

11.3.1.1 **PERFORMANCE BOND.** A good and sufficient bond in an amount equal to one hundred percent (100%) of the total Contract Sum, guaranteeing the full and faithful execution of the Work and performance of the Contract in accordance with Plans, Specifications and all other Contract Documents, including any extensions thereof, for the protection of Owner. This bond shall also provide for the repair and maintenance of all defects due to faulty materials and workmanship that appear within a period of one (1) year from the date of final Completion or acceptance of the Work by the Owner or lesser or longer periods as may be otherwise designated in the Contract Documents.

11.3.1.2 **PAYMENT BOND.** A good and sufficient bond in an amount equal to 100% of the total Contract Sum, guaranteeing the full and prompt payment of all claimants supplying labor or materials in the prosecution of the Work provided for in the Contract, and for the use and protection of each claimant.

11.3.2 If the Contract Sum, including Owner-accepted Alternates and allowances, if any, is greater than \$100,000, Performance and Payment Bonds equaling one hundred percent (100%) of the Contract Sum are mandatory and shall be provided by Contractor. If the Contract Sum is greater than \$50,000 but less than or equal to \$100,000, only a Payment Bond equaling One hundred percent (100%) of the Contract amount is mandatory; provided, however, that Contractor also may elect to furnish a Performance Bond in the same amount if Contractor so chooses. If the Contract Sum is less than or equal to \$25,000, Contractor may elect not to provide Performance and Payment Bonds; provided that in such event, no money shall be paid by Owner to Contractor until Final Completion of all Work. If Contractor elects to provide Performance and Payment Bonds, the Contract Sum shall be payable to Contractor through progress payments in accordance with these General Conditions.

11.3.3 No surety shall be accepted by Owner that is in default, delinquent on any bonds or that is a party to any litigation against Owner. All bonds shall be made and executed on Owner's standard forms, shall be approved by Owner and shall be executed by not less than one (1) corporate surety that is authorized and admitted to do business in the State of Texas, is licensed by the State of Texas to issue surety bonds, is listed in the most current United States Department of the Treasury List of Acceptable Sureties and is otherwise acceptable to Owner. Each bond shall be executed by Contractor and the surety and shall specify that legal venue for enforcement of each bond exclusively shall lie in Bexar County, Texas. Each surety shall designate an agent resident in Bexar County, Texas to which any requisite statutory notices may be delivered and on which service of process may be had in matters arising out of the suretyship.

11.3.4 The person or persons, partnership, company, firm, limited liability company, association, corporation or other business entity to whom the Contract is awarded shall, within ten (10) days after such award, sign the required Contract with Owner and provide the necessary surety bonds and evidence of insurance as required under the Contract Documents. No Contract shall be binding on Owner until:

- (1) it has been approved as to form by Owner's City Attorney;
- (2) it has been executed by Owner's City Manager;
- (3) the performance and payment bonds and evidence of insurance have been furnished to Owner by Contractor, as required by the Contract Documents; and
- (4) a fully executed Contract has been delivered to Contractor.

11.3.5 The failure of Contractor to execute the Contract and deliver the required bonds and evidence of insurance within ten (10) days after the Contract is awarded or as soon thereafter as Owner can assemble and deliver the Contract and by the time the Owner-scheduled Pre-Construction meeting is held shall, at Owner's option, constitute a material breach of Contractor's bid proposal and Owner may rescind the Contract award and collect or retain the proceeds of the bid security. By reason of the uncertainty of the market prices for materials and labor, and it being impracticable and difficult to determine accurately the amount of damages occurring to Owner by reason of Contractor's failure to execute the Contract within ten (10) days and deliver bonds and insurance by the Owner-scheduled Pre-Construction meeting, the filing of a bid proposal shall constitute an acceptance of this **Section 11.3.5**. In the event Owner should re-advertise for bids, the defaulting Contractor shall not be eligible to bid, and the lowest responsible bid obtained in the re-advertisement shall be the bid referred to in this **Section 11.3**.

11.4 'UMBRELLA' LIABILITY INSURANCE. Contractor shall obtain, pay for and maintain Umbrella Liability Insurance during the Contract term, insuring Contractor for an amount of not less than \$5,000,000 per occurrence combined limit Bodily Injury (including death) and Property Damage, that follows form and applies in excess of the primary coverage required hereinabove. Owner and Design Consultant shall be named as additional insureds using endorsement CG 20 26 or broader. No aggregate shall be permitted for this type of coverage. The Umbrella Liability Insurance policy shall provide "drop down" coverage, where the underlying primary insurance coverage limits are insufficient or exhausted.

11.5 POLICY ENDORSEMENTS AND SPECIAL CONDITIONS

11.5.1 Each insurance policy to be furnished by Contractor shall address the following required provisions within the certificate of insurance, which shall be reflected in the body of the insurance contract and/or by endorsement to the policy:

- 11.5.1.1 Owner and Design Consultant shall be named as additional insureds on all liability coverages, using endorsement CG 20 26 or broader. When Owner employs a Construction Manager on the Project, Contractor and Subcontractor(s) shall include the Construction Manager on all liability insurance policies to the same extent as Owner and Design Consultant are required to be named as additional insureds.
 - 11.5.1.2 Within five (5) calendar days of a suspension, cancellation or non-renewal of any required line of insurance coverage, Contractor shall provide Owner a replacement certificate of insurance with all applicable endorsements included. Owner shall have the option to suspend Contractor's performance should there be a lapse in coverage at any time during the Contract.
 - 11.5.1.3 The terms "Owner," "City" or "City of San Antonio" shall include all authorities, boards, bureaus, commissions, divisions, departments and offices of Owner and the individual members, employees and agents thereof in their official capacities, while acting on behalf of Owner.
 - 11.5.1.4 The policy phrase or clause "Other Insurance" shall not apply to Owner where Owner is an additional insured on the policy. The required insurance coverage furnished by Contractor shall be the primary insurance for all purposes for the Project, as well as the primary insurance for the additional insureds named in the required policies.
 - 11.5.1.5 All provisions of the Contract Documents concerning liability, duty and standard of care, together with the indemnification provision, shall, to the maximum extent allowable in the insurance market, be underwritten with contractual liability coverage(s) sufficient to include such obligations with the applicable liability policies.
- 11.5.2 Concerning the insurance to be furnished by the Contractor, it is a condition precedent to acceptability which:
- 11.5.2.1 All policies must comply with the applicable requirements and special provisions of this **Article 11**.
 - 11.5.2.2 Any policy evidenced by a Certificate of Insurance shall not be subject to limitations, conditions or restrictions deemed inconsistent with the intent of the insurance requirements set forth herein, and Owner's decision regarding whether any policy contains such provisions and contrary to this requirement shall be final.
 - 11.5.2.3 All policies required are to be written through companies duly authorized and approved to transact that class of insurance in the State of Texas and that otherwise are acceptable to Owner.

11.5.3 Contractor agrees to the following special provisions:

- 11.5.3.1 Contractor hereby waives subrogation rights for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against Owner, it being the intention that the insurance policies shall protect all parties to the Contract and be primary coverage for all losses covered by the policies. This waiver of subrogation shall be included, by endorsement or otherwise, as a provision of all policies required under this **Article XI**.
- 11.5.3.2 Insurance companies issuing the insurance policies and Contractor shall have no recourse whatsoever against Owner for payment of any premiums or assessments for any deductibles, as all such premiums and assessments solely are the responsibility and risk of Contractor.
- 11.5.3.3 Approval, disapproval or failure to act by Owner, regarding any insurance supplied by Contractor or any Subcontractor(s), shall not relieve Contractor of any responsibility or liability for damage or accidents as set forth in the Contract Documents. The bankruptcy, insolvency or denial of liability of or by Contractor's insurance company shall likewise not exonerate or relieve Contractor from liability.
- 11.5.3.4 Owner reserves the right to review the insurance requirements of this **Article XI** during the effective period of this Contract and to adjust insurance coverage and insurance limits when deemed necessary and prudent by Owner's Risk Management Division, based upon changes in statutory law, court decisions or the claims history of Contractor and Subcontractors. Contractor agrees to 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 party to this Contract or upon the underwriter of any such policy provisions. Upon request by Owner, Contractor shall exercise reasonable efforts to accomplish such changes in policy coverage.
- 11.5.3.5 No special payments shall be made for any insurance policies that Contractor and Subcontractors are required to carry. Except as provided in **Section 11.5.3.4** herein, all amounts payable regarding the insurance policies required under the Contract Documents are included in the Contract Sum.
- 11.5.3.6 Any insurance policies required under this **Article XI** may be written in combination with any of the other policies, where legally permitted, but none of the specified limits neither may be lowered or otherwise negatively impacted by doing so, nor may any of the requirements or special provisions of this **Article XI** be limited or circumvented by doing so.

ARTICLE XII. INSPECTING, UNCOVERING AND CORRECTING OF WORK

12.1 Inspecting Work. Owner and Design Consultant shall have authority to reject Work that does not conform to the Contract Documents. Whenever Owner or Design Consultant considers it necessary or advisable, Owner and/or Design Consultant shall have authority to require inspection or testing of the Work in accordance with this **Article XII**, whether or not such Work is fabricated, installed or completed.

12.2 UNCOVERING WORK

12.2.1 If a portion of the Work is covered, concealed and/or obstructed, contrary to Owner's or Design Consultant's requirements specifically expressed in the Contract Documents, it must be uncovered for Owner's or Design Consultant's inspection and properly be replaced at Contractor's expense without any change in the Contract Time or Sum.

12.2.2 If a portion of the Work has been covered, concealed and/or obstructed and Design Consultant or Owner has not inspected the Work prior to its being covered, concealed and/or obstructed, Owner and Design Consultant retain the right to inspect such Work and, when directed by Owner, Contractor shall uncover it. If said Work is found to be in accordance with the Contract Documents, the costs for uncovering and replacement shall, by appropriate Change Order, be paid by Owner. If such Work uncovered is found to not be in accordance with the Contract Documents, Contractor shall pay all costs associated with the uncovering, correction and replacement of the Work, unless the condition found was caused by Owner or Owner's separate contractor, in which event Owner shall be responsible for payment of actual costs incurred by Contractor.

12.3 CORRECTING WORK

12.3.1 Contractor promptly shall correct any Work rejected by Owner or Design Consultant as failing to conform to the requirements of the Contract Documents, whether inspected before or after Substantial Completion and whether or not fabricated, installed or completed. Contractor shall bear costs of correcting such rejected Work, along with all costs for additional testing, inspections and compensation for Design Consultant's services and expenses made necessary thereby.

12.3.2 In addition to Contractor's warranty obligations, if any of the Work is found to be defective or nonconforming with the requirements of the Contract Documents, including, but not limited to these General Conditions, Contractor shall correct it promptly after receipt of written notice from Owner or Design Consultant to correct unless Owner previously has given Contractor a written acceptance or waiver of the defect or nonconformity. Contractor's obligation to correct defective or nonconforming Work remains in effect for:

- 12.3.2.1 one (1) year after the date of Substantial Completion of the Work or designated portion of the Work;
- 12.3.2.2 one (1) year after the date for commencement of warranties established by agreement in connection with partial occupancy under **Section 9.9.1** hereto; or
- 12.3.2.3 the stipulated duration of any applicable special warranty required by the Contract Documents.
- 12.3.3 The one (1) year period, described in **Section 12.3.2.1**, **Section 12.3.2.2** and **Section 12.3.2.3** herein, shall be extended, with respect to portions of the Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual completion of the Work.
- 12.3.4 The obligations of Contractor under **Section 3.5** herein and this **Section 12.3** shall survive final acceptance of the Work and termination of this Contract. Owner shall give notice to Contractor promptly after discovery of a defective or nonconforming condition in the Work. The one (1) year period stated in this **Section 12.3** does not limit the ability of Owner to require Contractor to correct latent defects or nonconformities in the Work, which defects or nonconformities could not have been discovered through reasonable diligence by Owner or Design Consultant at the time the Work was performed or at the time of inspection for certification of Substantial Completion or Final Completion. The one (1) year period also does not relieve Contractor from liability for any defects or deficiencies in the Work that may be discovered after the expiration of the one (1) year correction period.
- 12.3.5 Contractor shall remove from the Project Site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Owner.
- 12.3.6 If Contractor fails to correct any defective or nonconforming Work within what Owner deems a reasonable time after Owner or Design Consultant gives written notice of rejection to Contractor, Owner may correct the defective or nonconforming Work in accordance with this **Section 12.3**. If Contractor promptly does not proceed with correction of any defective or nonconforming Work within a reasonable time fixed by written notice from Owner or Design Consultant, Owner may remove or replace the defective or nonconforming Work and store the salvageable materials or equipment at Contractor's expense. If Contractor does not pay the costs of removal and storage within ten (10) calendar days after written notice by Owner or Design Consultant, Owner may, upon ten (10) additional calendar days written notice, sell the materials and equipment at auction or at private sale and shall account to Contractor for the proceeds, after deducting all costs and damages that should have been borne by Contractor to correct the defective work, including all compensation for Design Consultant's services and expenses made necessary as a result of the sale, removal and storage. If the proceeds of sale do not cover the costs that Contractor should have borne,

the Contract Sum shall be reduced by the deficiency. If payments due to Contractor then or thereafter are not sufficient to cover the deficiency, Contractor shall pay the difference to Owner.

12.3.7 Contractor shall bear the cost of correcting destroyed or damaged construction of Owner or Owner's separate contractors, whether the construction is completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

12.3.8 Nothing contained in this **Section 12.3** shall be construed to establish a period of limitation with respect to other obligations which Contractor might have under the Contract Documents. The establishment of the one (1) year time period, as described in **Section 12.3.2** relates only to the specific obligation of Contractor to correct the Work and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced or to the time within which proceedings may be commenced to establish Contractor's liability with respect to Contractor's obligations other than specifically to correct the Work.

12.3.9 Any Work repaired or replaced, pursuant to this **Article XII**, shall be subject to the provisions of **Article XII** to the same extent as Work originally performed or installed.

12.4 Acceptance of Nonconforming Work. Owner may, in Owner's sole discretion, accept Work that is not in accordance with the requirements of the Contract Documents instead of requiring its removal and correction. Upon that occurrence, the Contract Sum shall be reduced as appropriate and equitable, as solely determined by Owner. Any adjustment shall be accomplished whether or not final payment has been made.

ARTICLE XIII. COMPLETION OF THE CONTRACT; TERMINATION; TEMPORARY SUSPENSION

13.1 Final Completion Of Contract. The Contract shall be considered completed, except as provided in any warranty or maintenance stipulations, bond or by law, when all the Work has been finally completed, a final inspection is made by Owner and Design Consultant and final acceptance and final payment is made by Owner.

13.2 Warranty Fulfillment. Prior to the expiration of the specified warranty period provided for in the Contract Documents, Owner or Design Consultant shall make a detailed inspection of the Work and shall advise Contractor and Contractor's Surety of the items that require correction. Owner or Design Consultant shall make a subsequent inspection and, if the corrections have been properly performed, Owner shall issue a letter of release on the maintenance obligations to Contractor. If, for any reason, Contractor has not made the required corrections before the expiration of the warranty period, the warranty provisions as provided for in the Contract Documents shall remain in effect until the corrections have properly been performed and a letter of release from Owner to Contractor is issued.

13.3 TERMINATION BY THE OWNER FOR CAUSE

13.3.1 Notwithstanding any other provision of these General Conditions, the Work or any portion of the Work may be terminated immediately by Owner for any good cause after giving seven (7) calendar days advance written notice and an opportunity to cure to Contractor, including but not limited to the following causes:

13.3.1.1 Failure or refusal of Contractor to start the Work within ten (10) calendar days after the date of the written Notice to Proceed is issued by Owner to Contractor commence Work.

13.3.1.2 A reasonable belief of Owner or Design Consultant that the progress of the Work being made by Contractor is insufficient to complete the Work within the specified Contract time.

13.3.1.3 Failure or refusal of Contractor to provide sufficient and proper equipment or construction forces properly to execute the Work in a timely manner.

13.3.1.4 A reasonable belief that Contractor has abandoned the Work.

13.3.1.5 A reasonable belief that Contractor has become insolvent, bankrupt, or otherwise is financially unable to carry on the Work.

13.3.1.6 Failure or refusal on the part of Contractor to observe any material requirements of the Contract Documents or to comply with any written orders given by Owner or Design Consultant, as provided for in the Contract Documents.

13.3.1.7 Failure or refusal of Contractor promptly to correct any defects in materials or workmanship, or defects of any nature, the correction of which has been directed to Contractor in writing by Owner or Design Consultant.

13.3.1.8 A reasonable belief by Owner that collusion exists or has occurred for the purpose of illegally procuring the contract or a Subcontractor, or that a fraud is being perpetrated on Owner in connection with the construction of Work under the Contract.

13.3.1.9 Repeated and flagrant violation of safe working procedures.

13.3.2 When the Work or any portion of the Work is terminated for any of the causes itemized in **Section 13.3.1** herein, or for any other cause except termination for convenience pursuant to **Section 13.3.5** herein, Contractor shall, as of the date specified by Owner, immediately discontinue the Work or portion of the Work as Owner shall designate, whereupon the Surety shall, within fifteen (15) calendar days after the written Notice of Termination by Owner For Cause has been served upon Contractor and the Surety or its authorized agents, assume the obligations of Contractor for the Work or that portion of the Work which Owner has ordered Contractor to discontinue and Surety may:

13.3.2.1 perform the Work with forces employed by the surety;

13.3.2.2 with the written consent of Owner, tender a replacement Contractor to take over and perform the Work, in which event the Surety shall be responsible for and pay the amount of any costs required to be incurred for the completion of the Work that are in excess of the amount of funds remaining under the Contract as of the time of the termination; or

13.3.2.3 with the written consent of Owner, tender and pay to Owner in settlement the amount of money necessary to finish the balance of uncompleted Work under the Contract, correct existing defective or nonconforming work and compensate Owner for any other loss sustained as a result of Contractor's default.

In the event of Termination by Owner For Cause involving **Article 13.3.2.1** and/or **Article 13.3.2.2**, the Surety shall assume Contractor's place in all respects and the amount of funds remaining and unpaid under the Contract shall be paid by Owner for all Work performed by the Surety or the replacement contractor in accordance with the terms of the Contract Documents, subject to any rights of Owner to deduct any and all costs, damages or liquidated or actual damages that Owner incurred, including, but not limited to, any and all additional fees and expenses of Design Consultant and any attorneys' fees Owner incurs as a result of Contractor's default and subsequent termination.

13.3.3 The balance of the Contract Sum remaining at the time of Contractor's default and subsequent termination shall become due and payable to the Surety as the Work progresses, subject to all of the terms, covenants and conditions of the Contract Documents. If the Surety does not, within the time specified in **Section 13.3.2** herein, exercise its obligation to assume the obligations of the Contract, or that portion of the Work which Owner has ordered Contractor to discontinue, then Owner shall have the power to complete the Work by contract or otherwise, as Owner may deem necessary and elect. Contractor agrees that Owner shall have the right to:

- (1) take possession of or use any or all of the materials, plant, tools, equipment, supplies and property of every kind, to be provided by Contractor for the purpose of the Work; and

- (2) procure other tools, equipment, labor and materials for the completion of the Work at Contractor's expense; and
- (3) charge to the account of Contractor the expenses of completion and labor, materials, tools, equipment, and incidental expenses.

13.3.4 All expenses incurred by Owner to complete the Work shall be deducted by Owner out of the balance of the Contract Sum remaining unpaid to or unearned by Contractor. Contractor and the Surety shall be liable to Owner for any costs incurred in excess of the balance of the Contract Sum for the completion and correction of the Work, and for any other costs, damages, expenses (including, but not limited to, additional fees of Design Consultant and attorney's fees) and liquidated or actual damages incurred as a result of the termination.

13.3.5 Owner shall not be required to obtain the lowest bid for the Work of completing the Contract, as described in **Section 13.3.3** herein, but the expenses to be deducted from the Contract Sum shall be the actual cost of such Work and the other damages, as provided in **Section 13.3.3** herein. In case Owner's costs and damages are less than the sum which would have been payable under the Contract if the Work had been completed by Contractor pursuant to the Contract, then Owner may pay Contractor (or the Surety, in the event of a complete Termination by Owner For Cause) the difference, provided that Contractor (or the Surety) shall not be entitled to any claim for damages or for loss of anticipated profits. In case such costs for completion and damages shall exceed the amount which would have been payable under the Contract if the Work had been completed by Contractor pursuant to the Contract, then Contractor and its Surety shall pay the amount of the excess to Owner immediately upon written notice from Owner to Contractor and/or the Surety for the excess amount owed. When only a particular part of the Work is being carried on by Owner, by contract or otherwise under the provisions of this Section, Contractor shall continue the remainder of the Work in conformity with the terms of the Contract and in such manner as not to hinder or interfere with the performance of workers employed and provided by Owner.

