for the use of his forces. Adequacy of these facilities will be subject to the approval of the Engineer and maintenance of same must be satisfactory to the Engineer at all times. Contractor shall provide a maintenance schedule to the Owner for approval.

35. WITHDRAWAL OF BIDS

Contractors may withdraw their bid at any time until the specified closing time for acceptance of bids. After the specified time, no bid may be withdrawn for a period of ninety (90) days or until a contract is awarded, whichever occurs first.

36. SUB-SURFACE CONDITIONS

It shall be the responsibility of the Contractor to satisfy himself as to the soil conditions and nature and type of geological formations in and through which this project will be constructed, and to make appropriate allowances in the proposal he submits for doing the work. Such information as may be obtained from the test borings and accompanying notations shown on the plans is merely for the guidance of the Contractor and is not to be construed in any manner as a guarantee by the Owner that such conditions of sub-surface strata are infallible.

37. STAKING FOR CONSTRUCTION

The Contractor will provide all construction staking services for the project. The cost of these services will be reflected in the unit price amount bid in the proposal. **No separate payment will be made.**

38. BID PROPOSALS

38.1 Bidders are requested to submit bids on all bid items as listed in the proposal, so that an adequate evaluation of the total project can be made.

38.2 The Owner reserves the right to reject any or all bids, or to accept the bid or combination of bids that they deem most advantageous to the public interest.

38.3 Bidders must submit their bids based on the design as set forth in the plans and specifications. Any bids submitted on the basis of unspecified alternate designs will be immediately rejected and returned to the bidder.

38.4 The prices bid in the Proposal shall be full compensation for furnishing all material, labor, equipment, and performing all operations required to complete the project ready for use. All materials, labor, equipment, and work required to complete the project ready for use, must be included in the price bid for the various items provided in the Proposal and no other compensation will be allowed.

38.5 Prices in the proposal shall be stated in both script and numerals.

39. CONTRACT DRAWINGS AND SPECIFICATIONS

39.1 All items shown on the drawings or included in the specifications shall be furnished, installed, and connected with accessories and appurtenances as shown or indicated on the plans and in the specifications.

39.2 Any work or item called for on the drawings and not particularly mentioned in the specifications, or work and items described in the specifications and not shown on the drawings is to be regarded as included under the contract the same as if set forth in the specifications and exhibited on the drawings.

40. SETTLEMENT OF INSURANCE CLAIMS

40.1 Losses insured under policies that include Owner/Engineer as a named insured shall be adjusted with Owner/Engineer and made payable to Owner/Engineer as trustee for the insured's, as their interests may appear.

40.2 Owner/Engineer and Contractor waive all rights against each other for damages caused by fire or other perils to the extent covered by insurance, except such rights as they may have to insurance proceeds held by owner as trustee. Contractor shall require similar waivers by Subcontractor as provided in General Conditions.

41. SPECIFICATIONS

The Specifications which govern materials and equipment to be furnished and the work to be performed under this contract are listed in the Table of Contents at the beginning of this volume.

42. PAYMENT

Contractor can make monthly payment requests with retainage withheld until the project is accepted. Retainage shall be 5%.

43. EXCAVATION, TRENCHING, AND SHORING

All excavation, trenching, and shoring shall conform to the U.S. Department of Labor, Occupational Safety, and Health Administration Guidelines (Subpart P – Excavation, Trenching, and Shoring). The Contractor will be required to submit an excavation, trenching, and shoring plan to the Engineer for approval prior to construction.

44. BUY AMERICAN

In accordance with the Buy American provision in Public Law 95-117 (section 215 of Public Law 92-500 as amended) the Contractor agrees that preference will be given to domestic material, by the contractor, subcontractors, material men, and suppliers and owner in the performance of this contract.

45. WAGE SCALE

All employees of the Contractor on this project shall be paid, at least, the amount shown in the wage decision attached herein.

46. BACKFILL AND PAVEMENT REPAIR

Separate payment **WILL NOT** be made for repair of gravel, asphaltic or concrete surfaces crossed or damaged by the Contractor's work.

47. NO SEPARATE PAYMENT

Several notes on the plans indicate work to be performed with "No Separate Payment". Contractor shall include the cost of this work in other bid items provided.

48. SPOIL DISPOSAL

The Contractor's bid shall include spoil disposal (offsite) for items that cannot be used for on-site fill (asphalt, concrete, wire, etc.) in accordance with applicable TCEQ regulations.

49. INGRESS/EGRESS

Ingress/Egress to the construction area by the Contractor shall be done only on the construction easements shown on the plans or as approved by the Owner, no exceptions. No separate payment will be provided for these services.

50. COOPERATION AND COORDINATION WITH PUBLIC

The Contractor shall conduct his work so as to cause the least amount of disruption to the public. Closing of any streets or lanes of traffic will be coordinated with City staff. All citizens along each street will be notified by the Contractor in advance of construction activities.

51. VIDEO OF CONSTRUCTION DATA

The Contractor shall provide the City with a video tape showing the construction area in detail prior to construction, to include audio to describe location.

52. SCHEDULE

The Contractor shall submit to the Engineer and Owner a construction schedule on the first day of each month for the duration of the project. Schedule shall include but not be limited to remaining activities, anticipated start/finish time, etc.

53. PUMPING, BAILING AND DRAINING

The Contractor shall immediately remove all surface or seepage water from ditches and other sources which may accumulate during the excavation and construction work by providing the necessary underdrains or otherwise, and by doing the necessary pumping, bailing or draining. The Contractor shall have available at all times sufficient equipment in proper working order for doing the work herein required. All water removed from excavations shall be disposed of in an approved manner so as to not create unsanitary conditions or to interfere unduly with the use of streets, private driveways or entrances. Pumping, bailing, draining, underdrains, ditches, etc., shall be considered incidental work and will not be paid for as separate items, but their cost shall be included in the contract prices bid in the Proposal for the various units of excavation measure.

54. TIME ALLOWED FOR COMPLETION

The time allotted for the completion of all items of work shall be 30 calendar days. The Work Order shall consist of a written request by the Engineer for the Contractor to proceed with the construction of the project.

55. BARRICADES AND DANGER SIGNALS

55.1 Where the work is carried on, in or adjacent to any street, alley, or public place, the Contractor shall, at his own cost and expense, furnish and erect barricades and/or fences, lights and/or danger signals, and take any other steps necessary for the protection of persons or property.

55.2 Barricades shall have the correct retro-reflectivity as required by the Texas Manual on Uniform Traffic Control Devices . From sunset to sunrise, the Contractor shall furnish and maintain lights at each barricade. Barricades shall be erected to endeavor to keep vehicles from being driven on or into any work under construction.

55.3 The Contractor will be held responsible for all damage to the work due to the failure of barricades, signs, lights, and watchmen to protect it, and whenever evidence is found of such damage, the Engineer may order the damaged portion immediately removed and replaced by the Contractor, at his cost and expense. The Contractor's responsibility for the maintenance of barricades, signs, and lights and for providing watchmen shall not cease until the project has been accepted by the Engineer.

55.4 The Contractor shall meet all applicable local, state, and federal regulations for barricades and danger signals.

56. SAFETY

56.1 Contractor shall place the highest priority on health and safety, and shall maintain a safe working environment during performance of the Work. The site shall be considered to be drug and alcohol free and such policy will be strictly enforced. All employees shall adhere to these policies while on site. Contractor shall comply, and shall secure compliance by its employees, agents, and lower tier Contractors, with all applicable health, safety, and security laws and regulations, any health regulations including without limitation, federal, state and local laws and regulations, and health and safety plans issued by the Owner's Agent as well as all policies and regulations of the Owner. Compliance with such requirements shall represent the minimum standard required of Contractor. Contractor will be performing Work on the Owner's property.

56.2 At all times, the Contractor shall provide an on-site construction supervisor. The Contractor's construction supervisor shall hold and document safety meetings.

56.3 Contractor agrees to furnish protective devices and clothing as required by applicable laws, regulations, health and safety plans and Engineer rules and regulations, and to ensure that such devices or clothing are properly used by its employees, agents, lower tier Contractors and other invitees of Contractor at the jobsite. Safety protection is required at all times while working onsite including a hardhat, a high visibility, tear-off reflective vest, lace-up leather safety boots with steel shank and steel toes, and safety glasses with permanently affixed side-shields.

57. PROJECT MAINTENANCE

The Contractor shall maintain and keep in good repair the improvements covered by these plans and specifications during the life of his contract. Existing improvements shall at all times be protected by the Contractor during the construction of the work as specified herein. All such improvements shall be left in a condition equal to that prior to start of construction.

58. PROPERTY LINES AND MONUMENTS

The Contractor shall protect all property corner markers, and when any such markers or monuments are in danger of being disturbed, they shall be properly referenced and if disturbed, shall be reset at the expense of the Contractor.

59. OFF-SITE STORAGE

Off-site storage for any materials and equipment not incorporated into the Work but included in the Applications for Payment shall not be allowed, unless the contractor obtains their own agreement for use of private property to store construction materials, equipment, vehicles, etc.

60. NOTICES TO OWNERS AND AUTHORITIES

Utilities and other concerned agencies shall be notified at least 48 hours prior to excavating near underground utilities or pole lines or in accordance with the regulations of the utilities, Texas Digger's Hotline (811), and concerned agencies.

61. UNFAVORABLE CONSTRUCTION CONDITIONS

During unfavorable weather, wet ground, or other unsuitable conditions, the Contractor shall confine its operations to work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by the Contractor to perform the Work in a proper and satisfactory manner.

62. DEWATERING

62.1 The Contractor shall at his own expense remove any water that may be encountered during the course of the work by pumping, well pointing, or other approved methods. The water shall be stored in a storage tank provided by the Contractor and disposed of in accordance with all applicable State rules and regulations. Newly placed concrete or grout shall be adequately protected from possible injury resulting from groundwater or from handling and disposal of water.

62.2 All surface drainage or natural waterways shall be controlled by dikes or ditches without damage to adjacent property or structures and without interference with the right of either public or private owners.

62.3 No separate payment will be made for dewatering.

63. EXISTING STRUCTURES/EQUIPMENT

Exact dimensions of existing structures, buildings, equipment roads, utility locations, etc. shown on the plans have not been field verified by the Engineer. Prior to submittal preparation by the Contractor, or construction activities as applicable, all dimensions of these existing items shall be verified by the Contractor in the field. It shall be the Contractor's responsibility to field verify all field dimensions.

00200
PAVEMENT MAINTENACE PROJECT
HERITAGE SOUTH SUBDIVISION
WINDWOOD SUBDIVISION
& CITY HALL PARKING LOT

BID NO. TF-2015-40

DATE: _____

Gentlemen:

Having carefully examined the Instructions to Bidders, Standard Form of Contract, Specifications, and Plans therein referred to, the undersigned bidder declares that the only person or parties interested in this Bid as Principals are those named herein; that this Bid is made without collusion with any other person, firm or corporation; that the Bidder has carefully examined, and this Bid is made in accordance therewith, locations, conditions and classes of materials of the proposed work; and agrees that the Bidder will provide all the necessary superintendence, labor, machinery, equipment, tools, apparatus and other means of construction, and to complete all the work and furnish all the materials called for in the Contract and Specifications in the manner prescribed therein and according to the requirements of the City Engineer, as therein set forth.

The Bid Form attached lists the items of construction contemplated in the Plans and Specifications. Bid prices must be shown in words and figures for each item listed in the Proposal, and in the event of a discrepancy, the words shall control.

It is understood that the following quantities of work to be done are approximate only, and are intended primarily to serve as a guide for the comparison and tabulation of the bids.

Receipt is hereby acknowledged of the following addenda to the Contract Documents:

Addendum No.1 dated _____ Received _____

Addendum No.2 dated _____ Received _____

Addendum No.3 dated _____ Received _____

Bidder agrees to perform all of the work listed in the proposal and as described in the specifications and shown on the plans, for the following prices:

00210
PROPOSAL

**PAVEMENT MAINTENACE PROJECT
HERITAGE SOUTH SUBDIVISION
WINDWOOD SUBDIVISION
& CITY HALL PARKING LOT
BID NO. TF-2015-40**

Item No.	Estimated Quantity	Description and Unit Price of Item In Words	Unit Price In Figures	Total Price
----------	--------------------	--	--------------------------	-------------

1	36,800 SY	Single Course Surface Treatment, Grade 5 Trap Rock ,complete and in place, per square yard		
---	-----------	--	--	--

FOR _____ DOLLARS

AND _____ CENTS \$ _____ \$ _____

2	1,040 LF	4” White Solid Parking Lot Striping, Complete and in place, per linear foot		
---	----------	--	--	--

FOR _____ DOLLARS

AND _____ CENTS \$ _____ \$ _____

TOTAL PROPOSAL \$ _____
(Summation of Items 1 through 2)

ADD ALTERNATE I

1	36,800 SY	Two Course Surface Treatment, Grade 3 first Course, Grade 5 Trap Rock second course, Complete and in place, per square yard.		
---	-----------	--	--	--

FOR _____ DOLLARS

AND _____ CENTS \$ _____ \$ _____

2	1,040 LF	4” White Solid Parking Lot Striping, Geothermal Reflective striping, c omplete and in place, per linear foot		
---	----------	---	--	--

FOR _____ DOLLARS

AND _____ CENTS \$ _____ \$ _____

Address

Printed Name

City, State, Zip Code

Title

Phone No. _____

Date

Fax No. _____

Email Address:

EXPERIENCE RECORD

Contractor shall list in the spaces provided below, similar projects of equal or greater dollar amount that have been installed and are in operation within the past five (5) years. Separate sheets may be attached.

NO.	LOCATION	DESCRIPTION (Size, Type, Length)	CONTACT PERSON PHONE NUMBER	DATE OF INSTALLATION
1				
2				
3				
4				
5				
6				
7				
8				
10				

00400

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires.

Name of Bidder: _____

Address: _____

Date Organized: _____ Date Incorporated _____

Number of Years in contracting business under present name: _____

List Names of Owners, Partners, or Shareholders:

CONTRACTS ON HAND

Contract	Dollar Amount	Anticipated Completion Date
----------	---------------	-----------------------------

Type of work performed by your company: _____

Have you ever failed to complete any work awarded to you? _____

Have you ever defaulted on a contract? _____

List the projects most recently completed by your firm (include project of similar importance):

Project	Dollar Amount	Mo/Yr Completed
---------	---------------	-----------------

Major equipment available for this contract:

Attach resume(s) for the principal member(s) of your organization, including the officers as well as the proposed superintendent for the project.

Credit available: \$ _____

Bank reference and bank officer: _____

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the _____ in verification of the recitals comprising this Statement of Bidder's Qualifications.

Executed this _____ day of _____, 2013.

By: _____
(Signature) (Title)

STANDARD FORM OF AGREEMENT

STATE OF TEXAS §

COUNTY OF §

THIS AGREEMENT, made and entered into this ___ day of _____ A.D. 2013, by and between the _____, TEXAS, a municipal corporation, of the County of _____ and State of _____, acting through _____ thereunto duly authorized so to do, Party of the First Part, hereinafter termed OWNER, and _____ of the City of _____, County of _____, and State of _____, Party of the Second Part, hereinafter termed CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, and under the conditions expressed in the bond bearing even date herewith, the said CONTRACTOR hereby agrees with the said OWNER to commence and complete the construction of certain improvements generally described as follows:

Construct a surface treatment composed of a single or double application of asphalt material, each covered with aggregate, constructed on existing pavements or on the prepared base course or surface in accordance with these specifications. This item shall also govern for the furnishing and placing of aggregates. Quantities for the different types of surfaces and materials will be shown on the plans; Or

The slurry seal shall consist of a mixture of an approved emulsified asphalt, mineral aggregate, mineral filler, water and specified additives, proportioned, mixed and uniformly spread over a properly repaired surface. The completed slurry seal shall leave a homogenous mat, adhere firmly to the prepared surface and have a skid resistant surface texture.

,and all extra work in connection therewith, under the terms as stated in the General Conditions of the Agreement and at his (or their) own proper cost and expenses to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said construction, in accordance with the Advertisement for Proposals, General and Special Conditions of Agreement, Plans and other drawings and printed or written explanatory matter thereof, and the Specifications and addenda therefore, as prepared by Stanley Consultants Inc., 6836 Austin Center Blvd., Suite 350, Austin, Texas 78731, herein entitled the ENGINEER, each of which has been identified by the CONTRACTOR and the ENGINEER, together with the CONTRACTOR'S written Proposal, and the performance and Payment Bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire contract (hereinafter collectively called the "Contract Documents" or the "Contract").

The CONTRACTOR hereby agrees to commence work within ten (10) days after the date written notice to do so shall have been given to him, and to substantially complete the same by **180**, subject to such extensions of time as are provided by the General and Specific Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds the price or prices shown in the proposal, which forms a part of this contract, such payments to be subject to the General and Special Conditions of the contract.

00500

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

Party of the First Part
(OWNER)

Party of the Second Part
(CONTRACTOR)

By: _____

By: _____

ATTEST:

ATTEST:

Executed ____ originals.

00600

Performance Bond

STATE OF _____

COUNTY OF _____

We, _____ (Contractor name) ,
_____ (address),
as Principal, and _____
(bond company name), as Surety, are held and firmly bound unto the City of Seguin, Texas,
as Owner, in the penal sum of _____
_____ dollars (\$ _____), for the
payment of which the Principal and Surety bind themselves and their heirs, administrators,
executors, successors and assigns, jointly and severally, by this bond:

The Principal has entered into a written Contract with the Owner dated
_____ for the _____ ("Project"), which is fully
incorporated into this bond by reference.

The condition of this obligation is that if the Principal faithfully and promptly performs
all work for the Project in accordance with the Contract Documents, and faithfully and
promptly observes and performs all of its covenants, conditions, duties and obligations under
the Contract Documents according to their true intent and meaning, then this obligation will
be satisfied; otherwise it will remain in full force and effect.

If the Owner declares the Principal to be in default under the Contract, the Surety
agrees to either 1) promptly remedy the default, or 2) faithfully and promptly perform and
complete the Project in accordance with the Contract Documents.

The Surety, for value received, agrees that no modification, change order, extension of
time, amendment or addition to the Contract, or to the plans, specifications, drawings or other
Contract Documents, will in any way affect the Surety's obligation on this bond, and the
Surety waives notice of any such modification, change order, extension of time, amendment
or addition.

The Surety certifies that it is authorized and admitted to write surety bonds in Texas. If
this bond exceeds \$100,000.00 the surety certifies that it either 1) holds a certificate of
authority from the United States Secretary of the Treasury to qualify as a surety on
obligations permitted or required under federal law, or 2) has obtained qualified reinsurance
for any liability in excess of \$100,000.00 from a reinsurer that is authorized and admitted as a
reinsurer in the State of Texas, and is the holder of a certificate of authority from the United
States Secretary of the Treasury to qualify as a surety or reinsurer on obligations permitted or
required under federal law. This bond is governed by Chapter 2253 of the Texas
Government Code, and it is provided solely for the protection of the Owner.

This bond is filed with the Owner in Guadalupe County, Texas, and the Principal and Surety agree that mandatory venue for any legal action filed upon this bond is in the District Courts of Guadalupe County, Texas.

Executed and sealed by the Principal and Surety
on _____.

_____	_____
Principal	Surety
By: _____	By: _____
Title: _____	Title: _____
Address: _____	Address: _____
_____	_____
_____	_____
	Telephone Number: _____
	Facsimile Number: _____

(SEAL)

(SEAL)

The name and address of the Resident Agent of Surety is:

THIS BOND MUST BE ISSUED AFTER EXECUTION OF OWNER-CONTRACTOR AGREEMENT BY BOTH PARTIES. ATTACH ORIGINAL POWER OF ATTORNEY FOR THE SURETY'S REPRESENTATIVE TO THIS BOND.

THE ADDRESS OF THE SURETY COMPANY TO WHICH ANY NOTICE OF CLAIM SHOULD BE SENT MAY BE OBTAINED FROM THE TEXAS DEPARTMENT OF INSURANCE BY CALLING 1-800-252-3439.

00700

Payment Bond

STATE OF _____

COUNTY OF _____

_____(Contractor name), of
_____(address),

as Principal, and _____
(bond company name), as Surety, are held and firmly bound unto the City of Seguin, Texas,
as Owner, in the penal sum of _____ dollars (\$ _____) for the
payment of which the Principal and Surety bind themselves and their heirs, administrators,
executors, successors and assigns, jointly and severally, by this bond.

The Principal has entered into a Contract with the Owner dated _____ for the
_____ (“Project”), which is fully incorporated into this bond by
reference.

The condition of this obligation is that if the Principal pays all persons who supply
public work labor or material for the Project, then this obligation will be satisfied; otherwise
this bond will remain in full force and effect.

This bond is provided under the provisions of Chapter 2253 of the Texas Government
Code, as amended and all liabilities on this bond shall be determined in accordance with the
provisions of that statute to the same extent as if it were copied at length in this document.

The Surety, for value received, stipulates and agrees that no change, extension
of time, alteration or addition to the terms of the Contract, or the plans, specifications,
drawings or other Contract Documents, or to the work performed under the Contract
Documents, shall in any way affect its obligation on this bond, and the Surety waives notice
of any such change, extension of time, alteration or addition.

The Surety certifies that it is authorized and admitted to write surety bonds in Texas. If
this bond exceeds \$100,000.00 the surety certifies that it either 1) holds a certificate of
authority from the United States Secretary of the Treasury to qualify as a surety on
obligations permitted or required under federal law, or 2) has obtained qualified reinsurance
for any liability in excess of \$100,000.00 from a reinsurer that is authorized and admitted as a
reinsurer in the State of Texas, and is the holder of a certificate of authority from the United
States Secretary of the Treasury to qualify as a surety or reinsurer on obligations permitted or
required under federal law. This bond is governed by Chapter 2253 of the Texas
Government Code, and it is provided solely for the protection of the Owner.

Mandatory venue for any legal action filed upon this bond is in the District Courts of
Guadalupe County, Texas.

Executed and sealed by the Principal and Surety on_____.

Principal	Surety
By: _____	By: _____
Title: _____	Title: _____
Address: _____	Address: _____
_____	_____
_____	_____
	Telephone Number: _____
	Facsimile Number: _____

(SEAL)

(SEAL)

The name and address of the Resident Agent of the Surety is:

THIS BOND MUST BE ISSUED AFTER EXECUTION OF OWNER-CONTRACTOR AGREEMENT BY BOTH PARTIES. ATTACH ORIGINAL POWER OF ATTORNEY FOR THE SURETY'S REPRESENTATIVE TO THIS BOND.

THE ADDRESS OF THE SURETY COMPANY TO WHICH ANY NOTICE OF CLAIM SHOULD BE SENT MAY BE OBTAINED FROM THE TEXAS DEPARTMENT OF INSURANCE BY CALLING 1-800-252-3439.

00800
GENERAL CONDITIONS OF AGREEMENT

1.0 DEFINITION OF TERMS

1.01 OWNER, CONTRACTOR AND ENGINEER. The Owner, the Contractor and the Engineer are those persons or organizations identified as such in the Agreement and are referred to throughout the Contract Documents as if singular in number and masculine in gender.

The term Engineer means the City of Seguin CITY Engineer or his duly authorized representative. The Engineer shall be understood to be the Engineer of the Owner, and nothing contained in the Contract Documents shall create any contractual or agency relationship between the Engineer and the Contractor.

The Owner may include any authorized representative of Owner as may be set forth in the SPECIAL CONDITIONS.

1.02 CONTRACT DOCUMENTS. The Contract Documents shall consist of the Advertisement for Proposals, Special Instructions, Proposal, Signed Agreement, Performance and Payment Bonds, Special Bonds (when required), General Conditions of the Agreement, Technical Specifications, Plans, and all modifications thereof incorporated in any of the documents before the execution of the Agreement.

The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. In case of conflict between any of the Contract Documents, priority of interpretation shall be in the following order: signed Agreement, Performance and Payment Bonds, Special Bonds (if any), Proposal, Advertisement for Proposals, Special Instructions, Technical Specifications, Plans, and General Conditions of Agreement.

1.03 SUB-CONTRACTOR. The term Sub-Contractor, as employed herein , includes only those having a direct contract with the Contractor and it includes one who furnishes material worked to a special design according to the plans or specifications of this work, but does not include one who merely furnishes material not so worked.

1.04. WRITTEN NOTICE. Written notice shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, return receipt requested, to the last business address known to him who gives the notice.

1.05. WORK. The Contractor shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, services, insurance, permits, certificates, licenses, and all water, light, power, fuel, transportation and other facilities necessary for the execution and completion of the work covered by the contract documents. Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of a good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials. Materials of work described in words which so applied have a well known technical or trade meaning shall be held to refer to such recognized standards.

1.06. EXTRA WORK. The term “Extra Work” as used in this contract shall be understood to mean and include all work that may be required by the Engineer or Owner to be done by the Contractor to accomplish any change, alteration or addition to the work shown upon the plans, or reasonable implied by the specifications, and not covered by the Contractor’s proposal.

1.07. CALENDAR DAY. “Calendar Day” is any day of the week or month, no days being excepted.

1.08. SUBSTANTIALLY COMPLETED. By the term “substantially completed, is meant that the structure has been made suitable for use or occupancy or the facility is in condition to serve its intended purpose, but still may require minor miscellaneous work and adjustment.

2. RESPONSIBILITIES OF THE ENGINEER AND THE CONTRACTOR

2.01. OWNER-ENGINEER RELATIONSHIP. The Engineer will be the Owner’s representative during construction. The duties, responsibilities and limitations of authority of the Engineer as the Owner’s representative during construction are as set forth in the CONTRACT Documents and shall not be extended or limited without written consent of the Owner and Engineer. The Engineer will advise and consult with the OWNER’S instructions to the Contractor shall be issued through the Engineer.

2.02. PROFESSIONAL INSPECTION BY ENGINEER. The Engineer shall make periodic visits to the site to familiarize himself generally with the progress of the executed work and to determine if such work generally meets the essential performance and design features and the technical and functional engineering requirements of the Contract Documents; provided and except, however, that the Engineer shall not be responsible for making any detailed, exhaustive, comprehensive or continuous on-site inspection of the quality or quantity of the work or be in any way responsible, directly or indirectly. For the construction means, methods, techniques, sequences, quality, procedures, programs, safety precautions or lack of same incident thereto on in connection therewith. Notwithstanding any other provision of this agreement or any other Contract Document, the Engineer shall not be any way responsible or liable for any acts, errors, omissions or negligence of the Contractor, any subcontractor or any of the Contractor’s or subcontractor’s agents, servants, or employees or any other person, firm or corporation performing or attempting to perform any of the work.