13.3.6 The right to terminate this Contract for the convenience of Owner (including, but not limited to, non-appropriation of funding) expressly is retained by Owner. In the event of a termination for convenience by Owner, Owner shall, at least ten (10) calendar days in advance, deliver written notice of the termination for convenience to Contractor. Upon Contractor's receipt of such written notice, Contractor immediately shall cease the performance of the Work and shall take reasonable and appropriate action to secure and protect the Work then in place. Contractor shall then be paid by Owner, in accordance with the terms and provisions of the Contract Documents, an amount not to exceed the actual labor costs incurred, the actual cost of all materials installed and the actual cost of all materials stored at the Project site or away from the Project site, as approved in writing by Owner but not yet paid for and which can not be returned, plus applicable overhead, profit, and actual, reasonable and documented termination costs, if any, paid by Contractor in connection with the Work in place which is completed and in conformance with the Contract Documents up to the date of

termination for convenience, less all amounts previously paid for the Work. No amount ever shall be paid to Contractor for lost or anticipated profits on any part of the Work not performed.

13.4 TEMPORARY SUSPENSION OF THE WORK

13.4.1 The Work or any portion of the Work may temporarily be suspended by Owner, for a time period not to exceed ninety (90) calendar days, immediately upon written notice to Contractor for any reason, including, but not limited to:

13.4.1.1 the causes described in **Section 13.3.1.1** through **Section 13.3.1.9** herein;

13.4.1.2 under other provisions in the Contract Documents that require or permit temporary suspension of the Work;

13.4.1.3 situations where the Work is threatened by, contributes to or causes an immediate threat to public health, safety, or security; or

13.4.1.4 other unforeseen conditions or circumstances.

13.4.2 Contractor immediately shall resume the temporarily suspended Work when ordered in writing to do so by Owner. Owner shall not, under any circumstances, be liable for any claim of Contractor arising from a temporary suspension due to a cause described in **Section 13.4.1** herein; provided, however, that in the case of a temporary suspension for any of the reasons described under **Section 13.4.1.2** through **Section 13.4.1.4** herein, where Contractor is not a contributing cause of the suspension or where the provision of the Contract Documents in question does not specifically provide that the suspension is at no cost to Owner, Owner shall make an equitable adjustment for the following items, provided that a claim properly is made by Contractor under **Section 4.3** herein:

13.4.2.1 an equitable extension of the Contract Time, not to exceed the actual delay caused by the temporary suspension, as determined by Owner and Design Consultant;

13.4.2.2 an equitable adjustment to the Contract Sum for the actual, necessary and reasonable costs of properly protecting any Work finished or partially finished during the period of the temporary suspension; provided, however, that no payment of profit and/or overhead shall be allowed on top of these costs; and

13.4.2.3 if it becomes necessary to move equipment from the Project Site and then return it to the Project Site when the Work is ordered to be resumed, an equitable adjustment to the Contract Sum for the actual, necessary and reasonable cost of these moves; provided, however, that no adjustment to the Contract Sum shall be due if said equipment is moved to another Project site of Owner.

ARTICLE XIV. MISCELLANEOUS PROVISIONS

14.1 Small Business Economic Development Advocacy. Contractor shall comply with the requirements of City's Small Business Economic Development Advocacy Office as posted in the Project's solicitation documents and the Contract Documents.

14.2 GOVERNING LAW; COMPLIANCE WITH LAWS AND REGULATIONS

14.2.1 This Contract shall be governed by the laws and case decisions of the State of Texas, without regard to conflict of law or choice of law principles of Texas or of any other state.

14.2.2 This Contract is entered into subject to and controlled by the Charter and ordinances of the City of San Antonio and all applicable laws, rules and regulations of the State of Texas and the Government of the United States of America. Contractor shall, during the performance of the Work, comply with all applicable City of San Antonio codes and ordinances, as amended, and all applicable State of Texas and Federal laws, rules and regulations, as amended.

14.3 SUCCESSORS AND ASSIGNS. Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the promises, covenants, terms, conditions and obligations contained in the Contract Documents. Contractor shall not assign, transfer or convey its interest or rights in the Contract, in part or as a whole, without the written consent of Owner. If Contractor attempts to make an assignment, transfer or conveyance without Owner's written consent, Contractor nevertheless shall remain legally responsible for all obligations under the Contract Documents. Owner shall not assign any portion of the Contract Sum due or to become due under this Contract without the written consent of Contractor, except where assignment is compelled by court order, other operation of law or the terms of these General Conditions.

14.4 WRITTEN NOTICE. Any notice, payment, statement or demand required or permitted to be given under this Contract by either party to the other may be effected by personal delivery in writing or by facsimile transmission, email or by mail, postage prepaid, or by overnight delivery to an officer, management level employee or other designated representative of either party. Mailed or email notices shall be addressed to the parties at an address designated by each party, but each party may change its address by written notice in accordance with this section. Mailed notices shall be deemed received as of three (3) calendar days after mailing.

14.5 RIGHTS AND REMEDIES; NO WAIVER OF RIGHTS BY OWNER

14.5.1 The duties and obligations imposed on Contractor by the Contract Documents and the rights and remedies available to Owner under the Contract Documents shall be in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or made available by law.

14.5.2 No action or failure to act by Owner shall constitute a waiver of a right afforded Owner under the Contract Documents, nor shall any action or failure to act by Owner constitute approval of or acquiescence in a breach of the Contract by Contractor, except as may be specifically agreed in writing by Change Order, Amendment or Supplemental Agreement.

14.6 Interest. Owner shall not be liable for interest on any progress or final payment to be made under the Contract Documents, except as may be provided by the applicable provisions of the Prompt Payment Act, Chapter 2251, Texas Government Code, as amended, subject to **Article IX** of these General Conditions.

14.7 INDEPENDENT MATERIALS TESTING AND INSPECTION

In some circumstances, Owner shall retain, independent of Contractor, the inspection services, the testing of construction materials engineering and the verification testing services necessary for acceptance of the Project by Owner. Such Consultants shall be selected in accordance with Section 2254.004 of the Government Code. The professional services, duties and responsibilities of any independent Consultants shall be described in the agreements between Owner and those Consultants. The provision of inspection services by Owner shall be for Quality Assurance and shall not reduce or lessen Contractor's responsibility for the Work or its duty to establish and implement a thorough Quality Control Program to monitor the quality of construction and guard the Owner against defects and deficiencies in the Work, as required herein. Contractor fully and solely is responsible for constructing the Project in strict accordance with the Construction Documents.

14.8 OFFICERS OR EMPLOYEES OF THE OWNER NOT TO HAVE FINANCIAL INTEREST IN ANY CONTRACT OF THE OWNER. Contractor acknowledges the Charter of the City of San Antonio and its Ethics Code prohibits a City officer or employee, as those terms are defined in Section 2-52 of the Ethics Code, from having a financial interest in any contract with the City or any City agency, such as City-owned utilities. An officer or employee has a "prohibited financial interest" in a contract with the City or in the sale to the City of land, materials, supplies or service, if any of the following individual(s) or entities is a party to the contract or sale:

- (1) a City officer or employee; his parent, child or spouse;
- (2) a business entity in which the officer or employee, or his parent, child or spouse owns ten (10) percent or more of the voting stock or shares of the business entity, or ten (10) percent or more of the fair market value of the business entity;
- (3) a business entity in which any individual or entity above listed is a Subcontractor on a City contract, or
- (4) a partner or a parent or subsidiary business entity.

Pursuant to this **Article XIV**, Contractor warrants and certifies, and this Contract is made in reliance thereon, that it, its officers, employees and/or agents are neither officers nor employees of Owner. Except with Owner's low-bid contract awards, Contractor warrants and certifies that it has tendered to Owner a Discretionary Contracts Disclosure Statement in compliance with Owner's Ethics Code. Any violation of this article shall constitute malfeasance in office and any officer or employee of Owner guilty thereof shall thereby forfeit his office or position. Any violation of this **Section 14.8**, with the knowledge, express or implied, of the person, persons, partnership, company, firm, association or corporation contracting with Owner shall render a Contract voidable by the Owner's City Manager or City Council.

14.9 Venue. This Contract is performed in Bexar County, Texas, and if legal action is necessary to enforce this Contract, exclusive venue shall lie in Bexar County, Texas.

14.10 INDEPENDENT CONTRACTOR. In performing the Work under this Contract, the relationship between Owner and Contractor is that of an independent contractor. Contractor shall exercise independent judgment in performing the Work and solely is responsible for setting working hours, scheduling and/or prioritizing the Work flow and determining the means and methods of performing the Work, subject only to the requirements of the Contract Documents. No term or provision of this Contract shall be construed as making Contractor an agent, servant or employee of Owner or making Contractor or any of Contractor's employees, agents or servants eligible for the fringe benefits, such as retirement, insurance and worker's compensation which Owner provides to its employees.

14.11 NON-DISCRIMINATION. As a party to this Contract, Contractor understands and agrees to comply with the *Non-Discrimination Policy* of the City of San Antonio contained in Chapter 2, Article X of the City Code and further, Contractor shall not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, unless Contractor is exempted by state or federal law, or as otherwise established herein. Contractor covenants that it shall take all necessary actions to insure that, in connection with any Work under this Contract, Contractor and its Subcontractor(s) shall not discriminate in the treatment or employment of any individual or groups of individuals on the grounds of race, color, religion, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, either directly, indirectly or through contractual or other arrangements. Contractor also shall comply with all applicable requirements of the Americans with Disabilities Act, 42 U.S.C.A. §§12101-12213, as amended. In this regard, Contractor shall keep, retain and safeguard all records relating to this Contract or Work performed there under, for a minimum period of four (4) years from Final Completion, unless there is an ongoing dispute under the Contract; then, such retention period shall extend until final resolution of the dispute, with full access allowed to authorized representatives of Owner upon request, for purposes of evaluating compliance with this and other provisions of the Contract.

14.12 GIFTS TO PUBLIC SERVANTS

14.12.1 Owner may terminate this Contract immediately if Contractor has offered, conferred or agreed to confer any benefit on a City of San Antonio employee or official that the employee or official is prohibited by law from accepting.

- 14.12.2 For purposes of this Article, "benefit" means anything reasonably regarded as pecuniary gain or pecuniary advantage, including benefit to any other person in whose welfare the beneficiary has a direct or substantial interest, but does not include a contribution or expenditure made and reported in accordance with law.
- 14.12.3 Notwithstanding any other legal remedies, Owner may require Contractor to remove any employee of Contractor, a Subcontractor or any employee of a Subcontractor from the Project who has violated the restrictions of this **Article XIV** or any similar State or Federal law and Owner may obtain reimbursement for any expenditures made to Contractor as a result of an improper offer, an agreement to confer or the conferring of a benefit to a City of San Antonio employee or official.

ARTICLE XV. AUDIT

15.1 RIGHT TO AUDIT CONTRACTOR'S RECORDS

- 15.1.1 By execution of the Contract, Contractor grants Owner the right to audit, examine, inspect and/or copy, at Owner's election at all reasonable times during the term of this Contract and for a period of four (4) years following the completion or termination of the Work, all of Contractor's written and electronically stored records and billings relating to the performance of the Work under the Contract Documents. The audit, examination or inspection may be performed by an Owner designee, which may include its internal auditors or an outside representative engaged by Owner. Contractor agrees to retain its records for a minimum of four (4) years following termination of the Contract, unless there is an ongoing dispute under the Contract, then, such retention period shall extend until final resolution of the dispute. As used in these General Conditions, "Contractor written and electronically stored records" include any and all information, materials and data of every kind and character generated as a result of the work under this Contract. Example of Contractor written and electronically stores records include, but are not limited to: accounting data and reports, billings, books, general ledgers, cost ledgers, invoices, production sheets, documents, correspondences, meeting notes, subscriptions, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, reports, drawings, receipts, vouchers, memoranda, time sheets, payroll records, policies, procedures, Subcontractor agreements, Supplier agreements, rental equipment proposals, federal and state tax filings for any issue in question, along with any and all other agreements, sources of information and matters that may, in Owner's sole judgment, have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Agreement Documents.

- 15.1.2 Owner agrees that it shall exercise the right to audit, examine or inspect Contractor's records only during regular business hours. Contractor agrees to allow Owner and/or Owner's designee access to all of the Contractor's Records, Contractor's facilities and current or former employees of Contractor, deemed necessary by Owner or its designee(s), to perform such audit, inspection or examination. Contractor also agrees to provide adequate and appropriate work space necessary for Owner or its designees to conduct such audits, inspections or examinations.
- 15.1.3 Contractor shall include this **Article XV** in any Subcontractor, supplier or vendor contract.

**ARTICLE XVI.
ATTORNEY FEES**

The Parties hereto expressly agree that, in the event of litigation, all parties waive rights to payment of attorneys' fees that otherwise might be recoverable, pursuant to the Texas Civil Practice and Remedies Code Chapter 38, Texas Local Government Code §271.153, the Prompt Payment Act, common law or any other provision for payment of attorney's fees.

Special Conditions for Horizontal Projects

3.2.5 Differing Site Conditions (Adds this Section 3.2.5 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor promptly shall, before such discovered conditions and/or structures are disturbed, notify Owner in writing of differing site conditions. Differing site conditions are defined as subsurface or latent physical and/or structural conditions at the Site differing materially from those indicated in the Plans, Specifications and other Contract Documents or newly discovered and previously unknown physical conditions at the Site of an unusual nature differing materially from those geophysical conditions typically encountered in the type Work being performed and generally being recognized as not indigenous to the San Antonio, Bexar County, Texas environs.

Owner and/or Design Consultant promptly shall investigate the reported physical and/or structural conditions and shall determine whether or not the physical and/or structural conditions do materially so differ and thereby cause an increase or decrease in Contractor's cost of and/or time required for performance of any part of the Work under this Contract. In the event that Owner reasonably determines that the physical and/or structural conditions materially so differ, a negotiated and equitable adjustment shall be made to the Contract Time and/or Contract Sum and a Change Order promptly shall be issued by Owner.

- (1) No claim of Contractor under this **Section 3.2.5** shall be allowed unless Contractor has given the written notice called for above, prior to disturbing the discovered conditions and/or structures.
- (2) No Contract adjustment shall be allowed under this **Section 3.2.5** for any effects caused on unchanged work.

3.4.7 Material Testing (Added to Section 3.4.7 of GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Materials not meeting Contract requirements or that do not produce satisfactory results shall be rejected by Owner, unless Owner or Design Consultant approves corrective actions. Upon rejection, Contractor immediately shall remove and replace rejected materials. If Contractor does not comply with these requirements, Owner may remove and replace defective material and all costs incurred by Owner for testing, removal and replacement of rejected materials shall be deducted from any money due or owed to Contractor.

The source of supply of each of the materials shall be approved by Owner or Design Consultant before delivery is started and, at the option of Owner, may be sampled and tested by Owner for determining compliance with the governing specifications before delivery is started. If it is found after trial that sources of supply previously approved do not produce uniform and satisfactory products, or if the product from any source proves unacceptable at any time, Contractor shall furnish materials from other approved sources. Only materials conforming to the requirements of the Contract documents and approved by Owner shall be used by Contractor in the work. All

materials being used by Contractor are subject to inspection or test at any time during preparation or use. Any material which has been tested and accepted at the source of supply may be subjected to a check test after delivery and all materials which, when retested, do not meet the requirements of the specifications shall be rejected. No material which, after approval, has in any way become unfit for use shall be used in the Work.

If, for any reason, Contractor selects a material which is approved for use by Owner or Design Consultant by sampling, testing or other means, and Contractor decides to change to a different material requiring additional sampling and testing by Owner for approval, Contractor shall pay for any expense incurred by Owner for such additional sampling and testing and the costs incurred by Owner shall be deducted from any money due or owed to Contractor.

4.3.8 Change in Unit Prices (Added to Section 4.3.8 of GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Unit prices established in the Contract documents only may be modified when a Change Order or Field Work Directive causes a material change in quantity to a Major Bid Item. A Major Bid Item is defined as a single bid item that constitutes a minimum of five percent (5%) of the total contract value. A material change in quantity is defined as an increase or decrease of twenty five percent (25%) or more of the units of an individual bid item or an increase or decrease of twenty five percent (25%) or more of the dollar value of a lump sum bid item. Revised unit pricing only shall apply to the quantity of a major bid item in excess of a twenty five percent (25%) increase or decrease of the original Contract quantity.

7.2.5 Allowable Markups (Added to Section 7.2.5 of GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Maximum allowable markups for Change Order pricing, when said pricing is not determined through unit prices, are established as follows:

7.2.5.1 Labor

Contractor shall be allowed the documented payroll rates for each hour laborers and foremen actually shall be engaged in the Work. Contractor shall be allowed to receive an additional twenty five percent (25%) as compensation, based on the total wages paid said laborers and foremen. No charge shall be made by Contractor for organization or overhead expenses. For costs of premiums on public liability and workers compensation insurance(s), Social Security and unemployment insurance taxes, an amount equal to fifty five percent (55%) of the sum of the labor cost, excluding the twenty five percent (25%) documented payroll rate compensation allowed herein, shall be the established maximum allowable labor burden cost. No charge for superintendence shall be made unless considered necessary and approved by Owner or a Change Order includes an extension of the Contract Time.

7.2.5.2 Materials

Contractor shall be allowed to receive the actual cost, including freight charges, for materials used on such Work, including an additional twenty five percent (25%) of the actual cost as compensation. When material invoices indicate an available discount, the actual cost shall be determined as the invoiced price less the available discount.

7.2.5.3 Equipment

For Contractor-owned machinery, trucks, power tools or other equipment, necessary for use on Change Order work, the Rental Rate Blue Book for Construction Equipment (hereafter referred to as “Blue Book”) rate, as modified by the following, shall be used to establish Contractor’s allowable hourly rental rates. Equipment used shall be at the rates in effect for each section of the Blue Book at the time of use. The following formula shall be used to compute the hourly rates:

$$H = \frac{M \times R1 \times R2}{176} + OP$$

Where H = Hourly Rate
 M = Monthly Rate
 R1 = Rate Adjustment Factor
 R2 = Regional Adjustment Factor
 OP = Operating Costs

If Contractor-owned machinery and/or equipment is not available and equipment is rented from an outside source, the hourly rate shall be established by dividing the actual invoice cost by the actual number of hours the equipment is involved in the Work. Owner reserves the right to limit the hourly rate to comparable Blue Book rates. When the invoice specifies that the rental rate does not include fuel, lubricants, repairs and servicing, the Blue Book hourly operating cost shall be allowed to be added for each hour the equipment operates. The allowable equipment hourly rates shall be paid for each hour that the equipment is involved in the Work and an additional maximum of fifteen percent (15%) may be added as compensation.

7.2.5.4 Subcontractor Markups

Contractor shall be allowed administrative cost only when extra Work, ordered by Owner, is performed by a Subcontractor or Subcontractors. The maximum allowable payment for administrative cost shall not exceed five percent (5%) of the total Subcontractor work. Off-duty peace officers and patrol cruisers shall be considered as Subcontractors, with regard to consideration of allowable contractor markups.

7.3.9 Field Work Directive Allowable Markups (Adds this Section 7.3.9 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Maximum allowable markups for Field Work Directives shall follow the allowable markups established in **Section 7.2.5** herein.

8.2.2 Standby Equipment Costs (Added to Section 8.2.2 of GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall be entitled to standby costs only when directed to standby in writing by Owner. Standby costs may include actual documented Project overhead costs of Contractor, consisting of administrative and supervisory expenses incurred at the Project Site. Standby equipment costs shall not be allowed during periods when the equipment would otherwise have been idle.

No more than eight (8) hours of standby time shall be paid during a 24-hour day, no more than forty (40) hours shall be paid per week for standby time and no more than one hundred and seventy six (176) hours per month shall be paid of standby time. Standby time shall be computed at fifty percent (50%) of the rates found in the Rental Rate Blue Book for Construction Equipment and shall be calculated by dividing the monthly rate found in the Blue Book by 176, then multiplying that total by the regional adjustment factor and the rate adjustment factor. Operating costs shall not be charged by Contractor.

10.11 Road Closures and Detour Routes (Adds this Section 10.11 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall not begin construction of the Project or close any streets until adequate barricades and detour signs have been provided, erected and maintained in accordance with the detour route and details shown on the Project Plans. Contractor shall notify Owner forty eight (48) hours in advance of closing any street to through traffic. Local traffic shall be permitted the use of streets under construction whenever feasible.

10.12 Use of City Streets (Adds this Section 10.12 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall confine the movements of all steel-tracked equipment to the limits of the Project Site and any such equipment shall not be allowed use of Owner's streets unless being transported on pneumatic-tired vehicles. Any damage to Owner's streets caused by Contractor and/or Contractor's equipment, either outside the limits of the Project site or within the limits of the Project site but not within the limits of the current phase then being constructed, shall be repaired by Contractor at its own expense and as prescribed by Owner's specifications and direction. If Contractor can not or refuses to repair street damage caused by Contractor and/or Contractor's equipment, Owner may perform the repairs and all expenses incurred by Owner in performing the repairs shall be deducted for any money due or owed to Contractor.

10.13 Maintenance of Traffic (Adds this Section 10.13 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

In accordance with the approved traffic control plan and as specified in the Contract, Contractor shall:

- (1) keep existing roadways open to traffic or construct and maintain detours and temporary structures for safe public travel;
- (2) maintain the Work in passable condition, including proper drainage, to accommodate traffic;
- (3) provide and maintain temporary approaches and crossings of intersecting roadways in a safe and passable condition;
- (4) construct and maintain necessary access to adjoining property as shown in the plans or as directed by Owner; and
- (5) furnish, install and maintain traffic control devices in accordance with the Contract.

The cost of maintaining traffic shall be subsidiary to the Project and shall not directly be paid for by Owner, unless otherwise stated in the Plans and Specifications. Owner shall notify Contractor if Contractor fails to meet the above traffic requirements. Owner may perform the work necessary for compliance, but any action n by Owner shall not change the legal responsibilities of Contractor, as set forth in the Contract Documents. Any costs incurred by Owner for traffic maintenance shall be deducted from money due or owed to Contractor.

10.14 Abatement and Mitigation of Excessive or Unnecessary Construction Noise (Adds this Section 10.14 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall ensure abatement and mitigation of excessive or unnecessary construction noise to the satisfaction of Owner and as prescribed by all applicable state and local laws.

10.15 Incidental Work, Connections, and Passageways (Adds Section 10.15 to GENERAL CONDITIONS FOR CITY OF SAN ANTONIO CONSTRUCTION CONTRACTS)

Contractor shall perform all incidental Work necessary to complete and comply with this Contract including, but not limited to the following:

- (1) Contractor shall make and provide all suitable reconnections with existing improvements (generally excluding new connections with or relocation of utility services, unless specifically provided for otherwise in the Contract Documents) as are necessarily incidental to the proper completion of the Project;

- (2) Contractor shall provide passageways or leave open such thoroughfares in the Work Site as may be reasonably required by Owner; and
- (3) Contractor shall protect and guard same at its own risk and continuously shall maintain the Work Site in a clean, safe and workmanlike manner.

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Special Conditions for Task Order Contracts

When applying these General Conditions for City of San Antonio Construction Contracts to Task Order contracts for horizontal work, **Section 9.3 Application for Payment, Section 9.4 Pay Application Approval, Section 9.5 Decisions to Reject Application for Payment, Section 9.6 Progress Payments and Section 9.9 Final completion and Final Payment** of the City's General Conditions for City of San Antonio Construction Contracts hereby are deleted in their entireties and collectively replaced with the following replacement Sections:

9.3 APPLICATION FOR PAYMENT/CONTRACTOR BILLING

- 9.3.1 Under an issued Task Order contract with Owner, Contractor shall not be required to submit an application for payment to Owner for materials and work performed. Instead, Owner shall calculate the accrual of materials utilized for the subject payment period and submit a request for payment from Owner on Contractor's behalf.
- 9.3.2 Owner, through its on-site Project Inspector, shall calculate the daily total of materials utilized by Contractor performing horizontal work through an issued Task Order contract. Inspector's daily total of utilized materials shall be confirmed daily by Contractor. Inspector also shall keep a monthly running total of work performed and materials utilized as agreed upon, for each day of Work, by Contractor.
- 9.3.3 Inspector, at minimum every thirty (30) days throughout the Project's duration, then shall submit, on Contractor's behalf, the agreed upon total materials utilized by Contractor for the outstanding days, up to the date of Inspector's submittal, to Owner's TCI Fiscal Department for payment to Contractor.
- 9.3.4 Owner's TCI Fiscal Department then shall issue payment to Contractor, within ____ days of receipt of Inspector's and Contractor's agreed upon total materials utilized, calculated at the rate for the utilized materials reflected in Contractor's Task Order contract with Owner.
- 9.3.5 Unless otherwise provided in the Contract Documents, payments by Owner shall be made on account of materials and equipment delivered and suitably stored at the Site for subsequent incorporation in the Work and verified by Owner. If approved in advance in writing by Owner, payment similarly may be made for materials and equipment suitably stored off the Site at a location agreed upon in writing and verified by Owner. Payment for materials and equipment stored on or off the Site shall be conditioned upon compliance by Contractor with procedures reasonably satisfactory to Owner to establish Owner's title to such materials and equipment or otherwise protect Owner's interest. Contractor solely shall be responsible for payment of all costs of applicable insurance, storage and transportation to the site for materials and equipment stored off the site.

9.3.6 Contractor warrants, upon Owner's submittal of an Application for Payment to Contractor, all Work for which payment previously has been received from Owner shall, to the best of Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of Contractor, Subcontractors, material suppliers or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work. **CONTRACTOR SHALL INDEMNIFY AND HOLD OWNER HARMLESS FROM ANY LIENS, CLAIMS, SECURITY INTEREST OR ENCUMBRANCES FILED BY CONTRACTOR, SUBCONTRACTORS OR ANYONE CLAIMING BY, THROUGH OR UNDER CONTRACTOR OR SUBCONTRACTOR(S) FOR ITEMS COVERED BY PAYMENTS MADE BY OWNER TO CONTRACTOR.**

9.3.7 By Owner's submission of an Application for Payment on behalf of Contractor and by its concurrence with said submission, Contractor certifies that there are no known liens or bond claims outstanding as of the date of said Application for Payment, that all due and payable bills with respect to the Work have been paid to date or are included in the amount requested in the current application and, except for such bills not paid but so included, there is no known basis for the filing of any liens or bond claims relating to the Work and that releases from all Subcontractors and Contractor's materialmen have been obtained in such form as to constitute an effective release of lien or claim under the laws of the State of Texas covering all Work theretofore performed and for which payment has been made by Owner to Contractor; provided if any of the foregoing is not true and cannot be certified, Contractor shall revise the certificate as appropriate and identify all exceptions to the requested certifications.

9.4 PAYMENT APPROVAL

9.4.1 Contractor's concurrence of the total daily Work performed, as recorded by the on-site Project Inspector and subsequent confirmation by Contractor of the daily total of materials utilized by Contractor, shall constitute a representation by Contractor to Owner the Work has progressed to the point indicated and that, to the best of Contractor's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to any specific qualifications expressed by Owner. Contractor's concurrence further shall constitute a representation that Contractor is entitled to payment in the amount submitted. The issuance of a Payment to Contractor shall not be a representation that Owner has:

- (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work;
- (2) reviewed construction means, methods, techniques, sequences or procedures;

- (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by Owner to substantiate Contractor's right to payment; or
- (4) made any examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Sum.

9.5 DECISIONS TO REJECT PAYMENT TO CONTRACTOR

- 9.5.1 A request for payment to Contractor may be rejected at any time by Owner to protect Owner for any of the following reasons:
 - 9.5.1.1 Work not performed or is defective ;
 - 9.5.1.2 third party claims filed or reasonable evidence indicating a probable filing of such claims for which Contractor is responsible hereunder, unless security acceptable to Owner is provided by Contractor;
 - 9.5.1.3 failure of Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
 - 9.5.1.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum and Contractor has failed to provide Owner adequate assurance of its continued performance within a reasonable time after demand;
 - 9.5.1.5 damage to Owner or another contractor;
 - 9.5.1.6 reasonable evidence that the Work shall not be completed within the time allotted on the issued Task Order and that the unpaid balance on the issued Task Order would not be adequate to cover actual or liquidated damages for the anticipated delay;
 - 9.5.1.7 persistent failure by Contractor to carry out the Work in accordance with the issued Task Order and/or Contract Documents;
 - 9.5.1.8 the applicable liquidated damages were not included in the Owner-submitted Application for Payment;
 - 9.5.1.9 billing for unapproved/unverified materials stored off Site; or
 - 9.5.1.10 a current schedule update has not been submitted by Contractor to Owner.
- 9.5.2 Owner shall not be deemed in default by reason of rejecting Application for Payment as provided for in **Section 9.5.1** herein.

9.6 PROGRESS PAYMENTS

- 9.6.1 Owner's payment of installments shall not, in any way, be deemed to be a final acceptance by Owner of any part of the Work, shall not prejudice Owner in the final settlement of the Contract account or shall not relieve Contractor from completion of the Work herein provided.
- 9.6.2 Contractor shall, within ten (10) calendar days following receipt of payment from Owner, pay all bills for labor and materials performed and furnished by others in connection with the construction, furnishing and equipping of the improvements and the performance of the work, and shall, if requested, provide Owner with written evidence of such payment. Contractor's failure to make payments or provide written evidence of such payments within such time shall constitute a material breach of this contract, unless Contractor is able to demonstrate to Owner bona fide disputes associated with the unpaid Subcontractor(s) or supplier(s) and its/their work. Contractor shall include a provision in each of its subcontracts imposing the same written documentation of payment obligations on its Subcontractors as are applicable to Contractor hereunder, and if Owner so requests, shall provide copies of such Subcontractor payments to Owner. If Contractor has failed to make payment promptly to Contractor's Subcontractors or for materials or labor used in the Work for which Owner has made payment to the Contractor, Owner shall be entitled to withhold payment to Contractor to the extent necessary to protect Owner.
- 9.6.3 Owner shall, if practicable and upon request, furnish to Subcontractor information regarding percentages of completion or amounts applied for by Contractor and action taken thereon by Owner on account of portions of the Work done by such Subcontractor.
- 9.6.4 Owner shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law, if any.
- 9.6.5 Payments to material suppliers shall be treated in a manner similar to that provided in **Section 9.6.3** and **Section 9.6.4** herein regarding Subcontractors.
- 9.6.6 A Certificate for Payment, a progress payment or a partial or entire use or occupancy of the Project by Owner shall not constitute acceptance of Work that was not performed or furnished in accordance with the Contract Documents.
- 9.6.7 Contractor shall, as a condition precedent to any obligation of Owner under this Contract, provide to Owner payment and performance bonds in the full penal amount of the Contract in accordance with Texas Government Code Chapter 2253.

9.9 FINAL COMPLETION AND FINAL PAYMENT

- 9.9.1 When all of the Work on an issued Task Order finally is complete and ready for final inspection, Contractor shall notify Owner in writing. Thereupon, Owner shall make final inspection of the Work and, if the Work is complete in full accordance with the issued Task Order and, pursuant to this Contract, fully has been performed, Contractor shall submit a final Application for Payment. If Owner is unable to approve the final Application for Payment for reasons for which Contractor is responsible and Owner is required to repeat a final inspection of the Work, Contractor shall be responsible for all costs incurred and associated with such repeat final inspection(s) and said costs may be deducted by Owner from the Contractor's final payment.
- 9.9.2 If, after Substantial Completion of the Work, Final Completion of the Work materially is delayed through no fault of Contractor nor by Issuance of Change Orders affecting Final Completion of the Work, and Owner so confirms, Owner shall, upon application by Contractor and without terminating the Contract, make payment of the balance due Contractor for that portion of the work fully completed and accepted. Request for final payment by Contractor shall constitute a waiver of all claims against Owner, except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.
- 9.9.3 For all payments made through an issued Task Order contract, City shall not withhold any retainage from payments made to Contractor.

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SECTION 105
WAGE DECISION NUMBERS

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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, Burleson, 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, McClellon 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.

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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



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PREVAILING WAGE RATE AND LABOR STANDARD PROVISIONS

The Provisions of Chapter 2258 of the Texas Government Code, and the "Wage and Labor Standard Provisions" amended in City Ordinance 2008-11-20-1045, expressly are made a part of this Contract. In accordance therewith, a schedule of the general prevailing rate of per diem wages in this locality for each craft or type of worker needed to perform this Contract shall be obtained from the City's Labor Compliance Office and included in the project bid package prior to the bidding of the Project and such schedule shall become a part hereof. Contractor shall forfeit, as a penalty to Owner, sixty dollars (\$60.00) for each laborer, workman or mechanic employed for each calendar day, or portion thereof, in which such laborer, workman or mechanic is paid less than the stipulated prevailing wage rates for any work done under this Contract by the Contractor or any subcontractor employed on the project. The establishment of prevailing wage rates, pursuant to Chapter 2258 of the Texas Government Code, shall not be construed to relieve Contractor from its obligation under any Federal or State Law, regarding the wages to be paid to or hours worked by laborers, workmen or mechanics, insofar as applicable to the work to be performed hereunder. Contractor, in the execution of this Project, agrees it shall not discriminate in its employment practices against any person because of race, color, creed, sex, or origin. Contractor agrees it will not engage in employment practices which have the effect of discriminating against employees or prospective employees because of race, color, creed, national origin, sex, age, handicap or political belief or affiliation. This Contract provision shall be included in its entirety in any subcontract agreement entered into by the Contractor or any Subcontractor employed on the project.

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DIVISION B
ADDITIONAL REQUIREMENTS
FROM AVIATION DEPARTMENT

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INSURANCE

- A. Prior to the commencement of any work under this Agreement, Contractor shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to the City's Risk Management Department, which shall be clearly labeled **"TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 3)"** in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. The City will not accept a Memorandum of Insurance or Binder as proof of insurance. The certificate(s) must have the agent's signature and phone number, and be mailed, with copies of all applicable endorsements, directly from the insurer's authorized representative to the City. The City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by the City's Risk Management Department. No officer or employee, other than the City's Risk Manager, shall have authority to waive this requirement.
- B. The City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverage and their limits when deemed necessary and prudent by City's Risk Manager based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will City allow modification whereby City may incur increased risk.
- C. A Contractor's financial integrity is of interest to the City; therefore, subject to Contractor's right to maintain reasonable deductibles in such amounts as are approved by the City, Contractor shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension hereof, at Contractor's sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M Best's rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

TYPE	AMOUNTS
1. <u>Workers' Compensation</u>	<u>Statutory</u>
2. <u>Employers' Liability</u>	<u>\$500,000/\$500,000/\$500,000</u>
3. <u>Broad form Commercial General Liability Insurance to include coverage for</u> <u>The following:</u> a. Premises/Operations b. Independent Contractors c. Products/Completed Operations d. Personal Injury e. Contractual Liability f. Damage to property rented by you	<u>For Bodily Injury and Property Damage of \$5,000,000 per occurrence;</u> <u>\$15,000,000 General Aggregate, or its equivalent in Umbrella or Excess Liability Coverage</u> <u>f. \$100,000</u>
4. <u>Business Automobile Liability</u> g. Owned / leased vehicles h. Non-owned vehicles i. Hired Vehicles	<u>Combined Single Limit for Bodily Injury and Property Damage of \$5,000,000 per occurrence.</u>
5. <u>Builder's Risk (if applicable)</u>	<u>All Risk Policy written on an occurrence basis for 100% replacement cost during construction phase of any new or existing structure.</u>

- D. Contractor agrees to require, by written contract, that all subcontractors providing goods or services hereunder obtain the same insurance coverage required of Contractor herein, and provide a certificate of insurance and endorsement that names the Contractor and the CITY as additional insureds. Respondent shall provide the CITY with said certificate and endorsement prior to the commencement of any work by the subcontractor. This provision may be modified by City's Risk Manager, without subsequent City Council approval, when deemed necessary and prudent, based upon changes in statutory law, court decisions, or circumstances surrounding this agreement. Such modification may be enacted by letter signed by City's Risk Manager, which shall become a part of the contract for all purposes.
- E. As they apply to the limits required by the City, the City shall be entitled, upon request and without expense, to receive copies of the policies, declaration page, and all endorsements thereto and may require the 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 such policies). Contractor shall be required to comply with any such requests and shall submit a copy of the replacement certificate of insurance to City at the address provided below within 10 days of the requested change. Contractor shall pay any costs incurred resulting from said changes.

City of San Antonio
Attn: Risk Management Department
P.O. Box 839966
San Antonio, Texas 78283-3966

- F. Contractor agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:
- Name the City, its officers, officials, employees, volunteers, and elected representatives as additional insureds by endorsement, as respects operations and activities of, or on behalf of, the named insured performed under contract with the City, with the exception of the workers' compensation and professional liability policies;
 - Provide for an endorsement that the "other insurance" clause shall net apply to the City of San Antonio where the City is an additional insured shown en the policy;
 - Workers' compensation, employers' liability, general liability and automobile liability policies will provide a waiver 'of subrogation in favor of the City.
 - Provide advance written notice directly to City of any suspension, cancellation, non-renewal or material change in coverage, and not less than ten (10) calendar days advance notice for nonpayment of premium.
- G. Within five (5) calendar days 'of a suspension, cancellation or non-renewal of coverage, Contractor shall provide a replacement Certificate of Insurance and applicable endorsements to City. City shall have the option to suspend Contractor's performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this Agreement.
- H. In addition to any ether remedies the City may have upon Contractor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Contractor to stop work hereunder, and/or withhold any payment(s) which become due to Contractor hereunder until Contractor demonstrates compliance with the requirements hereof.
- I. Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payments of damages to persons or property resulting from Contractor's or its subcontractors' performance of the work covered under this Agreement.

- J. It is agreed that Contractor's insurance shall be deemed primary and noncontributory with respect to any insurance or self insurance carried by the City of San Antonio for liability arising out of operations under this Agreement.
- K. It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement and that no claim or action by or on behalf of the City shall be limited to insurance coverage provided.
- L. Contractor and any Subcontractors are responsible for all damage to their own equipment and/or property.

INDEMNIFICATION

CONSULTANT covenants and agrees to FULLY INDEMNIFY, DEFEND and HOLD HARMLESS, the CITY and the elected officials, employees, officers, directors, volunteers and representatives of the CITY, individually and collectively, from and against any and all costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including but not limited to, personal or bodily injury, death and property damage, made upon the CITY directly or indirectly arising out of, resulting from or related to CONSULTANT' activities under this Agreement, including any acts or omissions of CONSULTANT, any agent, officer, director, representative, employee, consultant or subcontractor of CONSULTANT, and their respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of CITY, it s officers or employees, in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT CONSULTANT AND CITY ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW.

The provisions of this INDEMNITY are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. CONSULTANT shall advise the CITY in writing within 24 hours of any claim or demand against the CITY or CONSULTANT known to CONSULTANT related to or arising out of CONSULTANT' activities under this AGREEMENT and shall see to the investigation and defense of such claim or demand at CONSULTANT's cost. The CITY shall have the right, at its option and at its own expense, to participate in such defense without relieving CONSULTANT of any of its obligations under this paragraph.

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SUPPLEMENT TO STANDARD INSTRUCTIONS TO RESPONDENTS**1. Project Description:**

This project consists of construction work at San Antonio International Airport, San Antonio, Texas. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

The Contractor shall provide unit prices for the base bids and also for the base bid and the two (2) alternate bids. The description of the base bid and two (2) alternate bids are as follows:

BASE BID

The “Base Bid” consists of the construction of the south extension of Taxiway N (TWN) between the TW N connector and the south Apron (this includes N9). Construction will require the removal of the existing asphalt cement (AC) pavement and Portland Cement Concrete (PCC) pavement section including the removal of the Cement Treated Base (CTB) and Crushed Aggregate Base (AB). The new pavement section for the taxiway will be constructed with 16 inches of PCC pavement on 12 inches of CTB on 6 inches of Crushed Aggregate Base (AB) on 6 inches of lime stabilized subgrade on compacted subgrade and new airfield lighting will be installed. This work also includes airport safety and security, storm water pollution prevention, all construction surveying and layout, existing utility location, contractor quality control, pavement saw cutting, pavement removal, excavation and grading, Portland cement concrete, cement treated base, crushed aggregate base course, lime stabilized base, temporary asphalt paving, asphalt surface course shoulder pavement, paint marking & removal, electrical conduit, light, & signage installation both temporary and permanent, drainage pipe and inlet removal and installation, and engineer’s field and laboratory office.

ALTERNATE BID 1

The “Alternate Bid 1” consists of the construction of Taxiway N between the south edge of TW G and the north end of Taxiway N extension (end of Base Bid work area) (approximately 1,450 feet long by varying width) and the construction of new connecting taxiways (N2, N11 and N12) between the terminal taxilane and Runway 4-22, and the reconstruction of connecting taxiways (N1, N3 N10 and N13) between the terminal taxilane and Runway 4-22. The new and reconstruction areas will require the removal of the existing Portland Cement Concrete (PCC) pavement section including the removal of the Cement Treated Base (CTB) and Crushed Aggregate Base (AB). The new pavement section for the taxiways will be constructed with 16 inches of PCC pavement on 12 inches of CTB on 6 inches of Crushed Aggregate Base (AB) on 6 inches of lime stabilized subgrade on compacted subgrade and new airfield lighting will be installed. This work also includes airport safety and security, storm water pollution prevention, all construction surveying and layout, existing utility location, contractor quality control, pavement saw cutting, pavement removal, excavation and grading, Portland cement concrete, cement treated base, crushed aggregate base course, lime stabilized base, temporary asphalt paving, asphalt surface course shoulder pavement, paint marking & removal, electrical conduit, light, & signage installation both temporary and permanent, drainage pipe and inlet removal and installation, and engineer’s field and laboratory office.

ALTERNATE BID 2

The “Alternate Bid 2” consists of the replacement of lighted taxiway signs on Taxiway N and connecting taxiways between the north edge of Runway 12R-30L and the north end of Runway 4-22 and between Taxiway N and Runway 4-22.