2.03. PAYMENTS FOR WORK. The Engineer shall review Contractor’s applications for payment and supporting data, determine the amount owed to the Contractor and approve, in writing, payment to Contractor in such amounts; such approval of payment to Contractor constitutes a representation to the Owner or Engineer’s professional judgment that the work has progressed to the point indicated to the made any examination to determine how or for what purpose Contractor has used the moneys paid on account of the Contract price.

2.04. OBJECTIONS AND DETERMINATIONS. The Engineer shall determine all claims disputes and other matters in question between the Contractor and the Owner relating to the execution or progress of the work or the interpretation of the Contract Documents. The Engineer’s decision shall be rendered in writing within a reasonable time and shall be binding.

2.05. CONTRACTOR'S DUTY AND SUPERINTENDENCE. The Contractor shall give adequate attention to the faithful prosecution and completion of this contract and shall keep on the work, during its progress, a competent superintendent and necessary assistants. The Superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor.

The Contractor is and at all times shall remain an independent contractor, solely responsible for the manner and method of completing his work under this contract with full power and authority to select the means, method and manner of performing such work, so long as such methods do not adversely affect the completed improvements, the Owner, and Engineer being interested only in the result obtained and conformity of such completed improvements to the Contract Documents.

Likewise, the Contractor shall be solely responsible for the safety of himself, his employees and other persons, as well as for the protection of the safety of the improvements being erected and the property of himself or any other person, as a result of his work hereunder. Shop or working construction drawings and any specifications shown in relation thereto, as well as any additional information concerning the work to be performed, passing from or through the Engineer, shall not be interpreted as requiring or allowing Contractor to deviate from the plans and specifications, the intent of such drawings, specifications and any other such instructions being to define with particularity the agreement of the parties as to the work the Contractor is to perform. Contractor shall be fully and completely liable at his own expense, for design, construction, installation and use, or non-use, of all items and methods incident to performance of the contract, and for all loss, damage or injury incident thereto, either to person or property, including, without limitation, the adequacy of all temporary supports, shoring, bracing, scaffolding, machinery or equipment, safety precautions or devices, and similar items or devices used by him during construction.

Any review of work in process, or any visit or observation during construction, or any clarification of plans and specifications, by the Owner or Engineer, or any agent, employee, or representative of either of them, whether through personal observation on the project site or by means of approval of shop drawings for temporary construction or construction processes, or by other means or method, is agreed by the Contractor to be for the purpose of observing the extent and nature of work completed or being performed, as measured against the drawings and specifications constituting the contract, or for the purpose of enabling Contractor to more fully understand the plans and specifications so that the completed construction work will conform thereto, and shall in no way relieve the Contractor from full and complete responsibility for the proper performance of his work on the project, including but without limitation the propriety of means and methods of the Contractor in performing said contract, and the adequacy of any designs, plans or other facilities for accomplishing such performance. Deviation by the Contractor from plans and specifications that may have been in evidence during any such visitations or observation by Engineer, or any of his representatives whether called to the Contractor's attention or not, shall in no way relieve Contractor from his responsibility to complete all work in accordance with said plans and specifications.

2.06 CONTRACTOR'S UNDERSTANDING. It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during

the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this contract. No verbal agreement or conversation with any officer, agent or employee of the Owner or Engineer, either before or after the execution of this contract, shall affect or modify any of the terms or obligations herein contained.

2.07 CHARACTER OF WORKMEN. The Contractor agrees to employ only orderly and competent men, skillful in the performance of the type or work required under this contract, to do the work; and agrees that whenever the Engineer shall inform him in writing that any man or men on the work are, in his opinion, incompetent, unfaithful or disorderly, such man or men shall be discharged from the work and shall not again be employed on the work without the Engineer's written consent.

2.08 CONTRACTOR'S BUILDINGS. The building of structures for housing men, or the erection of tents or other forms of protection, will be permitted only at such places as the Engineer shall direct, and the sanitary conditions of the grounds in or about such structures shall at all times be maintained in a manner satisfactory to the Engineer.

2.09 SANITATION. Necessary sanitary conveniences for the use of laborers on the work, properly secluded from public observation, shall be constructed and maintained by the Contractor in such manner and at such points as shall be approved by the Engineer, and their use shall be strictly enforced.

2.10 SHOP DRAWINGS. The Contractor shall submit to the Engineer, with such promptness as to cause no delay in his own work or in that of any other contractor, four checked copies, unless otherwise specified, of all shop and/or setting drawings and schedules required for the work of the various trades, and the Engineer shall pass upon them with reasonable promptness, noting desired corrections. The Contractor shall make any corrections required by the Engineer, file with him two corrected copies and furnish such other copies as may be needed. The Engineer's approval of such drawings or schedules shall not relieve the Contractor from responsibility for deviations from drawings or specifications, unless he has in writing called the Engineer's attention to such deviations at the time of submission, nor shall it relieve him from responsibility for errors of any sort in shop drawings or schedules. It shall be the Contractor's responsibility to fully and completely review all shop drawings to ascertain their effect on his ability to perform the required contract work in accordance with the plans and specifications and within the contract time.

Such review by the Engineer shall be for the sole purpose of determining the sufficiency of said drawings or schedules to result in finished improvements in conformity with the plans and specifications, and shall not relieve the Contractor of his duty as an independent contractor as previously set forth, it being expressly understood and agreed that the Engineer does not assume any duty to pass upon the propriety or adequacy of such drawings or schedules, or any means or methods reflected thereby, in relation to the safety of either person or property during Contractor's performance hereunder.

2.11 PRELIMINARY APPROVAL. The Engineer shall not have the power to waive the obligations of this contract for the furnishing by the Contractor of good material, and of his performing good work as herein described, in full accordance with the plans and specifications. No failure or omission of the Engineer to discover, object to or condemn any defective work or material shall release the Contractor from the obligations to fully and

properly perform the contract, including without limitation, the obligation to at once tear out, remove and properly replace the same at any time prior to final acceptance upon the discovery of said defective work or material; provided, however, that the Engineer shall, upon request of the Contractor, inspect and accept or reject any material furnished, and in event the material has been once accepted by the Engineer, such acceptance shall be binding on the Owner, unless it can be clearly shown that such materials furnished does not meet the specifications for this work.

Any questioned work may be ordered taken up or removed for re-examination by the Engineer prior to final acceptance, and if found not in accordance with the specifications for said work, all expense of removing, re-examination and replacement shall be borne by the Contractor, otherwise the expense thus incurred shall be allowed as EXTRA WORK, and shall be paid for by the Owner; provided that, where inspection or approval is specifically required by the specifications prior to performance of certain work, should the Contractor proceed with such work without requesting in writing prior inspection or approval, he shall bear all expense of taking up, removing, and replacing this work if so directed by the Engineer.

2.12 DEFECTS AND THEIR REMEDIES. It is further agreed that if the work or any part thereof, or any material brought on the site of the work for use in the work or selected for the same, shall be deemed by the Engineer as unsuitable or not in conformity with the specifications, the Contractor shall, after receipt of written notice thereof from the Engineer, forthwith remove such material and rebuild or otherwise remedy such work so that it shall be in full accordance with this contract.

2.13 CHANGES AND ALTERATIONS. The Contractor further agrees that the Owner may make such changes and alterations as the Owner may see fit, in the line, grade, form, dimensions, plans or materials for the work herein contemplated, or any part thereof, either before or after the beginning of the construction, without affecting the validity of this contract and the accompanying Performance and Payment bonds.

If such changes or alterations diminish the quantity of the work to be done, they shall not constitute the basis for a claim for damages for anticipated profits on the work that may be dispensed with. If the amount of work is increased, such additional work shall be paid for as provided under Extra Work. In case the Owner shall make such changes or alterations as shall make useless any work already done or material already furnished or used in said work, then the Owner shall recompense the Contractor for any material or labor so used, and for any actual loss occasioned by such change, due to actual expenses incurred in preparation for the work as originally planned.

3. GENERAL OBLIGATIONS AND RESPONSIBILITIES

3.01 KEEPING PLANS AND SPECIFICATIONS ACCESSIBLE. The Contractor will be supplied with two (2) copies of the plans, specifications and special provisions, and he shall have available at the work site at all times one copy of each. He shall give the work his constant attention to facilitate the progress thereof and shall cooperate with the Engineer in every way possible. He shall have at all times a satisfactory and competent English-speaking Superintendent at the work site, authorized to receive orders and to act for him. The Contractor shall designate to the Engineer in writing the name of such

Superintendent, and he shall be furnished by the Contractor regardless of how much of the work may be sublet.

3.02 AUTHORITY AND DUTY OF INSPECTORS. Inspectors will be authorized to inspect all work done and all materials furnished. Such inspections may extend to all or to any part of the work and to the preparation or manufacture of the materials to be used. An Inspector will be assigned to the work by the Engineer and will report to the Engineer as to the progress of the work and the manner in which it is being performed; also to report whenever it appears that the materials furnished and the work performed by the Contractor fail to fulfill the requirements of the specifications and contract; and to call the attention of the Contractor to any such failure or other infringement. Such inspection will not relieve the Contractor from any obligation to perform the work in accordance with the requirements of the specifications.

In case of any dispute arising between the Contractor and the Inspector as to materials furnished or the manner of performing the work, the Inspector will have the authority to reject materials or suspend work until the questions at issue can be referred to and decided by the Engineer. The Inspector will not be authorized to revoke, alter, enlarge, or release any requirement of these specifications, or to approve or accept any portion of work, or to issue instructions contrary to the plans and specifications. He will in no case act as foreman or perform other duties for the Contractor nor interfere with the management of the work.

3.02 OWNERSHIP OF DRAWINGS. All drawings, specifications and copies thereof furnished by the Engineer shall not be reused on other work, and, with the exception of signed contract sets, are to be returned to him on request, at the completion of the work. All models are the property of the Owner.

3.03 ADEQUACY OF DESIGN. It is understood that the Owner believes it has employed competent engineers and designers. It is, therefore, agreed that, as to the Contractor only, the Owner shall be responsible for the adequacy of the design, sufficiency of the Contract Documents, and the practicability of the operations of the completed project; provided the Contractor has complied with the requirements of the said Contract Documents, all approved modifications thereof, and additions and alterations thereto approved in writing by the Owner. The burden of proof of such compliance shall be upon the Contractor to show that he has complied with the said requirements of the Contract Documents, approved modifications thereof and all approved additions and alterations thereto.

3.04 RIGHT OF ENTRY. The Owner reserves the right to enter the property or location on the works herein contracted for are to be constructed or installed, by such agent or agents as he may elect, for the purpose of inspecting the work, or for the purpose of constructing or installing such collateral work as said Owner may desire.

3.05 COLLATERAL CONTRACTS. The Owner agrees to provide by separate contract or otherwise, all labor and material essential to the completion of the work specifically excluded from this contract, in such manner as not to delay the progress of the work or damage said Contractor, except where such delays are specifically mentioned elsewhere in the Contract Documents.

3.06 DISCREPANCIES AND OMISSIONS. It is further agreed that it is the intent of this contract that all work must be done and all material must be furnished in accordance with the generally accepted practice, and in the event of any discrepancies between the separate contracts documents, the priority of interpretation defined under "Contract Documents" shall govern. In the event that there is still any doubt as to the meaning and intent of any portion of the contract, specifications or drawings, the Engineer shall define which is intended to apply to the work.

3.07 EQUIPMENT, MATERIALS AND CONSTRUCTION PLANT. The Contractor shall be responsible for the care, preservation, conservation, protection and replacement of all materials, supplies, machinery, equipment, tools, apparatus, accessories, facilities, all means of construction, and any and all parts of the work, whether the Contractor has been paid, partially paid, or not paid for such work, or whether Owner has taken possession of completed portions of such work, until the entire work is completed and accepted.

3.08 PROTECTION AGAINST ACCIDENT TO EMPLOYEES AND THE PUBLIC. The Contractor shall at all times exercise reasonable precautions for the safety of employees and others on or near the work and shall comply with all applicable provisions of Federal, State, and Municipal safety laws and building and construction codes. All machinery and equipment and other physical hazards shall be guarded in accordance with the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America except where incompatible Federal, State, or Municipal laws or regulations. The Contractor shall provide such machinery guards, safe walkways, ladders, bridges, gangplanks, and other safety devices. The safety precautions actually taken and their adequacy shall be the sole responsibility of the Contractor, acting at his discretion as an independent contractor.

3.09 PERFORMANCE AND PAYMENT BONDS. Unless otherwise specified, it is further agreed by the parties to this Contract that the Contractor will execute separate performance and payment bonds, each in the sum of one hundred (100) percent of the total contract price, in standard forms for this purpose, guaranteeing faithful performance of the work and the fulfillment of any guarantees required, and further guaranteeing payment to all persons supplying labor and materials or furnishing him any equipment in the execution of the Contract, and it is agreed that this contract shall not be in effect until such performance and payment bonds are furnished and approved by the Owner.

Unless otherwise approved in writing by the Owner, the surety company underwriting the bonds shall be acceptable according to the latest list of companies holding certificates of authority from the appropriate authority of the State of Texas.

Unless otherwise stated, the cost of the premium for the performance and payment bonds shall be included in the Contractor's proposal.

3.10 LOSSES FROM NATURAL CAUSES. Unless otherwise specified, all loss or damage to the Contractor arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of the same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the work, shall be sustained and borne by the Contractor at his own cost and expense.

3.11 PROTECTION OF ADJOINING PROPERTY. The Contractor shall take proper means to protect the adjacent or adjoining property or properties in any way encountered, which might be injured or seriously affected by any process of construction to be undertaken under this Agreement, from any damage or injury by reason of said process of construction; and he shall be liable for any and all claims for such damage on account of his failure to fully protect all adjoining property. The Contractor agrees to indemnify, save and hold harmless the Owner and Engineer against any claim or claims for damages due to any injury to any adjacent or adjoining property, arising or growing out of the performance of the contract.

3.12 PROTECTION AGAINST CLAIMS OF SUB-CONTRACTORS, LABORERS, MATERIALMEN, AND FURNISHERS OF MACHINERY, EQUIPMENT AND SUPPLIES. The Contractor agrees that he will indemnify and save the Owner and Engineer harmless from all claims growing out of the demands of sub-contractors, laborers, workmen, mechanics, material men and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract, regardless whether caused wholly or in part by the negligence or gross negligence of any party indemnified hereunder and regardless of the application of any worker's compensation or similar statute which might apply to any employees or agents of the Contractor or any Subcontractor. When so desired by the Owner, the Contractor shall furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged or waived. If the Contractor fails so to do, then the Owner may, at its sole option, either pay directly any unpaid bills of which the Owner has written notice and deduct such amount from the next partial payment due to Contractor, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to liquidate any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payments to the Contractor shall be resumed in full in accordance with the terms of this contract; but in no event shall the provisions of the sentence be construed to impose any obligation upon the Owner by either the Contractor or his Surety.

3.13 PROTECTION AGAINST ROYALTIES OR PATENTED INVENTION. Contractor shall pay all royalties and license fees, and shall provide for the use of any design, device, material or process covered by letters patent or copyright by suitable legal agreement with the patentee or owner. The Contractor shall defend all suits or claims for infringement of any patent or copyright rights and shall indemnify and save the Owner and Engineer harmless from any loss on account thereof, except that the Owner shall defend all such suits and claims and shall be responsible for all such loss when a particular design, device, material or process or the product of a particular manufacturer or manufacturers is specified or required by the Owner; provided, however, if choice of alternate design, device, material or process is allowed to the Contractor, then Contractor shall indemnify and save Owner harmless from any loss on account thereof. If the material or process specified or required by the Owner is an infringement, the Contractor shall be responsible for such loss unless he promptly gives such information to the Owner.

3.14 LAWS AND ORDINANCES. The Contractor shall at all times observe and comply with all Federal, State and local laws, ordinances and regulations, which in any manner affect the contract or the work, and shall indemnify and save harmless the Owner and Engineer against any claim arising from the violation of any such laws, ordinances, and regulations whether by the Contractor or his employees, except where such violations are called for by the

provisions of the Contract Documents. If the Contractor observes that the plans and specifications are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in the contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Engineer, he shall bear all costs arising there from. In case the Owner is a body politic and corporate, the law from which it derives its powers, insofar as the same regulates the objects for which, or the manner in which, or the conditions under which the Owner may enter into contract, shall be controlling, and shall be considered as part of this contract, to the same effect as thought embodied herein.

3.15 ASSIGNMENT AND SUBLETTING. The Contractor further agrees that he will retain personal control and will give his personal attention to the fulfillment of this contract and that he will not assign by Power of Attorney, or otherwise, or sublet said contract without the written consent of the Owner, and that no part or feature of the work will be sublet to anyone objectionable to the Engineer or the Owner. The Contractor further agrees that the subletting of any portion or feature of the work, or materials required in the performance of this contract, shall not relieve the Contractor from his full obligations to the Owner, as provided by this Agreement.

3.16 INDEMNIFICATION. The Contractor shall defend, indemnify and hold harmless the Owner and the Engineer and their respective officers, agents and employees, from and against all damages, claims, losses, demands, suits, judgments and costs, including reasonable attorneys' fees and expenses, arising out of or resulting from the performance of the work, provided that any such damages, claim, loss, demand, suit, judgment, cost or expense:

- (1) Is attributable to bodily injury, sickness, disease or death or to injury or destruction or tangible property (other than the work itself) including the loss of use resulting there from; and,
- (2) Is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, the Owner, anyone directly or indirectly employed by any one of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

The obligation of the Contractor under this Paragraph shall not extend to the liability of the Engineer, his agents or employees arising out of the preparation or approval of maps, drawings, reports, surveys, Change Orders, designs or specifications, or the giving of or the failure to give directions or instructions by the Engineer, his agents or employees, provided such giving or failure to give is the primary cause of the injury or damage.

3.17 INSURANCE. The Contractor at his own expense shall purchase, maintain and keep in force such insurance as will protect him from claims set forth below which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any one of them or by anyone for whose acts any of them may be liable, including the acts of Owner:

- (1) Workmen's compensation claims, disability benefits and other similar employee benefit acts;

- (2) Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees, and claims insured by usual bodily injury liability coverages;
- (3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees, and claims insured by usual bodily injury liability coverages; and
- (4) Claims for damages because of injury to or destruction of tangible property, including loss of use resulting there from.

3.17.1 POLICIES OF INSURANCE. Before commencing any of the work, Contractor shall file with the Owner valid Policies of Insurance acceptable to the Owner and Engineer. Such Policies shall contain a provision that coverages afforded under the Policies will not be canceled until at least thirty days' prior written notice has been given to the Owner.

The Contractor shall also file with the Owner valid Policies of Insurance covering all sub-contractors.

3.17.2 WAIVER OF SUBROGATION. Contractor, its agents, employees and subcontractors, hereby waive any and all rights of subrogation against Owner or Engineer arising out of any claim or incident for which insurance coverage or indemnification is required under the Contract Documents.

4. PROSECUTION AND PROGRESS

4.01 TIME AND ORDER OF COMPLETION. It is the meaning and intent of this contract, unless otherwise herein specifically provided, that the Contractor shall be allowed to prosecute his work at such times and seasons, in such order of precedence, and in such manner as shall be most conducive to economy of construction; provided however, that the order and the time of prosecution shall be such that the work shall be substantially completed as a whole and in part in accordance with this contract, the plans and specifications, and within the time of completion designated in the Proposal; provided, also that when the Owner is having other work done, either by contract or by his own force, the Engineer may direct the time and manner of constructing the work done under this contract, so that conflict will be avoided and the construction of the various works being done for the Owner shall be harmonized.

The Contractor shall submit, at such times as may reasonably be requested by the Engineer, schedules which shall show the order in which the Contractor proposes to carry on the work, with dates at which the Contractor will start the several parts of the work, and estimated dates of completion of the several parts.

4.02 EXTENSION OF TIME. Should the Contractor be delayed in the completion of the work by any act or neglect of the Owner or Engineer, or of any employee of either, or by other contractors employed by the Owner, or by changes ordered in the work, or by strikes, lockouts, fires, and unusual delays by common carriers, or by uncontrollable cause or causes beyond the Contractor's control, and the Engineer decides such cause justifies the delay, then an extension of time sufficient to compensate for the delay as determined by the Engineer shall be allowed for completing the work; provided, however, that the Contractor shall give the Engineer prompt notice in writing of the cause of such delay.

4.03 HINDRANCES AND DELAYS. No claims shall be made by the Contractor for damages resulting from hindrances or delays from any cause (except where the work is stopped by order of the Owner) during the progress of any portion of the work embraced in this contract. In case said work shall be stopped by the act of the Owner, then such expense as in the judgment of the Engineer is caused by such stoppage of said work shall be paid by the Owner to the Contractor.

5. MEASUREMENT AND PAYMENT

5.01 QUANTITIES AND MEASUREMENTS. No extra or customary measurements of any kind will be allowed, but the actual measured and/or computed length, area, solid contents, number and weight only shall be considered, unless otherwise specifically provided.

5.02 ESTIMATED QUANTITIES. This agreement, including the specifications and plans, is intended to show clearly all work to be done and material to be furnished hereunder. Where the estimated quantities are shown for the various classes of work to be done and material to be furnished under this contract, they are approximate and are to be used only as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. It is understood and agreed that the actual amount of work to be done and material to be furnished under this contract may differ somewhat from these estimates.

5.03 PRICE OF WORK. In consideration of the furnishing of all the necessary labor, equipment and material, and the completion of all work by the Contractor, and on the completion of all work and of the delivery of all material embraced in this Contract in full conformity with the specifications and stipulations herein contained, the Owner agrees to pay the CONTRACTOR the prices set forth in the Proposal hereto attached, which has been made a part of this contract. The Contractor hereby agrees to receive such prices in full payment for furnishing all material and all labor required for the aforesaid work, also for all expense incurred by him, and for well and truly performing the same and the whole thereof in the manner and according to this Agreement.

5.04 PARTIAL PAYMENTS. On or before the 25th day or each month, the Contractor shall prepare and submit to the Engineer an application for payment showing as completely as practicable the total value of the work done by the Contractor up to and including the last day immediately preceding the date of such application and the value of all sound materials delivered on the site of the work that are to be fabricated into the work.

The Engineer shall verify Contractor's application, shall either approve or modify the total value of the work done by Contractor and the value of materials delivered on the site, and shall submit to Owner such application for payment as approved or modified with Engineer's verification affixed thereto on or before the 5th days of the month following the receipt of the application from Contractor.

The Owner shall pay the Contractor on or before the 25th day of the month in which the Owner receives the approved application from the Engineer the total amount of the approved and verified application, less five (5) percent of the amount thereof, which five (5) percent shall be retained until final payment, and further less all previous payments and all further sums that may be retained by the Owner under the terms of this Agreement. It is understood, however,

that in case the whole work be near to completion and some unexpected and unusual delay occurs due to no fault or neglect on the part of the Contractor, the Owner may, upon written recommendation of the Engineer, pay a reasonable and equitable portion of the retainage to the Contractor, or the Contractor, at the Owner's option, may be relieved of the obligation to fully complete the work and, thereupon, the Contractor shall receive payment of the balance due him under the contract subject only to the conditions stated under "Final Payment." Any such payments of retainage by Owner to Contractor prior to final payment must be agreed to in writing by the surety or sureties on Contractor's payment and performance bonds.

The Contractor shall submit to the Engineer, copies of the material invoices with the application for payment. No payment will be made to the Contractor until the quantities or work submitted have been checked and verified by the Engineer.

5.05 USE OF COMPLETED PORTIONS. The Owner shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding the time for completing the entire work or such portions may not have expired. Such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents, nor shall the risk of loss change from Contractor to Owner. If such prior use increases the cost of or delays the work, the Contractor shall be entitled to such extra compensation, or extension of time, or both, as the Engineer may determine.

5.07 FINAL COMPLETION AND ACCEPTANCE. The Contractor shall notify the Engineer when, in the Contractor's opinion, the contract is "substantially completed" and when so notifying the Engineer, the Contractor shall furnish to the Engineer in writing a detailed list of unfinished work. The Engineer will review the Contractor's list of unfinished work and will add thereto such items as the Contractor has failed to include. The substantial completion of the structure or facility shall not excuse the Contractor from performing all of the work undertaken, whether of a minor or major nature, and thereby completing the structure of the facility if accordance with the Contract Documents.

Within ten (10) days after the Contractor has given the Engineer written notice that the work has been completed, or substantially completed, the Engineer and the Owner shall inspect the work and within said time, if the work be found to be completed or substantially completed in accordance with the Contract Documents, the Engineer shall issue to the Owner and the Contractor his Certificate of Completion, and thereupon it shall be the duty of the Owner within ten (10) days to issue a Certificate of Acceptance of the work to the Contractor or to advise the Contractor in writing of the reason for the non-acceptance.

Where the work consists of concrete pavements or concrete base, the "Final Acceptance" will not release the Contractor from responsibility for the thickness of the concrete, which will be determined by means of taking cores from the pavement. The coring of the pavement will be done within 90 days from completion of the pavement.

Final acceptance will not relieve the Contractor from any obligation for replacement or repair of any work or materials due to latent defects of materials or workmanship.

5.08 AFFIDAVIT OF BILLS PAID. Upon completion of the project and final acceptance by the Owner and Engineer, the Contractor shall furnish the Owner with an

affidavit certifying that all suppliers and subcontractors have been paid, before final payment will be made by Owner.

5.09 FINAL PAYMENT. Upon the issuance of the Certificate of Completion, the Engineer shall proceed to make final measurements and prepare a final statement of the value of all work performed and materials furnished under the terms of the Agreement and shall certify same to the Owner. Thereafter, Owner shall pay to the Contractor, on or after the 30th day and before the 35th day, the balance due the Contractor under the terms of this Agreement, provided he has fully performed his contractual obligations under the terms of this contract and provided the Contractor has delivered to the Owner the affidavit of bills paid, and a surety release. Neither the Certificate of Acceptance nor the final payment, nor any provision in the Contract Documents, shall relieve the Contractor of the obligation for fulfillment of any warranty which may be required.

5.10 GUARANTEE AGAINST DEFECTIVE WORK Contractor warrants materials and workmanship and that the work is in conformance with Project Manual and Plans included in this Contract for a period of one year from date of Certificate of Final Acceptance of entire project. Said warranty binds Contractor to correct any work that does not conform to such Project Manual and Plans or defects in workmanship or materials furnished under this Contract which may be discovered within said one-year period. Contractor shall at his own expense correct such defect within 30 days after receiving written notice of such defect from Owner by repairing same to condition called for in the Contract. Should Contractor fail or refuse to repair such defect within said 30 day period or to provide acceptable assurances that such repair work will be completed within a reasonable time thereafter, Owner may repair or cause to be repaired any such defect by calling Contractor's "Performance Bond".