2. A responsive bid shall consist of the following:

- a. Compliance with items set forth in Division A, Formal Invitation for bids (IFB) and Contract

3. In determining a low bidder, the City shall consider the total of the following:

- a. Base Bid, and all Alternative Bids (where applicable)
- b. Contractor’s qualifications

**STANDARD INSTRUCTIONS TO BIDDERS FOR
FEDERALLY ASSISTED CONTRACTS
(SIB-AVIATION)**

1. DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1.1 It is the policy of the City of San Antonio to involve qualified Small, Minority, African-American, Woman-owned, and local business enterprises to the greatest extent feasible in the City's construction, procurement, professional services, and leases and concessions contracting. Per Ordinance #69403, the City of San Antonio, its employees, contractors, and subcontractors shall not discriminate on the basis of race, color, religion, national origin, sex, age, or handicap in the award and performance of contracts. Violation of this ordinance is a criminal offense and subject to penalty.

1.2 Requirements for **ALL** bids:

- 1.2.1. It is the policy of the City of San Antonio that disadvantaged business enterprises (DBEs), as defined under 49 CFR Part 26, shall have “equality of opportunity” to participate in the awarding of federally-assisted Aviation Department contracts and related subcontracts, to include sub-tier subcontracts. This policy supports the position of the U.S. Department of Transportation (DOT) in creating a level playing field and removing barriers by ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with federal funds under this contract. Therefore, on all DOT-assisted projects the DBE program requirements of 49 CFR Part 26 apply to the contract.
- 1.2.2. The Bidder/Contractor agrees to employ good-faith efforts (as defined in the Aviation Department’s DBE Program) to carry out this policy through award of subcontracts to disadvantaged business enterprises to the fullest extent consistent with the sufficient performance of the Aviation Department Contract, and/or the utilization of DBE suppliers where feasible. Aviation Department bidders/contractors are expected to solicit bids from available DBE’s on contracts which offer subcontracting opportunities.
- 1.2.3. Bidder/Contractor specifically agrees to comply with all applicable provisions of the Aviation Department’s DBE Program. The DBE Program may be obtained through the airport’s DBE Liaison Officer at (210) 207-3505 or by contacting the City’s Aviation Department.
- 1.2.4 Notification is hereby given that a DBE contract specific goal has been established on this bid/contract. The applicable DBE goal is 9.4% of the total dollar value of this contract.**
- 1.2.5. The Contractor shall appoint a high-level official to administer and coordinate the Contractor’s efforts to carry out the DBE Policy and Program requisites. The Contractor’s official should coordinate and ensure approval of the required “*Good-Faith Effort Plan*” (Attachment 1).
- 1.2.6. The Contractor shall maintain records, as specified in the audit and records section of the contract, showing: (i) all subcontract/supplier awards, specifically awards to DBE firms; (ii) specific efforts to identify and award such contracts to DBEs; and (iii) submit when requested, copies of executed contracts to establish actual DBE participation.

- 1.2.7 The Contractor shall agree to submit periodic reports of subcontract and/or supplier awards to DBE firms in such form and manner and at such times as the Aviation Department shall prescribe and shall provide access to books, records, and accounts to authorized officials of the City, Aviation Department, state, and/or federal agencies for the purpose of verifying DBE participation and good-faith efforts to carry out the DBE Policy and Program. All Aviation Department contractors may be subject to a post contract DBE audit. Audit determination(s) may be considered and have a bearing in the evaluation of a Contractor's good-faith efforts on future airport contracts.
- 1.2.8 All construction Bidders/Contractors with contracts subject to formal review and approval shall make good-faith efforts (as defined and approved by the City through the Aviation Department in its DBE Program) to subcontract and achieve the applicable contract specific DBE goal with certified DBEs. Contractors failing to achieve the applicable contract specific DBE goal or contractors failing to maintain the specific DBE goal percentage involvement initially achieved, will be required to provide documentation demonstrating that they have made good-faith efforts in attempting to do so through the submittal of an Aviation Department approved "*DBE Good-Faith Effort Plan*". *Bidders are required to satisfy applicable DBE program requirements prior to the award of the Aviation Department contract.* Bidders must submit a *DBE Good-Faith Effort Plan* or will be considered non-responsive.
- 1.2.9 A Bidder/Contractor may count towards its DBE goal sixty percent (60%) of its expenditures for materials and supplies required under a contract and obtained from a regular dealer, and one hundred percent (100%) of such expenditures to a DBE manufacturer. For purposes of this section, a manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Bidder or Contractor.
- 1.2.10. The City and Aviation Department encourages the Bidder/Contractor to utilize currently approved and certified DBE firms on the contract for DBE goal achievement and credit purposes. The Aviation Department utilizes the services of the South Central Texas Regional Certification Agency (SCTRCA) to certify DBE eligibility status. Please contact the SCTRCA at 305 E. Euclid, Suite 102, San Antonio, Texas 78212 (210/227-4722) for information regarding DBE trade areas or to apply for DBE status. The Aviation Department accepts DBE certification from any one of the five (5) certifying agencies under the Texas Unified Certification Program (TUCP) – Texas Department of Transportation (TxDOT), North Central Texas Regional Certification Agency (NCTRCA), South Central Texas Regional Certification Agency (SCTRCA), City of Houston, and the Corpus Christi Regional Transportation Authority.
- 1.2.11. Submittal of DBE status certification information for **all** DBE firms utilized or proposed to be utilized on the project as subcontractors, sub-consultants, or vendors, to include prime contractors when applicable, in the performance of work on said project. Additionally, prime contractors must submit a "Letter of Intent" form (Attachment 2) for **each** subcontractor prior to award of contract.
- 1.2.12. The following DBE-related contractual clause shall be applicable and is specifically included as part of the construction contract. Contractors shall also include this clause in each subcontract the prime contractor signs with a subcontractor.

“The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT- assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate”.

Additionally, Contractors agree to the following prompt payment and retainage payment clause:

“The Prime Contractor agrees to pay each subcontractor under this Prime Contract for satisfactory performance of its Contract no later than thirty (30) days from the receipt of each payment the Prime Contractor receives from the City of San Antonio. The Prime Contractor further agrees to return retainage payments to each subcontractor within thirty (30) days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced timeframe may occur only for good cause following written approval from the City of San Antonio. This Clause applies to both DBE and non-DBE subcontractors”.

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The DBE goal on this project is: _____%

1. The undersigned bidder has satisfied the requirements of the bid specification in the following manner (please check the appropriate space:

_____ The bidder/offeror is committed to a minimum of _____ % DBE utilization on this contract.

_____ The bidder/offeror (if unable to meet the DBE goal of _____%) is committed to a minimum of _____% DBE utilization on this contract. *(If contractor is unable to meet the goal, please fill out Section C and submit documentation demonstrating good faith efforts).*

2. Name and phone number of person appointed to coordinate and administer the Federal DBE requirements on this project.

Name: _____

Title: _____

Phone Number: _____

IF DBE GOAL WAS MET, PROCEED TO PAGE 4 AND SIGN THE GFEP. IF GOAL WAS NOT MET, PROCEED TO SECTION C.

SECTION C – GOOD FAITH EFFORTS (Fill out only, if the DBE goal was not achieved).

1. List all firms you contacted with subcontracting/supply opportunities for this project that will not be utilized for this contact by choice of the bidder, subcontractor, or supplier. *Written notices to firms contacted by the bidder for specific scopes of work identified for subcontracting/supply opportunities must be provided to subcontractor/supplier not less than five (5) business days prior to bid/proposal due date.* The following information is required for all firms that were contacted of subcontracting/supply opportunities:

Name & Address of Company	Scope of Work/Supplies to be Performed/ Provided by Firm	If Firm is DBE Certified, Provide Certification Number	Date Written Notice Was Sent and Method (Letter, Fax, E-mail)	Reason Agreement Was Not Reached
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

(Use additional sheets as needed)

In order to verify a bidder’s good faith efforts, please provide to the City with copies of the written notices to all firms contacted by the bidder for specific scopes of work identified in relation to the subcontracting/supply opportunities in the above named project. Copies of said notices must be provided to the DBE Liaison within five (5) business days after the bid is due. Such notices shall include information on the plans, specifications and scope of work.

2. Did you attend the pre-bid conference scheduled by the City for this project? Yes No

3. List all DBE listings or directories, contractor associations, and/or any other associations utilized to solicit DBE subcontractors/suppliers:

4. Discuss efforts made to define additional elements of the work proposed to be performed by DBEs in order to increase the likelihood of achieving the goal: _____

5. Indicate advertisement mediums used for soliciting bids from DBEs. (Please attach a copy of the advertisement(s): _____

6. Discuss efforts made to assist interested DBEs in obtaining bonding, lines of credit, or insurance: _____

7. Discuss efforts made to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services: _____

AFFIRMATION

I HEREBY AFFIRM THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. I FURTHER UNDERSTAND AND AGREE THAT, THIS DOCUMENT SHALL BE ATTACHED THERETO AND BECOME A BINDING PART OF THE CONTRACT.

NAME AND TITLE OF AUTHORIZED OFFICIAL: _____

SIGNATURE: _____ DATE: _____

NOTE:

1. If the DBE goal was not met, the Aviation’s DBE Liaison Officer will evaluate the “good faith efforts” of a firm. The Good Faith Effort Plan for Federally Funded Contracts must be approved by the Aviation Department’s DBE Liaison Officer prior to award of contract.
2. If the DBE Liaison determines that the bidder has not made good faith efforts, then the bidder shall have the opportunity to appeal this decision to the Aviation Director. The Aviation Director shall review the written documentation presented by bidder and determine whether bidder has adequately documented good faith efforts. If the Aviation Director determines that the bidder did not make good faith efforts to meet the goal, this final decision is not administratively appealable to the Department of Transportation.

FOR SAN ANTONIO INTERNATIONAL AIRPORT USE ONLY:

Plan Reviewed by: _____ Date: _____
Signature of DBE Liaison

Recommendation: Approval: _____ Denial: _____

ATTACHMENT 2
SAN ANTONIO INTERNATIONAL AIRPORT (SAIA)
LETTER OF INTENT
FOR FEDERALLY FUNDED CONTRACTS

The requirements of 49 CFR Part 26 (Section 26.53), of the U.S. Department of Transportation, requires that all bidders/proposers comply with good faith efforts requirements as a matter of responsiveness. Each solicitation for which a contract goal has been established will require the bidders/proposers to submit the following information from each Subcontractor/Supplier for this contract], and/or change or addition of subcontractors/suppliers on federally funded contracts (ACDBE Form 3)

NAME OF PROJECT: Terminal Area Taxiway Improvements (Package 3)

Name of bidder/proposer's firm: _____

Address: _____ Phone No.: _____

City: _____ State: _____ Zip: _____

Contact Person: _____ Telephone: _____



Name of Sub consultant/Supplier: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Contact Person: _____

Is the above firm Certified: Yes No If certified, Certification No: _____

Type of Certification: DBE MBE WBE AABE SBE

If firm is certified, please attach a copy of the Certification Affidavit with this form.

Age of Firm (Number of Years in Business: _____ Years

Annual Gross Receipts of the Firm: Less than \$500,000 \$500,000 to \$1 million
 \$1 million to \$2 million \$2 million to \$5 million
 Over \$5 million

NAICS Code and/or Description of work to be performed by firm:

The bidder/proposer is committed to utilizing the above-named firm for the work described above. The estimated dollar value of this work is \$ _____.

Affirmation

The above named firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____
Signature of Firm's Representative Date

Title: _____

NAME OF PROJECT: _____

DECLARATION OF PRIME CONSULTANT:

I hereby declare and affirm that I am the _____
(Title of Declarant)

and a duly authorized representative of _____
(Name of Prime Consultant)

to make this declaration and that I have personally reviewed the material and facts set forth in this Intent to Perform form. To the best of my knowledge, information and belief, the facts and representations contained in this form are true, the owner or authorized agent of the firm signed this form in the place indicated, and no material facts have been omitted.

The undersigned intends to enter into a formal agreement with the listed firm for work as indicated by this form and will, if requested, provide the Airport's DBE Liaison with a copy of that agreement within three (3) business days of execution.

(Name of Declarant)

(Signature)

(Date)

SUBMIT THIS PAGE FOR EACH SUBCONSULTANT/SUPPLIER FOR THIS CONTRACT, AS LISTED ON ITEM 1 OF DBE GOOD FAITH EFFORT PLAN FOR FEDERALLY FUNDED CONTRACTS [DBE FORM 1] AND/OR CHANGE OR ADDITION OF SUBCONTRACTORS/SUPPLIERS ON FEDERALLY FUNDED CONTRACTS (DBE FORM 3)

IF THE BIDDER/OFFEROR DOES NOT RECEIVE AWARD OF THE PRIME CONTRACT, ANY AND ALL REPRESENTATIONS IN THIS LETTER OF INTENT AND AFFIRMATION SHALL BE NULL AND VOID.

ATTACHMENT 3

**SAN ANTONIO INTERNATIONAL AIRPORT
CHANGE OR ADDITION OF SUBCONTRACTORS/SUPPLIERS ON FEDERALLY FUNDED CONTRACTS**

NAME OF PROJECT: Terminal Area Taxiway Improvements (Package 3)

Name of Bidder/Proposer: _____

The above named firm requests approval of the following addition(s) and/or deletion(s) of the Subcontractor/Supplier firm(s) to the approved DBE Good Faith Effort Plan for Federally Funded Contracts (DBE Form 1) and Letter of Intent (DBE Form 2) as originally submitted as part of the above referenced project. No additional and/or substitute subcontractor/supplier shall begin work on the project until contractor receives written approval by the City.

Delete	Name of Firm	Is firm a Subcontractor or Supplier	Description of Work to be Performed by Firm	Is firm DBE Certified Yes or No?	Total Dollars of Work to be Performed by Firm

REASON(S) FOR REMOVING EACH SUBCONTRACTOR(S)/SUPPLIER(S) LISTED ABOVE: _____

Please indicate the name of the firm(s) you wish to add or substitute. A Letter of Intent (DBE Form 2) for any additional/substitute subcontractor(s)/supplier(s) must be submitted to the City for approval with this form. No additional and/or substitute subcontractor/supplier shall begin work on the project until contractor receives written approval by the City.

Add	Name of Firm	Is firm a Subcontractor or Supplier	Description of Work to be Performed by Firm	Is firm DBE Certified Yes or No?	Estimated Dollars of Work to be Performed by Firm

1. If a DBE Subcontractor/Supplier was deleted/terminated/replaced, was it replaced with another DBE Subcontractor/Supplier? Yes _____ No _____ If not, why not: _____

2. If another DBE Subcontractor/Supplier did not replace the DBE Subcontractor/Supplier, please submit for our review the good faith efforts used to find another DBE to perform at least the same amount of work under the contract as the DBE that was deleted/terminated/replaced.

3. If a Subcontractor/Supplier is added at any time during this project, Contractor shall submit for our review and approval the good faith efforts used to find a DBE to perform such work.

AFFIRMATION

THE ABOVE INFORMATION IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF, I FURTHER UNDERSTAND AND AGREE THAT, THIS DOCUMENT SHALL BE ATTACHED THERETO AND BECOME A BINDING PART OF THE CONTRACT.

Name & Title of Authorized Official: _____

Signature: _____

Approved: _____

AVIATION DEPARTMENT DBE LIAISON

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Additional Supplemental General Conditions Required
for
Aviation Department Projects

- 1) The use of explosives is strictly prohibited on the airport properties, including airside property and landside property.
- 2) The Contractor will be responsible for construction staking except for verifying and making benchmarks for horizontal and vertical control.
- 3) Survey Layout:
The Contractor shall employ an experienced and competent surveyor, registered in the State of Texas, to lay out the detail lines and grades of the work from the horizontal and vertical control established in those contract documents. A closed traverse and level loop within a close proximity of the construction site will be provided by the contractor's surveyor. A copy of such work will be presented to the Architect/Engineer for review prior to any field layout by the Contractor.
- 4) This contract shall be a calendar day contract.
- 5) Extension of Time for Adverse Weather:
Extension of time for adverse weather conditions not reasonably anticipated as provided in Subparagraph 8.3.1 will be granted for those days where precipitation is 0.10 inch or greater and where the number of such days exceed the normal number of rain days in that particular month. This provision shall cease at the time of Substantial Completion. The determination of the normal number of rain days per month shall be according to Local Climatological Data prepared by the National Oceanic and Atmospheric Administration.

For the San Antonio area, the climatological data is recorded at the airport weather station. The Contractor may expect adverse weather for the number of calendar days in accordance with the following local climatological data prepared by NOAA.

	<u>0.10 In. or More Precipitation at San Antonio Airport</u>
January	2
February	4
March	2
April	4
May	4
June	3
July	3
August	3
September	5
October	6
November	3
December	3
Total Days Lost	42

The contractor agrees that the measure of adverse weather during the period covered by the Specification shall be the number of days in excess of those shown for each month.

- 6) Aviation Department may close the construction site due to security reasons. The contractor will not be compensated for any loss due to shut down for the first three closures. Each day shall be counted as one shut down regardless of the total hours involved for each day.
- 7) Contractor shall provide, prepare and distribute agendas and minutes for all construction progress meetings and/or coordination meetings.
- 8) As per FAA policy, the prime contractor must provide the Aviation Department a Buy American Preference certificate.
- 9) Staging Area and Storage Area:
 - A) The contractor needs to maintain areas in a clean condition at all times.
 - B) If the contractor and/or their subcontractors store equipment, fuel, paint, and or other hazard material at the staging areas, and/or storage areas, the contractor will perform and pay their own costs for soils and water testing before use of the site, upon exit from the site and any site remediation that may be necessary, as directed by the Owner.
 - C) Prior to occupying and upon vacating any staging area/and or storage areas, the contractor shall submit the owner a minimum of 10 photographs documenting the initial and final conditions of the staging area and/or storage area. Each photograph must have a date. During the construction, the contractor needs to provide 5 progress photographs for each area with each payment request.
 - D) The contractor shall provide a written notice to the owner two weeks in advance prior to vacating the staging areas and/or storage areas.
 - E) The policies stated here will be applied to the areas owned by the private citizens and leased by the contractor for the project involved.
 - F) All work and required pictures are part of subsidiary to Item 100.1, Mobilization/Demobilization.
- 10) Reflective Safety Vests and Hard Hats:
 - A) At a minimum, all reflective safety vests must meet ANSI Class-2, Level-2 Standards.
 - B) All construction personnel or site visitors on the project sites shall wear the hard hat and the reflective safety vest at all times.
 - C) All construction personnel or site visitors entering AOA site must wear the reflective safety vest at all times, regardless inside the project site or not.
- 11) The Aviation Department has the Soil Management Plan. The said plan can be downloaded from the <http://www.sanantonio.gov/Aviation/EnvironmentalStewardship/SoilManagement.aspt>. All four appendixes are attached after this section. The contractor has to follow the instructions stated in the said Soil Management Plan to handle all required tests and to submit the SMP Manager Authorization Form for all import soils and/or exported soil for approval before the contractor can import the soil to the project site or to export the soil out of the airport project site, regardless the location of the project site, inside AOA fence or outside AOA fence. All required materials, equipment, labor, tool, and incidentals necessary to complete the work to meet the requirements stated on the Aviation Department's Soil Management Plan are one part of subsidiary to Item 101, Preparing Right-of Way.

SAN ANTONIO INTERNATIONAL AIRPORT

9800 Airport Boulevard
San Antonio, Texas 78216



Soil Management Plan

*Prepared by: San Antonio International Airport
Environmental Stewardship Division*

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APPENDICES

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B	Chemicals of Concern (COC) Acceptable Concentration Limits
C	Soil Stockpile Plan
D	SMP Authorization Form

1.0 Introduction

The Environmental Stewardship Division (ESD) of the San Antonio Airport System (SAAS) has developed this *Soil Management Plan* (SMP) to establish practices for managing soil generated or handled by Airport projects to assure that excavated/imported soil suspected of being contaminated is separated from clean soil and managed in compliance with Federal, State and Local rules and regulations.

This *Soil Management Plan* is designed to:

- ensure that soil entering or leaving the San Antonio International Airport (SAT) or Stinson Municipal Airport (SSF) is not contaminated;
- verify that surplus soil leaving SAT or SSF is not mixed with contaminated soil at an off-Airport location;
- ensure that test procedures to identify soil contamination are scientifically appropriate;
- provide a tracking method for soil disposition.

Note: This *Soil Management Plan* is not designed nor is it intended to be a *Site Safety Plan*. Determination of compliance with Occupational Safety and Health Administration (OSHA) regulations and appropriate training for construction workers is the sole responsibility of the contractor.

1.1 Purpose and Scope

This *Soil Management Plan* is designed to assist SAAS, SAAS contractors and SAAS tenants with cradle to grave liability for contaminated media, provide guidelines to identify potential, or known, environmental conditions that may be encountered during construction projects at SAT or SSF, and assure compliance with applicable laws, regulations and/or policies. The scope of this *Soil Management Plan* is to provide guidelines and procedures to effectively address environmental issues associated with soil excavated from SAAS projects; generated on-Airport, or imported from off-Airport sources to be used by SAAS contractors.