5.10 PAYMENTS WITHHELD. The Owner may, on account of subsequently discovered evidence, withhold or nullify the whole or part of any certificate to such extent as may be necessary to protect him from loss on account of:

- (a) Defective work not remedied.
- (b) Claims filed or reasonable evidence indicating probable filing of claims.
- (c) Failure of the Contractor to make payments properly to subcontractors or for material or labor.
- (d) Damage to another contractor.
- (e) Reasonable doubt that the work can be completed for the unpaid balance for the contract amount.
- (f) Reasonable indication the work will not be completed within the contract time.
- (g) Failure to submit "as built" drawings as required by the Contract Documents.

When the above grounds are removed or the Contractor provides a surety bond satisfactory to the Owner, which will protect the Owner in the amount withheld payment shall be made for amounts withheld because of them.

5.11 DELAYED PAYMENTS. Should the Owner fail to make payment to the Contractor of the sum named in any approved partial or final statement, when payment is due, the Owner shall pay to the Contractor, in addition to the sum shown as due by such statement, interest thereon at the rate of six (6) percent per annum, unless otherwise specified, from date due as provided under "Partial Payments" and "Final Payments," until fully paid, which shall

fully liquidate any injury to the Contractor growing out of such delay in payment, but the right is expressly reserved to the Contractor in the event payments be not promptly made, as provided under "Partial Payments." To at any time thereafter treat the contract as abandoned by the Owner and recover compensation, as provided under "Abandonment of Contract," unless such payments are withheld in accordance with the provisions of "Payments Withheld."

6. EXTRA WORK AND CLAIMS

6.01 CHANGE ORDERS. Without invalidating this Agreement, the Owner may, at any time or from time to time, order additions, deletions or revisions to the work; such changes will be authorized by written Change Order prepared by the Engineer for execution by the Owner and the Contractor. The Change Order shall set forth the basis for any change in contract price, as hereinafter set forth for Extra Work, and any change in contract time which may result from the change.

In the event the Contractor shall refuse to execute a Change Order which has been prepared by the Engineer and executed by the Owner, the Engineer may in writing instruct the Contractor to proceed with the work as set forth in the Change Order and the Contractor may make claim against the Owner for Extra Work involved therein, as hereinafter provided.

6.02 MINOR CHANGES. The Engineer may authorize minor changes in the work not inconsistent with the overall intent of the Contract Documents and not involving an increase in Contract Price. If the Contractor believes that any minor change or alteration authorized by the Engineer involves Extra Work and entitles him to an increase in the Contract Price, the Contractor shall make written request to the Engineer for a written Field Order. In such case, the Contractor by copy of his communication to the Engineer or otherwise in writing shall advise the Owner of his request to the Engineer for a written Field Order and that the work involved may result in an increase in the Contract Price.

Any request by the Contractor for a change in Contract Price shall be made in writing in accordance with the provisions of this section prior to beginning g the work covered by the proposed change.

6.03 EXTRA WORK. It is agreed that the basis of compensation to the Contractor for work either added or deleted by a Change Order or for which a claim for Extra Work is made shall be determined by one or more of the following methods:

Method (A) – By agreed unit prices; or

Method (B) – By agreed lump sum; or

Method (C) – If neither method (A) or (B) be agreed upon before the Extra Work is commenced, then the Contractor shall be paid the "actual field cost" of the work, plus fifteen (15) percent.

In the event said Extra Work be performed and paid for under Method (C), then the provisions of this paragraph shall apply and the "actual field cost" is hereby defined to include the cost to the Contractor of all workmen, such as foreman, timekeepers, mechanics and laborers, and materials, supplies, teams, trucks, rentals on machinery and equipment, for the time actually employed or used on such Extra Work, plus actual transportation charges necessarily incurred, together with all power, fuel, lubricants, water and similar operating

expenses, also all necessary incidental expenses incurred directly on account of such Extra Work, including Social Security Old Age Benefits and other payroll taxes, and a ratable proportion of premiums on Performance and Payment Bonds and Maintenance Bonds, Public Liability and Property Damage and Workmen's Compensation, and all other insurance as may be required by any law or ordinance, or directed by the Owner, or by them agreed to. The Engineer may direct the form in which accounts of the "actual field cost" shall be kept and the records of these accounts shall be made available to the Engineer. The Engineer or Owner may also specify in writing, before the work commences, the method of doing the work and the type and kind of machinery and equipment to be used; otherwise these matters shall be determined by the Contractor. Unless otherwise agreed upon, the prices for the use of machinery and equipment shall be determined by using 100 percent, unless otherwise specified, of the latest schedule of Equipment Ownership Expense adopted by the Associated General Contractors of America. Where practicable the terms and prices for the use of machinery and equipment shall be incorporated in the written Change Order. The fifteen percent (15%) of the "actual field cost" to be paid the Contractor shall cover and compensate him for his profit, overhead, general superintendence and field office expense and all other elements of cost and expense not embraced within the "actual field cost" as herein defined; save that where the Contractor's Camp or Field Office must be maintained primarily on account of such Extra Work, then the cost to maintain and operate the same shall be included in the "actual field cost."

No claim for Extra Work of any kind will be allowed unless ordered in writing by the Engineer. In case any orders or instructions, either oral or written, appear to the Contractor to involve Extra Work for which he should receive compensation or an adjustment in the construction time, he shall make written request to the Engineer for written order authorizing such Extra Work. Should a difference of opinion arise as to what does or does not constitute Extra Work, or as to the payment therefore, and the Engineer insists upon its performance, the Contractor shall proceed with the work after making written request for written order and shall keep an accurate account of the "actual field cost" thereof, as provided under Method (C). The Contractor will thereby preserve the right to submit the matter of payment to a court of general jurisdiction to decide the matter, otherwise the Contractor shall waive all claims for payment for EXTRA WORK.

7. ABANDONMENT OF CONTRACT

7.01 ABANDONMENT BY CONTRACTOR. In case the Contractor should abandon and fail or refuse to resume work within ten (10) days after written notification from the Owner, or the Engineer, or if the Contractor fails to comply with the orders of the Engineer, when such orders are consistent with the Contract Documents, then, and in that case, where performance and payment bonds exist, the Sureties on these bonds shall be notified in writing and directed to complete the work, and a copy of said notice shall be delivered to the Contractor.

After receiving said notice of abandonment, the Contractor shall not remove from the work any machinery, equipment, tools, materials or supplies then on the job, but the same, together with any materials and equipment under contract for the work, may be held for use on the work by the Owner or the Surety on the performance bond, or another contractor in completion of the work; and the Contractor shall not receive any rental or credit therefore (except when used in connection with Extra Work, where credit shall be allowed as provided for under Section 6, Extra Work and Claims), it being understood that the use of such

equipment and materials will ultimately reduce the cost to complete the work and be reflected in the final settlement.

In case the Surety should fail to commence compliance with the notice for completion hereinbefore provided for, within ten (10) days after service of such notice, then the Owner may provide for completion of the work in either of the following elective manners:

7.01.1 The Owner may employ such force of men and use such machinery, equipment, tools, materials and supplies as said Owner may deem necessary to complete the work and charge the expense of such labor, machinery, equipment, tools, materials and supplies to said Contractor, and expense so charged shall be deducted and paid by the Owner out of such moneys as may be due, or that may thereafter at any time become due to the Contractor under and by virtue of this Agreement. In case such expense is less than the sum which would have been payable under this contract, if the same had been completed by the contractor, then said Contractor shall receive the difference. In case such expense is greater than the sum which would have been payable under this contract, if the same had been completed by said Contractor, then the Contractor and/or his Surety shall pay the amount of such excess to the Owner; or

7.01.2 The Owner under sealed bids, after five (5) days notice published one or more times in a newspaper having general circulation in the county of the location of the work, may let the contract for the completion of the work under substantially the same terms and conditions which are provided in this contract. In the case of any increase in cost to the Owner under the new contract as compared to what would have been the cost under this contract, such increase shall be charged to the Contractor and the Surety shall be and remain bound therefore. However, should the cost to complete any such new contract prove to be less than what would have been the cost to complete under this contract, the Contractor and/or his Surety shall be credited therewith.

When the work shall have been substantially completed the Contractor and his Surety shall be so notified and Certificates of Completion and Acceptance, as provided in Paragraph 5.06 hereinabove, shall be issued. A complete itemized statement of the contract accounts, certified to by the Engineer as being correct, shall then be prepared and delivered to the Contractor and his Surety, whereupon the Contractor and/or his Surety, or the Owner as the case may be, shall pay the balance due as reflected by said statement, within fifteen (15) days after the date of such Certificate of Completion.

After final completion of the work and in the event the statement of accounts shows that the cost to complete the work is less than that which would have been the cost to the Owner had the work been completed by the Contractor under the terms of this contract; or when the Contractor and/or his Surety shall pay the balance shown to be due by them to the Owner, then all machinery, equipment, tools, materials or supplies left on the site of the work shall be turned over to the Contractor and/or his Surety. Should the cost to complete the work exceed the contract price, and the Contractor and/or his Surety fail to pay the amount due the Owner within the time designated hereinabove, and there remains any machinery, equipment, tools, materials or supplies on the site of the work, notice thereof, together with an itemized list of such equipment and materials, shall be mailed to the Contractor and his Surety at the respective addresses designated in this contract; provided, however, that actual written notice given in any manner will satisfy this condition. After mailing or other giving of such notice, such property

shall be held at the risk of the Contractor and his Surety subject only to the duty of the Owner to exercise ordinary care to protect such property. After fifteen (15) days from the date of said notice the Owner may sell such machinery, equipment, tools, materials or supplies and apply the net sum derived from such sale to the credit of the Contractor and his Surety. Such sale may be made at either public or private sale, with or without notice, as the Owner may elect. The Owner shall release any machinery, equipment, tools, materials, or supplies, which remain on the work, and belong to persons other than the Contractor or his Surety, to their proper owners.

7.02. ABANDONMENT BY OWNER. In case the Owner shall fail to comply with the terms of this contract within ten (10) days after written notification by the Contractor, then the Contractor may suspend or wholly abandon the work, and may remove there from all machinery, tools and equipment, and all materials on the site of the work that have not been included in payments to the Contractor and have not been wrought into the work. Thereupon the Engineer shall make an estimate of the total amount earned by the Contractor, which estimate shall include the value of all work actually completed by said Contractor, the value of all partially completed work at a fair and equitable price, and the amount of all Extra Work performed at the prices agreed upon, or provided for by the items of this contract, and a reasonable sum to cover the cost of any provisions made by the Contractor to carry the whole work to completion and which cannot be utilized. The Engineer shall then make a final statement of the balance due the Contractor by deducting from the above estimate all previous payments by the Owner and all other sums that may be retained by the Owner under the terms of this Agreement and shall certify same to the Owner who shall pay to the Contractor on or before thirty (30) days after the date of delivery to Owner of such certified final statement.

00900

PREVAILING WAGE DECISION

General Decision Number: TX150016 01/02/2015 TX16

Superseded General Decision Number: TX20140016

State: Texas

Construction Types: Heavy and Highway

Counties: Atascosa, Bandera, Bastrop, Bell, Bexar, Brazos, Burlleson, Caldwell, Comal, Coryell, Guadalupe, Hays, Kendall, Lampasas, McLennan, Medina, Robertson, Travis, Williamson and Wilson Counties in Texas.

HEAVY (excluding tunnels and dams, not to be used for work on Sewage or Water Treatment Plants or Lift / Pump Stations in Bell, Coryell, McClennon and Williamson Counties) and HIGHWAY Construction Projects

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015

* SUTX2011-006 08/03/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving and Structures).....	\$ 12.56	
ELECTRICIAN.....	\$ 26.35	
FORM BUILDER/FORM SETTER Paving & Curb.....	\$ 12.94	
Structures.....	\$ 12.87	
LABORER Asphalt Raker.....	\$ 12.12	
Flagger.....	\$ 9.45	
Laborer, Common.....	\$ 10.50	
Laborer, Utility.....	\$ 12.27	
Pipelayer.....	\$ 12.79	
Work Zone Barricade		

Servicer.....	\$ 11.85
PAINTER (Structures).....	\$ 18.34
POWER EQUIPMENT OPERATOR:	
Agricultural Tractor.....	\$ 12.69
Asphalt Distributor.....	\$ 15.55
Asphalt Paving Machine.....	\$ 14.36
Boom Truck.....	\$ 18.36
Broom or Sweeper.....	\$ 11.04
Concrete Pavement Finishing Machine.....	\$ 15.48
Crane, Hydraulic 80 tons or less.....	\$ 18.36
Crane, Lattice Boom 80 tons or less.....	\$ 15.87
Crane, Lattice Boom over 80 tons.....	\$ 19.38
Crawler Tractor.....	\$ 15.67
Directional Drilling Locator.....	\$ 11.67
Directional Drilling Operator.....	\$ 17.24
Excavator 50,000 lbs or Less.....	\$ 12.88
Excavator over 50,000 lbs...	\$ 17.71
Foundation Drill, Truck Mounted.....	\$ 16.93
Front End Loader, 3 CY or Less.....	\$ 13.04
Front End Loader, Over 3 CY.	\$ 13.21
Loader/Backhoe.....	\$ 14.12
Mechanic.....	\$ 17.10
Milling Machine.....	\$ 14.18
Motor Grader, Fine Grade....	\$ 18.51
Motor Grader, Rough.....	\$ 14.63
Pavement Marking Machine....	\$ 19.17
Reclaimer/Pulverizer.....	\$ 12.88
Roller, Asphalt.....	\$ 12.78
Roller, Other.....	\$ 10.50
Scraper.....	\$ 12.27
Spreader Box.....	\$ 14.04
Trenching Machine, Heavy....	\$ 18.48
Servicer.....	\$ 14.51
Steel Worker	
Reinforcing.....	\$ 14.00
Structural.....	\$ 19.29
TRAFFIC SIGNAL INSTALLER	
Traffic Signal/Light Pole Worker.....	\$ 16.00
TRUCK DRIVER	
Lowboy-Float.....	\$ 15.66

Off Road Hauler.....\$ 11.88
Single Axle.....\$ 11.79
Single or Tandem Axle Dump
Truck.....\$ 11.68
Tandem Axle Tractor w/Semi
Trailer.....\$ 12.81

WELDER.....\$ 15.97

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.)

and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

□

General Contract Conditions

DEFINITIONS

Whenever used in any of the contract Documents, the following meanings shall be given to the terms here in defined:

- A. The term "Contract" means the Contract executed between the (Name of City of Seguin), hereinafter called the City of Seguin and (Name of Construction Co.), hereinafter called Contractor, of which these GENERAL CONDITIONS, form a part.
- B. The term "Project Area" means the area within which is the specified Contract limits of the improvements contemplated to be constructed in whole or in part under this contract.
- C. The term "Engineer" means the City Engineer or his designated staff.
- D. The term "Contract Documents" means and shall include the following: Advertisement for Proposals, Special Instructions, Proposal, signed Agreement, Performance and Payment Bonds, Special Bonds (when required), General Conditions of the Agreement, Technical Specifications, Plans, and al modifications thereof incorporated in any of the documents before the execution of the Agreement.

SUPERVISION BY CONTRACTOR

- A. Expect where the Contractor is an individual and gives his personal supervision to the work, the Contractor shall provide a competent superintendent, satisfactory to the City of Seguin and the Engineer, on the work at all times during working hours with full authority to act for him. The contractor shall also provide an adequate staff for the proper coordination and expediting of his work.
- B. The Contractor shall lay out his own work and he shall be responsible for all work executed by him under the Contract. He shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

SUBCONTRACTS

- A. No proposed subcontractor shall be disapproved by the city/county except for cause.
- B. The Contractor shall be as fully responsible to the city/county for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them.
- C. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work and required compliance by each subcontractor with the applicable provisions of the Contract.
- D. Nothing contained in the Contract shall create any contractual relation between any subcontractor and the City of Seguin.

FITTING AND COORDINATION OF WORK

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material suppliers engaged upon this Contract.

PAYMENTS TO CONTRACTOR

A. Partial Payments

1. On or before the 25th day of each month, the Contractor shall prepare and submit to the Engineer an application for payment showing as completely as practicable the total value of the work done by the Contractor up to and including the last day immediately preceding the date of such application and the value of all sound materials delivered on the site of the work that are to be fabricated into work.

The Engineer shall verify Contractor's application, shall either approve or modify the total value of the work done by the Contractor and the value of Materials delivered to the site, and shall submit to Owner such application for payment as approved or modified with Engineer's verification affixed thereto on or before the 5th days of the month following the receipt of the application from Contractor.

The Owner shall pay the Contractor on or before the 25th day of the month in which the Owner receives the approved application from the Engineer the total amount of the approved and verified application, less five (5) percent of the amount thereof, which five (5) percent shall be retained until final payment, and further less all previous payments and all further sums that may be retained by the Owner under the terms of this Agreement. It is understood, however, that in case the whole work be near to completion and some unexpected and unusual delay occurs due to no fault or neglect on the part of the Contractor, the Owner may, upon written recommendation of the Engineer, pay a reasonable and equitable portion of the retainage to the Contractor, or the Contractor, at the Owner's option, may be relieved of the obligation to fully complete the work and, thereupon, the Contractor shall receive payment of the balance due him under the contract subject only to the conditions stated under "Final Payment." Any such payments of retainage by Owner to Contractor prior to final payment must be agreed to in writing by the surety or sureties on Contractor's payment and performance bonds.

The Contractor shall submit to the Engineer, copies of the material invoices with the application for payment. No payment will be made to the Contractor until the quantities or work submitted have been checked and verified by the Engineer.

2. Monthly or partial payments made by the City of Seguin to the Contractor are moneys advanced for the purpose of assisting the contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the City of Seguin. Such payments shall not constitute a waiver of the right of the City of Seguin to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the City of Seguin in all details.

B. Final Payment

1. After final inspection and acceptance by the City of Seguin of all work under the Contract, the Contractor shall prepare his requisition for final payment which shall be based upon the careful inspection of each item of work at the applicable unit prices stipulated in the Agreement. The total amount of the final payment due the Contractor under this contract shall be the amount computed as described above less all-previous payments.
2. The City of Seguin before paying the final estimate, shall require the Contractor to furnish releases or receipts from all subcontractors having preformed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor, if the City of Seguin deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
3. Any amount due the City of Seguin under Liquidated Damages shall be deducted from the final payment due the contractor.

C. Payments Subject to Submission of Certificates

Each payment to the Contractor by the City of Seguin shall be made subject to submission by the Contractor or all written certifications required of him and his subcontractors.

D. Withholding Payments

The City of Seguin may withhold from any payment due the Contractor whatever is deemed necessary to protect the City of Seguin, and if so elects, may also withhold any amounts due the Contractor to any subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the City of Seguin and will not require the City of Seguin to determine or adjust any claims or disputes between the Contractor and his subcontractors or material dealers, or to withhold any moneys for their protection unless the City of Seguin elects to do so. The failure or refusal of the City of Seguin to withhold any moneys from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

CHANGES IN THE WORK

- A. The City of Seguin may make changes in the scope of work required to be performed by the Contractor under the Contract without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.

- B. Except for the purpose of affording protection against any emergency endangering health, life, limb or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the City of Seguin authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.

- C. If applicable unit prices are contained in the Agreement, the City of Seguin may order the Contractor to proceed with desired unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase the original total amount of the agreement by more than twenty-five percent (25%) or decrease the original the total amount by eighteen percent (18%) for counties or twenty-five percent (25%) for cities.

- D. Each change order shall include in its final form:
 - 1. A detailed description of the change in the work.
 - 2. The Contractor's proposal (if any) or a confirmed copy thereof.
 - 3. A definite statement as to the resulting change in the contract price and/or time.
 - 4. The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.
 - 5. The procedures as outlined in this Section for a unit price contract also apply in any lump sum contract.

CLAIMS FOR EXTRA COST

- A. If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the City of Seguin, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.

- B. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.

- C. Any discrepancies, which may be discovered between actual conditions and those, represented by the Drawings and maps shall be reported at once to the City of Seguin and work shall not proceed except at the Contractor's risk, until written instructions have been received by him from the City of Seguin.

- D. If, on the basis of the available evidence, the City of Seguin determines that an adjustment of the Contract Price and/or time is justifiable, a change order shall be executed.

TERMINATION, DELAYS, AND LIQUIDATED DAMAGES

A. Right of the City of Seguin to Terminate Contract.

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the City of Seguin may serve written notice upon the Contractor and the Surety of its intention to terminate the contract. The notices shall contain the reasons for such intention to terminate the contract, and unless such violation or delay shall cease and satisfactory arrangement of correction be made within ten days, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the City of Seguin shall immediately serve notice thereof upon the Surety and the Contractor. The Surety shall have the right to take over and perform the contract. Provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the City of Seguin may take over the work and complete the project by bid/contract or by force account at the expense of the Contractor and his Surety shall be liable to the City of Seguin for any excess cost incurred. In such event the City of Seguin may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

B. Liquidated Damages for Delays.

If the work is not completed within the time stipulated in the applicable bid for Lump Sum or Unit Price Contract provided, the Contractor shall pay to the City of Seguin as fixed, agreed, and liquidated damages (it being impossible to determine the actual damages occasioned by the delay) the amount of (\$ SEE SECTION I) for each calendar day of delay, until the work is completed. The Contractor and his sureties shall be liable to the City of Seguin for the amount thereof.

C. Excusable Delays.

The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:

- (1) Any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency:
- (2) Any acts of the City of Seguin:
- (3) Causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the City of Seguin, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.

Provided, however, that the Contractor promptly notifies the City of Seguin within then (10) days in writing of the cause of the delay. Upon receipt of such notification, the City of Seguin shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the City of Seguin shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

ASSIGNMENT OR NOVATION

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the City of Seguin; provided, however, that assignment to banks or other financial institutions may be made without the consent of the City of Seguin. No assignment or notation of this Contract shall be valid unless the assignment or notation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, firms, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

DISPUTES

- A. All disputes arising under this Contract or its interpretation except those disputes covered by **FEDERAL LABOR STANDARDS PROVISIONS** whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall, within ten (10) days of commencement of the dispute, be presented by the Contractor to the City of Seguin for decision. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing then (10) days prior to the receipt of the City of Seguin.
- B. The Contractor shall submit in detail his claim and his proof thereof.
- C. If the Contractor does not agree with any decision of the City of Seguin, he shall in no case allow the dispute to delay the work but shall notify the City of Seguin promptly that he is proceeding with the work under protest.

TECHNICAL SPECIFICATIONS AND DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Drawings or vice versa, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the City of Seguin, without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

SHOP DRAWINGS

- A. All required shop drawings, machinery details, layout drawings, etc. shall be submitted to the Engineer in six (6) copies for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. The Contractor may proceed, only at his own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc. until they are approved and no claim, by the Contractor, for extension of the contract time shall be granted by reason of his failure in this respect.
- B. Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of contract price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.
- C. If a shop drawing is in accordance with the contract or involves only a minor adjustment in the interest of the City of Seguin not involving a change in contract price or time; the engineer may approve the drawing. The approval shall not relieve the Contractor from his responsibility for adherence to the contract or for any error in the drawing.

REQUESTS FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the City of Seguin for any additional information not already in his possession which should be furnished by the City of Seguin under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at this time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provision of this section.

MATERIALS AND WORKMANSHIP

- A. Unless otherwise specifically provided for in the technical specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the technical specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- B. The Contractor shall furnish to the City of Seguin for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for

approval full information concerning all other materials or articles which he proposes to incorporate.

- C. Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- D. Materials specified by reference to the number or symbol of a specific standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in the technical specifications shall have full force and effect as though printed therein.
- E. The City of Seguin may require the Contractor to dismiss from the work such employee or employees as the City of Seguin or the Engineer may deem incompetent, or careless, or insubordinate.

SAMPLES, CERTIFICATES AND TESTS

- A. The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the contract documents or required by the Engineer, promptly after award of the contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.
- B. Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the Engineer in making a prompt decision regarding the acceptability of the sample. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.
- C. Approval of any materials shall be general only and shall not constitute a waiver of the City of Seguin's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.
- D. All testing of materials required under these specifications shall be performed by an approved agency for testing materials. The Contractor shall make the nomination of the laboratory and the payment for such services. The Contractor will pay for any retest required because of failure of the initial test.

PERMITS AND CODES

- A. The Contractor shall give all notices required by and comply with all applicable laws, ordinances, and codes of the local Governments. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the drawings and technical specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the City of Seguin. Where the requirements of the drawings and technical specifications fail to comply with such applicable ordinances or codes, the City of Seguin will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the drawings and technical specifications), the Contractor shall remove such work without cost to the City of Seguin.

- B. The Contractor shall at his own expense, secure and pay for all permits for street pavement, sidewalks, shed, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies.
- C. The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the improvements contained in this Contract.

CARE OF WORK

- A. The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.
- B. The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.
- C. In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the City of Seguin is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the City of Seguin.
- D. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed),

adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.

- E. The Contractor shall shore up, brace, underpin, secure, and protect as maybe necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements included in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the City of Seguin from any damages on account settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the City of Seguin may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

ACCIDENT PREVENTION

- A. No laborer or mechanic employed in the performance of this Contract shall be required to work in surroundings or under working conditions, which are unsanitary, hazardous, or dangerous to his health or safety, are determined under construction safety and health standards promulgated by the Secretary of Labor.
- B. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work.
- C. The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the City of Seguin with reports concerning these matters.
- D. The Contractor shall indemnify and save harmless the City of Seguin from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.
- E. The Contractor shall provide trench protection for all trenches in an excess of a depth of five (5) feet, in the manner specified in the technical specifications and drawings.
- F. The Contractor shall at all times conduct his work in such a manner as to insure the least possible inconvenience to vehicular and pedestrian traffic. At the close of the work each day, all streets where possible in the opinion of the City of Seguin, shall be opened to the public in order that persons living in the area may have access to their homes or businesses by the use of streets. Barricades, warning signs, and necessary lighting shall be provided to the satisfaction of the City of Seguin at the expense of the Contractor.

SANITARY FACILITIES

The Contractor shall furnish, install and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe

and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

USE OF PREMISES

- A. The Contractor shall confine his equipment, storage of materials, and construction operations to the contract limits as shown on the drawings and as prescribed by ordinances or permits, or as may be desired by the City of Seguin, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- B. The Contractor shall comply with all reasonable instructions of the City of Seguin and all existing state and local regulations regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for work, and put the whole site of the work and public rights of way in a neat and clean condition.

INSPECTION

- A. All materials and workmanship shall be subject to inspection, examination, or test by the City of Seguin and Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction occurs. The City of Seguin shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the City of Seguin may be contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any Monies which may be due the Contractor, without prejudice to any other rights or remedies of the City of Seguin.
- B. The Contractor shall furnish promptly all materials reasonably necessary for any tests, which may be required. All tests by the City of Seguin will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the technical specifications.
- C. The Contractor shall notify the City of Seguin sufficiently in advance of back filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the City of Seguin, the Contractor shall uncover for inspection and recover such facilities at his own expense, when so requested by the City of Seguin.

- D. Should it be considered necessary or advisable by the City of Seguin at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or his subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacements, shall be allowed the Contractor and he shall, in addition, if completion of the work of the entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.
- E. Inspection of materials and appurtenances to be incorporated in the improvements included in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the technical specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.
- F. Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the City of Seguin or its agents shall relieve the Contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

REVIEW BY CITY OF SEGUIN

The City of Seguin and its authorized representatives and agents shall have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however that all instructions and approval with respect to the work will be given to the Contractor only by the City of Seguin through its authorized representatives or agents.

FINAL INSPECTION

When the improvements included in this Contract are substantially completed, the Contractor shall notify the City of Seguin in writing that the work will be ready for final inspection on a definite date, which shall be stated in the notice. The City of Seguin will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

DEDUCTION FOR UNCORRECTED WORK

If the City of Seguin deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the City of Seguin and subject to settlement, in case of dispute, as herein provided.

INSURANCE

The Contractor shall not commence work under this contract until he has obtained all the insurance required as described in Attachment A.

The Vendor will procure and maintain at its expense insurance with insurance companies authorized to do business in the State of Texas, covering all operations under this Agreement, whether performed by the Vendor or its agents, subcontractors or employees. Before commencing the work the Vendor will furnish to the City an original certificate or certificates in a form satisfactory to the City.

The Vendor shall not cause any insurance policy to be cancelled or permit it to lapse, and all insurance policies shall include an endorsement to the effect that the insurance policy shall not be subject to cancellation or to a reduction in the required limits of liability or amounts of insurance until notice has been mailed to the City of Seguin, ATTN: Purchasing Manager, P.O. Box 591, Seguin, TX 78156-0591. The notice shall state the date when such cancellation or reduction shall be effective. The cancellation date shall not be less than thirty (30) days after such notice.

Commercial general liability and motor vehicle insurance will be written with the City as an additional insured and will be endorsed to provide a waiver of the carrier's right of subrogation against the City. The types and amounts of insurance required are set forth in Attachment A.

WARRANTY OF WORKMANSHIP AND MATERIALS

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements included in this Contract by the City of Seguin or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of 12 months from the date of final acceptance of the work.

COMPLIANCE WITH AIR AND WATER ACTS

In compliance with the Clean Air Act, as amended, 41 U.S.C. Sec. 7401 et. seq., and the regulations of the Environmental Protection Agency with respect thereto, the Contractor agrees that:

1. Any facility to be utilized in the performance of this contract or any subcontract shall not be a facility listed on the EPA List of Violating Facilities pursuant to 40 CFR 15.20.
2. He will comply with all requirements of Section 114 of the Clean Air Act, as amended.

EQUAL EMPLOYMENT OPPORTUNITY

- A. The Contractor will not discriminate against any employee or the applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such

action shall include, but not be limited to the following: employment, promotion, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms or compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Owner.

- B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- C. The Contractor will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this contract so that such provisions will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.
- D. The Contractor shall take affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions.
- E. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts.
- F. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents.

AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as the following: employment, promotion, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

NON SEGREGATED FACILITIES

The Contractor certifies that he does not and will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not and will not permit his employees any segregated facilities at any of his establishments, or permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. As used in this paragraph the term "segregated facilities" means any waiting rooms, work areas, rest rooms and washrooms, restaurants and other eating areas, time clocks, locker room and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise.

JOB OFFICES

- A. The Contractor and his subcontractors may maintain such office and storage facilities on the site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the site. The City of Seguin shall be consulted with regard to locations.
- B. Upon completion of the improvements, or as directed by the City of Seguin, the Contractors shall remove all such temporary structures and facilities from the site, and leave the site of the work in the condition required by the Contract.

PARTIAL USE OF SITE IMPROVEMENTS

The City of Seguin may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:

- A. The use of such sections of the improvements shall in no way impede the completion of the remainder of the work by the Contractor.
- B. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
- C. The period of guarantee stipulated in the Section 132 hereof shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

CONTRACT DOCUMENTS AND DRAWINGS

The City of Seguin will furnish the Contractor without charge 2 copies of the Contract Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

CONTRACT PERIOD

The work to be performed under this contract shall commence within the time stipulated by the City of Seguin in the Notice to Proceed, and shall be fully completed within 180 calendar days thereafter.

LIQUIDATED DAMAGES

Failure to Complete on Time-The time of completion is the essence of the contract. For each calendar day that any work shall remain uncompleted after the time specified in the proposal and the contract, or the increased time granted by the Owner, or as automatically increased by additional work or materials ordered after the contract is signed, the sum per day given in the following schedule will not be deducted from the monies due the Contractor, not as a penalty but as liquidated damages.

AMOUNT OF CONTRACT	AMOUNT OF LIQUIDATED DAMAGES PER DAY
Less than \$500,000	\$ 250.00
\$500,000 to \$750,000	\$ 300.00
\$750,000 to \$1,000,000	\$ 400.00
Over \$1,000,000	\$ 500.00

This sum of money thus deducted for such delay, failure or non-completion is not to be considered as a penalty, but it shall be deemed, taken and treated as reasonable liquidated damages, since it would be impractical and extremely difficult to fix the actual damages and the Owner may withhold from the Contractor's compensation such sum as liquidated damages.

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

2 **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

Yes No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

Yes No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

Yes No

D. Describe each employment or business relationship with the local government officer named in this section.

4

Signature of person doing business with the governmental entity

Date

GENERAL CONDITIONS OF BIDDING

These general conditions apply to any procurement of products or services by the City of Seguin. Failure to comply with these General Conditions of Bidding may result in the bid being disqualified.

1. DEFINITION OF TERMS

A. "Bid documents" mean the entire packet of documents provided to bidders, including, but not limited to the General Conditions of Bidding, General and/or Technical Specifications, Special and Supplementary Conditions, Information to Bidders, Bid Form(s) and any Addendum.

B. "Bidder" means a person or firm submitting a bid, proposal, or quote to provide equipment, material, and/or services necessary in the performance of these specifications, and competing for award of a contract.

C. "Bid" or "Proposal" means an offer to perform or provide the requirements specified herein. "Furnish" or "provide" means to supply, equip, and deliver the specified equipment, material and/or services to the Purchaser.

D. "Formal Bid" is a formally advertised solicitation for acquiring goods, services, and construction that requires a public opening of sealed bids or proposals, generally \$50,000 or more.

E. "Informal Bid" is a competitive bid or price quotation for supplies or services under \$50,000 that is conveyed by letter, telephone, or other means and does not require a sealed bid, public opening, or public reading of bids.

F. "City", "Purchaser", or "Owner" shall refer to the City of Seguin, PO Box 591, Seguin, Texas 78156-0591.

G. "Contract" means the contract awarded pursuant to this solicitation.

H. "Contractor" or "Vendor" means the bidder to which a contract award has been made by the City.

I. "Purchase Order" means the document issued by the City that creates a legal binding contract between the City and the Contractor and authorizes the Contractor to ship goods pursuant to the contract.

2. SUBMISSION OF BIDS

A. All bids must be on blank forms furnished by the Purchasing Department and must be written in ink or typed. Pencil quotations will not be considered. Proposals must be submitted on the forms or in the format called for in specifications. Each must be executed personally by the bidder, or if executed by an agent, a power of attorney or other evidence of his authority to act on behalf of the bidder must accompany the bid. If the bidder is a corporation, the certificate of corporate bidder must be executed under the corporate seal by some duly authorized officer of the corporation other than the officers signing the bid. By execution of the bid, the bidder accepts all general and special conditions of the contract and the specifications.

B. Formal sealed bids and proposals must be received at the date, time, and place specified in the bid document packaged in a sealed envelope (8 1/2" x 11" minimum) clearly marked with the bid or project name, bid number, and date/time of opening, unless otherwise specified. An early postmark will not suffice. Bids and proposals will be publicly opened and read followed by evaluation and award at a later

date. **Formal bids and proposals (\$50,000 or higher) may NOT be faxed or submitted via e-mail.**

C. Informal bids are due at the date, time, and place stated in the bid document. **Informal bids (less than \$50,000) may be faxed or submitted via e-mail.**

D. Each Bidder agrees that its price will remain firm and subject to acceptance by the City for a period of sixty (60) calendar days from the bid opening date. The prices quoted in the bid shall not be subject to escalation except where otherwise clearly indicated by the Bidder or by the City in bid documents. The basis for the escalation shall be clearly indicated in either case.

E. All information required by the bid documents will be furnished. The bidder will print or type its name, in ink, and manually sign the bid sheet. The bid sheet, with original signatures, must be submitted.

F. All prices shall be quoted as required in the specifications. Unit prices will be shown when called for on the bid sheet, and where there is a conflict between the unit price show and the total price shown, the unit price will govern.

G. No change in price will be considered after bids have been opened. The City reserves the right to negotiate prices as submitted by proposal as allowed by state statute.

H. In case of ambiguity or lack of clarity in stating prices in the bid, Purchaser reserves the right to adopt the price written in words or reject the bid. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be construed in the favor of the City.

I. If this bid is altered, any erasure or alteration of figures on the item on which the erasure or alteration is made must be initialed by signee of this bid.

J. The City reserves the right to extend the bid closing time and date. Notification will be made by addendum.

K. The City reserves the right to increase or decrease the quantity specified, unless the bidder specified otherwise.

3. WITHDRAWAL OF BIDS

A. A Bidder may withdraw a bid before Council acceptance of the bid without prejudice to himself by a written request addressed to the Purchasing Manager.

B. If there is an honest mistake in the bid, due to clerical errors, and the bidder calls attention thereto promptly, the bidder will not be bound by the bid.

C. When the mistake was a result of a bidder's negligence, and City has no knowledge of the mistake when bids were opened, and awarded a contract based on the bid, bidder will not be released and shall be bound by the bid.

D. If a mistake is not discoverable and verifiable by the City, bidder's incorrect interpretation of Engineering specifications set forth in a construction contract will not release him from his obligations, once a contract has been awarded by City Council and bidder has received notice of such award.

4. GENERAL CONDITIONS

Bidders will submit their bids or proposals upon the following express conditions:

A. Bidders shall thoroughly examine all drawings, specifications, plans, schedules, instructions, and all other contract documents pertaining to this bid.

B. Bidders shall make all investigations necessary to thoroughly inform themselves regarding plant and facilities for delivery of materials or equipment as required by the bid conditions. No plea of ignorance by the Bidder of conditions that exist or that may hereafter exist as a result of failure or omission on the part of the Bidder to make the necessary examinations and investigations will be accepted as a basis for varying the requirements of the City or the compensation to the vendor.

C. If any bidder is in doubt as to the true meaning of the specifications, other bid documents, or any part thereof, they may submit a written request for clarification to the Purchasing Manager. A request for clarification should be submitted by the deadline, if any, indicated in the specifications.

D. All materials, equipment, supplies which are new, non-standard to the City of Seguin, and/or items which are to be listed as an alternate or exception must be pre-approved PRIOR to placing them on a bid proposal. In order to fairly evaluate all bids, sufficient time requirements for possible field testing or demonstrations should be allowed.

E. Bidders are advised that City contracts are subject to all legal requirements under Local, State and Federal statutes, ordinances, and regulations. Any bid, after being opened, becomes subject to the Public Information Act, Government Code Chapter 552; therefore bidders must clearly indicate any portion of the submitted bid that the bidder claims is not subject to public inspection under the Public Information Act.

F. No officer or employee of the City shall have a financial interest, direct or indirect, in any contract with the City, or shall benefit financially, directly or indirectly, in the sale to the City of any materials, supplies or services, except on behalf of the City as an officer or employee.

G. The City of Seguin is committed to maintaining fair and open competition as required by local, state, and federal laws and statutes. Every effort is made to maintain the highest level of ethical conduct in every aspect of the procurement process. Sharp business practices or high-pressure tactics will not be tolerated. Qualification and selection of vendors is based on those vendors who share the same high standards of ethical conduct.

5. DESCRIPTION OF GOODS

A. Any catalog or manufacturer's reference in this bid is merely descriptive, and not restrictive, unless otherwise noted, and is used only to indicate type and quality of material. Any such references are made a part of these contract documents as if incorporated verbatim herein.

B. The term "Or Equal", if used, is intended to allow substitution of a brand which has all the essential performance, features, reliability, and other salient characteristics as the brand name and model stated in the item description. "Or Equal" is intended to establish a level of quality and function and is not to be interpreted as a preference for a particular brand. Other brands meeting these minimum requirements will be accepted. Bid submitted on an "Or Equal" item must clearly identify the proposed product, the quantity of the product, model, and type, as applicable.

C. Alternate bids will not be considered unless expressly authorized by the bid documents.

6. PREPARATION OF BID

Bidders will prepare bids in accordance with the following:

A. Specifications are written to encourage competition. The specifications herein shall be the basis of comparison between bidders. There is no intent to discriminate against any supplier or vendor but rather, to set a definite standard of performance. Bidders are required to quote services and/or equipment that will meet or exceed the minimum or maximum specifications herein.

B. Any omission in the specifications of any minor requirement necessary to make each unit complete and functional shall not relieve the Supplier of responsibility to furnish any material or equipment necessary.

C. The City reserves the right to request clarification to assist in evaluating the bidder's response when the bid response is unclear with respect to product pricing, packaging or other factors. The information provided is not intended to change the bid response in any fashion and such information must be provided within two days from request.

D. Bidders shall not include federal taxes nor State of Texas limited sales, excise and use taxes in bid prices since the City of Seguin is exempt from payment of such taxes under section 151.309 of the Texas Tax Code.

E. By submitting a bid, each bidder certifies that it is a duly qualified, capable, and bondable business entity, that it is not in or contemplating bankruptcy or receivership and that it is not currently delinquent with respect to payment of taxes assessed by any political subdivision.

F. By submitting a bid, each bidder certifies that it does not currently owe any money to the City.

G. The City is exempt from the Federal Excise and Transportation Tax, and the Limited Sales and Use Tax. Unless the bid form or specification specifically indicates otherwise, the price bid must be net exclusive of the above mentioned taxes, and will be so construed.

H. Prompt payment discounts will not be considered in determining low bids and making awards.

7. BID DEPOSIT

No bid deposit will be expected of bidder UNLESS specifications expressly provide otherwise. If a bid bond is required, the submitted bond may be in the form of a cashier's check, cash, a certified check made payable to the City of Seguin or an original bond submitted in the form required by the City in the Bid Documents. The bond shall be executed by a surety authorized by the Texas State Insurance Commission and must be signed by both the surety and the bidder. Should a bid deposit be presented in a form not acceptable to the City, the bid will not be considered.

8. EXCEPTIONS

If Bidder takes exceptions to any provisions of the specifications, the exceptions must be specifically and clearly identified by section in Bidder's bid, and Bidder's proposed alternative must also be provided in the bid. Bidders cannot take a 'blanket exception' to the entire bid document.

9. ADDENDA

Any clarification or interpretation of the bid, if made, will be made only by written addendum issued through the Purchasing Department and signed by the City of Seguin Purchasing Manager. A copy of such Addendum will be mailed or delivered to each person receiving bids. Addenda to the bid documents may be issued in response to a request for clarification or objection, or for any other reason the City considers advisable. Once issued, an addendum becomes a part of the bid documents. All addenda can be viewed and downloaded at the City's website: www.seguintexas.gov. It is the bidder's responsibility to check this site to determine if the City has issued any addenda. The City will not be

responsible for any other explanation or interpretation of the bid made or given prior to the award of the contract.

10. REJECTION OF BIDS

A. The City of Seguin reserves the right to accept or reject any or all bids, and to waive any informalities and technicalities. The City of Seguin shall consider all factors it believes to be relevant in selecting the offer that provides the best value for the City including, but not limited to, the offered price. Causes for bidder disqualification and rejection of bids may include, but shall not be limited to:

- 1.** Bidder's current inability to satisfactorily perform the work or service, or the bidder's previous failure to properly and timely perform its obligations under a contract with the City. Purchaser may make such investigation as is deemed necessary to determine the ability of the Bidder to provide the equipment, material, and/or services as required by this specification and to determine the adequacy of the proposed equipment, material, and/or services. The Bidder shall furnish, upon request, all such data and information requested for this purpose. The information provided is not intended to change the bid response in any fashion and such information must be provided within **two** days from request.
- 2.** Bidder's current violation of any City ordinance.
- 3.** Bidder's misstatement or concealment of any material fact in the bid.
- 4.** Bid or proposal's nonconformance to law or the requirements of the bid specifications.
- 5.** Failure to use or properly complete the bid/proposal form furnished by the City of Seguin.
- 6.** Lack of signature by an authorized representative on the proposal form.
- 7.** Alteration of bid form.
- 8.** Evidence of collusion among proposers.
- 9.** Omission of proposal guarantee (if required).
- 10.** In the event that a bidder is, or subsequently becomes, delinquent in the payment of his, her or its City taxes, including state and local sales taxes, or any other City financial obligation, such fact shall constitute grounds for rejection of the bid, or if awarded the bid, for cancellation of the contract.

11. AWARD

A. The City reserves the right to award a bid or contract to the lowest responsible bidder or to the bidder who provides goods or services at the "best value" for the City. Factors to be considered in the evaluation of the bids are price, quality, reputation and experience of Bidder, past relationship with City, long term cost, safety record, operating history of equipment, conformance to specifications, delivery, and other factors as deemed appropriate by the Purchaser.

B. The City reserves the right to reject or accept all or any combination of bids deemed advantageous to the City.

C. The City reserves the right to reject or accept all or any combination of base bid plus alternative bids when alternate bids are called for in bid documents, subject to available funding.

D. Contractor is an independent contractor. Award of a contract does not create a joint venture between the Contractor and the City.

12. CONTRACT

A. City's Bid Documents combined with the Vendor's response (bid or proposal) submitted to and accepted by the City, constitutes a contract between the City of Seguin and the selected vendor at the time the Seguin City Council awards the contract to such vendor.

B. No further documentation is required, although the contracting parties may supplement the

contract with further documentation. By submitting a bid or proposal, the vendor agrees to comply with the Terms and Conditions and other requirements set forth in the Bid Documents and to be further bound to the representations and information the vendor provides in the response.

C. Acceptance of bidder's offer may be in the form of a "Notice of Award", a Purchase Order (P.O.) or a "Contract".

13. RESERVATIONS

THE CITY EXPRESSLY RESERVES THE RIGHT TO ACCEPT, REJECT OR CANCEL ANY AND ALL BIDS and:

A. Waive any defect, irregularity, or informality in any bid or bidding procedure;

B. Reissue a bid invitation or proposal;

C. Procure any item by other allowable means;

D. Waive minor deviations from the specifications when a bid meets the intent of the specifications and consider such bid if it is determined the bid's total cost is lower, the purpose for the bid is improved or not impaired, the bid amounts to the best value for the City, and/or the waiver otherwise results in a measurable benefit on behalf of the City.

E. Extend any contract when most advantageous to the City as provided by original contract conditions.

14. WARRANTIES

A. WARRANTY FOR PRODUCT: The Contractor warrants to the City that all goods delivered will conform to the specifications, drawings, or other descriptions furnished or incorporated by reference, will be of merchantable quality, good workmanship, free from defects, and fit for all purposes specified in this contract. The Contractor shall not Limit or exclude any implied warranties, and any attempt to do so shall render this contract voidable at the option of the City. The Contractor will provide copies of applicable warranties or guarantees to the Purchasing Manager. The City may return goods not meeting applicable warranties to the Contractor at the Contractor's expense.

B. WARRANTY FOR PRICE: The City will pay the price for goods specified by the Contractor's bid. The Contractor warrants its price to be no higher than the Contractor's current prices or charges on orders by others for products or services of the kind and specification covered by this bid contract for similar quantities under similar or like conditions and methods of purchase. In the event Contractor breaches this warranty, the prices or charges shall be reduced to Contractor's current prices or charges on orders by others, or in the alternative, City may cancel this contract without liability to Contractor for breach or Contractor's actual expense.

C. SAFETY WARRANTY: Contractor warrants that the goods sold to the City conform to the standards promulgated by the U.S. Department of Labor under the Occupational Safety and Health Act (OSHA) as amended. In the event the goods do not so conform, the Contractor must correct or replace the goods at the Contractor's expense. If the Contractor fails to do so within a reasonable time, the City, at its discretion, may cause the correction to be made at the Contractor's expense, or may return the goods at the Contractor's expense and terminate this contract.

15. PROTESTS

A. The City Council is the final authority on issues relating to this contract. The Purchasing Manager is the City's representative in the award and administration of this contract, and will issue and receive

all documents, notices, and correspondence.

B. Any protest to the City's consideration of any bid must be submitted in writing and delivered to the City of Seguin, ATTN: Purchasing Manager.

C. The protest may be delivered in person to the Purchasing office located at 816 Fred Byrd Drive, Seguin, Texas, or by certified mail, return receipt requested, to the following address: City of Seguin, Purchasing Department, ATTN: Purchasing Manager, PO Box 591, Seguin, Texas 78156-0591.

D. The written protest must include the following information before it may be considered by the City:

- 1.** Name, mailing address, and business phone number of the protesting party;
- 2.** Identification of the bid or proposal being protested;
- 3.** A precise and concise statement of the reason/reasons for the protest which should provide enough factual information to enable the City to determine the basis of the protest;
- 4.** Any documentation or other evidence supporting the protest.

E. The Purchasing Department, in conjunction with the department responsible for the bid or proposal solicitation, will attempt to resolve the protest, including, at the City's option, meeting with the protesting party. If the protest is successfully resolved by mutual agreement, written verification of the resolution of each ground addressed in the protest will be provided to the City Manager. If the Purchasing Department is unable to resolve the protest, the protesting party may request the protest be reviewed and resolved by the City Manager.

F. A request for the City Manager's review must be in writing and received by the Purchasing Department within three (3) business days from the date the Purchasing Department informs the protesting party the protest cannot be resolved. The request for review must be delivered in person to the Purchasing Department at the address stated above or by certified mail, return receipt requested, to the mailing address stated above. If the protesting party fails or refuses to request a review by the City Manager within the three (3) days, the protest is deemed finalized and no further review by the City is required. Applicable documentation and other information applying to the protest may be submitted by the protesting party to the Purchasing Department before review by the City Manager. If the protesting party requests a review by the City Manager, such documentation will be forwarded to the City Manager for consideration. The City Manager may likewise notify the protesting party or any City department to provide additional information.

G. The decision reached by the City Manager will be final, but the protesting party may still appear before the City Council during the hearing of citizens' session.

16. SHIPMENT & DELIVERY

A. Bidder is to quote its lowest and best price F.O.B. Destination on each item to shipping location in Seguin, Texas unless otherwise specified in the bid documents. Pricing shall include packaging, transportation, unloading, and any trade and cash discounts, which may be taken if earned.

B. The bidder certifies all materials, parts, and equipment supplied or represented in response to this bid shall be new and unused unless noted elsewhere in the bid documents.

C. The title and risk of loss of the goods will not pass to the City until receipt and acceptance takes place at the FOB point. The City department receiving deliveries or issuing purchase orders under this contract will inspect and accept any and all deliveries made and may reject those items which are

damaged or which do not conform to the specifications. The Contractor is responsible for the proper labeling, packing, and delivery to final destination, including replacement of rejected deliveries at no additional cost.

D. Delivery dates pertaining to this specification must be clearly stated in the bid form where required. The bidder will clearly state in the bid the time required for delivery upon receipt of contract or purchase order. Failure to specify delivery date or state unrealistically short or long delivery dates may cause the bid to be disqualified. Proposed delivery time must be specific and such phrases “as required”, “as soon as possible”, or “prompt” may result in disqualification of the bid.

E. Vendor must keep the City advised as to the status of the delivery. When delivery delay can be foreseen, the Vendor shall give prior notice to the City.

F. Default in promised delivery, without acceptable reasons, or failure to meet specifications without remedy shall cause the City to purchase the goods elsewhere, and charge any increase in cost and handling to the defaulting vendor. This does not limit any other remedies to the City for damage entitled under the Uniform Commercial Code.

17. REJECTIONS

A. Delivered articles not in accordance with samples and specifications must be removed by the bidder at his expense. All disputes concerning quality of supplies delivered under this proposal will be determined by the City’s Purchasing Manager or his/her designated representative.

B. All articles enumerated in the proposal shall be subject to inspection or delivery by an officer designated for the purpose and if found inferior to the quality called for, or not equal in value to the department’s samples, or deficient in weight, measurements, workmanship or otherwise, this fact shall be reported to the Purchasing Manager who shall have the right to reject the whole or any part of the same.

18. PAYMENTS

A. Payment of invoices by the City shall be made thirty (30) days after receipt and acceptance of all equipment or performance of services covered by each purchase order or following the receipt of an accurate invoice, whichever is later, in compliance with state statute. Bidder shall state his bid in accordance with the standard payment terms and conditions of the City of Seguin of Net 30 days. All bids must be stated in terms of dollars and cents, the bidder’s lowest, best, and final price.

B. Invoices submitted or otherwise used pursuant to the bid awarded under this IFB shall be presented to the City in the following form and content:

1. Each invoice must reference the City of Seguin contract, agreement, or P.O. number;
2. Only one contract, agreement, or project shall be billed on a particular invoice;
3. Each invoice must have a billing or invoice number and an Invoice Total.

C. The invoice requirements stated herein shall not be read to disallow or exclude other information that may be otherwise required or requested by the City. Such information required herein must be submitted only on an invoice and not in any other non-invoice form or document.

19. ASSIGNMENT

No right or interest in the contract shall be assigned, nor delegation of any obligation made by Vendor without the written permission of the City. Any attempted assignment or delegation by Vendor shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

20. WAIVER

No claim or right arising out of a breach of this contract can be discharged in whole or in part by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party.

21. FORCE MAJEURE

In the event that the performance by either party of any of its obligations under this contract is interrupted or delayed by events outside of their control such as acts of God, war, riot, or civil commotion, then the party is excused from such performance for the period of time reasonably necessary to remedy the effects of the events.

22. GRATUITIES

The City may, by written notice to the Vendor, cancel this contract without liability to the City if it is determined by the City that gratuities have been offered to any officer or employee of the City with a view toward securing a contract, securing favorable treatment with respect to the awarding, amending, or the making of any determinations in respect to the performance of such a contract. In the event City, as set forth in this paragraph, cancels this contract the City shall be entitled to recover from the Vendor all additional costs incurred by City as a result of the cancellation.