Compliance with applicable federal, state and local health and safety regulations is the responsibility of SAAS and each contractor and/or tenant engaging in activities relevant to this *Soil Management Plan*. Construction contracts may provide more specific project related obligations.

1.2 Definitions

ESD – SAAS's Environmental Stewardship Division.

Project Manager – This is the individual in charge of any construction project that involves the moving or handling of soil. The project manager may be an employee of SAAS, a tenant, or a contractor. The Project Manager is responsible for ensuring the adherence to all requirements of this *Soil Management Plan*.

P&D – SAAS's Planning and Development Division

SAAS – San Antonio Airport System

SAT – San Antonio International Airport

SMP – Soil Management Plan

SMP Authorization – Written authorization from ESD and/or P&D to transport soils to or from SAT or SSF. The written authorization must specify the off-Airport location, expected contaminant levels, soil quantity, time period and Airport site(s) covered by the authorization. Written authorization to import or export soil must be obtained prior to acceptance of contractual obligations for soil importation or exportation.

Soil Stockpile Plan – The *Soil Stockpile Plan* must be generated and maintained by ESD and the Planning & Development Division (P&D) with support from the Wildlife Division (which monitors wildlife activities and hazardous wildlife on and near the airport). The *Soil Stockpile Plan* must distinguish between surplus soil and soil required to remain available on-Airport for use in future planned construction projects. The *Soil Stockpile Plan* must consider soil volume, structural properties, and designate stockpile locations to preserve and maintain surplus clean soils for future development projects as P&D deems appropriate.

Soil – Refers to soil, dirt, fill, gravel, sand, rock, aggregate, alluvium, crushed concrete, constructions soils/spoils, demolition material, backfill, topsoil, engineering fill or earthen material.

SSF – Stinson Municipal Airport

TCEQ - Texas Commission on Environmental Quality

Soil Screening Plan – A written plan prepared by the Project Manager whose construction project involves the moving or handling of soil. This project *Soil Screening Plan* must be submitted for ESD and/or P&D approval prior to conducting related project activities. The project *Soil Screening Plan* must consider:

- Nature of historic activity and potential existing contamination at the construction site (PM can obtain this information from ESD or from Phase I Environmental Site Assessment);
- Description of contaminants that will be screened;
- Identification and justification for contaminants that will not be actively screened;
- Proposed screening methodology;
- Identification of action thresholds for each contaminant;
- Description of handling procedures for soil containing contaminants

- exceeding pre-established screening thresholds; and
- Designated haul routes (if applicable).

Due Diligence Review – The due diligence review is an environmental evaluation conducted by ESD and P&D, applicable to any off-Airport facility to which excavated soil generated by SAAS projects is to be taken for disposal or imported for use on-Airport. The due diligence review must evaluate the proposed off-Airport soil facility for compliance with the provisions of the federal Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) or Resource Conservation & Recovery Act (RCRA). ESD's due diligence review will include:

Due diligence review of proposed soil suppliers:

- Description of soil material
- Description of source of soil material
- Analytical data for soil and/or all quality control data guaranteeing the use of non-contaminated soil.

Due diligence review of proposed off-Airport Soil Disposal Sites:

- Description of soil material to be disposed
- Description of potential contamination of soil to be disposed
- Analytical analysis of soil
- Review of recent (5 to 10 years) federal and state environmental enforcement actions against soil disposal site
- Review and copies of any relevant environmental permits to ensure soil disposal facility can accept soil from Airport
- Description of any programs/protocols/assurances to prevent contamination from other sources during transportation, storage and disposal.

A due diligent review may involve the collection of samples to evaluate potential soil contamination. Sampling will be required, on a case by case bases by ESD, depending on the due diligence review.

1.3 Soils and Geologic Setting

See Appendix A regarding the soil and geology at each SAAS facility.

1.4 Applicability

This SAAS *Soil Management Plan* applies to:

- A. Surplus soil generated by on-Airport projects;
- B. Fill dirt, gravel, spoils, sand, soil, aggregate, and infrastructure supporting earthen material required by SAAS projects;
- C. Soil imported for on-Airport use;
- D. Soil disturbed due to on SAAS property projects; and

- E. Soil that is disturbed in the process of contaminant remediation.
- F. Investigation Derived Waste (IDW)

Implementation of this Soil Management Plan is effective immediately and is intended for use all on-Airport property projects.

1.5 Department Responsibilities

Aviation Environmental Stewardship Division (ESD)

ESD must implement the *Soil Stockpile Plan* with full support from P&D as requested. ESD responsibilities must include:

- Documenting the sources of stockpiled soil;
- Documenting the sources of soil used by the various SAAS projects;
- Assist in the security of any contaminated soil stockpiles;
- Provide technical and regulatory assistance to Project Managers when possible;
- Conducting/oversee due diligence reviews;
- Authorizing importation and exportation of soil as requested;
- Overseeing implementation of protocols for testing and categorizing soil;
- Evaluation and review of field and laboratory test results;
- Approval of off-Airport soil destinations; and
- Reporting to Administering Agencies, as required, on circumstances relating to contaminated soil.

Aviation Planning & Development (P & D) Division

Tasks include:

- Assist with the update of any *Soil Stockpile Plan* site maps;
- Coordinate current and future soil projects with ESD; and
- Review structural properties and quantities of soils needed for planned development projects as well as providing specifications for all soil projects.

2.0 Soil Stockpile Area Requirements

The location of clean soil stockpiles will be **DESIGNATED BY ESD AND P&D. LOCATIONS ARE REFLECTED WITHIN THE SOIL STOCKPILE PLAN (APPENDIX C)**. All soils suspected of contamination must be tested, profiled (characterized) and properly disposed.

2.1 Storm Water Pollution Prevention Plan

Each contractor and/or tenant conducting construction activities will develop, implement and maintain a Storm Water Pollution Prevention Plan (SWP3), if applicable, in accordance with Texas Pollution Discharge Elimination System (TPDES) rules and regulations.

2.2 Erosion Control Measures

Erosion controls (silt fence, rock berms, vegetation, etc...) must be installed and maintained around all stockpile areas. Controls must be inspected by contractor after each rain event. Erosion controls in need of repair/replacement must be corrected within one week. If unaddressed within the one week timeframe, SAAS retains the right to make the required corrections and back charge the contractor for time and material.

2.3 Security

During non-operational hours, or when not staffed, soil stockpile area(s) must be fenced off and entrance/exit gates locked or located within the AOA. Reflective markers must be used for night time vehicle safety.

2.4 Soil segregation

Soil that will be stockpiled on SAAS property will be segregated by project and/or contamination. Additionally, each stockpile must have signage indicating material type, generating date, originating project and contamination status.

2.5 Environmental Contamination

A Limited Phase II Environmental Site Assessment (ESA) will be completed before commissioning and decommissioning any SAAS soils. All stockpile facilities must be constructed using appropriate structural and operational methods to minimize potential environmental contamination (e.g. use of impervious barriers where suspect contaminated soil is stored prior to profiling and disposal).

2.6 Vehicle Maintenance/Fueling

Maintenance and fueling of vehicles and earth moving equipment at stockpile sites must be limited as much as practicable. Reasonable measures should be employed to prevent environmental contamination where such vehicle maintenance activities at the project site are unavoidable.

The trucks used for moving soil between the construction site and any stockpile area must meet all Texas Department of Transportation (TXDOT) rules and regulations. Trucks not meeting these regulations will not be authorized to work.

3.0 Potential Contaminants and Environmental Concerns

Contaminant spills and releases occurring during construction activities must be responded to in a timely and effective manner by the responsible party. Even relatively small hydrocarbon releases are reportable to regulatory agencies when evidenced by sheens on receiving waters of the United States/Texas. SAAS requires immediate reporting of contaminant spills and releases to Airport Communications and immediate action to contain, mitigate and clean up spills and releases to prevent migration to infrastructure discharging to receiving waters and, thereby minimize environmental impact and compounded response costs. SAAS requires preventative maintenance of equipment, at appropriate locations, in order to minimize the potential for preventable spills and releases due to equipment failure. Prevention of spills and releases of oil and oil products may also be required pursuant to Spill Prevention Control and Countermeasures (SPCC) regulations (refer to 40 CFR 112.1). *SPCC Plans* are dependent on oil product storage capacity (ESD can provide guidance upon request).

Contractors can reduce the possibility of generating contaminated materials by proper management and maintenance of their construction areas (equipment mobilization and staging areas; materials lay-down yards). SAAS requires that Contractors conducting activities at SAT and SSF to properly handle, store, and label construction materials to prevent environmental multi-media contamination (air, soil, and water) to the maximum extent practicable.

The following is intended to be a general reference list of contaminants that could be encountered during construction activities at SAT and SSF:

3.1 Jet A Fuel (Jet A)

Jet A has been used to fuel commercial, cargo and private aircraft at SAT and SSF.

Jet A has a nearly water-white appearance; is a mobile, oily liquid; and has a mild petroleum paraffinic odor typical of kerosene. Jet A has an auto-ignition temperature of 475°F (246°C), a lower boiling point of 320°F (160°C), a flash point of 100°F (38°C), and a specific gravity of 0.81. The Lower Explosive Limit (LEL) is 0.5% and the Upper Explosive Limit (UEL) is 6.0%. The vapor pressure density of Jet A fuel is 5 mm/Hg. Jet A is essentially water insoluble (floats on the surface of water).

3.2 Aviation Gasoline (AvGas)

AvGas is used to fuel piston engine aircraft at SAT and SSF.

AvGas is generally a clear blue liquid with a gasoline hydrocarbon odor. AvGas has a lower boiling point of 158°F (70°C), a flash point of -49°F (-45°C), and a specific gravity of 0.71. The vapor density of AvGas is 4 mm/Hg, the LEL is 0.6% and the UEL is 8.0%. AvGas is essentially insoluble in water.

3.3 Motor Gasoline (MoGas)

MoGas is used to fuel ground service equipment (GSE).

MoGas is a clear colored liquid (typically red-orange) with a pungent petroleum hydrocarbon odor. MoGas has a lower boiling point of 102°F (39°C), a flash point of 35°F (-37°C), and a specific gravity of 0.8. The vapor density of MoGas is 3 to 4 mm/Hg, the LEL is 1.5% and the UEL is 7.6%. MoGas is essentially insoluble in water.

3.4 Low Sulfur Diesel (LSD)

LSD is typically used to fuel construction equipment and therefore, may be encountered during construction activities.

LSD is a pale yellow liquid with a hydrocarbon odor. LSD has a lower boiling point of 349°F (176°C), a flash point of 125°F (52°C), and a specific gravity of 0.84. The vapor pressure of LSD is 0.04 PSIG, the LEL is 0.6% and the UEL is 4.7%. LSD is essentially insoluble in water.

3.5 Solvents

Solvents are primarily used to clean aircraft and vehicle parts. These activities have typically been restricted to maintenance areas in hangars and at maintenance shops

3.6 Aircraft De-icing and Anti-icing Fluid (ADAF)

Both ethylene glycol and propylene glycol are used at SAAS as ADAF. De-icing activities are performed at gates, RONs, ramps and along taxiways. ADAF residuals may be encountered when construction project excavation is conducted proximate to terminal gates due to prior gate deicing practices.

Glycol-based fluids are generally colorless, odorless, viscous, hygroscopic liquids. Aircraft deicing/anti-icing ethylene glycol has a lower boiling point of 383°F (195°C), a flash point of 232°F (111°C), and a specific gravity of 1.1. The vapor density of ethylene glycol is 2.1 mm/Hg, the LEL is 3.2% and the UEL is 15.3%. Ethylene and propylene glycol used for aircraft deicing/anti-icing may have a pungent odor and may have an orange to green appearance (depending on concentration). Both ethylene and propylene glycol are miscible in water (mix readily with water).

3.7 Metals

Some metals are evidenced at low concentrations in soils and groundwater at SAT and SSF (referred to as background since naturally occurring). Chromium associated with paint and painting operations, and lead from leaded gasoline may occur at levels above background concentrations. Significant contamination is not usually encountered; either as background or resulting from prior occupancy activities conducted at SAT and SSF. If there is a suspected cause making contamination testing prudent, the suspect media will be tested for the eight RCRA identified metals and the Texas three metals using specified U.S. Environmental Protection Agency (EPA) laboratory protocols. Metals include: antimony, arsenic, barium, beryllium, cadmium, chromium, mercury, nickel, lead, selenium, and silver.

3.8 Battery Acids

Increasing airline use of electric GSE at SAT and SSF has resulted in the establishment of a growing fleet of battery powered GSE and construction of numerous electric vehicle recharging stations. Spills of battery acid from GSE occur occasionally. Battery acid spills may occur on ramps, around charging stations and near maintenance facilities. Acidic conditions may be encountered in excavated soils from these locations.

3.9 Other Construction Components

Other contaminants may be discovered in the course of a project or generated due to methods used during construction. Project generated contaminants can result from boring operations that generate process wastewater or by petroleum contamination generated, for example, by hydraulic leaks from construction equipment. Construction related process wastewater must be properly contained, collected and disposed.

4.0 Management of Soils at Project Sites

This *Soil Management Plan* has been developed as a framework for field determination, classification, transportation, and disposition of excavated soil, free phase product, contaminated dissolved phase groundwater, and vapors that may be encountered during construction projects. This *Soil Management Plan* must be followed by SAAS and contract personnel. Each Project Manager is responsible for administering the *Soil Management Plan* during ongoing pre-construction and construction activities they oversee.

The occasional presence of contaminated media (soil, groundwater, and free phase product) may be encountered from time to time. Information collected from pre-construction investigation activities should be summarized to determine likely locations of contaminants within the construction footprint. Close attention must be paid to excavated soil for contamination. Suspect soils must be stockpiled for subsequent evaluation, treatment, reuse or disposal.

The project *Soil Screening Plan* should reflect the results of pre-construction investigations and any project due diligence review. The *Soil Screening Plan* must be submitted by the construction Project Manager to ESD and P&D for review and concurrence during the construction review process. The *Soil Screening Plan* will identify screening methods and frequencies using the environmental principles discussed in Section 4.1.

CAUTION: When environmental conditions associated with contaminated media are encountered, the contractor is required to ensure compliance with applicable federal, state, and local regulations and is responsible to protect worker health and safety.

In the event excavated or construction pre-screened soil evidences contact with potential contaminants not listed in the *Soil Screening Plan*, construction activities in the affected area must be immediately terminated pending ESD & P&D evaluation of the pending issues.

4.1 Soil Screening & Sampling

As much as possible, soil characterization must be performed prior to soil importation or excavation. The designated Project Manager must observe soil for visual evidence of contamination. Soil samples will be collected as described in the project specific *Soil Screening Plan*. Typically this may involve visual and olfactory soil observations, PID readings, headspace analysis, soil sampling and/or manufacturer documentation.

4.1.1 Screening Methods

Volatile organic compounds (and some semi-volatile organic compounds) may be screened using approved field technology photo-ionization detection (PID) or flame ionization-detection (FID) direct reading instrumentation, as appropriate, to screen for volatile organic compounds (VOCs); immuno-assay tests for semi-volatile; x-ray fluorescence (XRF) for metals (refer to table below). Field analysis alone will not authorize off-Airport disposal options or approval. Field analysis results may be used to

determine the appropriateness of returning clean soil to the excavation; to determine the appropriateness of transporting clean soil to another on-Airport clean soil stockpile; or to decide which suspect soils must be stockpiled and sampled for contamination.

Only trained personnel must conduct direct reading instrumentation excavated soil screening; calibrate direct reading instruments, deploy recommended instrument manufacturer's methods, or use analytical kits of any kind. Daily calibration, using recommended instrument manufacturer's methods or analytical kit requirements must be completed and recorded for submission to ESD prior to project close-out.

Field methods must be documented; retained in project management files and submitted to ESD. Should screening method results exceed limits outlined, work is to be stopped and ESD and/or P&D immediately contacted.

Potential Contaminant	Analytical Field Test Method
Jet A Fuel	PID, FID, Immunoassay Kit, Portable GC
Aviation Gas	PID, FID, Immunoassay Kit, Portable GC
Vehicle Gas	PID, FID, Immunoassay Kit, Portable GC
Diesel Fuel	PID, FID, Immunoassay Kit, Portable GC
Solvents	Portable GC, Immunoassay Kit, Electron Capture GC
Aircraft Deicing Fluids	Colorimetric Kit
Metals	X-Ray fluorescence
Pesticides/PCBs	Portable GC, Immunoassay Kit
Hydraulic Fluids	PID, FID, Immunoassay Kit, Portable GC

*PID - Photo Ionization Detector

*FID - Flame Ionization Detector

*GC - Gas Chromatograph

4.1.2 Soil Sampling

Soil must not be imported or exported without a completed SMP authorization (see attached form) issued/approve by ESD and/or P&D. A *Soil Screening Plan* must be prepared and followed for all projects. At a minimum, soils should be analyzed for the following:

Chemical of Concern (COC)	Test Method
Total Petroleum Hydrocarbon (TPH)	TX1005
Benzene, Toluene, Xylene and Ethylbenzene (BTEX)	8021 or 8260
Polycyclic Aromatic Hydrocarbons (PAH) ⁴	8310 or 8270
Metals (RCRA-8) plus Antimony, Beryllium and Nickel	200.7

⁴ - TPH testing will be used to screen for PAHs using method TCEQ-1005. If the laboratory reports any detection of hydrocarbons in the carbon range greater than nC12, then the sample with the highest

concentration of hydrocarbons in the > nC12 range must be analyzed for PAHs. The PAH results will be compared to the PAH results listed above.

See Appendix B for the acceptable concentrations of Chemicals of Concern (COCs).

4.1.3 Sampling Frequencies

Project Type	Frequency
Soil Importation	One (1) composite sample per 1,000 cubic yards (or less)*. Additional visual screening of imported soil is required at a minimum of one (1) per every five (5) trucks*.
Soil Exportation (initial screening)	One (1) composite sample per 1,000 cubic yards
Soil Exportation (off site disposal)	One (1) composite sample per 50 cubic yards (the requirements of the disposal facility may be substituted for the above composite sampling frequency).

* - This sampling frequency may be relaxed based upon demonstration of minimal likelihood of encountering contamination and/or documentation provided by soil supplier.

4.1.4 Confirmation Sampling

Project specific soil sampling requires the collection of soil samples from sidewalls and the finished grade bottom of excavations where contaminated media was encountered. This will allow determination of the levels of potential contaminants that may remain in the area. ESD may also require confirmation sample(s) to verify that contamination is no longer present in the construction footprint should results of field screening and laboratory results of excavated soils sampled so indicate.

Typically, excavated soil with no evidence of contamination from pre-construction investigations, no visual or olfactory evidence of contamination, and no elevated PID readings (less than 20 parts per million (ppm)) may be deemed clean soil and will not require additional analytical testing or laboratory sampling. Clean soil, upon ESD's approval, may be directly transported to the clean soil stockpile area for subsequent reuse. If a Project Manager anticipates off-Airport disposal or reuse, an SMP authorization must be obtained from ESD and/or P&D.

Excavated soil evidencing contamination from pre-construction investigations; visual or olfactory screening; direct reading instrumentation hits above 20 ppm; or other approved field screening methods must be stockpiled for further evaluation. Excavated soils suspected of contamination must be segregated at the project site from clean soil based on field screening and placed on and covered with vapor barriers (e.g. visqueen). Once segregated, the material must be sampled, profiled and disposed.

4.2 Excavated Soils

As much as possible, soil characterization must be performed prior to soil excavation. The designated Project Manager must observe unexcavated and excavated soil for visual evidence of contamination. Excavated soil samples will be collected as described in the project specific *Soil Screening Plan*. Typically this will involve visual and olfactory soil observations, PID readings, headspace analysis, and sampling.

4.3 Imported Soils

Screening of imported materials prior to entering Airport property or a project site is acceptable for material such as rocks and pea gravel. Soil screening results that exceed pre-established contamination levels **will not** be brought onto SAAS property without the expressed authorization of ESD and/or P&D. If no levels are pre-established this will be the detection limit of any contamination subject to the materials screening protocols. Field notes for the screening will be collected and submitted to ESD and/or P&D.

4.3.1 Ready-to-Plant, Mulch and Topsoil

Ready-to-Plant, Mulch and Professional Topsoil will be addressed on a case by case basis. These soils are generally contract spec soils that will be mixed per the required specifications. The P&D Division should approve the spec and source before the contractor brings the soil on to the airport.

4.3.2 Material Used for Concrete

Soil importation for production of concrete is necessitated by the scope and scale of some SAAS Airport capital development projects. It is important to conduct imported concrete production materials screening to prevent distribution of imported materials that may have been previously contaminated. Given that materials used to produce concrete are typically manufactured products, ESD anticipates that screening will be less rigorous than suspect soils. The Project Manager will be responsible to document imported soils screening consistent with ESD and/or P&D approved project specific soil screening prior to accepting imported soils used for the on-Airport production of concrete.