23. TERMINATION

A. DEFAULT: Failure by either party to perform any of its provisions will constitute a default and breach of contract, in which case, the other party may require corrective action within 10 days from the date the defaulting party receives written notice citing the nature of the breach. Failure of the defaulting party to take corrective action or to provide a satisfactory written reply excusing such failure within the prescribed 10 days will authorize the other party to terminate this agreement by written notice.

B. CONVENIENCE: The City reserves the right to terminate this contract upon 30 days written notice for any reason deemed by the City Council to serve the public interest. Termination for convenience will not be made when termination is authorized under any other provisions of this contract. In the event of such termination the City will pay the Contractor those costs directly attributable to supplies obtained in compliance with the contract prior to termination. Provided, however, that no costs will be paid to the Contractor which are recoverable in the normal course of doing business. The City is not liable for loss of any profits anticipated to be made hereunder.

C. FUNDING: The City retains the right to terminate this contract at the expiration of each of City's budget periods. This contract is conditioned on a best efforts attempt by City to obtain and appropriate funds for payment of any debt due by City herein.

D. FUNDING OUT: The State of Texas statutes prohibit the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved. Should, during the term of this contract, funds be withdrawn by the funding authority, a Force Majeur shall be deemed to exist, and this contract may be terminated without penalty or recourse by either party.

24. ENTIRETY OF AGREEMENT/AMENDMENTS

This represents the entire agreement between the parties relating to the subject matter of this contract. Any prior agreements, promises, negotiations, or representations between the parties are not binding unless included in this contract. All amendments to this contract must be in writing and executed by both parties.

25. SEVERABILITY

In case any one or more of the provisions contained in this contract is held to be invalid or unenforceable in any respect by a court of proper jurisdiction, the invalidity, illegality or unenforceability will not affect any other provision of this contract, and this contract will be construed as if the invalid or unenforceable provision was not contained herein.

26. INSURANCE

If required, specific insurance provisions will be included in bid specifications. An original, certified copy of an insurance certificate must be submitted within ten days from request. The successful vendor will be required to maintain, at all times during performance of the contract, the insurance detailed in bid specifications. Failure to provide this document may result in disqualification of bid.

27. INDEMNITY

The Vendor will indemnify, hold harmless and defend the City and its employees, agents, officers and servants from any and all lawsuits, claims, demands and causes of action of any kind arising from the negligent or intentional acts errors or omissions of the Vendor, its officers, employees or agents. This will include, but not be limited to, the amounts of judgments, penalties, interest, court costs, reasonable legal fees, and all other expenses incurred by the City arising in favor of any party, including the amounts of any damages or awards resulting from claims demands and causes of action for personal injuries, death or damages to property alleged or actual infringement of patents, copyrights, and trademarks and without limitation by enumeration, all other claims, demands, or causes of action of every character occurring, resulting, or arising from any negligent or intentional wrongful act, error or omission of the Vendor or its agents or employees. This obligation by the Vendor will not be limited by reason of the specification of any particular insurance coverage required under this Agreement.

28. PATENTS

The bidder agrees to indemnify and save harmless the City, the Purchasing Manager, and his/her assistants from all suits and actions of every nature and description brought against it or any of them, for or on account of the use of patented appliances, products or processes, and he shall pay all royalties and charges which are legal and equitable. Evidence of such payment or satisfaction shall be submitted, upon request of the Purchasing Manager, as a necessary requirement in connection with the final estimate for payment in which such patented appliances, products or processes are used.

29. CONFIDENTIALITY

The City of Seguin is governed by the Public Information Act ("The Act"), Chapter 552 of the Texas Government Code. All information submitted by prospective bidders during the bidding process is subject to release under The Act. On each page where proprietary information appears, information considered confidential must be labeled. Failure to so label the proprietary or confidential information shall be considered as a waiver of any confidentiality rights or interests. Disclosure of requested information will be determined in accordance with the Texas Public Information Act. You are not encouraged to submit such data and information unless it is absolutely required to understand and evaluate your response. If such data and information is submitted, you agree that the City shall not be liable for disclosure of such data and information and hereby release the City from any liability. In the event a request for public information is filed with the City which involves information labeled as confidential, you will be notified by the City of the request so that you will have an opportunity to contact the Attorney General as to why such information should not be released.

30. ANTI-LOBBYING PROVISION

Bidders are prohibited from directly or indirectly communicating with City Council members regarding the Bidder's qualifications or any other matter related to the eventual award of a contract for the

services requested under this Invitation for Bids. Bidders are prohibited from contacting City staff members regarding their qualifications or the award of a contract, unless in response to an inquiry from a staff member. Any violation will result in immediate disqualification of the Bidder from the selection process.

Upon issuance of the Invitation for Bids, all bidder communications and requests for clarification or objections shall be directed in writing to the Purchasing Manager for response, determination and dissemination to all bidders. Any communication by bidders or their representatives toward other city officers or employees regarding this Invitation for Bids or the award of a contract are prohibited and will constitute grounds for disqualification of a proponent. A lobbyist or a proponent or any of their agents may not do any act or refrain from any act for the express purpose and intent of placing any City official under personal obligation to the lobbyist or proponent.

31. CONFLICT OF INTEREST

A person or vendor seeking to contract with the City must file a Conflict of Interest Questionnaire (CIQ) if the person has a business relationship with the City, and either: has a business relationship with a city official or a city official's family member; or has given a gift worth more than \$250 to a city official or city official's family member within the previous 12-month period. A vendor required to file a CIQ must do so with the City Secretary within seven business days of: (1) beginning contract discussions with the city; (2) submitting to the City an application, response to a request for proposals or bid; or (3) learning of the existence of the applicable business relationship. Vendors should see Texas Local Government Code Chapter 176 in an effort to determine its applicability. The conflict of interest questionnaire form is included herein and is available from the Texas Ethics Commission at www.ethics.state.tx.us.

32. LOCAL VENDOR PREFERENCE POLICY

Texas Local Government Code, Sections 271.905(a) and 271.9051 allow the City to consider a vendor's principal place of business in awarding certain contracts by way of competitive bids. This consideration is in effect to promote economic development opportunities through the contract by employing local residents and increasing tax revenue. The City of Seguin applies a local vendor preference to bids in compliance with state statute.

33. NOTICES

All notices called for or required by this agreement will be addressed to Purchasing Manager, City of Seguin, 205 N. River Street, Seguin, Texas 78155, or such other party or address as either party designates in writing, by certified mail, postage pre-paid, or by hand delivery, and will be effective five days after mailing.

34. QUESTIONS

Questions regarding interpretation of specifications, bids, bid results or bid awards should be directed in writing to the Buyer or Purchasing Technician indicated in the General and/or Technical Specifications, or the Purchasing Manager, twood@seguintexas.gov and be referenced by bid number.

ATTACHMENT A

(Revised 2/18/14)

INSURANCE

SECTION A. Prior to the approval of this contract by the City, CONTRACTOR shall furnish a completed Insurance Certificate to the Purchasing office. The certificate shall be completed by an agent authorized to bind the named underwriter(s) to the coverages, limits, and termination provisions shown thereon, and shall furnish and contain all required information referenced or indicated thereon. CITY SHALL HAVE NO DUTY TO PAY OR PERFORM UNDER THIS CONTRACT UNTIL SUCH CERTIFICATE IS RECEIVED BY THE CITY OF SEGUIN'S PURCHASING DEPARTMENT, and no officer or employee of the City shall have authority to waive this requirement.

INSURANCE COVERAGE REQUIRED

SECTION B. CITY reserves the right to review the insurance requirements of this section during the effective period of the contract and to adjust insurance coverages and their limits when deemed necessary and prudent by CITY, based upon changes in statutory law, court decisions, or the claims history of the industry as well as the CONTRACTOR.

SECTION C. Subject to CONTRACTOR'S right to maintain reasonable deductibles in such amounts as are approved by CITY, CONTRACTOR shall obtain and maintain in full force and effect for the duration of this contract, and any extension hereof, at CONTRACTOR'S sole expense, insurance coverage written by companies approved by the State of Texas and acceptable to CITY, in the following type(s) and amount(s):

<u>TYPE</u>	<u>AMOUNT</u>
1. Workers' Compensation and Employer's Liability	Statutory
NOTE: For building or construction projects, and services provided at City-owned facilities, the successful Contractor shall meet the minimum requirements defined in the Texas Workers' Compensation Commission Rule 28 TAC §110.110 which follows this insurance attachment.	
2. Commercial General (public) Liability including coverage for the following:	
a. Premises operations	Combined single limit for bodily injury and property damage of \$500,000 per occurrence or its equivalent with an aggregate limit of \$1,000,000.
b. Independent contractors	
c. Products/completed operations	
d. Personal injury	
e. Advertising injury	
f. Contractual liability	
g. Medical payments	
h. Professional liability*	
i. Underground hazard*	
j. Explosion and collapse hazard*	
k. Liquor liability*	
l. Fire legal liability*	
m. City's property in Contractor's* care, custody, or control	
n. Asbestos specific liability*	
* Not required for this contract	
3. Comprehensive Automobile Liability insurance, including coverage for loading and unloading hazards, for:	Combined single limit for bodily injury and property damage of \$500,000 per occurrence or equivalent.

- a. Owned/leased vehicles
 - b. Non-owned vehicles
 - c. Hired vehicles
4. **Errors and Omissions** insurance policy (when applicable) Provide a prudent amount of coverage for the willful or negligent acts or omissions of any officers, employees or agents thereof.

ADDITIONAL POLICY ENDORSEMENTS

CITY shall be entitled, upon request, and without expense, to receive copies of the policies and all endorsements thereto and may make any reasonable request for deletion, revision, or modification of particular policy terms, conditions, limitations, or exclusions (except where policy provisions are established by law or regulation binding upon either of the parties hereto or the underwriter of any of such policies). Upon such request by CITY, CONTRACTOR shall exercise reasonable efforts to accomplish such changes in policy coverages, and shall pay the cost thereof.

REQUIRED PROVISIONS

CONTRACTOR agrees with respect to the above required insurance, all insurance contracts and certificate(s) of insurance will contain and state, in writing, on the certificate or its attachment, the following required provisions.

- a. Name the City of Seguin and its officers, employees, and elected representatives as an Additional Insured(s), (as the interest of each insured may appear) to all applicable coverage.
- b. Provide for 30 days notice to City for cancellation, non-renewal, or material change.
- c. Provide for notice to City at the address shown below by registered mail.
- d. CONTRACTOR agrees to waive subrogation against the City of Seguin, its officers, employees, and elected representatives for injuries, including death, property damage, or any other loss to the extent same may be covered by the proceeds of insurance.
- e. Provide that all provisions of this agreement concerning liability, duty, and standard of care together shall be underwritten by contractual liability coverage sufficient to include such obligations within applicable policies.
- f. For coverages that are **only** available with claims made policies, the required period of coverage will be determined by the following formula: Continuous coverage for the life of the contract, plus one year (to provide coverage for the warranty period) and an extended discovery period for a minimum of five years which shall begin at the end of the warranty period.

NOTICES

CONTRACTOR shall notify CITY in the event of any change in coverage and shall give such notices not less than thirty (30) days prior to the change, which notice must be accompanied by a replacement CERTIFICATE OF INSURANCE. All notices shall be given to CITY at the following address:

Purchasing Department
 City of Seguin
 P.O. Box 591
 Seguin, Texas 78156

SECTION D. Approval, disapproval, or failure to act by CITY regarding any insurance supplied by CONTRACTOR shall not relieve CONTRACTOR of full responsibility or liability for damages and accidents as set forth in the contract documents. Neither shall the bankruptcy, insolvency, or denial of liability by the insurance company exonerate CONTRACTOR from liability.

WORKERS COMPENSATION INSURANCE
for
Building or Construction Projects and Services Provided at City-Owned Facilities

TEXAS WORKERS' COMPENSATION COMMISSION RULE 28 § 110.110

As required by the Texas Workers' Compensation Rule 28, §110.110, the Contractor shall accept the following definitions and comply with the following provisions:

Workers' Compensation Insurance Coverage

A. Definitions:

1. Certificate of coverage ("certificate")-A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.
2. Duration of the project-includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the City of Seguin.
3. Persons providing services on the project ("subcontractor" in Section 406.096) - includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

B. The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.

C. The Contractor must provide a certificate of coverage to the City of Seguin prior to being awarded the contract.

D. If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the City of Seguin showing that coverage has been extended.

E. The Contractor shall obtain from each person providing services on a project, and provide to the City of Seguin:

1. A certificate of coverage, prior to that person beginning work on the project, so the City of Seguin will have on file certificates of coverage showing coverage for all persons providing services on the project; and
2. No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

F. The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

G. The Contractor shall notify the City of Seguin in writing by certified mail or personal delivery, within ten (10) days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

H. The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and

stating how a person may verify coverage and report lack of coverage.

- I. The Contractor shall contractually require each person with whom it contracts to provide services on a project, to:
1. Provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
 2. Provide to the Contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.
 3. Provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 4. Obtain from each other person with whom it contracts, and provide to the Contractor:
 - a. A certificate of coverage, prior to the other person beginning work on the project; and
 - b. A new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
 5. Retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter;
 6. Notify the City of Seguin in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
 7. Contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.
- J. By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the City of Seguin that all employees of the Contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- K. The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the City of Seguin to declare the contract void if the Contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the City of Seguin.

As defined by the Texas Labor Code, Chapter 269, Section 406.096(e), building or construction is defined as:

1. Erecting or preparing to erect a structure, including a building, bridge, roadway, public utility facility, or related appurtenance;
2. Remodeling, extending, repairing, or demolishing a structure; or
3. Otherwise improving real property or an appurtenance to real property through similar activities.

The employment of a maintenance employee who is not engaging in building or construction as the employer's primary business does not constitute engaging in building or construction.

**CITY OF SEGUIN
INSURANCE REQUIREMENT AFFIDAVIT**

**To be Completed By Appropriate Insurance Agent
and submitted with bid proposal.**

I, the undersigned Agent/Broker, certify that the insurance requirements contained in this bid document have been reviewed by me with the below identified Contractor. If the below identified Contractor is awarded this contract by the City of Seguin, I will be able to, within ten (10) days after being notified of such award, furnish a valid insurance certificate to the City meeting all of the requirements defined in this bid.

Agent (Signature)

Agent (Print)

Name of Agency/Broker: _____

Address of Agent/Broker: _____

City/State/Zip: _____

Agent/Broker Telephone #: () _____

CONTRACTOR'S NAME: _____

(Print or Type)

NOTE TO AGENT/BROKER

If this time requirement is not met, the City has the right to invalidate the bid award and award the contract to the next lowest bidder meeting specifications. Should an awarded bid be invalidated the Contractor may be liable for breach of contract. If you have any questions concerning these requirements, please contact the Purchasing Manager for the City of Seguin at (830) 401-2451

ITEM NO. 3015 - ASPHALTS, OILS, AND EMULSIONS 8-20-07

3015.1 - Description

This item includes the requirements for cutback asphalts, emulsified asphalts, polymer modified asphalt cements, performance graded asphalt binders and other miscellaneous asphaltic materials and latex additives.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text the inch-pound units are given preference followed by SI units shown within parentheses.

3015.2 - Submittals

Submittals shall include test results for each the materials described herein when specifically identified on the drawings and/or referenced in associated standard specification items and standard details.

Submittals may include samples of the base asphalt cement and polymer additives.

3015.3 - Materials

When tested in accordance with designated TxDOT, AASHTO and/or ASTM test methods, the various materials shall meet the applicable requirements of this specification.

A. Acronyms

The acronyms used in this specification are defined in the following table.

Table 1: Acronyms

Acronym	Definition	Acronym	Definition
Test Method Prefix		Polymer Modifier	
Tex	TxDOT	SBR or L	Styrene-Butadiene Rubber (Latex)
T	AASHTO	SBS	Styrene-Butadiene-Styrene Block Copolymer
D	ASTM	TR	Tire Rubber, from ambient temperature grinding of truck and passenger tires
		P	Polymer Modified
AC	Asphalt Cement	SS	Slow Setting
RC	Rapid Curing	H-suffix	Harder Residue (Lower Penetration)
MC	Medium Curing	AE	Asphalt Emulsion
SCM	Special Cutback Material	S-suffix	Stockpile Usage
HF	High Float	AE-P	Asphalt Emulsion Prime
C	Cationic	EAP&T	Emulsified Asphalt Prime and Tack
RS	Rapid Setting	PCE	Prime, Cure, and Erosion Control
MS	Medium Setting	PG	Performance Grade

B. Asphalt Cement

The material shall be homogeneous, free from water, shall not foam when heated to 350°F (177°C) and shall meet the requirements in Table 2.

Table 2: Asphalt Cement Requirements

Viscosity Grade		AC-10		AC-20		AC-30	
Property	Test Method	Min	Max	Min	Max	Min	Max
Viscosity: 140°F, poises (60°C, pascals)	T 202	800 (80)	1200 (120)	1600 (160)	2400 (240)	2400 (240)	3600 (360)
Viscosity: 275°F, stokes	T 202	1.9	-	2.5	-	3.0	-

(135°C, pascals)		(.19)		(.25)		(.30)	
Penetration: 77°F (25°C), 100g, 5s	T 49	85	-	55	-	45	-
Flash Point, C.O.C. °F (°C)	T 48	450 (232)	-	450 (232)	-	450 (232)	-
% Solubility trichloroethylene	T44	99.0	-	99.0	-	99.0	-
Spot test	Tex 509-C						
Viscosity: 140°F stokes (60°C pascals)	T 202	-	3000 (300)	-	6000 (600)	-	9000 (900)
Ductility 77°F (25°C), 5 cm/min, cm	T 202	<u>100</u>	-	70	-	50	-

C. Polymer Modified Asphalt Cement

Polymer modified asphalt cement must be smooth, homogeneous, and shall comply with the requirements listed in Table 3.

Table 3: Polymer Modified Asphalt Cement Requirements

Polymer Modified Viscosity Grade		AC-5		AC-10		AC-15P		AC-45P*	
Polymer Type		SBR		SBR		SBS		SBS	
Property	Test Method	Min	Max	Min	Max	Min	Max	Min	Max
Polymer in % (solids basis)	Tex-533-C	2.0	-	2.0	-	3.0	-	3.0	-
Viscosity									
140°F, poise (60°C, pascals)	T 202	<u>700</u> (70)	- -	<u>1300</u> (130)	- -	1500 (150)	- -	4500 (450)	- -
275°F, poise (135°C, pascals)	T 202	- -	7.0 (0.7)	- -	8.0 (0.8)	- -	8.0 (0.8)	14.0 (1.4)	
Penetration, 77°F (25°C), 100 g, 5 s.	T 49	120	-	80	-	<u>100</u>	150	50	74
Ductility, 5cm/min., 39.2°F, cm	T 51	70	-	60	-	-	-	15	-
Elastic Recovery, 50°F (10°C), %	Tex-539-C	-	-	-	-	55	-	-	-
Polymer Separation, 48 hrs**.	Tex-540-C	None		None		None		None	
Flash Point, C.O.C., °F (°C),	T 48	425 (218)	- -	425 (218)	- -	425 (218)	- -	425 (218)	- -
Tests on Residue from Thin Film Oven Test: (T179)									
Retained Penetration Ratio, 77°F (25°C), % original	T 49	-	-	-	-	0.60	1.00	0.60	0.90

* The SBS block copolymer may be pre-blended with a polymer processing oil (up to a 1:1 ratio of polymer to oil) to aid the solution of the polymer in the asphalt.

** A 350-gram (0.77 pound) sample of the asphalt-SBS blend is stored for 48 hours at 325°F (163°C). Upon completion of the storage time, the sample is visually examined for separation of the SBS from the asphalt (smoothness and homogeneity). If a question still exists about the separation of the SBS, samples shall be taken from the top and bottom of the sample for Infrared Spectroscopy analysis. A difference of 0.4% or more in the concentration of the SBS between the top and bottom samples shall constitute separation.

D. Cutback Asphalt

Cutback asphalt shall meet the requirements presented in Tables 4 and 5 for the specified type and grade.

Table 4: Rapid Curing Type Cutback Asphalt Requirements

Type-Grade		RC-250		RC-800		RC-3000	
Properties	Test Method	Min	Max	Min	Max	Min	Max
Water, percent	T55	-	0.2	-	0.2	-	0.2
Flash Point, T.O.C., °F (°C)	T79	80 (27)	-	80 (27)	-	80 (27)	-
Kinematic viscosity @ 140°F, cst (60°C, mm ² /s)	T201	250	<u>400</u>	<u>800</u>	1600	3000	6000
Distillation Test:	T78						
Distillate, % by volume of total distillate to 680°F (360°C):							
to 437°F (225°C):		40	75	35	70	20	55
to <u>500</u> °F (260°C):		65	90	55	85	45	75
to <u>600</u> °F (316°C):		85	-	80	-	70	-
Residue from Distillation, Volume %		70	-	75	-	82	-
Tests of Distillation Residue:							
Penetration, 100g, 5 sec., 77°F (25°C), cm	T49	80	120	80	120	80	120
Ductility, 5 cm/min., 77°F, 5 cm/min., cm	T51	<u>100</u>	-	<u>100</u>	-	<u>100</u>	-
(25°C, 50 mm/min., mm)		1000	-	1000	-	1000	-
Solubility in trichloroethylene, %	T44	99.0	-	99.0	-	99.0	-
Spot Test	Tex 509-C	ALL NEGATIVE					

Table 5: Medium Curing Type Cutback Asphalt Requirements

Type		MC-30		MC-70		MC-250		MC-800		MC-3000	
Properties	Test Method	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Water, %	T55	-	0.2	-	0.2	-	0.2	-	0.2	-	0.2
Flash Point, T.O.C., °F (°C)	T79	<u>100</u> (38)	-	<u>100</u> (38)	-	150 (65)	-	150 (65)	-	150 (65)	-
Kinematic viscosity. @ 140°F, cst (60°C, mm ² /s)	T201	30	60	70	140	250	<u>500</u>	<u>800</u>	1600	3000	6000
Distillation Test:	T78										
Distillate, as % by volume to total distillate to 680°F(360°C);, shall be as follows:											
to 437°F (225°C):		-	25	-	20	-	10	-	-	-	-
to <u>500</u> °F (260°C):		40	70	20	60	15	55	-	35	-	15
to <u>600</u> °F (316°C):		75	93	65	90	60	87	45	80	15	≥75
Residue from 80°F (225°C) distillation											

Volume Percent		50	-	55	-	67	-	75	-	80	-
Tests on Distillation Residue:											
Penetration	T49	120	250	120	250	120	250	120	250	120	250
@77°F (25°C), 100g, s, 01 mm:											
Ductility	T51										
@ 77°F, 5 cm/min, cms		<u>100*</u>	-	<u>100*</u>	-	<u>100*</u>	-	<u>100*</u>	-	<u>100*</u>	-
(25°C, 50 mm/min., mm)		1000*	-	1000*	-	1000*	-	1000*	-	1000*	-
% Solubility in trichloroethylene	T44	99.0	-	99.0	-	99.0	-	99.0	-	99.0	-
Spot Test	Tex 509-C	ALL NEGATIVE									

* If penetration of residue is more than 200 and the ductility at 77°F (25°C) is less than 100 cm (1000 mm), the material will be acceptable if its ductility at 60°F (16°C) is more than 100cm (1000 mm).

E. Emulsified Asphalt

The material shall be homogenous. It shall show no separation of asphalt after thorough mixing and shall meet the requirements for the specified type and grade presented in Tables 6, 7 and 8.

Table 6: Anionic Emulsion Requirements

	Type	Medium Setting		Slow Setting			
		MS-2		SS-1		SS-1h	
Property	Test Method	Min	Max	Min	Max	Min	Max
Furol Viscosity @ 77°F (25°C), sec.	T72	-	-	20	<u>100</u>	30	<u>100</u>
@ 122°F(50°C), sec		<u>100</u>	<u>300</u>	-	-	-	-
Sieve Test, %.	T59	-	0.1	-	0.1	-	0.1
Miscibility (Standard Test)	T59	-	-	Passing		Passing	
Cement Mixing, %	T59	-	-	-	2.0	-	2.0
% Demulsibility: 35 cc 0.02N CaCl ₂	T59	-	30	-	-	-	-
Storage Stability 1 day, %	T59	-	1	-	1	-	1
Freezing Test, 3 Cycles*	T59	Passing		Passing	Passing		
Distillation Test	T59						
Distillation Residue, %		65	-	60	-	60	-
Distillate Oil Portion, %		-	½	-	½	-	½
Tests of Residue from Distillation:							
Penetration @ 77°F (25°C), 100g, 5s	T49	120	160	120	160	70	<u>100</u>
Solubility in Trichloroethylene, %	T44	97.5	-	97.5	-	97.5	-
Ductility @ 77F, 5 cm/min., cm	T51	<u>100</u>	-	<u>100</u>	-	80	-
(@ 25°C, 50 mm/min., mm)		1000	-	1000	-	<u>800</u>	-

* Applies only when Engineer or designated representative specifies the material for winter use.

Table 7: High Float anionic Emulsion Requirements

	Type	Rapid Setting		Medium Setting	
	Grade	HFRS-2		AES-300	
Property	Test Method	Min	Max	Min	Max
Viscosity, Saybolt Furol	T72				
@ 77°F (25°C), sec.		-	-	75	<u>400</u>
@ 122°F (50°C), sec.		150	<u>400</u>	-	-
Oil Portion of Distillate, %	T59	-	2	-	7
Sieve Test, %	T59	-	0.1	-	0.1
Particle Charge	T59	positive		positive	
Coating Ability and Water Resistance:	T59				
Coating, dry aggregate		-	-	good	
Coating, after spraying		-	-	fair	
Coating, wet aggregate				fair	
Coating, after spraying				fair	
% Demulsibility: 35 ml 0.02 N CaCl ₂	T59	50	-	-	-
Storage Stability Test, 1 day, %	T59	-	1	-	1
Distillation Test	T59				
Residue by Distillation, % by weight		65	-	65	-
Oil Distillate, by volume of emulsion, %		-	1/2	-	5
Tests on Residue from Distillation:					
Penetration at 77°F (25°C), 100g, 5s	T49	<u>100</u>	140	<u>300</u>	-
Solubility in Trichloroethylene, %	T44	97.5	-	97.5	-
Ductility @ 77°F., 5 cm/min, cms	T51	<u>100</u>	-	-	-
(25°C., 50 mm/min, mm)		(1000)			
Float Test at 140°F (60°C), sec.	Tex 509-C	1200	-	1200	-

Table 8: Cationic Emulsion Requirements

	Type	Rapid Setting				Medium Setting				Slow Setting			
	Grade	CRS-2		CRS-2h		CMS-2		CMS-2s		CSS-1		CSS-1h	
Property	Test Method	Min	Max	Min	Max	Min.	Max	Min	Max	Min	Max	Min	Max
Viscosity, Saybolt Furol	T72												
@ 77°F (25°C), sec.		-	-	-	-	-	-	-	-	20	<u>100</u>	20	<u>100</u>
@ 122°F (50°C), sec.		150	<u>400</u>	150	<u>400</u>	<u>100</u>	<u>300</u>	<u>100</u>	<u>300</u>	-	-	-	-
Storage stability test, 1 day	T59	-	1	-	1	-	1	-	1	-	1	-	1

%													
% Demulsibility: *, **	T59	40	-	40	-	-	-	-	-	-	-	-	-
Coating, ability & water resistance	T59												
Coating, dry aggregate		-	-	-	-	good	good	-	-	-	-	-	-
Coating, after spraying		-	-	-	-	fair	fair	-	-	-	-	-	-
Coating, wet aggregate		-	-	-	-	fair	fair	-	-	-	-	-	-
Coating, after spraying		-	-	-	-	fair	fair	-	-	-	-	-	-
Particle charge test	T59	Positive		Positive		Positive		Positive		Positive		Positive	
Sieve test, %	T59	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10	-	0.10
Cement Mixing test, %	T59	-	-	-	-	-	-	-	-	-	2.0	-	2.0
Distillation Test:	T59												
% Oil distillate, vol. of emulsion		-	1/2	-	1/2	-	7	-	5	-	1/2	-	1/2
Residue by Distillation,% by wt.		65	-	65	-	65	-	65	-	60	-	60	-
Tests on Residue from Distillation:													
Penetration, 77°F	T49	120	160	80	110	120	<u>200</u>	<u>300</u>	-	120	160	80	110
(25°C), 100g, 5s.													
Ductility,	T51												
77°F, 5 cm/min, cm		<u>100</u>	-	80	-	<u>100</u>	-	-	-	<u>100</u>	-	80	-
(25°C, 50 mm/min, mm)		1000	-	<u>800</u>	-	1000	-	-	-	1000	-	<u>800</u>	-
% Solubility in trichloroethylene	T44	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-	97.5	-

* At a level of 35 ml 0.8% sodium dioctyl sulfosuccinate.

** The demulsibility test shall be made within 30 days from date of shipment.

F. Polymer Modified Emulsions

The material shall be homogenous. It shall show no separation of asphalt after thorough mixing and shall meet the requirements for the specified type and grade presented in Tables 9 and 10.

G. Specialty Emulsions

Specialty emulsions may be either asphaltic-based or resin-based and must meet the requirements included in Table 11.

H. Recycling Agent

Recycling agent and emulsified recycling agent must meet the requirements of Table 12. Additionally, recycling agent and residue from emulsified recycling agent, when added in the specified proportions to the recycled asphalt, must meet the properties specified on the drawings.

Table 9: Polymer Modified Emulsified Asphalt Requirements

Type-Grade	Test Method	Rapid Setting				Medium Setting						Slow Setting	
		RS-1P		HFRS-2P		AES-150P		AES-300P		AES-300S		SS-1P	
Property	Test Method	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Viscosity, Saybolt Furol	T 72												
77°F, sec.		-	-	-	-	75	<u>400</u>	75	<u>400</u>	75	<u>400</u>	30	<u>100</u>

122°F, sec.		50	<u>200</u>	150	<u>400</u>	-	-	-	-	-	-	-	-
Sieve Test, %	T 59	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1
Miscibility	T 59	-	-	-	-	-	-	-	-	-	-	-	pass
Coating Ability and Water Resistance:	T 59												
dry aggregate/after spray		-	-	-	-	good/fair	good/fair	good/fair	good/fair	good/fair	good/fair	good/fair	-
wet aggregate/after spray		-	-	-	-	fair/fair	fair/fair	fair/fair	fair/fair	fair/fair	fair/fair	fair/fair	-
Demulsibility, 35 ml of 0.02 N CaCl ₂ , %	T 59	60	-	50	-	-	-	-	-	-	-	-	-
Storage Stability, 1 day, %	T 59	-	1	-	1	-	1	-	1	-	1	-	1
Breaking Index, g	Tex-542-C	-	80	-	-	-	-	-	-	-	-	-	-
Distillation Test: ¹	T 59												
Residue by Distillation, % by wt.		65	-	65	-	65	-	65	-	65	-	60	-
Oil Distillate, % by vol of emulsion		-	3	-	0.5	-	3	-	5	-	7	-	0.5
Tests: Residue from Distillation:													
Polymer Content, wt. % (solids basis)	Tex-533-C	-	-	3.0	-	-	-	-	-	-	-	3.0	-
Penetration, 77°F, (25°C) 100 g, 5 sec.	T 49	225	<u>300</u>	90	140	150	<u>300</u>	<u>300</u>	-	<u>300</u>	-	<u>100</u>	140
Solubility in Trichloroethylene, %	T 44	97.0	-	97.0	-	97.0	-	97.0	-	97.0	-	97.0	-
Viscosity, 140°F, poise 60°C, Pa-s	T 202	-	-	1500	-	-	-	-	-	-	-	<u>1300</u>	-
Float Test, 140°F, sec.	T 50	-	-	1200	-	1200	-	1200	-	1200	-	-	-
Ductility ² ,													
39.2°F, 5 cm/min., cm	T 51	-	-	50	-	-	-	-	-	-	-	50	-
(4°C, 5 cm/min., mm)		-	-	<u>500</u>	-	-	-	-	-	-	-	<u>500</u>	-
Elastic Recovery ² , 50°F, (10°C), %	Tex-539-C	55	-	55	-	-	-	-	-	-	-	-	-
Tests on RTFO Curing of Distillation Residue:	Tex-541-C												
Elastic Recovery, 50°F, (10°F) %	Tex-539-C	-	-	-	-	50	-	50	-	30	-	-	-

¹ Exception to AASHTO T 59: Bring the temperature on the lower thermometer slowly to 350°F +/- 10°F. Maintain at this temperature for 20 min. Complete total distillation in 60 +/- 5 min. from the first application of heat.

² HFRS-2P must meet one of either the Ductility or Elastic Recovery.

Table 10: Polymer Modified Cationic Emulsified Asphalt Requirements

Type-Grade	Test Method	Rapid Setting				Slow Setting	
		CRS-1P		CRS-2P		CSS-1P	
Property	Test Method	Min	Max	Min	Max	Min	Max
Viscosity, Saybolt Furol	T 72	-	-	-	-	20	<u>100</u>
77°F (25°C), sec.		50	150	150	<u>400</u>	-	-
122°F (50°C), sec.		-	0.1	-	0.1	-	0.1
Sieve Test, %	T 59	60	-	70	-	-	-
Demulsibility, 35 ml of 0.8% sodium dioctyl sulfosuccinate, %	T 59	-	1				
Storage Stability, 1 day, %	T 59	-	1	-	1	-	1
Breaking Index, g	Tex-542-C		80	-	-	-	-
Particle Charge	T 59	positive		positive		positive	
Distillation Test: ¹	T 59	65	-	65	-	62	-
Residue by Distillation, % by wt.							
Oil Distillate, % by volume of emulsion		-	3	-	0.5	-	0.5
Tests on Residue from Distillation:							
Polymer Content, wt. % (solids basis)	Tex-533-C	-	-	3.0	-	3.0	-
Penetration, 77°F (25°C), 100 g, 5 sec.	T 49	225	<u>300</u>	90	150	55	90
Viscosity, 140°F, poise (60°C, Pa-s)	T 202	-	-	<u>1300</u>	-	-	-
Solubility in Trichloroethylene, %	T 44	97.0	-	97.0	-	97.0	-
Softening Point, °F	T 53	-	-	-	-	135	-
Ductility, 77°F, 5 cm/min., cm (25°C, 5 cm/min., mm)	T 51	-	-	-	-	70 <u>700</u>	-
Ductility ² , 39.2°F, 5 cm/min., cm (4°C, 5 cm/min., mm)	T 51	-	-	50	-	-	-
Elastic Recovery ² , 50°F (10°C), %	Tex-539-C	45	-	55	-	-	-

¹ Exception to AASHTO T 59: Bring the temperature on the lower thermometer slowly to 350°F +/- 10°F. Maintain at this temperature for 20 min. Complete total distillation in 60 +/- 5 min. from the first application of heat.

² CRS-2P must meet one of either the Ductility or Elastic Recovery.

Table 11: Specialty Emulsion Requirements

Type-Grade	Test Method	Medium Setting				Slow Setting	
		AE-P		EAP&T		PCE ¹	
Property	Test Method	Min	Max	Min	Max	Min	Max
Viscosity, Saybolt Furol	T 72						
77°F (25°C), sec.		-	-	-	-	10	<u>100</u>

122°F (50°C), sec.		15	150	-	-	-	-
Sieve Test, %	T 59	-	0.1	-	0.1	-	0.1
Miscibility ²	T 59	-		pass		pass	
Demulsibility, 35 ml of 0.10 N CaCl ₂ , %	T 59	-	70	-	-	-	-
Storage Stability, 1 day, %	T 59	-	1	-	1	-	-
Particle Size ³ , % by volume ≤ 2.5 m	Tex-238-F	-	-	90	-	-	-
Asphalt Emulsion Distillation to 500°F (260°C) followed by Cutback Asphalt Distillation of Residue to 680°F (360°C):	T 59 & T 78						
Residue after both Distillations, % by wt.		40	-	-	-	-	-
Total Oil Distillate from both distillations, % by volume of emulsion		25	40	-	-	-	-
Distillation:	T 59						
Residue by Distillation, % by wt.		-	-	60	-	-	-
Evaporation: ⁴	T 59						
Residue by Evaporation, % by wt.		-	-	-	-	60	-
Tests on Residue after all Distillation(s):							
Viscosity, 140°F, poise (60°C, Pa-s)	T 202	-	-	<u>800</u>	-	-	-
Kinematic Viscosity, 140°F, cSt (60°C, mm ² /s)	T 201	-	-	-	-	<u>100</u>	350
Flash Point, C.O.C., °F (°C)	T 48	-	-	-	-	<u>400</u> 204	-
Solubility in Trichloroethylene, %	T 44	97.5	-	-	-	-	-
Float Test, 122°F (50°C), sec	T 50	50	<u>200</u>	-	-	-	-

¹ Supply with each shipment of PCE:

- a copy of a lab report from an approved analytical lab, signed by a lab official, indicating the PCE formulation does not meet any characteristics of a Resource Conservation Recovery Act (RCRA) hazardous waste;
- a certification from the producer that the formulation supplied does not differ from the one tested and that no listed RCRA hazardous wastes or PCB's have been mixed with the product; and
- a Materials Safety Data Sheet.

² Exception to AASHTO T 59: In dilution, use 350 ml of distilled or deionized water and a 1000-ml beaker.

³ Tex-238-F, beginning at "Particle Size Analysis by Laser Diffraction," "Procedure" (using - medium: distilled or deionized water and dispersant: none), or other approved method.

⁴ Exception to AASHTO T 59: Leave sample in the oven until foaming ceases, then cool and weigh.

Table 12: Recycling Agent and Emulsified Recycling Agent Requirements

Property	Test Method	Recycling Agent		Emulsified Recycling Agent	
		Min	Max	Min	Max
Viscosity, Saybolt Furol, 77°F, sec.	T 72	-	-	15	<u>100</u>
Sieve Test, %	T 59	-	-	-	0.1

Miscibility ¹	T 59	-		No Coagulation	
Evaporation Test: ²	T 59				
Residue by Evaporation, % by wt.		-	-	60	-
Tests on Recycling Agent or Residue from Evaporation:					
Flash Point, C.O.C., °F	T 48	<u>400</u>	-	<u>400</u>	-
Kinematic Viscosity,	T 201				
140°F, cSt		75	<u>200</u>	75	<u>200</u>
275°F, cSt		-	10.0	-	10.0

¹ Exception to AASHTO T 59: Use 0.02 N CaCl₂ solution in place of water.

² Exception to AASHTO T 59: Maintain sample at 300°F until foaming ceases, then cool and weigh.

I. Crack Sealer

This section sets forth the requirements for a polymer modified emulsion suitable for sealing fine cracks, and a rubber asphalt compound suitable for sealing cracks of 1/8 inch (3 mm) or greater width.

1. Polymer Modified Asphalt Emulsion Crack Sealer

For cracks on the order of 1/8 inch (3 mm) width, HFRS-2P polymer modified emulsion as described in the table included in Section F, Polymer Modified Emulsions of this item may be used. Requirements for the polymer modified emulsion and rubber-asphalt crack-sealing compound are presented in Table 13.

Table 13: Polymer Modified Asphalt Emulsion Crack Sealer Requirements

Property	Test Methods	Min	Max
Rotational Viscosity, 77°F, cP	ASTM D 2196, Method A	10,000	25,000
Sieve Test, %	T 59	-	0.1
Storage Stability, 1 day, %	T 59	-	1
Evaporation	Tex-543-C		
Residue by Evaporation, % by wt.		65	-
Tests on Residue from Evaporation:			
Penetration, 77°F, 100 g, 5 sec.	T 49	35	75
Softening Point, °F	T 53	140	-
Ductility, 39.2°F, 5 cm/min., cm	T 51	<u>100</u>	-

2. Rubber-Asphalt Crack Sealing Compound

This specification item may be a proprietary product. The compound shall be capable of being melted and applied at a temperature of 400°F (200°C) or less by a suitable oil jacketed kettle equipped with a pressure pump, a hose and a nozzle. It shall contain no water or highly-volatile matter. It shall not be tracked by vehicular traffic once it cools to road pavement temperature.

The rubber-asphalt crack sealing compound shall meet requirements in Table 14.

Table 14: Rubber-Asphalt Crack Sealer Requirements

Property	Test Methods	Class A		Class B	
		Min	Max	Min	Max
CRM Content, Grade A or B, % by wt.	Tex-544-C	22	26	-	-

CRM Content, Grade B, % by wt.	Tex-544-C	-	-	13	17
Virgin Rubber Content ¹ , % by wt.		-	-	2	-
Flash Point ² , COC, °F	T 48	<u>400</u>	-	<u>400</u>	-
Penetration ³ , 77°F, 150g, 5 sec.	T 49	30	50	30	50
Penetration ³ , 32°F, 200g, 60 sec.	T 49	12	-	12	-
Softening Point, °F	T 53	-	-	170	-
Bond ⁴ , 3 cycles, 20°F	Tex-525-C	-	Pass		

¹ Provide certification that the min. % virgin-rubber was added.

² Before passing the test flame over the cup, agitate the sealing compound with a 3/8 to 1/2 in. (9.5 to 12.7 mm) wide, square-end metal spatula in a manner so as to bring the material on the bottom of the cup to the surface, i.e., turn the material over. Start at one side of the thermometer, move around to the other, and then return to the starting point using 8 to 10 rapid circular strokes. Accomplish agitation in 3 to 4 sec. Pass the test flame over the cup immediately after stirring is completed.

³ Exception to AASHTO T 49: Substitute the cone specified in ASTM D 217 for the penetration needle.

⁴ No crack in the crack sealing materials or break in the bond between the sealer and the mortar blocks over 1/4 in. deep for any specimen after completion of the test.

a. Properties of Rubber Used in Sealer. The rubber shall be one of the following types;

1) Type I - Ground tire rubber.

2) Type II - A mixture of ground tire rubber and high natural reclaimed scrap rubber. The natural rubber content, determined by ASTM D 297, shall be a minimum of 25 percent.

b. Ground Rubber. The ground rubber shall comply with the following gradation requirements when tested by TxDOT Test Method Tex-200-F, Part I.
Table 15: Ground Rubber Gradation Requirements

Sieve Size		Percent Retained	
U.S.	SI	Type I	Type II
No. 8	2.36 mm	0	-
No. 10	2.00 mm	0-5	0
No. 30	600mm	90-100	50-70
No. 50	300mm	95-100	70-95
No. 100	150mm	-	95-100

The ground rubber shall be free from fabric, wire, cord or other contaminating materials.

c. Packaging. The rubber-asphalt crack sealing compound shall be packaged in boxes, which contain two 30-35 pound (14-16 kilogram) blocks that are individually packaged in a liner made of polyethylene, or other packaging approved by the Engineer or designated representative.

J. Performance Graded Binders

Performance graded binders must be smooth, homogeneous, show no separation when tested in accordance with Test Method Tex-540-C, and must meet the requirements in the following table.

Separation testing is not required if:

- a modifier is introduced separately at the mix plant either by injection in the asphalt line or mixer, or
- the binder is blended on site in continuously agitated tanks, or
- binder acceptance is based on field samples taken from an in-line sampling port at the hot mix plant after the addition of modifiers.

Table 16: Performance Graded Binder Requirements (Printer-friendly version in PDF)

Performance Grade	PG 58			PG 64			PG 70			PG 76			PG 82		
	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28	

Average 7-day Max Pavement Design Temperature, °C ¹	58			64				70				76				82		
Min Pavement Design Temperature, °C ¹	≥-22	≥-28	≥-34	≥-16	≥-22	≥-28	≥-34	≥-16	≥-22	≥-28	≥-34	≥-16	≥-22	≥-28	≥-34	≥-16	≥-22	≥-28
ORIGINAL BINDER																		
Flash Point, AASHTO T 48: Min,	230°C																	
Viscosity, AASHTO TP 48: ^{2,3} Max, 3.0 Pas, Test Temperature,	135°C																	
Dynamic Shear, AASHTO TP 5: ⁴ G*/sin (δ), Min, 1.00 kPa Test Temperature @ 10 ead/sec.,	58°C			64°C				70°C				76°C				82°C		
Elastic Recovery, ASTM D 6084, 50°F, % Min	-	-	30	-	-	30	50	-	30	50	60	30	50	60	70	50	60	70
ROLLING THIN FILM OVEN (Tex-541-C)																		
Mass Loss, Max, %	1.0																	
Dynamic Shear, AASHTO TP 5: G*/sin (δ) in, 2.20 kPa Test Temperature @10 red/sec.,	58°C			64°C				70°C				76°C				82°C		
PRESSURE AGING VESSEL (PAV) RESIDUE (AASHTO PP 1)																		
PAV Aging Temperature	100°C																	
Dynamic Shear, AASHTO TP 5: G*/sin (δ) Max, 5000 kPa Test Temperature 10 rad/sec., °C	25	22	19	28	25	22	19	28	25	22	19	28	25	22	19	28	25	22
Creep Stiffness, AASHTO TP 1: ^{5,6} S, Max, 300 mPa, M - value, Min, 0.300 Test Temperature @	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18

60 sec., °C																		
Direct Tension, AASHTO TP 3: ⁶ Failure Strain, Min, 1.0% Test Temperature @1.0 mm/min., °C	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18

¹ Pavement temperatures are estimated from air temperatures using an algorithm contained in the PGEXCEL3.xls software program, may be provided by the Department or by following the procedures as outlined in AASHTO MP 2 and PP 28.

² This requirement may be waived at the Department's discretion if the supplier warrants that the asphalt binder can be adequately pumped, mixed and compacted at temperatures that meet all applicable safety, environmental, and constructability requirements. At test temperatures where the binder is a Newtonian fluid, any suitable standard means of viscosity measurement may be used, including capillary (AASHTO T 201 or T 202) or rotational viscometry (AASHTO TP 48).

³ Viscosity at 135°C is an indicator of mixing and compaction temperatures that can be expected in the lab and field. High values may indicate high mixing and compaction temperatures. Additionally, significant variation can occur from batch to batch. Contractors should be aware that variation could significantly impact their mixing and compaction operations. Contractors are therefore responsible for addressing any constructability issues that may arise.

⁴ For quality control of unmodified asphalt binder production, measurement of the viscosity of the original asphalt binder may be substituted for dynamic shear measurements of $G^*/\sin(\delta)$ at test temperatures where the asphalt is a Newtonian fluid. Any suitable standard means of viscosity measurement may be used, including capillary (AASHTO T 201 or T 202) or rotational viscometry (AASHTO TP 48).

⁵ Silicone beam molds, as described in AASHTO TP 1-93, are acceptable for use.

⁶ If creep stiffness is below 300 mPa, direct tension test is not required. If creep stiffness is between 300 and 600 mPa, the direct tension failure strain requirement can be used instead of the creep stiffness requirement. The m-value requirement must be satisfied in both cases.

301S.4 - Equipment.

All equipment necessary to transport, store, sample, heat, apply, and incorporate asphalts, oils and emulsions shall be provided.

301S.5 - Construction

Typical materials used for specific applications are identified in Table 17. These are typical uses only and circumstances may require use of other material.

Table 17: Typical Material Use

Material Application	Typically Used Materials
Hot-Mixed, Hot-Laid Asphalt Mixtures	PG Binders, Modified PG Binders
Surface Treatment	AC-5, AC-10, AC-5 w/2% SBR, AC-10 w/2% SBR, AC-15P, AC-15-5TR, HFRS-2, MS-2, CRS-2, CRS-2H, HFRS-2P, CRS-2P, Surface Treatment
(Cool Weather)	RS-1P, CRS-1P, RC-250, RC-800, RC-3000, MC-250, MC-800, MC-3000, MC-2400L
Precoating	AC-5, AC-10, PG 64-22, SS-1, SS-1H, CSS-1, CSS-1H
Tack Coat	RC-250, SS-1, SS-1H, CSS-1, CSS-1H, EAP&T
Fog Seal	SS-1, SS-1H, CSS-1, CSS-1H
Hot-Mixed, Cold-Laid Asphalt Mixtures	AC-0.6, AC-1.5, AC-3, AES-300, AES-300P, CMS-2, CMS-2S
Patching Mix	MC-800, SCM I, SCM II, AES-300S
Recycling	AC-3, AES-150P, AES-300P, Recycling Agent, Emulsified Recycling Agent
Crack Sealing	SS-1P, Polymer Mod AE Crack Sealant, Rubber Asphalt Crack Sealers (Class A, Class B)
Prime	MC-30, AE-P, EAP&T, PCE
Curing Membrane	SS-1, SS-1H, CSS-1, CSS-1H, PCE
Erosion Control	SS-1, SS-1H, CSS-1, CSS-1H, PCE

3015.6 - Storage, Heating and Application Temperatures

Asphaltic materials should be applied at the temperature, which provides proper and uniform distribution. Within practical limits higher temperatures than necessary to produce the desired results shall be avoided. Satisfactory application usually should be obtained within the recommended ranges shown below.

No material shall be heated above the following maximum temperatures:

Table:18 Recommended Temperature Ranges

Type-Grade	Recommended Range; °F (°C)	Maximum Temperature; °F (°C) for	
	Application/Mixing	Allowable Application	Storage
AC-5, 10,20,30	275—350 (135—177)	375 (191)	<u>400</u> (204)
AC-5 or AC-10 + 2% SBR	<u>300</u> —375 (142—191)	390* (199)	375 (191)
AC-10 + 3% SBR, AC-45P	<u>300</u> —350 (142—191)	350 (177)	360 (182)
RC-250	125—180 (52—82)	<u>200</u> (93)	<u>200</u> (93)
RC-800	170—230 (77—110)	260 (127)	260 (127)
RC-3000	215—275 (102—135)	285 (141)	285 (141)
MC-30, AEP	70—150 (21—66)	175 (79)	175 (79)
MC-70	125—175 (52—79)	<u>200</u> (93)	<u>200</u> (93)
MC-250	125—210 (52—99)	240 (116)	240 (116)
MC-800, SCM I, SCM II	175—260 (79—127)	275 (135)	275 (135)
MC-3000 & MC-2400 Latex	225—275 (107—135)	290 (143)	290 (143)
HFRS-2, MS-2, CRS-2, CRS-2H, HFRS-2P, CRS-2P, CMS-2, CMS- 2S, AES-300, AES-300S, AES- 150P, AES-300P	120—160	180	180
SS-1, SS-1h, SS-1P, CSS-1, CSS- 1h, PCE, EAP & T, SS-1P, RS-1P, CRS-1P, CSS-1P, recycling agent, emulsified recycling agent, polymer modified AE crack sealant.	50—130 (10—54)	140 (60)	140 (60)
RS-2, RS-2h, MS-2, CRS-2, CRS- 2h, CRS-2p, CMS-2, CMS-2S, HFRS-2, HFRS-2p, AES-300	110—160 (43—71)	170 (77)	170 (77)
Special Precoat Material	125—250 (52—121)	275 (135)	275 (135)
PG Binders, Modified PG Binders	275—350	350	350
Rubber Asphalt Crack Sealers (Class A, Class B)	350—375	<u>400</u>	-
Rubber-Asphalt Crack Sealer	350—375 (177—191)	<u>400</u> (204)	-

* AC-5 + 2% SBR and AC-10 + 2% SBR, which is designated for surface treatment work, may be heated to a maximum temperature of 390°F (200°C) by the supplier loading through an in-line heater, or with the permission of the Engineer or designated representative, these materials may be heated to maximum of 390°F (200°C) by the Contractor just prior to application. When any of the SBR-modified asphalt cements are used in asphaltic concrete, the storage temperature at the mix plant should not exceed 350°F (177°C).

Attention is called to the fact that asphaltic materials (except emulsions) are very flammable and constitute fire hazards. Proper precautions should be used in all cases, especially with RC cutbacks.

Utmost care shall be taken to prevent open flames from coming in contact with the asphaltic material or the gases of it. The Contractor shall be responsible for any fires or accidents, which may result from heating the asphaltic materials.

301S.7 - Measurement and Payment

All asphaltic materials included in this specification will not be paid for directly but shall be included in the unit price bid for the item of construction in which this item is used.