4.4 Suspected Contaminated Material

When field-screening results indicate levels above the action threshold (**20 ppm**), the material will be stockpiled onsite and placed on and covered with a vapor barrier. The Project Manager will contact ESD and/or P&D and notify them that soil sampling is required. While awaiting results from the laboratory, the soils will remain in this hold status until a determination is made for final disposition. If laboratory analysis results indicate that the soil is clean, the soil may be moved to a clean stockpile for reuse. If laboratory results indicate there is contamination; but contaminate concentrations are below the standards set in Appendix B, this soil may be subsequently transported for reuse at appropriate projects. When results indicate levels of contamination too high for reuse, this material will be designated for profiling and disposal.

4.5 Soil Disposition/Transportation

Project Managers are responsible for transporting soils to and from the project site. Imported materials and materials generated by on-Airport projects destined for off-airport disposition will proceed only after express authorization by ESD and/or P&D. Project Managers will assure that any soil that will be stockpiled at Airport stockpile reuse areas will be free of trash, debris, rubbish, or construction rubble. Haul trucks will be required to follow designated haul routes (specified in *Soil Screening Plan*) from the excavation area to the soil stockpile area(s).

Soil must not be exported without a completed SMP Authorization Form approved issued by ESD and/or P&D. Soil screening must be conducted on all exported materials pursuant to the approved *Soil Screening Plan* prior to leaving Airport Property. The soil screening plan must reflect the anticipated contaminants in the soil to be exported and the results of the due diligence review of the off-site facility. Detailed records must permanently be maintained documenting sample test results, soil source location, soil destination, the due diligence review, and all other relevant data.

THE PROJECT MANAGER WILL COMPLETE AND SUBMIT A SMP AUTHORIZATION FORM TO ESD AND/OR P&D FOR APPROVAL (See Appendix D). THIS SHOULD BE INCLUDED IN THE INITIAL PLAN REVIEW PROCESS.

The contractor is solely responsible for Health and Safety measures required for safe transportation of the excavated materials to the designated destination on or off-Airport.

The Project Manager will record the following information for all materials received at any SAAS stockpile area:

- Date/Time
- Project name and ESD and/or P&D authorization approval
- Truck number and size
- Truckloads of material received
- Type of material received
- Truck Tickets

The following additional information will be recorded for confirmed and suspected contaminated materials:

- Description of material
- Parameters analyzed
- Material ID Number (given by Project Manager)
- Sampling results
- Disposal location
- Date removed
- Truck Tickets

4.6 Soil Sampling and Classifications

Final characterization of excavated soils will result in one of three soil classifications. The following sections summarize the designation criteria associated with each classification. A brief discussion of each classification is presented for guidance.

4.6.1 Unregulated Soil

Unregulated soil is soil evidencing no detectable levels of potential contaminants of concern. Unregulated soil may be reused on-Airport, as the Planning and Development Division deems necessary.

4.6.2 Impacted Soil

Impacted soils exhibiting analytical results below established maximum concentration levels for each COC analyte may be reused on-Airport only. Reuse locations must meet TRRP requirements restricting reuse in projects with finished grade impervious surfaces and where no human exposure pathways will occur (e.g.: under pavement or other impervious cover as allowed by regulation). ESD and/or P&D concurrence with reuse of impacted soils for designated projects is required.

4.6.3 Contaminated Soil

Contaminated soils are soils exhibiting analytical results above established RCRA levels for any COC analyte. Contaminated soils will be profiled and properly disposed.

4.7 Sample Documentation

Samples collected from the soil stockpiles, or confirmation samples collected from excavation sidewalls and finished grade will be identified using a four-part system. The sample identification system will consist of the following:

- A location designator based on the SAAS Airport's Emergency Grid System;
- A matrix identifier;
- A sample number; and
- Depth of sample collection (where applicable).

The first portion of the sample identifier will identify the soil origination utilizing the SAAS Airport Emergency Grid System as described above. Therefore, analytical results from the soil stockpiles can be traced to locations on the airport property where the soil was excavated.

The second portion of the sample identifier will identify the sample as a soil sample (SS) collected at the source, groundwater (GW), or stockpile (SP) sample.

During excavation, soil samples will be numbered within each grid location (i.e., in subsequent grid locations, sample numbers will start over). The depth at which the sample was obtained will be noted as the final portion of the sample identifier.

For example, the tenth sample obtained in the 4GA grid square from an excavation at a depth of 2 feet would be labeled:

4GA – SS-10 (2)

Stockpile samples will be numbered according to the soil source location. For example, a sample obtained from stockpiled soil whose source is the 4GA grid square at a depth of approximately 5 feet would be labeled:

4GA – SP – 1(5)

A sample log and sampling map will be created to document all samples collected. The sample log will contain the sample identification number, sample matrix, date and time collected, location description, number of jars, analyses requested, PID readings (if any), and relevant notes. The sampling map will be a drawing that will identify the location of each sample taken, the location of the project in relation to other onsite activities, a north arrow and any other requested information.

Proper chain-of-custody documentation will be maintained for all samples sent to the laboratory using the appropriate Chain-of-Custody form.

5.0 Management of soil stockpile areas

The Project Manager must manage the *Stockpile Screening Plan* that will guide day to day operation and handling of soil and soil stockpiles.

5.1 Soil Classification Management

ESD and/or P&D will review the *Soil Screening Plan* for each project and determine if soil is eligible for direct shipment to a clean soil stockpile area. This determination will be communicated to the Project Manager. Please refer to Section 4.5 for proper soil stockpiling recordkeeping requirements.

5.1.1 Unregulated Soil

If the soil is determined to be uncontaminated and has been approved for storage at the Airport's Buckhorn site the Project Manager (or his designee) will unlock the site (Buckhorn) at the scheduled time and remain on site until delivery is complete. The area will be re-secured when not supervised. The Project Manager (or his designee) will inspect loads to verify that they are debris free and properly authorized. Trucks with construction debris will be returned to the project site for debris removal. Soils transported to a clean soil stockpile area will be segregated by project.

5.1.2 Impacted Soil

Impacted soils exhibiting analytical results below established maximum concentration levels for each COC analyte may be reused on-Airport only. Stockpile storage locations must be approved by ESD and/or P&D.

5.1.3 Contaminated Soil

Contaminated soils are soils exhibiting analytical results above established RCRA levels for any COC analyte. Contaminated soils must be properly profiled and disposed of at an approved ESD and/or P&D facility. Long term stockpiling of contaminated soil on Airport property is prohibited.

All contaminated soils stockpiled will be placed on an impervious material and covered with an impervious material.

Construction materials not for immediate use must be stockpiled in designated areas. Other materials may be stored at approved locations proximate to the work area provided however that the piles are no greater than 18" in height. Higher piles may be permitted only during working hours and in such quantity that they may be reduced in height to 18" maximum within thirty (30) minutes of notification."

Soils stationed at Buckhorn will be placed in windrows no more than six feet in height. Soils will be segregated and records maintained by the Project Manager

to identify soil sources, soil types and contamination test results.

5.2 Maintenance of Soil Stockpiles.

Stockpiles must be maintained in a manner to minimize wildlife attractants. All requirements of Section 2.0 must be met.

6.0 Data Management

6.1 Field Documentation

Quantities of excavated/imported soils, soil types, PID readings, trucking data, etc. must be documented by the Project Manager in a daily logbook, by photo-documentation and/or by use of electronic record keeping.

6.2 Soil Tracking

The sources of excavated soils must be tracked and maintained along with sampling, analytical, and disposal records. SAAS Airport's Emergency Grid System will be utilized to aid in tracking excavated soil sources. SAAS Airport's Emergency Grid System is laid out such that north-south grid lines are labeled numerically beginning with the number 1 and east-west grid lines are labeled alphabetically from A to S. Each grid square is 1,000' by 1,000'. Each grid square is further sectioned by 4 smaller squares (500' by 500') that are labeled with a letter designation (e.g.: a location can therefore be designated as 4GA, which denotes a particular area 500' by 500'). If the Emergency Grid System is not utilized for soil stockpile tracking then an alternate method must be approved by ESD and/or P&D.

As part of the *Stockpile Management Plan*, it is also necessary to track the final disposition of all soil. See the *Stockpile Management Plan* and Section 4.5 for additional tracking information.

6.3 Sample Documentation

Samples collected from the soil stockpiles, or confirmation samples collected from excavation sidewalls and finished grade will be identified using a four-part system. The sample identification system will consist of the following:

- A location designator based on the SAAS Airport's Emergency Grid System;
- A matrix identifier;
- A sample number; and
- Depth of sample collection (where applicable).

A sample log and sampling map will be created to document all samples collected. The sample log will contain the sample identification number, sample matrix, date and time collected, location description, number of jars, analysis requested, PID readings (if any), and relevant notes. The sampling map will be a drawing that will identify the location of each sample taken, the location of the project in relation to other onsite activities, a north arrow and any other requested information.

Proper chain-of-custody documentation will be maintained for all samples sent to the laboratory using the appropriate Chain-of-Custody form.

See Section 4.0 for more sampling information.

6.4 Project Database

A database will be created and maintained by ESD and/or P&D. This database will include "trip tickets", laboratory analytical results, excavation dates, stockpile numbers, and stockpile locations.

7.0 REPORTING

7.1 Emergency Notifications

In the event of an environmental emergency, the following notifications must be made immediately:

- SAT/SSF Communications Center – (210) 207-3433
- Operations 202 – (210) 413-4928
- Operations 210 – (210) 207-3590
- Operations – (210) 207-3540
- Environmental Stewardship Manager – (210) 207-3402
- SAAS Environmental Stewardship Division – (210) 207-3518
- Planning & Development – (210) 207-3519
- San Antonio Fire/Police Department – 911
- SAT Fire/Rescue – (210) 207-3473

7.2 Reports – Project Manager

Weekly Status Reports

A Weekly Status Report will be prepared during construction activities describing the field activities conducted that week and summarize the total amount of soil excavated/imported and specify quantities of soil stockpiled and suspected of contamination.

Post-Construction Report

As a pre-requisite to project closeout, the Project Manager will verify all previously submitted information/reports are correct and up to date. Any missing information such as truck tickets, soil analysis and/or disposal manifests will be submitted to ESD and/or P&D.

Appendix A

Soil & Geologic Tables

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Appendix B

COC Acceptable Concentration Limits

Acceptable COC concentrations are as follows:

Chemical of Concern (COC)	Results (mg/kg)
Total Petroleum Hydrocarbons (TPH) ⁽¹⁾	
C6 – C12	65.00
>C12 – C28	200.00
>C12 – C35	200.00
>C28 – C35	200.00
Polycyclic Aromatic Hydrocarbons (PAH) ^(1 unless otherwise specified and 3)	
Acenaphthene	240.00
Anthracene	6900.00
Acenaphthylene	410.00
Benzo(a)anthracene	18.00
Benzo(a)pyrene	7.60
Benzo(b)fluoranthene	600.00
Benzo(g,h,i)perylene	46486.86
Benzo(k)fluoranthene	620.00
Chrysene	1545.38
Dibenz(a,h)anthracene	15.00
Fluoranthene	1917.25
Fluorene	300.00
Indeno(1,2,3-cd)pyrene	170.00
Naphthalene ²	31.00
Phenanthrene	420.00
Pyrene	1116.00
Benzene, Toluene, Xylene and Ethylbenzene (BTEX) ⁽¹⁾	
Benzene	0.025
Toluene	8.20
Total Xylene	120.00
Ethylbenzene	7.60
Metals ^(2, unless otherwise specified)	
Antimony	1.00
Arsenic	5.90
Barium	300.00
Beryllium	1.50
Cadmium ¹	1.50
Chromium (total)	30.00
Lead	15.00
Mercury	0.04
Nickel	10.00
Selenium	0.30
Silver ¹	0.48
NOTES	
¹ - TCEQ Tier I Residential Soil PCLs, 0.5 acre source – GW Soil Ing.	
² - TCEQ Chapter 350 -Texas-Specific Soil Background Concentrations	
³ - TPH testing will be used to screen for PAHs using method TCEQ-1005. If the laboratory reports any detection of hydrocarbons in the carbon range greater than nC12, then the sample with the highest concentration of hydrocarbons in the > nC12 range must be analyzed for PAHs. The PAH results will be compared to the PAH results listed above.	

Appendix C

Soil Stockpile Plan

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Appendix D

SMP Manager Authorization Form

**San Antonio Airport System
Environmental Stewardship Division
SMP Manager Authorization Form**

Date: _____ Project Manager/Company: _____

Request for: Exportation of Material Importation of Material

Project Name: _____

Type of Material: _____
(i.e. topsoil, engineered fill material, rock, crushed stone, sand, CTB, mulch)

Amount of Imported Material: _____ Amount of Exported Material: _____

Analytical Test Results (attached): _____ (minimum one sample per 50 yds³)

Rock and pea gravel screening results: _____ (Screening required per load/truck)

Exported Soil Location:

Import Soil/Material

Vendor Information

Name: _____

Address: _____

City/State: _____

Applicant's Signature: _____ Date: _____
(Contractor, PM, CM)

*Please attach a copy of the contract specifications requiring importation.

Soil Management Plan (SMP) Manager Approval

(SMP Manager or Designee)

Date: _____

Please read the following instructions. If you have any questions, please contact the SMP Manager at (210) 207-3402 or the Environmental Stewardship Division at (210) 207-3862

- No soil originating on airport property shall leave the airport without SMP Manager approval.
- No soils other than those required by engineer's specifications and not available through the SAAS stockpile program shall be imported onto the airport without SMP Manager approval.
- All trucks using public roadways within airport property and transporting erodable materials such as soil, sand, gravel, rock, concrete chunks, etc. shall be in good condition and shall be in compliance with TXDOT rules and regulations.
- Soils disturbed by excavation or drilling shall be observed for visual and olfactory evidence of contamination. That means if you see or smell anything unusual, immediately contact the SMP Manager. If evidence of contamination is encountered through visual or olfactory senses or by required instrument screening, the contractor shall immediately notify the SMP Manager and then store the contaminated soil in a manner to protect from precipitation, generally by placing the soil on a layer of plastic and cover with a layer of plastic.
- Excess uncontaminated soils should not remain as soil piles on the project site any longer than necessary. Should there be a need to store excess soils on the project site, the location of any temporary stockpiles should be noted in the Storm Water Pollution Prevention Plan (SWPPP). Any stockpiles or areas not in use for a period of 21 days are to be stabilized by some means such as covering, surrounding by silt fence, hay logs and growth of grass to minimize erosion and sediment transport potential. "Clean" soil stockpiles are not to be contaminated in any way with construction debris, or spills of fuel, oil, solvents, chemicals or other waste materials.
- All clean excess soils shall be transported to a SAAS Soil Stockpile area. The stockpile area does not accept loads with trash, pipe pieces, rebar, concrete chunks or other types of construction debris. Rejected loads are the responsibility of the Project Manager to correct by removal of debris, etc. Small amounts of excess soil such as placing post holes may have an option to spread soil at the site as long as it is evenly and very thinly spread over a wide grassy area and is not in danger of washing into a nearby storm drain or body of water during a rain event. Soils segregated due to any evidence of contamination shall be managed in accordance with SAAS's Soil Management Plan.
- Entry to SAAS Stockpiles is controlled access only. Arrangement must be made with the SMP Manager for gate/stockpile site access. Other arrangements may be made to transport uncontaminated soil to other project sites or locations on the airport, but shall not be done without prior approval of the SMP Manager and

will be documented through the use of the SMP Manager Authorization Form.

- Any loads dumped by truck drivers either containing unwanted materials or debris, in an unapproved location or without the Project Manager's prior approval shall be the responsibility of the Project Manager to arrange for removal and/or mitigation.

Printed Name

Signature

Company

Date

Appendix A

Soil & Geologic Tables

MAP LEGEND

	Area of Interest (AOI)		Very Stony Spot
	Soils		Wet Spot
	Area of Interest (AOI)		Other
	Soil Map Units	Special Line Features	
	Special Point Features		Gully
	Blowout		Short Steep Slope
	Borrow Pit		Other
	Clay Spot	Political Features	
	Closed Depression		Cities
	Gravel Pit	Water Features	
	Gravelly Spot		Oceans
	Landfill		Streams and Canals
	Lava Flow	Transportation	
	Marsh or swamp		Rails
	Mine or Quarry		Interstate Highways
	Miscellaneous Water		US Routes
	Perennial Water		Major Roads
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		
	Spot Area		
	Stony Spot		

MAP INFORMATION

Map Scale: 1:28,500 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:24,000.
 Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 14N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
 Survey Area Data: Version 12, Oct 26, 2009
 Date(s) aerial images were photographed: 1/7/1995; 1/6/1995

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Bexar County, Texas (TX029)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AuB	Austin silty clay, 1 to 3 percent slopes	113.9	3.2%
AuC	Austin silty clay, 3 to 5 percent slopes	233.1	6.6%
BrD	Brackett gravelly clay loam, 5 to 12 percent slopes	6.4	0.2%
BsC	Whitewright-Austin complex, 1 to 5 percent slopes	150.7	4.3%
HnC2	Heiden clay, 3 to 5 percent slopes, eroded	46.1	1.3%
HoD3	Heiden-Ferris complex, 5 to 10 percent slopes, severely eroded	78.5	2.2%
HsB	Houston Black clay, 1 to 3 percent slopes	30.1	0.9%
HsC	Houston Black clay, 3 to 5 percent slopes	10.8	0.3%
HtA	Branyon clay, 0 to 1 percent slopes	749.5	21.3%
HtB	Branyon clay, 1 to 3 percent slopes	55.2	1.6%
LvA	Lewisville silty clay, 0 to 1 percent slopes	560.3	15.9%
LvB	Lewisville silty clay, 1 to 3 percent slopes	616.1	17.5%
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	490.9	13.9%
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	30.0	0.9%
Pt	Pits and Quarries, 1 to 90 percent slopes	121.4	3.4%
TaB	Eckrant cobbly clay, 1 to 5 percent slopes	39.3	1.1%
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	194.3	5.5%
Totals for Area of Interest		3,526.5	100.0%

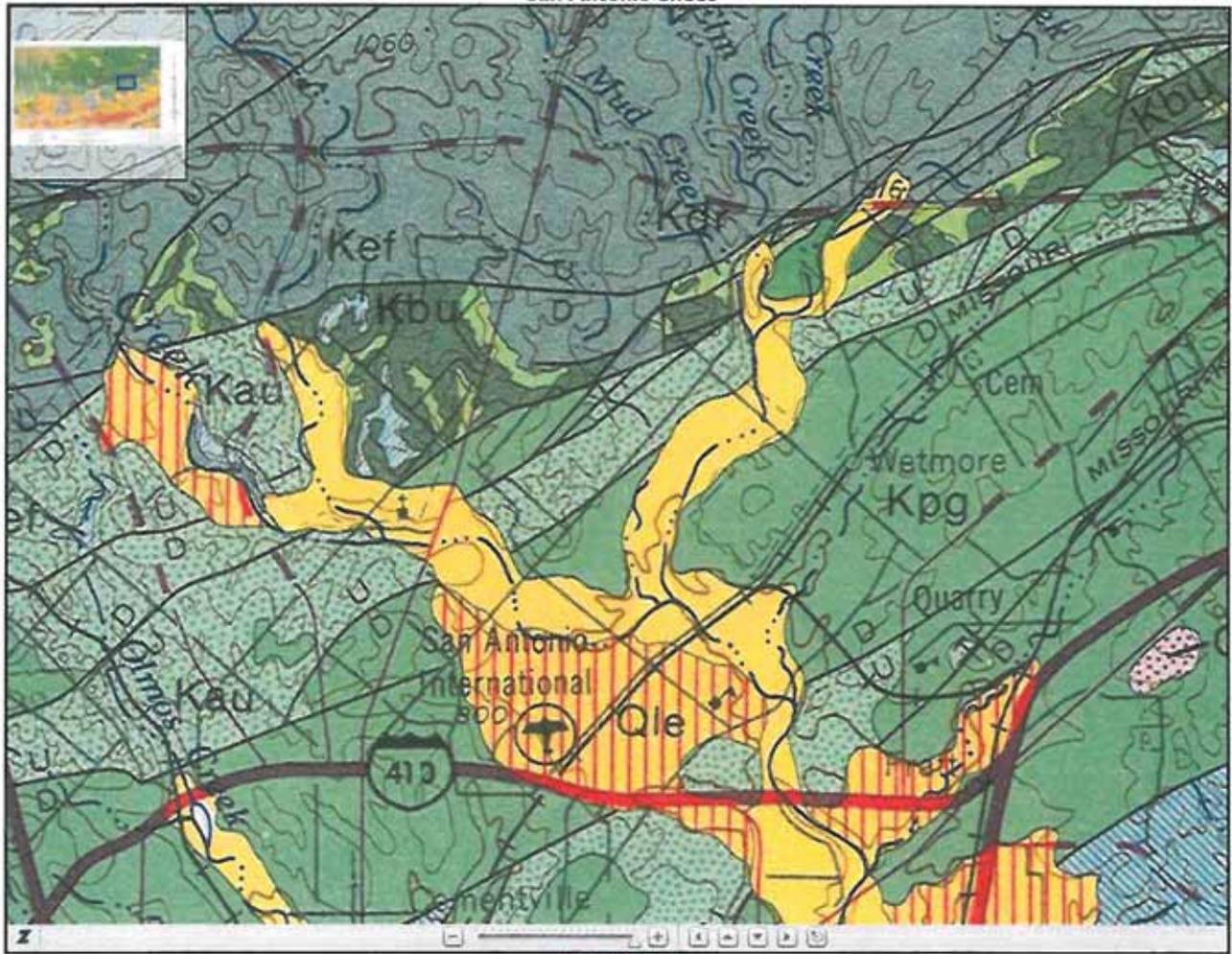
San Antonio International Airport – Soil Table