End

SPECIFIC CROSS REFERENCE MATERIALS

Specification Item 301S "Asphalts, Oils and Emulsions"

American Association of State Highway and Transportation Officials (AASHTO)

<u>Designation</u>	<u>Description</u>
AASHTO T-44	Solubility of Bituminous Materials in Organic Solvents
AASHTO T-48	Flash and Fire Points by Cleveland Open Cup
AASHTO T-49	Penetration of Bituminous Materials
AASHTO T-50	Float Test for Bituminous Materials
AASHTO T-51	Ductility of Bituminous Materials
AASHTO T-53	Distillation of Road Tar
AASHTO T-55	Water in Petroleum Products and Bituminous Materials by Distillation
AASHTO T-59	Testing Emulsified Asphalt
AASHTO T-72	Saybolt Viscosity
AASHTO T-78	Distillation of Cut-Back Asphaltic (Bituminous) Products
AASHTO T-79	Flash Point with Tag Open-Cup Apparatus
AASHTO T-201	Kinematic Viscosity of Asphalts
AASHTO T-202	Viscosity of Asphalts by Vacuum Capillary Viscometer
AASHTO TP-1	Creep Stiffness
AASHTO TP-3	Direct Tension
AASHTO TP-5	Dynamic Shear
AASHTO TP-48	Rotational Viscometry

Texas Department of Transportation: Manual of Testing Procedures

<u>Designation</u>	<u>Description</u>
Tex-200-F	Sieve Analysis of Fine and Coarse Aggregates
Tex-238-F	Laser Diffraction Particle Size Distribution Analyzer
Tex-509-C	Spot Test of Asphaltic Materials
Tex-525-C	Tests for Asphalt and Concrete Joint Sealers

Tex-533-C	Determination of Polymer Additive Percentages in Polymer Modified Asphalt Cements
Tex-539-C	
Tex-540-C	
Tex-541-C	
Tex-542-C	
Tex-543-C	
Tex-544-C	
<u>American Society for Testing and Materials (ASTM)</u>	
<u>Designation</u>	<u>Description</u>
D 217	Test Methods for Cone Penetration of Lubricating Grease
D 297	Test Methods for Rubber Products-Chemical Analysis
D 2186 Method A	Test Methods for Deposit-Forming Impurities in Steam
D 6084	Test Method for Elastic Recovery of Bituminous Materials by Ductilometer

RELATED CROSS REFERENCE MATERIALSSpecification Item 301S "Asphalts, Oils and Emulsions"City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 206S	Asphalt Stabilized Base
Item No. 210S	Flexible Base
Item No. 302S	Aggregates for Surface Treatments
Item No. 306S	Prime Coat
Item No. 307S	Tack Coat
Item No. 310S	Emulsified Asphalt Treatment
Item No. 311S	Emulsified Asphalt Repaving

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 312S	Seal Coat
Item No. 313S	Rubber Asphalt Joint and Crack Sealant
Item No. 315S	Milling Asphaltic Concrete Paving
Item No. 320S	Two Course Surface Treatment
Item No. 340S	Hot Mix Asphaltic Concrete Pavement
Item No. 341S	Paving Fabric
Item No. 350S	Heating, Scarifying and Repaving

Item No. 351S	Recycling Agent
<u>City of Austin Standard Details</u>	
<u>Designation</u>	<u>Description</u>
1000S-10	Local Street Sections
1000S-11(1)	Residential and Neighborhood collector Street Sections
1000S-11(2)	Industrial and Collector Street Sections
1000S-12(1)	Primary Collector Street Sections
1000S-12(2)	Primary Arterial Street Sections
1000S-13(1)	Minor Arterial Street Sections (4 Lanes)
1000S-13(2)	Minor Arterial Street Sections (4 Lanes divided)
1000S-14	Major Arterial Street
<u>Texas Department of Transportation: Standard Specifications for Construction And Maintenance of Highways, Streets, and Bridges</u>	
<u>Designation</u>	<u>Description</u>
Item 300	Asphalts, Oils and Emulsions
Item 301	Asphalt Antistripping Agents
Item 310	Prime Coat (Cutback Asphaltic Materials)
Item 314	Emulsified Asphalt Treatment
Item 316	Surface Treatments
Item 345	Asphalt Stabilized Base (Plant Mixed)
Item 354	Planing and/or Texturing Pavement
Item 520	Weighing and Measuring Equipment
<u>Texas Department of Transportation: Manual of Testing Procedures</u>	
<u>Designation</u>	<u>Description</u>
Tex-126-E	Molding, Testing and Evaluation of Bituminous Black Base Materials
Tex-207-F	Determination of Density of Compacted Bituminous Mixtures
Tex-211-F	Recovery of Asphalt from Bituminous Mixtures by Absorption
Tex-215-	Determination of Asphalt Content of Rock Asphalt Process by Hot Solvent Method
Tex-217-F	Determination of Deleterious Material and Decantation Test for Coarse Aggregates
Tex-224-F	Determination of Flakiness
Tex-400-A	Method of Sampling Stone, Gravel, Sand and Mineral Aggregates
Tex-410-A	Abrasion of Coarse Aggregate Using the Los Angeles Machine
Tex-411-A	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
Tex-438-A	Accelerated Polish Test for Aggregate

Tex-460-A	Determination of Crushed Face Particle
Tex-501-C	Test for Water in Petroleum Products and Other Bituminous Materials
Tex-502-C	Test for Penetration of Bituminous Material
Tex-503-C	Test for Ductility of Bituminous Materials
Tex-504-C	Test for Flash and Fire Points of Petroleum Materials by Cleveland Open Cup
<u>Texas Department of Transportation: Manual of Testing Procedures</u>	
<u>Designation</u>	<u>Description</u>
Tex-505-C	Test for Softening Point of Bituminous Materials by Ring-and-Ball Method
Tex-506-C	Test for Loss on Heating of Oils and Asphaltic Compounds
Tex-507-C	Proportion of Bitumen Soluble in Trichloroethylene
Tex-510-C	Determining the Effect of Heat and Air on Asphaltic Materials when Exposed in Thin Films
Tex-512-C	Test for Flash Points of Volative Flammable Materials by Tag Open-Cup Apparatus
Tex-513-C	Test for Saybolt Viscosity
Tex-515-C	Distillation of Cut-Back Asphalt Products
Tex-519-C	Float Test for Bituminous Materials
Tex-520-C	Test for Residue of Specified Penetration
Tex-521-C	Testing Emulsified Asphalts
Tex-528-C	Test for Absolute Viscosity of Asphalt Cements
Tex-529-C	Test for Kinematic Viscosity of Asphalts

ITEM NO. 302S - AGGREGATES FOR SURFACE TREATMENTS 9-26-12

302S.1 - Description

This item shall govern aggregate and precoated aggregate to be used in the construction of surface treatments.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, the inch-pound units are given preference followed by SI units shown within parentheses.

302S.2 - Submittals

The submittal requirements of this specification item include:

- A. Aggregate types, gradations and physical characteristics (i.e. flakiness index, % wear, soundness, polish value, etc).
- B. Proposed proportioning of materials.
- C. Aggregate precoat and fluxing material.
- D. Type of mixing plant and associated equipment including chart indicating the calibration of each cold bin.
- E. Aggregate storage/stockpiling plans.

302S.3 - Materials

A. Aggregates

Aggregates shall be composed of clean, tough and durable particles of gravel, crushed gravel, crushed stone, crushed slag or natural limestone rock asphalt. These materials shall not contain more than 2 percent by weight (mass) of soft particles and other deleterious materials as determined by TXDOT Test Method Tex-217-F, Part I. The natural limestone rock asphalt aggregate furnished shall have an average bitumen content from 4 to 7 percent by weight (mass) of naturally impregnated asphalt, as determined by TXDOT Test Method Tex-215-F and shall contain not more than 2 percent by weight (mass) of any one of or combination of iron pyrites or other objectionable matter, as determined by TXDOT Test Method Tex-217-F, Part I. No aggregate shall contain a total of more than 2 percent by weight (mass) of impurities or objectionable matter listed above.

The aggregate shall be either dark in color or be precoated. If not precoated, it shall be sufficiently washed as to produce a clean, dust free surface.

The aggregate shall not contain more than 1 percent loss from fine dust, clay-like particles and/or silt when tested in accordance with TXDOT Test Method Tex-217-F, Part II. The flakiness index for the aggregate, as determined by TXDOT Test Method Tex-224-F, shall not exceed 17 unless otherwise shown on the Drawings.

The percent of wear, as determined by TXDOT Test Method Tex-410-A (Los Angeles Abrasion Test), for each of the materials, except natural limestone rock asphalt (LRA), shall not exceed 35 percent. The percent of wear on natural limestone rock asphalt aggregate (LRA) shall not exceed 40 percent as determined by TXDOT Test Method Tex-410-A on that portion of the material retained on the No. 4 (4.75 mm) sieve, having a impregnated asphalt content of less than 1 percent.

Unless indicated otherwise on the drawings crushed gravel shall have a minimum of 85 percent of the particles retained on the No. 4 (4.75 mm) sieve with two or more mechanically induced crushed faces, as determined by TXDOT Test Method Tex-460-A, Part I.

The aggregate will be subjected to five (5) cycles of magnesium sulfate soundness testing in accordance with Test Method Tex-411-A. The loss shall not exceed 25 percent, unless indicated otherwise on the Drawings.

The polish value for the aggregate used in the surface or finish course shall be the value shown on the Drawings, when tested in accordance with TxDOT Test Method Tex-438-A. Unless otherwise shown on the Drawings, a minimum polish-value requirement of 30 will apply only to aggregate used in the travel lanes.

When aggregates requiring polish value are supplied from a source rated for a previous City of Austin roadway project or rated by TxDOT Materials and Tests Division, the Rated Source Polish Value (RSPV) for that source will be used to meet this requirement. When aggregates are supplied from a source that is not rated, the aggregate will be sampled and tested prior to use. The procedures will be in accordance with TxDOT Test Methods Tex-400-A and Tex-438-A, Part I. Blending of aggregates to achieve polish value will not be permitted, unless otherwise shown on the Drawings. If blending is allowed, TxDOT Test Method Tex-438-A, Part II, Method B will be used to determine the required blend percentages. However, a minimum of 50 percent by volume of non-polishing aggregate is required.

B. Precoat Material and Fluxing Material

1. The precoat material shall meet requirements for "Precoat Materials" as specified in Standard Specification Item No. 301S, "Asphalts, Oils and Emulsions".
2. The fluxing material shall meet the requirements for "Fluxing Material " as specified in Standard Specification Item No. 301S, "Asphalts, Oils and Emulsions".
3. Water in an amount not to exceed 3 percent by weight (mass) of the mixture may be used in preparing the mixture. The water shall be added as directed by the Engineer or designated representative during the mixing. In the event water is used in the mixing operation, adequate measuring devices shall be used and the water shall be administered to the mix through an approved spray bar. Potable water from City of Austin supplies is preferred, but the Contractor may submit test results of other water sources for approval by the Engineer or designated representative before use.

302S.4 - Types of Aggregates

The various types of aggregates are identified as follows:

A. Uncoated Aggrerate Types.

Type	Description
A	gravel, crushed slag, crushed stone or natural limestone rock asphalt (LRA)
B	crushed gravel, crushed slag, crushed stone or natural limestone rock asphalt (LRA)
C	gravel, crushed slag or crushed stone

D	crushed gravel, crushed slag or crushed stone
E	Aggregate as shown on drawings
F	Trap Rock

B. Precoated Aggregate.

Precoated aggregate shall be aggregate of the type and grade specified above, coated with 0.5 to 1.5 percent, by mass, of residual bitumen from a precoating material. When indicated on the drawings, specific aggregates may be prohibited from being precoated.

Where limestone rock asphalt (LRA) is used, it shall be fluxed with 0.5 to 1.5 percent by mass of fluxing material. Limestone rock asphalt (LRA) that contains visual surface moisture or excessive quantities of fines shall not be precoated.

The grade of aggregate specified shall meet all requirements of sections 302S.3 and 302S.4 prior to the application of the precoat or fluxing material.

The materials may be mixed on the job or at a central mixing plant and shipped ready for use. Mixes that do not maintain flow qualities such that the precoated aggregate may be satisfactorily spread by approved mechanical spreading devices will not be acceptable.

Materials that are not uniformly and/or properly coated, in the opinion of the Engineer or designated representative, will not be accepted for use.

The various types of precoated aggregates are identified as follows:

Precoated Aggregate Types

Type	Description
PA	gravel, crushed slag, crushed stone or natural limestone rock asphalt (LRA)
PB	crushed gravel, crushed slag, crushed stone or natural limestone rock asphalt (LRA)
PC	gravel, crushed slag or crushed stone
PD	crushed gravel, crushed slag or crushed stone
PE	Aggregate as shown on drawings

When tested by TXDOT Test Method Tex-200-F, Part I, the gradation requirements for the several grades of aggregate shall be as follows:

Sieve Designation		Percent Retained By Weight (Mass) for				
US	SI	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
1 inch	25.0 mm	0				
7/8 inch	22.4 mm	0—2	0			
$\frac{3}{4}$ inch	19.0 mm	20—35	0—2	0		
5/8 inch	16.0 mm	85—100	20—40	0—2	0	
$\frac{1}{2}$ inch	12.5 mm		80—100	20—40	0—5	0
3/8 inch	9.5 mm	95—100	95—100	80—100	20—40	0—5
$\frac{1}{4}$ inch	6.25 mm			95—100		
No. 4	4.75 mm				95—100	50—80
No. 20	2.36 mm	99—100	99—100	99—100	98—100	98—100

302S.6 - Equipment For Precoating Aggregate

Mixing plants that will not continually meet all the requirements of this specification shall be rejected.

Mixing plants may be either the weigh batching type, the continuous mixing type or the drum mix type. Each type of plant shall be equipped with satisfactory conveyors, power units, aggregate handling equipment, aggregate screens and bins and shall consist of the essential pieces of equipment listed below:

If the Engineer or designated representative approves the use of emulsion as a precoat material, the Engineer or designated representative may also waive the requirement for a dryer, as specified below, if it is demonstrated that a satisfactory coating can be obtained without drying or heating the aggregate.

When using a low grade fuel oil or waste oil, the plant shall meet the requirements of article 340.4.(2) of TxDoT Specification Item 340, "Hot Mix Asphaltic Concrete Pavement".

A. Weigh Batching Type

1. Cold Aggregate Bin and Proportioning Device

The cold aggregate bins or aggregate stockpiles shall be of sufficient number and size to supply the amount of aggregate required to keep the plant in continuous operation. The proportioning device shall be such as will provide a uniform and continuous flow of aggregate to the plant in the desired proportions.

2. Dryer

The dryer shall be of the type that continually agitates the aggregate during heating and in which the temperature can be so controlled that aggregate will not be damaged in the necessary drying and heating operations, which are required to obtain a mixture of the specified temperature.

3. Burner

The burner or combination of burners and type of fuel used shall be such that in the process of heating the aggregate to the desired or specified temperatures, no residue from the fuel shall adhere to the heated aggregate. A recording thermometer shall be provided which will record the temperature of the aggregate when it leaves the dryer. The dryer shall be of sufficient size to keep the plant in continuous operation. The dryer will not be required for precoating natural limestone rock asphalt.

4. Screening and Proportioning

The screening capacity and size of the bins shall be sufficient to screen and store the amount of aggregate required to properly operate the plant and keep the plant in continuous operation at full capacity. Proper provisions shall be made to enable inspection forces to have easy and safe access to the proper location on the mixing plant where accurate representative samples of aggregate may be taken from the bins for testing.

5. Weighing and Measuring Equipment

The weighing and measuring equipment shall be of sufficient capacity and of adequate design for proper batching. The following equipment, conforming to the requirements of the TxDOT Standard Specification, Item No. 520, "Weighing and Measuring Equipment", shall be furnished:

- (a) Aggregate weigh box and batching scales.
- (b) Bucket and scales for precoat material for flux oil.

A pressure type flow meter may be used to measure the precoat material or fluxing material for each batch.

If a pressure type flow meter is used to measure the asphaltic material, the requirements of TxDOT Specification Item 520, "Weighing and Measuring Equipment", shall apply.

Provisions of a permanent nature shall be made for checking the accuracy of the asphaltic material measuring device. The line to the measuring device shall be protected with a jacket of hot oil or other means approved by the Engineer to maintain the temperature of the line near the temperature specified for the precoating material.

6. Mixer

The mixer shall be of the pug mill type and shall have a capacity of not less than 3000 pounds (1350 kilograms) in a single batch. The number of blades and the position of same shall be such as to give a uniform and complete circulation of the batch in the mixer. The mixer shall be equipped with an approved spray bar that will distribute the precoat material or fluxing material

quickly and uniformly throughout the mixer. Any mixer that has a tendency to segregate the mineral aggregate or fails to secure a thorough and uniform mixing with the precoat material or fluxing material shall not be used. All mixers shall be provided with an automatic time lock that will lock the discharge doors of the mixer for the required mixing period. The dump door or doors and the shaft seals of the mixer shall be tight enough to prevent the spilling of aggregate or mixture from the pug mill.

B. Continuous Mixing Type

1. Cold Aggregate Bin and Proportioning Device.

Same as for weigh batching type of plant.

2. Dryer.

Same as for weigh batching type of plant.

3. Screening and Proportioning.

Same as for weigh batching type of plant. These requirements shall also apply to materials that are stockpiled and that are proposed for direct use by a continuous mixing plant without the use of plant bins.

4. Aggregate Proportioning Device.

The aggregate proportioning device shall be so designed, that when properly operated, a uniform and continuous flow of aggregate into the mixer will be maintained.

5. Spray Bar for Precoat Material and Fluxing Material.

The spray bar for the precoat material or fluxing material shall be so designed that the material will spray uniformly and continuously into the mixer.

6. Meter for Precoat Material or Fluxing Material.

An accurate recording meter for precoat material or fluxing material shall be placed in the line leading to the spray bar so that the accumulative amount of precoat material or fluxing material being used can be accurately determined. Provisions of a permanent nature shall be made for checking the accuracy of the meter output.

7. Mixer

The mixer shall be of the pug mill continuous type and shall have a capacity of not less than 40 tons (36 megagrams) of mixture per hour. Any mixer that has a tendency to segregate the aggregate or fails to secure a thorough and uniform mixing of the aggregate with the precoat material or fluxing material shall not be used.

C. Drum Mix Plant

Unless otherwise indicated on the Drawings or if natural limestone rock asphalt is to be used, the Contractor may elect to use the drum-mixing process. The plant shall be adequately designed and constructed for the process of mixing aggregates and precoat material in the dryer-drum without preheating the aggregates. The plant shall be equipped with satisfactory conveyors, power units, aggregate-handling equipment and feed controls and shall consist of the following essential pieces of equipment.

1. Cold Aggregate Bin and Feed System

The number of compartments in the cold aggregate bin shall be equal to or greater than the number of stockpiles of individual materials to be used.

The bin shall be of sufficient size to store the amount of aggregate required to keep the plant in continuous operation and of proper design to prevent overflow of material from one compartment to another. There shall be vertical partitions meeting the requirements of article 340.4. (2) of TxDOT Specification Item 340, "Hot Mix Asphaltic Concrete Pavement". The feed system shall provide a uniform and continuous flow of aggregate in the desired proportion to the dryer. The Contractor shall furnish a chart indicating the calibration of each cold bin in accordance with the manufacturer's recommendations or in a method acceptable to the Engineer or designated representative.

The system shall provide positive weight (mass) measurement of the combined cold aggregate feed by use of belt scales or other approved devices. Provisions of a permanent nature shall be made for checking the accuracy of the measuring device, as required by TxDOT Specification Item 520, "Weighing and Measuring Equipment". When a belt scale is used, mixture production shall be maintained so that the scale normally operates between 50 percent and 100 percent of its rated capacity. Belt scale operation below 50 percent of the rated capacity may be allowed by the Engineer or designated representative if accuracy checks show the scale to meet the requirements of TxDOT Specification Item 520, "Weighing and Measuring Equipment", at the selected rate and it can be satisfactorily demonstrated to the Engineer or designated representative that mixture uniformity and quality have not been adversely affected.

2. Scalping Screen

A scalping screen shall be required, unless otherwise indicated on the Drawings and shall be located ahead of the combined aggregate belt scale.

3. Precoat Material Measuring System

An asphaltic material measuring device meeting the requirements of the TXDOT Item No. 520, "Weighing and Measuring Equipment", shall be placed in the line leading to the drum mixer so that the accumulative amount of precoat material used can be accurately determined. Provisions of a permanent nature shall be made for checking the accuracy of the measuring device output. The measuring device and line to the measuring device shall be protected with a jacket of hot oil or other approved means to maintain the temperature of the line and measuring device near the temperature specified for the precoat material. The measuring system shall include an automatic temperature compensation device to maintain a constant percent by mass of precoating material in the mixture. Unless otherwise indicated, the temperature of the precoat material entering the measuring device shall be maintained at +100F (+60C) of the temperature at which the measuring set was calibrated and set.

4. Synchronization Equipment for Feed-Control Systems

The precoat material feed-control shall be coupled with the total aggregate weight (mass) measuring device in such a manner as to automatically vary the precoat material feed rate as required to maintain the required proportion.

5. Drum Mix System

The drum mix system shall be of the type that continually agitates the aggregate and precoat mixture during heating, and in which the temperature can be so controlled that aggregate and asphalt will not be damaged in the necessary drying and heating operations that are required to obtain a mixture at the specified temperature. A continuously-recording thermometer shall be provided which will indicate the temperature of the mixture as it leaves the drum mixer.

6. Surge-Storage System

A surge-storage system will be required. It shall be adequate to minimize the production interruptions during the normal day's operations and shall be constructed to minimize segregation. A device such as a gob hopper or other similar devices approved by the Engineer or designated representative to prevent segregation in the surge-storage bin will be required.

7. Heating Equipment for Precoat Material and Fluxing Material

Heating equipment for precoat material and fluxing material shall be adequate to heat the amount of material required to the desired temperature. The material may be heated by steam coils which shall be absolutely tight. Direct fire heating will be permitted, provided the heater used is manufactured by a reputable concern and there is positive circulation of the liquid throughout the heater. Agitation with steam or air will not be permitted. The heating apparatus shall be equipped with a recording thermometer with a 24-hour chart that will record the temperature of the precoat material or fluxing material where it is at the point of highest temperature.

302S.7 - Storage, Proportioning and Mixing

A. Aggregate Storage

If the mineral aggregates are stored or stockpiled, they shall be handled in such a manner as to prevent segregation, mixing of the various materials or sizes and contamination with foreign materials. The grading of aggregates proposed for use and as supplied to the mixing plant shall be uniform. When directed by the Engineer or designated representative, aggregate materials shall not be added to stockpiles that have already been sampled for approval.

When asphalt cement is the precoating material, stockpile height shall be limited to approximately three (3) feet (one meter) immediately after production to limit the build up of heat. These stockpiles may be consolidated after cooling adequately, in the opinion of the Engineer or designated representative.

The use of limestone rock asphalt aggregate containing moisture in excess of the saturated surface-dry condition will not be permitted. Excess moisture will be evidenced by visual surface moisture on the aggregate or any unusual quantities of fines clinging to the aggregate.

B. Storage and Heating of Precoating Material or Fluxing Material

The precoating or fluxing material storage shall be ample to meet the requirements of the plant. The precoating materials shall not be heated in storage to a temperature in excess of 2500F (1200C) or the maximum temperature established in Standard Specification Item Number 301S, "Asphalts, Oils and Emulsions". All equipment used in the storage and handling of precoat material or fluxing material shall be kept in a clean condition at all times and shall be operated in such manner that there will be no contamination with foreign matter.

C. Feeding and Drying of Aggregate

The feeding of various sizes of aggregate, other than natural limestone rock asphalt, to the dryer shall be done through the cold aggregate bin and proportioning device in such a manner that a uniform and constant flow of material in the required proportions will be maintained. The aggregate shall be heated to the temperature necessary to produce a mixture meeting the requirements of Article 302S.A.3 and 302S.7.

D. Proportioning

The proportioning of the various materials entering into the mixture shall be as directed by the Engineer or designated representative and in accordance with these specifications. Aggregate shall be proportioned by weight (mass) using the weigh box and batching scales herein specified when the weigh-batch type of plant is used and by volume using the aggregate proportioning device when the continuous mixer type of plant is used. The precoat material or fluxing material shall be proportioned by weight (mass) or by volume based on weight (mass) using the specified equipment.

E. Mixing

1. Batch Type Mixer

In the charging of the weigh box and the charging of the mixer from the weigh box, such methods or devices shall be used as are necessary to secure a uniform mixture. In introducing the batch into the mixer, the mineral aggregate shall be introduced first; shall be mixed thoroughly, as directed, to uniformly distribute the various sizes throughout the batch before the precoat material or fluxing material is added; the precoat material or fluxing material shall then be added and the mixing continued until such time that the aggregate is properly coated. This mixing period may be varied, if in the opinion of the Engineer or designated representative the mixture is not uniform.

2. Continuous Type Mixer and Drum Mixer

The amount of aggregate and precoat material or fluxing material entering the mixer and the rate of travel through the mixer shall be so coordinated that a uniform mixture of the specified grading and percent by weight (mass) of precoat material or fluxing material will be produced.

302S.8 - Physical Properties of the Mixture

The materials shall be mixed at a central mixing plant and shipped ready for use. Mixes that do not remain workable over a sufficient period of time or do not maintain flow qualities such that the precoated aggregate may be satisfactorily spread by normal approved mechanical spreading devices will not be acceptable. Materials that are not uniformly and/or properly coated or fluxed, in the opinion of the Engineer or designated representative will not be accepted for use.

302S.9 - Measurement and Payment

Aggregates and precoated aggregates provided in accordance with this specification will not be paid for directly but shall be included in the unit price bid for the item of construction in which this item is used.

End

SPECIFIC CROSS REFERENCE MATERIALS

Specification Item 302S "Aggregates for Surface Treatments"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 301S	Asphalts, Oils and Emulsions
Item No. 340S	Hot Mix Asphaltic Concrete Pavement

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item 520	Weighing and Measuring Equipment

Texas Department of Transportation: Manual of Testing Procedures

<u>Designation</u>	<u>Description</u>
Tex-200-F	Sieve Analysis of Fine and Coarse Aggregates
Tex-215-F	Determination of Asphalt Content of Rock Asphalt By Hot Solvent Method
Tex-217-F	Determination of Deleterious Material and Decantation Test For Coarse Aggregates
Tex-224-F	Determination of Flakiness
Tex-400-A	Method of Sampling Stone, Gravel, Sand and Mineral Aggregates
Tex-410-A	Abrasion of Coarse Aggregate Using the Los Angeles Machine
Tex-411-A	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
Tex-438-A	Accelerated Polish Test for Aggregate
Tex-460-A	Determination of Crushed Face Particle

RELATED CROSS REFERENCE MATERIALS

Specification Item 302S "Aggregates for Surface Treatments"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 206S	Asphalt Stabilized Base
Item No. 210S	Flexible Base
Item No. 306S	Prime Coat
Item No. 307S	Tack Coat
Item No. 310S	Emulsified Asphalt Treatment
Item No. 311S	Emulsified Asphalt Repaving
Item No. 320S	Two Course Surface Treatment

City of Austin Standard Details

<u>Designation</u>	<u>Description</u>
1000S-10	Local Street Sections
1000S-11 (1)	Residential and Neighborhood collector Street Sections
1000S-11 (2)	Industrial and Collector Street Sections
1000S-12 (1)	Primary Collector Street Sections
1000S-12 (2)	Primary Arterial Street Sections
1000S-13 (1)	Minor Arterial Street Sections (4 Lanes)
1000S-13 (2)	Minor Arterial Street Sections (4 Lanes divided)
1000S-14	Major Arterial Street

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item 300	Asphalts, Oils and Emulsions

Item 301	Asphalt Antistripping Agents
Item 310	Prime Coat (Cutback Asphaltic Materials)
Item 314	Emulsified Asphalt Treatment
<u>Texas Department of Transportation: Manual of Testing Procedures</u>	
<u>Designation</u>	<u>Description</u>
Tex-126-E	Molding, Testing and Evaluation of Bituminous Black Base Materials
Tex-207-F	Determination of Density of Compacted Bituminous Mixtures

ITEM NO. 312S - SEAL COAT 9-26-12

312S.1 - Description

This item shall govern the construction of a surface treatment composed of a single application of asphalt or latex-asphalt covered with aggregate for the sealing of existing pavements in accordance with the details on the Drawings and this specification item.