Soil	Symbol	Landform	Slope	Depth to restrictive feature	Drainage class	Depth to water table	Frequency of flooding	Frequency of ponding	Available water capacity	Typical profile
Austin Silty Clay	AuB	Ridges	1-3%	24-43" to paralithic bedrock	Well drained	> 80"	None	None	Moderate	0-28": silty clay 28-42": silty clay 42-72": Bedrock
Austin Silty Clay	AuC	Ridges	3-5%	24-40" to paralithic bedrock	Well drained	> 80"	None	None	Low	0-16": Silty clay 16-30": Silty clay 30-72": Bedrock
Whitewright-Austin complex (Whitewright)	BsC	Ridges	1-5%	10-20" to paralithic bedrock	Well drained	> 80"	None	None	Very Low	0-6": Clay loam 6-15": Silty clay 15-20": Bedrock
Whitewright-Austin complex (Austin)	BsC	Ridges	1-5%	24-43" to paralithic bedrock	Well drained	> 80"	None	None	Moderate	0-28": Silty clay 28-42": Silty clay 42-72": Bedrock
Brackett gravelly clay loam	BrD	Ridges	5-12%	6-20" to paralithic bedrock	Well drained	> 80"	None	None	Very Low	0-4": Gravelly clay loam 4-12": Gravelly clay loam 12-30": Bedrock
Heiden clay, eroded	HnC2	Ridges	3-5%	> 80"	Well drained	> 80"	None	None	Moderate	0-14": Clay 14-25": Clay 25-62": Clay
Heiden-Ferris complex, severely eroded (Heiden)	HoD3	Ridges	5-10%	> 80"	Well drained	> 80"	None	None	Moderate	0-14": Clay 14-25": Clay 25-62": Clay 62-80": Clay
Heiden-Ferris complex, severely eroded (Ferris)	HoD3	Ridges	5-10%	40-60" to densic bedrock	Well drained	> 80"	None	None	Moderate	0-8": Clay 8-40": Clay 40-84": Clay
Houston Black Clay	HsB	Ridges	1-3%	> 80"	Moderately well drained	> 80"	None	None	Moderate	0-8": Clay 8-38": Clay
Houston Black Clay	HsC	Ridges	3-5%	> 80"	Moderately well drained	> 80"	None	None	Moderate	0-8": Clay 8-38": Clay 38-62": Clay
Branyon Clay	HtA	Stream Terraces	0-1%	> 80"	Moderately well drained	> 80"	None	None	Moderate	0-8": Clay 8-40": Clay 40-62": Clay

San Antonio International Airport – Soil Table

Soil	Symbol	Landform	Slope	Depth to restrictive feature	Drainage class	Depth to water table	Frequency of flooding	Frequency of ponding	Available water capacity	Typical profile
Branyon Clay	HtB	Stream Terraces	1-3%	>80"	Moderately Well drained	> 80"	None	None	Moderate	0-8": Clay 8-34": Clay 34-60": Clay
Lewisville Silty Clay	LvA	Stream Terraces	0-1%	> 80"	Well drained	> 80"	None	None	High	0-6": Silty clay 6-44": Silty clay 44-62": Silty clay
Lewisville Silty Clay	LvB	Stream Terraces	1-3%	> 80"	Well drained	> 80"	None	None	High	0-6": Silty clay 6-44": Silty clay 44-62": Silty clay
Patrick soils, rarely flooded	PaB	Paleo-terraces	1-3%	> 80"	Well drained	> 80"	Rare	None	Low	0-17": Clay loam 17-60": Very gravelly sand
Patrick soils, rarely flooded	PaC	Paleo-terraces	3-5%	> 80"	Well drained	> 80"	Rare	None	Low	0-17": Gravelly clay loam 17-60": Very gravelly sand
Pits and Quarries	Pt	Pits	1-90%	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed	0-80": Variable
Eckrant Cobbley Clay	TaB	Ridges	1-5%	8-20" to lithic bedrock	Well drained	> 80"	None	None	Very Low	0-10": Cobbly clay 10-18": Extremely stoney clay loam 18-25": Bedrock
Tinn and Frio soils, frequently flooded (Tinn)	Tf	Flood plains	0-1%	> 80"	Moderately well drained	> 80"	Frequent	None	High	0-8": Clay 8-65": Clay 65-80": Clay
Tinn and Frio soils, frequently flooded (Frio)	Tf	Flood plains	0-1%	> 80"	Well drained	> 80"	Frequent	None	High	0-30": Silty clay loam 30-50": Silty clay loam 50-80": Clay loam

Texas Water Development Board
San Antonio Sheet



[Back to index map](#)

San Antonio International Airport – Geology Table

Formation Name	Symbol	Age	Description	Primary Rock Type	Secondary Rock Type	Tertiary Rock Type
Leona Formation	Qle	Phanerozoic Cenozoic Quaternary Pleistocene	Fluvatile terrace deposits of gravel, sand, silt and clay on first wide terrace of Nueces and Leona Rivers below the level of the Uvalde Formation.	Sand	Gravel	Clay or mud
Fluviatile Terrace Deposits	Qt	Phanerozoic Cenozoic Quaternary Pleistocene Holocene	Sand, silt, clay, and gravel in various proportions, with gravel more predominant in older, higher terrace deposits. Locally indurated with calcium carbonate (caliche) in terraces along streams. Along Colorado River clasts mostly limestone, chert, quartz, and various igneous and metamorphic rocks from Llano region and Edwards Plateau. Includes point bar, natural levee, stream channel deposits along valley walls; probably in large part correlatives of Deweyville, Beaumont, Lissie, and Willis deposits. In upland regions (Rolling Plains, Edwards Plateau, etc.) unit includes fluvial terrace deposits, undivided. Light-brown, reddish-brown, gray, or yellowish brown, gravelly quartz and lithic sand and silt to sandy gravel (Moore and Wermund, 1993). Deposits become increasingly fine grained on Coastal and Nueces Plains. Locally, calcium carbonate-cemented quartz sand, silt, clay, and gravel intermixed and interbedded. Low terraces of major rivers are capped by 2-4 m of clayey sand and silt. Sandy gravel on higher terraces varies somewhat in composition from river to river.	Terrace	Sand	Gravel, silt, clay or mud
Pecan Gap Chalk	Kpg	Phanerozoic Mesozoic Cretaceous-Late [Gulfian]	In East Texas and Gulf Coast to Rio Grande- Sherman Sheet (1967) in Collin County, upper 45 ft limestone in alternating intervals of soft, light to med. olive-gray lime sand and hard, granular, dark bluish-gray limestone, glauconitic with most of it in limesand, phosphate pebbles throughout, thin to very thin beds, limesand minutely cross-bedded; marine megafossils abundant; southward limesand replaced by calcar, silty clay; grades east in Hunt Co. and beyond to chalk. Thickness 50-70 ft. In north, central, and south Texas including Quaternary for all of west Texas- chalk and chalky marl, v. lt. yell to yell-brn, Exogyra ponderosa common; thickness 100-400 ft thick on San Antonio Sheet (1974).	Limestone	Sand	Clay or mud; limestone

Soil Map—Bexar County, Texas



Map Scale: 1:5,430 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

-  Area of Interest (AOI)
-  Soils
-  Soil Map Units
- Special Point Features**
 -  Blowout
 -  Borrow Pit
 -  Clay Spot
 -  Closed Depression
 -  Gravel Pit
 -  Gravelly Spot
 -  Landfill
 -  Lava Flow
 -  Marsh or swamp
 -  Mine or Quarry
 -  Miscellaneous Water
 -  Perennial Water
 -  Rock Outcrop
 -  Saline Spot
 -  Sandy Spot
 -  Severely Eroded Spot
 -  Sinkhole
 -  Slide or Slip
 -  Sodic Spot
 -  Spoil Area
 -  Stony Spot
- Special Line Features**
 -  Gully
 -  Short Steep Slope
 -  Other
- Political Features**
 -  Cities
- Water Features**
 -  Oceans
 -  Streams and Canals
- Transportation**
 -  Ralls
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads

MAP INFORMATION

Map Scale: 1:5,430 If printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000. Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 14N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
 Survey Area Data: Version 12, Oct 26, 2009

Date(s) aerial images were photographed: 1/6/1995

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

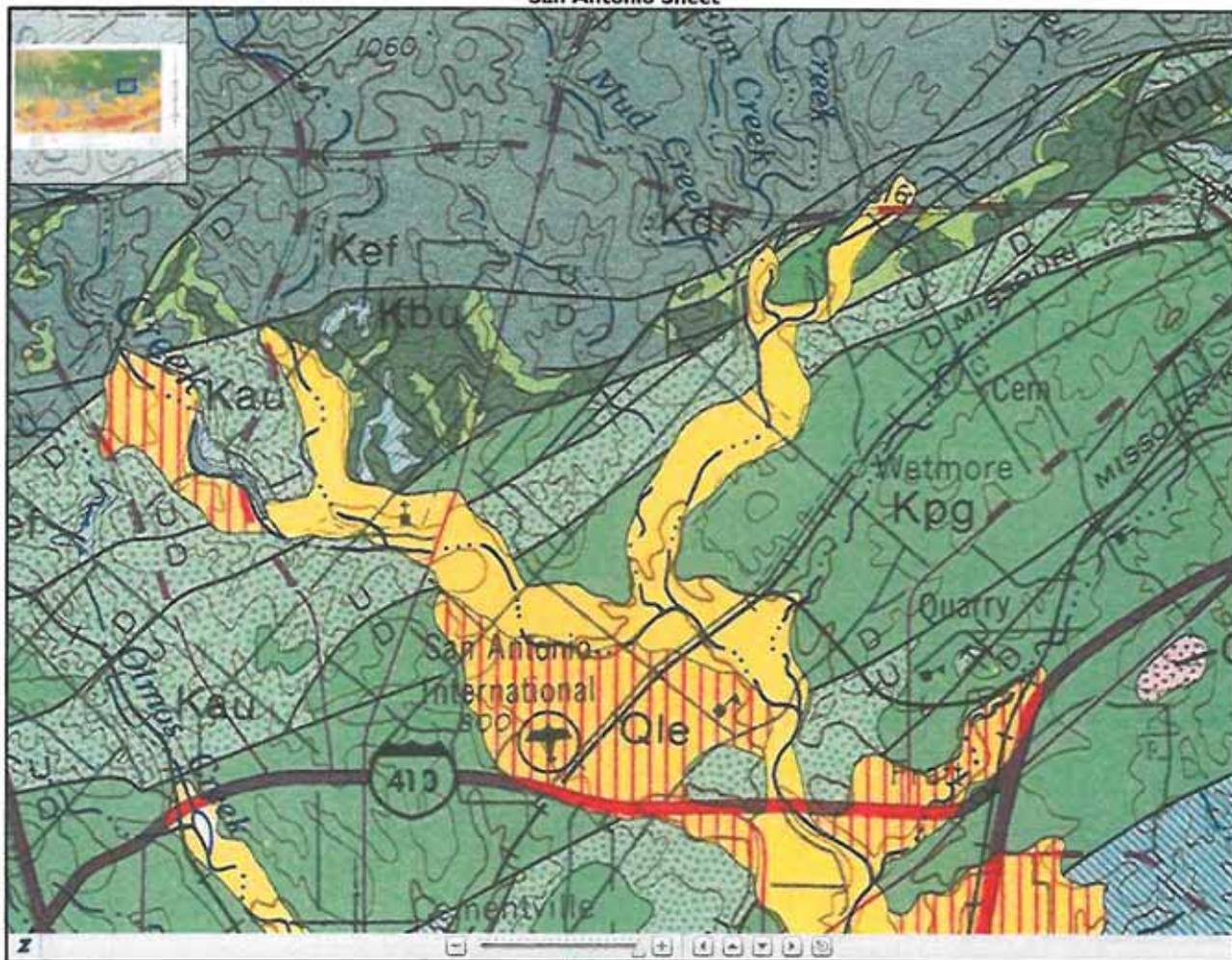
Map Unit Legend

Bexar County, Texas (TX029)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AuC	Austin silty clay, 3 to 5 percent slopes	41.5	31.0%
BsC	Whitewright-Austin complex, 1 to 5 percent slopes	26.4	19.7%
Cb	Crawford and Bexar stony soils	6.9	5.2%
LvA	Lewisville silty clay, 0 to 1 percent slopes	56.6	42.4%
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	2.2	1.7%
Totals for Area of Interest		133.7	100.0%

Buckhorn – Soil Table

Soil	Symbol	Landform	Slope	Depth to restrictive feature	Drainage class	Depth to water table	Frequency of flooding	Frequency of ponding	Available water capacity	Typical profile
Austin Silty Clay	AuC	Ridges	3-5%	24-40" to paralithic bedrock	Well drained	> 80"	None	None	Low	0-16": Silty clay 16-30": Silty clay 30-72": Bedrock
Whitewright-Austin complex (Whitewright)	BsC	Ridges	1-5%	10-20" to paralithic bedrock	Well drained	> 80"	None	None	Very Low	0-6": Clay loam 6-15": Silty clay 15-20": Bedrock
Whitewright-Austin complex (Austin)	BsC	Ridges	1-5%	24-43" to paralithic bedrock	Well drained	> 80"	None	None	Moderate	0-28": Silty clay 28-42": Silty clay 42-72": Bedrock
Crawford and Bexar stony soils (Crawford)	Cb	Plains	0-3%	20-40" to lithic bedrock	Well drained	> 80"	None	None	Low	0-8": Stony clay 8-34": Stony clay 34-50": Bedrock
Crawford and Bexar stony soils (Bexar)	Cb	Plains	0-5%	20-40" to lithic bedrock	Well drained	> 80"	None	None	Low	0-18": Cobbly clay loam 18-27": Cobbly clay 27-32": Bedrock
Lewisville Silty Clay	LvA	Stream Terraces	0-1%	> 80"	Well drained	> 80"	None	None	High	0-6": Silty clay 6-44": Silty clay 44-62": Silty clay
Patrick soils, rarely flooded	PaB	Paleo-terraces	1-3%	> 80"	Well drained	> 80"	Rare	None	Low	0-17": Clay loam 17-60": Very gravelly sand

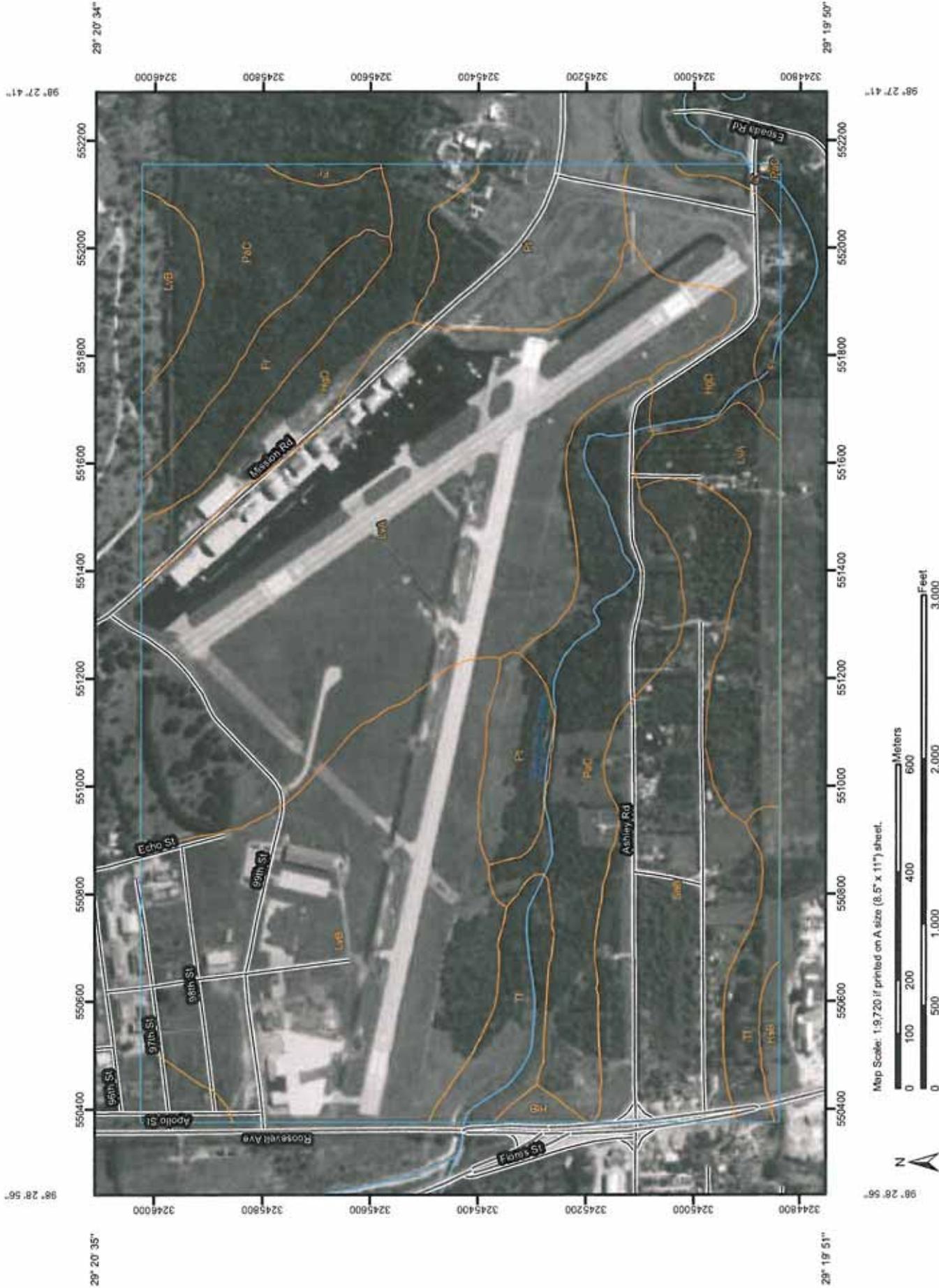
Texas Water Development Board
San Antonio Sheet



Buckhorn – Geology Table

Formation Name	Symbol	Age	Description	Primary Rock Type	Secondary Rock Type	Tertiary Rock Type
Fluviatile Terrace Deposits	Qt	Phanerozoic Cenozoic Quaternary Pleistocene Holocene	Sand, silt, clay, and gravel in various proportions, with gravel more predominant in older, higher terrace deposits. Locally indurated with calcium carbonate (caliche) in terraces along streams. Along Colorado River clasts mostly limestone, chert, quartz, and various igneous and metamorphic rocks from Llano region and Edwards Plateau. Includes point bar, natural levee, stream channel deposits along valley walls; probably in large part correlatives of Deweyville, Beaumont, Lissie, and Willis deposits. In upland regions (Rolling Plains, Edwards Plateau, etc.) unit includes fluvial terrace deposits, undivided. Light-brown, reddish-brown, gray, or yellowish brown, gravelly quartz and lithic sand and silt to sandy gravel (Moore and Wermund, 1993). Deposits become increasingly fine grained on Coastal and Nueces Plains. Locally, calcium carbonate-cemented quartz sand, silt, clay, and gravel intermixed and interbedded. Low terraces of major rivers are capped by 2-4 m of clayey sand and silt. Sandy gravel on higher terraces varies somewhat in composition from river to river.	Terrace	Sand	Gravel, silt, clay or mud
Pecan Gap Chalk	Kpg	Phanerozoic Mesozoic Cretaceous-Late [Gulfian]	In East Texas and Gulf Coast to Rio Grande- Sherman Sheet (1967) in Collin County, upper 45 ft limestone in alternating intervals of soft, light to med. olive-gray lime sand and hard, granular, dark bluish-gray limestone, glauconitic with most of it in limesand, phosphate pebbles throughout, thin to very thin beds, limesand minutely cross-bedded; marine megafossils abundant; southward limesand replaced by calcar, silty clay; grades east in Hunt Co. and beyond to chalk. Thickness 50-70 ft. In north, central, and south Texas including Quaternary for all of west Texas- chalk and chalky marl, v. lt. yell to yell-brn, Exogyra ponderosa common; thickness 100-400 ft thick on San Antonio Sheet (1974).	Limestone	Sand	Clay or mud; limestone