312S.2 - Submittals

The submittal requirements of this specification item include:

- A. Recommended design mix (emulsion type, aggregate type, type and % of polymer)
- B. Test results on the emulsion (Saybolt Furol Viscosity, storage stability, demulsibility, sieve test, distillation test and residue tests).
- C. Test results on the aggregate (gradation and percent wear).
- D. Characteristics (i.e. manufacturer, rate of application, speed, etc.) of the proposed distributor and aggregate spreader.
- E. List of facilities and equipment proposed for temperature measurements.
- F. List of facilities and equipment proposed for storage and handling of asphaltic materials.

312S.3 - Materials

A. Asphaltic Materials

Asphaltic material shall conform to Item No. 301S, "Asphalts, Oils and Emulsions" as follows:

1. Patching

Patching shall be completed with Class D HMAC conforming to Item No. 340S, "Hot Mix Asphaltic Concrete".

2. Sealing

- a. Cool Weather of 65 to 80°F (18 to 27°C): HFRS-2.
- b. Warm Weather over 81°F (27°C): RS-2.

B. Aggregate

Aggregate material shall conform to Item No. 302S, "Aggregate for Surface Treatments". Unless otherwise specified on the drawings, the aggregate grading shall meet Grade 5.

C. Aggregate (Stockpiled) (Stockpiled)

Aggregate may be stockpiled only with permission of the Engineer or designated representative at locations designated for stockpiling. The Contractor shall be responsible for all remedial pollution control measures during the clean up of the stockpiling.

D. Latex Additive

The latex shall be an emulsion of styrene-butadiene low-temperature copolymer in water. The emulsion shall have good storage stability and possess the following properties:

Monomer ratio, Butadiene/Styrene	(73 ± 5)/(27 ± 5)
----------------------------------	-------------------

Minimum solids content, % by weight (mass)	45
Viscosity of emulsion at 77°F ± 1°F (25°C ± 1°C), Cps, Maximum (No. 3 spindle, 20 rpm, Brookfield RVT Viscometer	2000

The manufacturer shall furnish the actual styrene-butadiene rubber (SBR) content for each batch of latex emulsion. This information shall accompany all shipments to facilitate proper addition rates.

312S.4 - Equipment

Equipment will consist of the following: asphalt storage and heaters, distributors, aggregate spreaders, blade equipped tractor and drag broom, pneumatic rollers, water truck with pump and rotary broom.

All storage tanks, piping, retorts, booster tanks and distributors used in storage or handling of asphaltic material shall be kept clean and in good operating condition at all times and they shall be operated in such manner that there will be no contamination of the asphaltic material. The Contractor shall provide and maintain in good working order a recording thermometer to continuously indicate the temperature of the asphaltic material at the storage-heating unit, when storing of asphalt is permitted.

The distributor shall have pneumatic tires of such width and number that the load produced on the street surface shall not exceed 650 pounds per inch (12 kilograms per millimeter) of tire width and shall be so designed, equipped, maintained and operated that asphaltic material at even heat may be applied uniformly on variable widths of surface at readily determined and controlled rates of from 0.05 to 0.2 gallons per square yard (0.25 to 0.9 liters per square meter), with a pressure range of from 25 to 75 pounds per square inch (170 to 515 kilopascals), and with an allowable variation from any specified rate not to exceed 5 percent. Distributor equipment shall include tachometer, pressure gauges, volume measuring devices and a thermometer for reading temperatures of tank contents.

The aggregate spreading equipment shall be adjusted and capable of spreading aggregate at controlled amounts per square yard (square meter: 1 square meter equals 1.196 square yards) in a continuous manner.

The drag broom shall be lightweight street type, mounted on a frame, designed to spread aggregate uniformly over the surface of a bituminous pavement and equipped with pull plates for towing. Towing equipment shall be pneumatic tired.

Rollers shall conform to Item No. 232S, "Rolling (Pneumatic Tire)", Light Pneumatic Tire Roller.

Rotary brooms shall be suitable for cleaning the surfaces of bituminous pavements.

Vacuum sweepers shall be suitable for removing any loose aggregate without disturbing the compacted seal coat.

312S.5 - Construction Methods

Prior to commencement of this work, all erosion control, environmental protection measures and all traffic control devices shall be in place.

Seal coats may be applied when the surface on which the seal coat is to be placed is 60°F (16°C) or above and the air temperature is above 50°F (10°C) and rising, if the temperature is measured in the shade and away from artificial heat. Asphaltic material shall not be placed when general weather conditions are not suitable for a satisfactory seal coat or when the environment could be damaged.

A. Cracks and Holes

Cracks and holes will be patched by the Contractor prior to seal coat operations. Patching materials shall be hot mix, hot laid asphaltic concrete in conformance with Standard Specification Item No. 340S, "Hot Mix Asphaltic Concrete Pavement" or other asphaltic materials as approved by the Engineer or designated representative.

B. Cleaning Existing Surfaces

Prior to placement of the seal coat, loose dirt and other objectionable material shall be removed from the existing surface. The surface will be cleaned with a rotary broom. Hand brooms will be used in areas not accessible to rotary brooms. The Engineer or designated representative must approve all streets before application of any asphalt.

C. Mixing Asphalt

When the air temperature is 80°F (27°C) or higher, latex shall be added to the asphalt at the rate of 1½ to 2 percent by weight (mass) [solid bases]. The actual rate shall be in accordance with the drawings and/or as approved by the Engineer or designated representative. The asphalt shall be heated to 150°F (65°C) before adding the latex. The mixture shall be thoroughly mixed before application.

The finished latex-asphalt shall meet the following requirements:

Viscosity at 140 F, stokes (60°C, Pa-s)	1500 (150) maximum
Ductility at 39.2 F, 1 cm per min, cm (4°C, 1 mm/min, mm)	<u>100</u> minimum

D. Application of Asphaltic Material

Immediately following the preparation of the existing surface by cleaning, the asphaltic material shall be applied at the rate of 0.25 to 0.30 gallon per square yard (0.9 to 1.1 liters per square meter) as determined by the Engineer or designated representative, so that uniform distribution is obtained at all points. Skip streaks on the pavement, due to defective distributor nozzles, will be reshot with a distributor at the expense of the Contractor.

The Contractor shall calibrate the spray bar nozzles by spreading building paper as required on the surface for a sufficient distance back from the end of each application so that flow through sprays may be started and stopped on the paper and so that all sprays will operate properly over the entire length being treated. Building paper so used shall be immediately removed and loaded on a truck. At the end of each day, the paper shall be disposed of at a permitted site approved by the Engineer or designated representative.

Application temperatures will be determined by weather conditions but the temperature of the asphaltic material to be applied shall be between 150 and 160°F (65 and 71°C) as determined by the Engineer or designated representative. When a street to be sealed is continuous through several

intersections, sealed area will include all spandrels and stub-outs, unless otherwise directed by the Engineer or designated representative. Spandrels will be hand sprayed. Contractor shall not apply excessive amounts of asphaltic materials when hand spraying. Excessive materials applied shall be removed by the Contractor before spreading the aggregate.

The Contractor shall be required to seal all spandrels at the same time the adjacent streets are sealed, unless otherwise approved in writing by the Engineer.

During all applications, the surface of adjacent structures shall be protected in such a manner as to prevent their being splattered or marred. Building paper shall be spread on all manholes, valve boxes, junction boxes, etc. to protect the surface from asphaltic materials. The asphaltic material shall not be applied until the cover aggregate is available and ready to spread with assurance of continuous operation. No asphaltic material shall be placed which cannot be covered and rolled during daylight hours.

E. Spreading the Aggregate

The Contractor shall employ a mechanical aggregate spreader, which applies the aggregate uniformly over the surface at the rate of 15 to 20 pounds per square yard (8 to 11 kilograms per square meter). The actual rate shall be as directed by the Engineer or designated representative.

The covering material in the quantity specified shall be spread uniformly over the bituminous material as soon after application as possible. The aggregate shall be spread in the same width of application as for the asphaltic material and spread uniformly with the aggregate spreading equipment.

Trucks spreading aggregate shall be operated backward so that bituminous material will be covered before truck wheels pass over it. The aggregate shall be applied to a thickness that will not produce blanketing or stacking. Any blanketing or stacking shall be removed prior to rolling. Backspotting or sprinkling cover aggregate shall be done by hand spreading, which will be continued during the operations whenever necessary, as directed by the Engineer or designated representative.

F. Brooming and Rolling

Rolling shall be started as soon as sufficient aggregate is spread to prevent pick-up and continued until no more aggregate can be worked into the surface. The surface shall be blanket rolled. The Contractor shall manage the Work so that all rolling of all cover aggregate applied that day is accomplished with a minimum of four complete coverages with pneumatic rollers prior to sundown.

In lieu of the rolling equipment specified, the Contractor may, upon written permission from the Engineer or designated representative, operate other compacting equipment that will produce equivalent relative compaction in the same period of time as the specified equipment.

In lieu of the rolling equipment specified, the Contractor may, upon written permission from the Engineer or designated representative, operate other compacting equipment that will produce equivalent relative compaction in the same period of time as the specified equipment.

Rollers shall be maintained in good repair and operating condition and shall be approved by the Engineer or designated representative.

The Contractor will be responsible for maintaining all streets for 48 hours after each street has been seal coated. Maintenance will consist of brooming, rolling and adding more aggregate as directed by the Engineer or designated representative.

G. Asphaltic Material Contractor's Responsibility

The Contractor shall furnish vendor's certified test report for asphaltic material shipped for the project. The report shall be delivered to the Engineer or designated representative before permission is granted for use of the material. Any change of source shall be reported prior to delivery.

312S.6 - Traffic Control Facilities

The Contractor shall arrange the seal coat operation in such a manner as to avoid excessive inconvenience to the public in the seal coat area.

The Contractor shall notify all abutting property owners along the street prior to initiation of the seal coat operation.

The Contractor shall have on the project site sufficient barricades, flag-persons and traffic control devices to assure a minimum of inconvenience to traffic around the construction area in conformance with the General Conditions of the Standard Contract Documents. If the Contractor's arrangements are satisfactory to the Engineer or designated representative, the seal coat operation will not be allowed to commence.

After the seal coat has been applied, the Contractor shall post appropriate warning signs along these streets as directed by the Engineer or designated representative and maintain such signs for 48 hours.

312S.7 - Final Cleanup

The Contractor shall vacuum sweep the completed seal coat and curb areas to remove loose aggregate as required during the first week after the traffic is allowed on the street.

312S.8 - Measurement

All accepted Seal Coat will be measured by one of the following methods:

- A. "Asphaltic Material" will be measured in gallons (liters: 1 liter equals 0.264 gallons) at the applied temperature at the point of application on the street.
- B. "Aggregate" will be measured by the cubic yard (cubic meter: 1 cubic meter equals 1.31 cubic yards) in vehicles as applied on the street.
- C. "Aggregate (Stockpiled)", if required to be furnished, will be measured by the cubic yard (cubic meter: 1 cubic meter equals 1.31 cubic yards) of material in vehicles at the point of stockpiling.
- D. "Complete in Place" will be measured by the square yard (square meter: 1 square meter equals 1.196 square yards) of surface area treated.

312S.9 - Payment

The work performed and materials furnished as prescribed by this item and measured as provided under "Measurement" will be paid for at the unit bid prices stipulated in the bid for "Seal Coat, Asphaltic Material", "Seal Coat, Aggregate", "Seal Coat, Aggregate (Stockpiled)" or "Seal Coat, Complete in Place". The unit bid prices shall each include full compensation for: a) furnishing, delivering and placing all materials; b) patching, brooming, compacting and rolling; c) cleaning the existing surface, covering excess asphaltic material, removing excess aggregate and cleaning gutters and cleaning stockpiles sites; d) a 48 hour maintenance period and e) all labor, equipment, tools and incidentals necessary to complete the work required as indicated on the drawings.

Payment will be made under one of the following:

Pay Item No. 312S-A:	Seal Coat, Asphaltic Material	Per Gallon.
-----------------------------	-------------------------------	-------------

Pay Item No. 312S-B:	Seal Coat, Aggregate	Per Cubic Yard.
Pay Item No. 312S-C:	Seal Coat, Aggregate (Stockpiled)	Per Cubic Yard.
Pay Item No. 312S-D:	Seal Coat, Complete in Place	Per Square Yard.

End

SPECIFIC CROSS REFERENCE MATERIALS

Specification Item No. 312S, " Seal Coat"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 232S	Rolling (Pneumatic Tire)
Item No. 301S	Asphalts, Oils and Emulsions
Item No. 302S	Aggregates for Surface Treatments
Item No. 340S	Hot Mix Asphaltic Concrete Pavement

Texas Department of Transportation: Manual of Testing Procedures

<u>Designation</u>	<u>Description</u>
Tex-200-F	Sieve Analysis of Fine and Coarse Aggregates
Tex-410-A	Abrasion of Coarse Aggregate Using the Los Angeles Machine
Tex-502-C	Test for Penetration of Bituminous Material
Tex-503-C	Test for Ductility of Bituminous Materials
Tex-504-C	Test for Flash and Fire Points of Petroleum Materials by Cleveland Open Cup
Tex-506-C	Test for Loss on Heating of Oils and Asphaltic Compounds

Tex-507-C	Proportion of Bitumen Soluble in Trichloro-ethylene
Tex-513-C	Test for Saybolt Viscosity
Tex-519-C	Float Test for Bituminous Materials
Tex-520-C	Test for Residue of Specified Penetration
Tex-521-C	Testing Emulsified Asphalts
Tex-528-C	Test for Absolute Viscosity of Asphalt Cements
Tex-529-C	Test for Kinematic Viscosity of Asphalts

RELATED CROSS REFERENCE MATERIALS

Specification Item No. 312S, " Seal Coat"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 310S	Emulsified Asphalt Treatment
Item No. 313S	Rubber Asphalt Joint and Crack Sealant
Item No. 315S	Milling Asphaltic Concrete Paving and Non Portland Cement Concrete Bases
Item No. 316S	Polymerized Asphalt Interlayer Seal
Item No. 320S	Two Course Surface Treatment
Item No. 350S	Heating, Scarifying and Repaving
Item No. 801S	Construction Detours
Item No. 803S	Barricades, Signs and Traffic Handling
Item No. 870S	Work Zone Pavement Markings
Item No. 874S	Eliminating Existing Pavement Markings and Markers

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 300	Asphalts, Oils and Emulsions
Item No. 302	Aggregates for Surface Treatments
Item No. 314	Emulsified Asphalt Treatment
Item No. 315	Emulsified Asphalt Seal
Item No. 316	Surface Treatments
Item No. 345	Asphalt Stabilized Base (Plant Mixed)
Item No. 520	Weighing and Measuring Equipment

City of Austin Standard Contract Documents

<u>Designation</u>	<u>Description</u>
00700	General Conditions
01500	Temporary Facilities
01550	Public Safety and Convenience

Texas Department of Transportation: Manual of Testing Procedures

<u>Designation</u>	<u>Description</u>
Tex-509-C	Spot Test of Asphaltic Materials
Tex-510-C	Determining the Effect of Heat and Air on Asphaltic Materials when Exposed in Thin Films
Tex-512-C	Test for Flash Points of Volative Flammable Materials by Tag Open-Cup Apparatus

ITEM NO. 320S - TWO COURSE SURFACE TREATMENT 9-26-12

320S.1 - Description

This item shall govern the construction of a wearing surface composed of a double application of asphaltic material, each covered with aggregate, constructed on existing pavements, a prepared base course or surface in accordance with these specifications.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, the inch-pound units are given preference followed by SI units shown within parentheses.

320S.2 - Submittals

The submittal requirements of this specification item include:

- A. Recommended design mix (asphaltic material, aggregate type, modifier type and %)
- B. Test results on the asphaltic material (Viscosity, penetration, solubility, ductility, stability, distillation test, residue tests, etc.).
- C. Test results on the aggregate (gradation and percent wear).
- D. Characteristics (i.e. manufacturer, rate of application, speed, etc.) of the proposed distributor and aggregate spreader.
- E. List of facilities and equipment proposed for temperature measurements.
- F. List of facilities and equipment proposed for storage and handling of asphaltic materials.

320S.3 - Materials

All material shall be of the type(s) and grade(s) shown on the Drawings and shall conform to the pertinent material requirements for the following items:

A. Asphaltic Materials

The asphaltic materials used shall conform to Item No. 301S, "Asphalts, Oils and Emulsions" as follows:

- 1. Air Temperature 65 to 80o F (18 to 27°C), HFRS-2
- 2. Air Temperature over 81°F (27°C), RS-2

B. Aggregate

The aggregate materials shall conform to Item No. 302S, "Aggregate for Surface Treatments" as follows:

- 1. First Course
Grade 3
- 2. Second Course
Grade 5

C. Aggregate (Stockpiled)

When the Drawings include the Item, "Aggregate (Stockpiled)", aggregate of the type and grade specified for the surface treatment shall be stockpiled within the limits of the project at sites designated on the drawings or as directed by the Engineer or designated representative. Stockpile

sites shall be leveled, if required and prepared as specified herein. The Contractor shall load, haul, distribute and apply the stockpiled aggregate in accordance with specification requirements governing for this item. The stockpile areas and remaining stockpiles shall be left in a neat condition satisfactory to the Engineer or designated representative.

D. Temporary Pavement Markings

Temporary pavement markings shall conform to Item No. 864S, "Abbreviated Pavement Markings".

320S.4 - Construction Methods

Prior to commencement of this work, all required erosion control and tree protection measures shall be in place and the utilities located and protected as specified in the City of Austin Standard Contract Documents, Section 00700, "General Conditions". Construction equipment shall not be operated within the drip line of trees unless otherwise indicated. Construction materials shall not be stockpiled under the canopies of trees. Excavation or embankment materials shall not be placed within the drip line of trees until tree wells are constructed.

The two course surface treatment shall be applied when the air temperature is above 50°F (10°C) and rising. Air temperature shall be taken in the shade and away from artificial heat. The two course surface treatment shall not be applied when the temperature of the roadway surface is below 60°F(16°C).

When latex modified asphalt cement is specified, the two course surface treatment shall be applied when the air temperature is above 70°F (21°C) and rising. Air temperature shall be taken in the shade and away from artificial heat. The two course surface treatment shall not be applied when the temperature of the roadway surface is below 70°F(21°C).

Asphaltic material shall not be placed when general weather conditions, in the opinion of the Engineer or designated representative, are not suitable.

The area to be treated shall be cleaned of dirt, dust or other deleterious matter by sweeping or other approved methods. If deemed necessary by the Engineer or designated representative, the surface shall be lightly sprinkled just prior to the first application of asphaltic material.

The Contractor shall be responsible for the proper preparation of all stockpile areas before aggregates are placed thereon, including leveling, cleaning of debris necessary for protection of the aggregate to prevent any contamination thereof and clean up of any stockpile area at the completion of the work.

All storage tanks, piping, retorts, booster tanks and distributors used in storing or handling asphaltic materials shall be kept clean and in good operating condition at all times and shall be operated in such manner that there will be no contamination of the asphaltic material with foreign material. It shall be the responsibility of the Contractor to provide and maintain in good working order a recording thermometer at the storage heating unit at all times.

Application temperatures will be determined by weather conditions within the limits recommended in Specification Item 301S," Asphalts, Oils and Emulsions", as determined by the Engineer or designated representative.

The Contractor shall provide all necessary facilities for determining the temperature of the asphaltic material in all of the heating equipment and in the distributor for determining the rate at which it is applied and for securing uniformity at the junction of two distributor loads. The distributor shall have been calibrated within three (3) years from the date it is first used on this project. The Contractor shall

furnish the Engineer or designated representative with an accurate and satisfactory record of such calibration. After beginning the work, should the rate of the asphaltic material appear to be inappropriate, the distributor shall be adjusted to provide a satisfactory rate before proceeding with the work.

When a uniform application of asphaltic material is not being achieved, the Engineer or designated representative may require that the Contractor provide an operator at the rear of the distributor to manually control the spray bar operations.

Asphaltic material for each course may be applied for the full width of the surface treatment in one application, unless the width exceeds 26 feet (8 meters). No traffic or hauling will be permitted over the freshly applied asphaltic material. The asphaltic material shall not be applied until immediate covering is assured.

A. First Course

Asphaltic material for the first course shall be applied on the clean surface by an approved type of self-propelled pressure distributor so operated as to distribute the material, evenly and smoothly, under a pressure necessary for proper distribution at a rate of 0.30 to 0.35 gallons per square yard (1.4 to 1.6 liters per square meter) or as directed by the Engineer or designated representative.

Aggregate for the first course shall be immediately and uniformly applied and spread by an approved self-propelled continuous feed aggregate spreader, unless otherwise indicated or authorized by the Engineer in writing. The aggregate shall be applied at the approximate rate of 15 to 20 lbs. per square yard (8 to 11 kilograms per square meter) or as directed by the Engineer or designated representative. The Contractor shall be responsible for the maintenance of the surface of the first course until the second course is applied.

The entire surface shall then be broomed, bladed or raked as required by the Engineer and shall be thoroughly rolled in accordance with Specification Item 230S, "Rolling (Flat Wheel)" with power rollers of the three-wheel or tandem, self-propelled type, weighing not less than 3 tons (2.7 megagrams) nor more than 6 tons (5.4 megagrams). All wheels shall be flat.

In lieu of the rolling equipment specified, the Contractor may, upon written permission from the Engineer or designated representative, operate other compacting equipment that will produce equivalent relative compaction in the same period of time as the specified equipment. If the substituted compaction equipment fails to produce the desired compaction within the same period of time as would be expected of the specified equipment, as determined by the Engineer or designated representative, its use shall be discontinued. Rollers shall be maintained in good repair and condition and shall be approved by the Engineer or designated representative prior to their use.

B. Second Course

It is the intent of this specification that the application of asphalt and aggregate for the second course be applied within the same day or immediately thereafter and prior to opening the roadway to traffic.

The second course shall consist of asphaltic material and aggregate applied and covered in the manner specified for the first application. The surface shall then be broomed, bladed or raked as required by the Engineer or designated representative and thoroughly rolled in accordance with Standard Specification Item 232S, "Rolling (Pneumatic Tire)" with a pneumatic tire roller. Asphaltic materials for the course shall be applied at the rate of 0.25 gallons per square yard (1.1 liters per

square meter) or as directed by the Engineer or designated representative. Aggregate for the second course shall be applied at the rate of 14 to 18 lbs. per square yard (7.5 to 10 kilograms per square meter) or as directed by the Engineer or designated representative.

The Contractor shall be responsible for the maintenance of the surface treatment until the work is accepted by the Engineer or designated representative. All holes or failures in the surface shall be repaired by use of additional asphalt and aggregate. All fat or bleeding surfaces shall be covered with approved cover material in such a manner that the asphaltic material will not adhere to or be picked up by the wheels of vehicles.

Temporary pavement markings shall be placed in accordance with Item No. 864S, "Abbreviated Pavement Markings".

320S.5 - Measurement

A "Two Course Surface Treatment" application shall be measured by the square yard (square meter: 1 square meter equals 1.196 square yards) of completed and accepted two-course surface treatment.

320S.6 - Payment

The work performed and materials furnished as prescribed by this item and measured as provided under "Measurement" will be paid at the unit bid price for two course surface treatment. The price shall each include full compensation for: a) cleaning and sprinkling the base; furnishing, preparing, hauling and placing all materials, and rolling, b) all freight involved; c) all manipulations, labor, tools, equipment cleanup, and temporary pavement markings and d) all incidentals necessary to complete the work.

Payment will be made under the following:

Pay Item No. 320S-A:	Two Course Surface Treatment Plan Quantity	Per Square Yard
-----------------------------	---	-----------------

End

<u>SPECIFIC CROSS REFERENCE MATERIALS</u>	
<u>Specification Item 320S "Two Course Surface Treatment"</u>	
<u>City of Austin Standard Specifications</u>	
<u>Designation</u>	<u>Description</u>
Item No. 232S	Rolling (Pneumatic Tire)
Item No. 301S	Asphalts, Oils and Emulsions
Item No. 302S	Aggregates for Surface Treatments
Item No. 642S	Silt Fence (SF)

Item No. 864S

Abbreviated Pavement Markings

RELATED CROSS REFERENCE MATERIALSSpecification Item 320S "Two Course Surface Treatment"City of Austin Standard Contract DocumentsDesignationDescription

Section 00700

General Conditions

City of Austin Standard SpecificationsDesignationDescription

Item No. 206S

Asphalt Stabilized Base

Item No. 210S

Flexible Base

Item No. 306S

Prime Coat

Item No. 307S

Tack Coat

Item No. 310S

Emulsified Asphalt Treatment

Item No. 311S

Emulsified Asphalt Repaving

Item No. 312S

Seal Coat

Item No. 340S

Hot Mix Asphaltic Concrete Pavement

Item No. 341S

Paving Fabric

Item No. 350S

Heating, Scarifying and Repaving

Item No. 351S

Recycling Agent

City of Austin Standard DetailsDesignationDescription

1000S-10	Local Street Sections
1000S-11(1)	Residential and Neighborhood collector Street Sections
1000S-11(2)	Industrial and Collector Street Sections
1000S-12(1)	Primary Collector Street Sections
1000S-12(2)	Primary Arterial Street Sections
1000S-13(1)	Minor Arterial Street Sections (4 Lanes)
1000S-13(2)	Minor Arterial Street Sections- (4 Lanes divided)
1000S-14	Major Arterial Street

Texas Department of Transportation: Standard Specifications for Construction And Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item 300	Asphalts, Oils and Emulsions
Item 301	Asphalt Antistripping Agents
Item 310	Prime Coat (Cutback Asphaltic Materials)
Item 314	Emulsified Asphalt Treatment
Item 316	Surface Treatments
Item 345	Asphalt Stabilized Base (Plant Mixed)
Item 354	Planing and/or Texturing Pavement