Soil Map—Bexar County, Texas



Map Scale: 1:9,720 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

 Area of Interest (AOI)	 Very Stony Spot
 Soils	 Wet Spot
 Area of Interest (AOI)	 Other
 Soil Map Units	
Special Point Features	Special Line Features
 Blowout	 Gully
 Borrow Pit	 Short Steep Slope
 Clay Spot	 Other
 Closed Depression	Political Features
 Gravel Pit	 Cities
 Gravelly Spot	Water Features
 Landfill	 Oceans
 Lava Flow	 Streams and Canals
 Marsh or swamp	Transportation
 Mine or Quarry	 Rails
 Miscellaneous Water	 Interstate Highways
 Perennial Water	 US Routes
 Rock Outcrop	 Major Roads
 Saline Spot	 Local Roads
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	
 Spoil Area	
 Stony Spot	

MAP INFORMATION

Map Scale: 1:9,720 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000. Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 14N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
 Survey Area Data: Version 12, Oct 26, 2009
 Date(s) aerial images were photographed: 1/15/1995

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

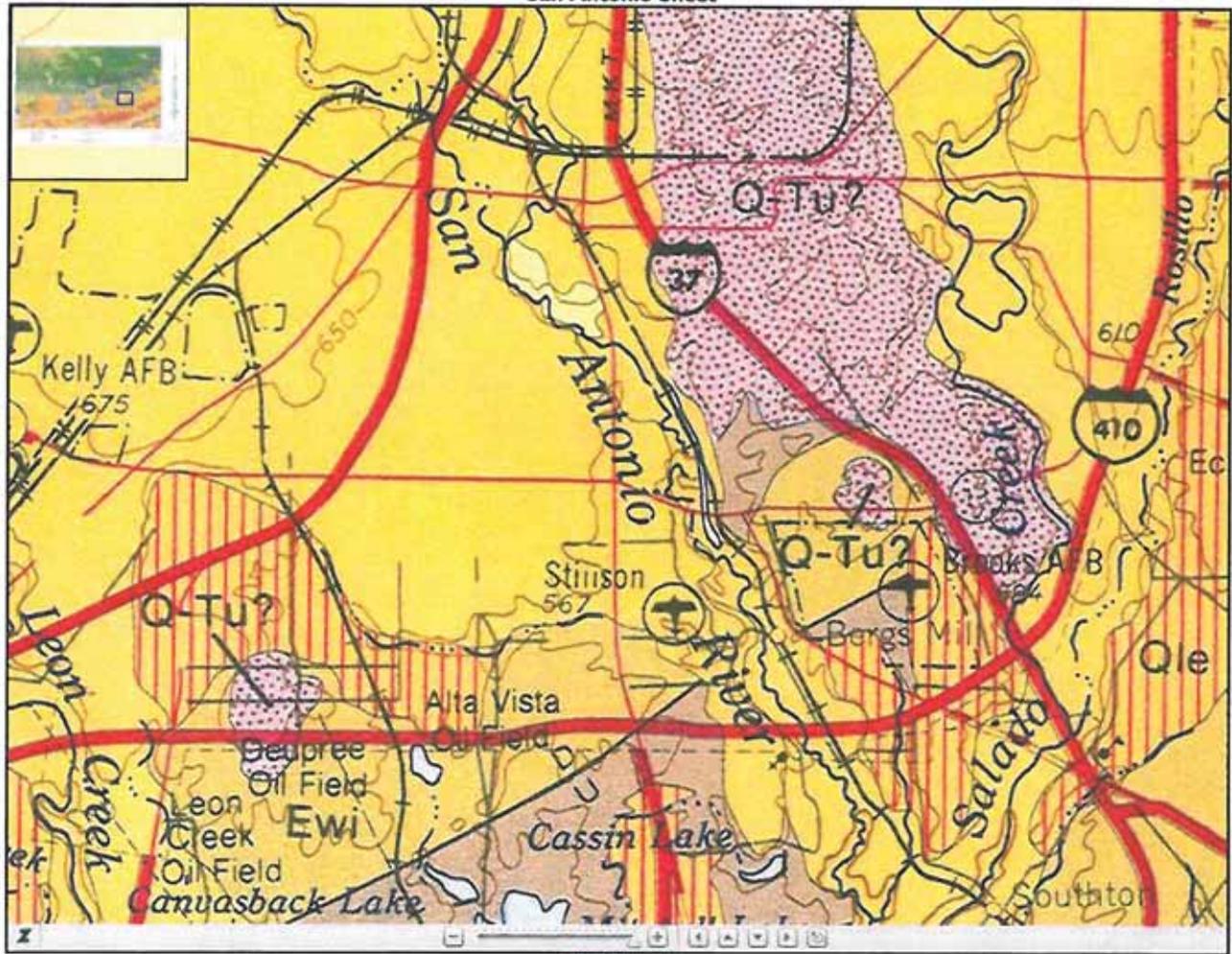
Map Unit Legend

Bexar County, Texas (TX029)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Fr	Loire clay loam, 0 to 2 percent slopes, occasionally flooded	19.1	3.7%
HgD	Rock outcrop-Olmos complex, 5 to 25 percent slopes	43.3	8.3%
HsB	Houston Black clay, 1 to 3 percent slopes	2.1	0.4%
HtB	Branyon clay, 1 to 3 percent slopes	1.6	0.3%
LvA	Lewisville silty clay, 0 to 1 percent slopes	161.2	30.8%
LvB	Lewisville silty clay, 1 to 3 percent slopes	107.8	20.6%
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	74.5	14.3%
Pt	Pits and Quarries, 1 to 90 percent slopes	34.7	6.6%
SaB	San Antonio clay loam, 1 to 3 percent slopes	57.9	11.1%
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	20.6	3.9%
Totals for Area of Interest		522.7	100.0%

Stinson Municipal Airport – Soil Table

Soil	Symbol	Landform	Slope	Depth to restrictive feature	Drainage class	Depth to water table	Frequency of flooding	Frequency of ponding	Available water capacity	Typical profile
Loire Clay Loam, occasionally flooded	Fr	Flood plain	0-2%	> 80"	Well drained	> 80"	Occasionally	None	High	0-25": Clay loam 25-35": Clay loam 35-56": Loam 56-80": Fine sandy loam
Rock Outcrop – Olmos Complex (Rock Outcrop)	HgD	Rock outcrop	5-25%	0-2" to lithic bedrock	Not listed	Not listed	Not listed	Not listed	Moderately low to very high	0-80": Bedrock
Rock Outcrop- Olmos Complex (Olmos)	HgD	Ridges	5-25%	4-20" to petrocalcic	Well drained	> 80"	None	None	Very low	0-14": Very gravelly loam 14-18": Cemented material 18-60": Gravelly loam
Houston Black Clay	HsB	Ridges	1-3%	> 80"	Moderately well drained	> 80"	None	None	Moderate	0-8": Clay 8-38": Clay
Branyon Clay	HtB	Stream Terraces	1-3%	>80"	Moderately Well drained	> 80"	None	None	Moderate	0-8": Clay 8-34": Clay 34-60": Clay
Lewisville Silty Clay	LvA	Stream Terraces	0-1%	> 80"	Well drained	> 80"	None	None	High	0-6": Silty clay 6-44": Silty clay 44-62": Silty clay
Lewisville Silty Clay	LvB	Stream Terraces	1-3%	> 80"	Well drained	> 80"	None	None	High	0-6": Silty clay 6-44": Silty clay 44-62": Silty clay
Patrick soils, rarely flooded	PaC	Paleo-terraces	3-5%	> 80"	Well drained	> 80"	Rare	None	Low	0-17": Gravelly clay loam 17-60": Very gravelly sand
Pits and Quarries	Pt	Pits	1-90%	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed	0-80": Variable
San Antonio clay loam	SaB	Stream Terraces	1-3%	> 80"	Moderately low to moderately high	> 80"	None	None	High	0-10": Clay loam 10-38": Clay 38-60": Clay loam
Tinn and Frio soils, frequently flooded (Tinn)	Tf	Flood plains	0-1%	> 80"	Moderately well drained	> 80"	Frequent	None	High	0-8": Clay 8-65": Clay 65-80": Clay
Tinn and Frio soils, frequently flooded (Frio)	Tf	Flood plains	0-1%	> 80"	Well drained	> 80"	Frequent	None	High	0-30": Silty clay loam 30-50": Silty clay loam 50-80": Clay loam

Texas Water Development Board
San Antonio Sheet



Stinson Municipal Airport – Geology Table

Formation Name	Symbol	Age	Description	Primary Rock Type	Secondary Rock Type	Tertiary Rock Type
Fluviatile Terrace Deposits	Qt	Phanerozoic Cenozoic Quaternary Pleistocene Holocene	<p>Sand, silt, clay, and gravel in various proportions, with gravel more predominant in older, higher terrace deposits. Locally indurated with calcium carbonate (caliche) in terraces along streams. Along Colorado River clasts mostly limestone, chert, quartz, and various igneous and metamorphic rocks from Llano region and Edwards Plateau. Includes point bar, natural levee, stream channel deposits along valley walls; probably in large part correlatives of Deweyville, Beaumont, Lissie, and Willis deposits. In upland regions (Rolling Plains, Edwards Plateau, etc.) unit includes fluvial terrace deposits, undivided. Light-brown, reddish-brown, gray, or yellowish brown, gravelly quartz and lithic sand and silt to sandy gravel (Moore and Wermund, 1993). Deposits become increasingly fine grained on Coastal and Nueces Plains. Locally, calcium carbonate-cemented quartz sand, silt, clay, and gravel intermixed and interbedded. Low terraces of major rivers are capped by 2-4 m of clayey sand and silt. Sandy gravel on higher terraces varies somewhat in composition from river to river.</p>	Terrace	Sand	Gravel, silt, clay or mud

Appendix B

COC Acceptable Concentration Limits

Table 1
Tier 1 Residential Soil PCLs¹
May 24, 2011

Chemical of Concern	CAS	0.5 acre source area						30 acre source area						
		1 st Soil C _{comb} ² (mg/kg)	GW-Soil _{Int} (mg/kg)	GW-Soil _{Int} notes ³	GW-Soil _{Int} (mg/kg)	GW-Soil _{Int} notes ³	GW-Soil _{Int} (mg/kg)	1 st Soil C _{comb} ² (mg/kg)	GW-Soil _{Int} (mg/kg)	GW-Soil _{Int} notes ³	GW-Soil _{Int} (mg/kg)	GW-Soil _{Int} notes ³	GW-Soil _{Int} (mg/kg)	GW-Soil _{Int} notes ³
Sodium polyacrylate	9003-04-7	1.2E+02	2.4E+01	n	2.4E+03	n	1.2E+02	n	1.2E+03	n	1.2E+03	n	1.2E+03	n
Strontium	7440-24-6	4.4E+04	6.1E+02	n	6.1E+04	n	4.4E+04	n	3.1E+04	n	3.1E+04	n	3.1E+04	n
Styrene	57-24-9	2.0E+01	3.7E-02	n	3.7E+00	n	2.0E+01	n	1.9E+00	n	1.9E+00	n	1.9E+00	n
Styrene Sulfide*	14805-79-8	6.7E+03	3.3E+00	m	3.3E+02	m	4.3E+03	n	1.6E+00	m	5.8E+03	n	3.2E+04	n
Sulfide*	18496-25-8	1.9E+02	1.7E-01	n	1.7E+01	n	8.6E+02	n	2.5E+05	n	8.7E+02	n	1.6E+04	n
Sulfone	126-33-0	2.0E+02	7.5E+03	n	7.5E+05	n	2.0E+02	n	3.8E+03	n	3.8E+05	n	3.8E+05	n
Sulfur*	7704-34-9	2.0E+03	3.1E+01	n	3.1E+03	n	2.0E+03	n	1.6E+01	n	1.6E+03	n	1.6E+03	n
Sulprofos (Bolstar)	35400-43-2	4.7E+03	5.4E+00	n	5.4E+02	n	4.7E+03	n	2.7E+00	n	2.7E+02	n	2.7E+02	n
Tebacozole	107534-96-3	34014-18-1	4.7E+03	n	3.4E+01	n	1.7E+00	n	1.7E+01	n	1.7E+01	n	1.7E+01	n
Terbuthion	R071-79-9	919-94-8	3.3E+03	n	9.5E+02	n	3.3E+03	n	4.7E+00	n	4.7E+02	n	4.7E+02	n
Tert-amyl ethyl ether (TAE)	994-05-8	3.3E+03	3.3E+00	n	3.3E+02	n	3.3E+03	n	1.9E+00	n	1.9E+02	n	1.9E+02	n
Tert-butyl alcohol (2-methyl-2-propanol)	75-65-0	7.4E+03	4.6E+00	n	4.6E+02	n	7.4E+03	n	2.3E+00	n	2.3E+02	n	2.3E+02	n
Tetrachlorobenzene, 1,2,3,4-	634-66-2	2.0E+01	1.2E+01	n	1.2E+03	n	2.0E+01	n	6.0E+00	n	6.0E+02	n	6.0E+02	n
Tetrachlorobenzene, 1,2,3,5-	634-90-2	1.3E+01	1.9E+00	n	1.9E+02	n	1.3E+01	n	9.4E+01	n	9.4E+01	n	9.4E+01	n
Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.0E+01	4.8E-01	n	4.8E+01	n	2.0E+01	n	2.4E+01	n	2.4E+01	n	2.4E+01	n
Tetrachloroethane, 1,1,1,2-	630-20-6	6.5E+01	1.4E+00	c	1.4E+02	c	3.9E+01	c	7.1E+01	c	7.1E+01	c	4.7E+01	c
Tetrachloroethane, 1,1,2,2-	79-34-5	3.0E+01	2.3E-02	c	2.3E+00	c	3.0E+01	c	1.2E+02	c	1.2E+02	c	1.2E+02	c
Tetrachloroethylene	127-18-4	1.0E+02	5.0E-02	m	5.0E+00	m	9.4E+02	c	5.0E+03	c	5.0E+03	c	4.8E+02	c
Tetrahydrofuran	4901-81-3	4.0E+02	1.5E-01	n	1.5E+03	n	4.0E+02	n	7.4E+00	n	7.4E+02	n	7.4E+02	n
Tetrahydrofuran	58-90-2	1.8E+02	4.5E+00	n	4.5E+02	n	1.8E+02	n	2.2E+00	n	2.2E+02	n	2.2E+02	n
Tetrahydrofuran	935-95-5	2.3E+01	2.2E+00	n	2.2E+02	n	2.3E+01	n	1.1E+00	n	1.1E+02	n	1.1E+02	n
Tetrahydrofuran	22248-79-9	2.6E+03	2.4E+03	n	2.4E+05	n	2.6E+03	n	1.2E+03	n	1.2E+05	n	1.2E+05	n
Tetrahydrofuran	116-29-0	1.0E+03	8.7E+01	n	8.7E+03	n	1.0E+03	n	4.4E+01	n	4.4E+03	n	4.4E+03	n
Tetrahydrofuran	3689-24-5	3.3E+01	3.9E-01	n	3.9E+01	n	3.3E+01	n	1.9E-01	n	1.9E+01	n	1.9E+01	n
Tetrahydrofuran	78-00-2	6.7E-03	5.0E-04	n	5.0E-02	n	6.7E-03	n	2.5E-04	n	2.5E-02	n	2.5E-02	n
Tetrahydrofuran	107-49-3	7.3E-01	9.3E-03	n	9.3E-01	n	7.3E-01	n	4.6E-03	n	4.6E-01	n	4.6E-01	n
Tetrahydrofuran	112-60-7	2.3E+04	1.6E-01	n	1.6E+03	n	2.3E+04	n	7.3E+03	n	7.3E+05	n	7.3E+05	n
Tetrahydrofuran	109-99-9	1.5E+02	2.5E+01	c	2.5E+03	c	1.5E+02	c	1.2E+01	c	1.2E+03	c	9.7E+01	c
Tetrahydrofuran	142-68-7	1.6E+02	2.7E-01	c	2.7E+01	c	9.2E+01	c	1.4E-01	c	1.4E+01	c	1.0E+02	c
Tetrahydrofuran	112-49-2	2.0E+03	1.7E+00	n	1.7E+02	n	2.0E+03	n	8.6E-01	n	8.6E+01	n	8.6E+01	n
Thallium and compounds (as thallium chloride)	7791-12-0	6.3E+00	1.7E+00	m	1.7E+02	m	6.3E+00	m	8.7E-01	m	8.7E+01	m	8.7E+01	m
Thiofanox	39196-18-4	2.0E+01	3.1E-02	n	3.1E+00	n	2.0E+01	n	1.6E-02	n	1.6E+00	n	1.6E+00	n
Thiofanox	297-97-2	4.7E+00	1.1E-02	n	1.1E+00	n	4.7E+00	n	5.5E-03	n	5.5E+01	n	5.5E+01	n
Thiophanate-methyl	23564-05-8	5.3E+03	4.5E+00	n	4.5E+02	n	5.3E+03	n	2.2E+00	n	2.2E+02	n	2.2E+02	n
Thiram	137-26-8	3.3E+02	3.5E+00	n	3.5E+02	n	3.3E+02	n	1.8E+00	n	1.8E+02	n	1.8E+02	n
Tin	7440-31-5	3.5E+04	3.7E+04	n	3.7E+06	n	3.5E+04	n	1.8E+04	n	1.8E+06	n	1.8E+06	n
Titanium	7440-32-6	2.2E+05	8.2E+00	m	8.2E+02	m	2.2E+05	n	4.1E+00	m	4.1E+02	m	3.2E+04	n
Toluene	108-88-3	5.0E+03	8.2E+00	m	8.2E+02	m	5.4E+03	n	4.1E+00	m	4.1E+02	m	3.4E+04	n
Toluene disocyanate, 2,4,6-	26471-62-5	1.8E-02	1.5E-02	n	1.5E+00	n	7.5E+01	n	7.6E-03	c	7.6E-01	c	7.5E+01	n
Toluene diamine, 2,4-	95-80-7	1.5E+00	1.5E+00	c	1.5E+00	c	1.5E+00	c	7.6E-03	c	7.6E-01	c	7.6E-01	c
Toluene diamine, 2,6-	523-40-5	2.0E+03	1.4E+00	n	1.4E+02	n	2.0E+03	n	7.2E-01	n	7.2E+01	n	7.2E+01	n
Toluidine, o-	95-53-4	1.7E+01	3.8E-02	c	3.8E+00	c	1.5E+01	c	1.9E-02	c	1.9E+00	c	1.9E+00	c
Toluidine, p-	106-49-0	2.5E+01	1.4E-02	c	1.4E+00	c	2.5E+01	c	7.0E-03	c	7.0E-01	c	7.0E-01	c
Toxaphene	8001-35-2	1.2E+00	1.2E+01	m	1.2E+03	m	1.2E+00	m	5.8E+00	m	5.8E+02	m	4.9E+02	c
TPH, TX1005, C6-C12	TPH1005-1	2.3E+03	6.5E+01	n	6.5E+03	n	1.1E+03	n	3.3E+03	n	3.3E+05	n	1.6E+03	n
TPH, TX1005, C12-C28	TPH1005-2	2.3E+03	2.0E+02	n	2.0E+04	n	2.0E+03	n	9.9E+01	n	9.9E+03	n	7.8E+03	n
TPH, TX1005, C12-C35	TPH1005-3	2.3E+03	2.0E+02	n	2.0E+04	n	2.0E+03	n	9.9E+01	n	9.9E+03	n	7.8E+03	n
TPH, TX1005, C28-C35	TPH1005-4	93-72-1	2.3E+02	n	2.3E+04	n	5.3E+02	m	2.6E+00	m	2.6E+02	m	9.8E+04	n
TP Sil ex. 2,4,5-	55219-65-3	2.0E+03	8.4E+00	n	8.4E+02	n	2.0E+03	n	4.2E+00	n	4.2E+02	n	4.2E+02	n

Table 1
Tier 1 Residential Soil PCLs¹
May 24, 2011

Chemical of Concern	CAS	0.5 acre source area						30 acre source area						
		1 st Soil _{comb} ² (mg/kg) note3	GW _{Soil} ³ (mg/kg) note3	GW _{Soil} ⁴ (mg/kg) note3	GW _{Soil} ⁵ (mg/kg) note3	GW _{Soil} ⁶ (mg/kg) note3	GW _{Soil} ⁷ (mg/kg) note3	1 st Soil _{comb} ² (mg/kg) note3	GW _{Soil} ³ (mg/kg) note3	GW _{Soil} ⁴ (mg/kg) note3	GW _{Soil} ⁵ (mg/kg) note3	GW _{Soil} ⁶ (mg/kg) note3	GW _{Soil} ⁷ (mg/kg) note3	
>16-21 C, >21-35 C aliphatics (TPH) (for transformer mineral oil releases only)	NA	1.1E+05	1.0E+06	n > S	1.0E+05	n > S	1.1E+05	1.0E+06	n > S	1.0E+06	n > S	1.1E+05	1.0E+06	n > S
>7-8 C aromatics (TPH)	NA	6.4E+03	2.0E+01	n	2.0E+03	n	5.3E+03	1.0E+01	n	1.0E+03	n	5.3E+03	1.0E+01	n
>8-10 C aromatics (TPH)	NA	1.6E+03	6.5E+01	n	6.5E+03	n	1.1E+03	3.3E+01	n	3.3E+03	n	1.1E+03	3.3E+01	n
>10-12 C aromatics (TPH)	NA	1.9E+03	1.0E+02	n	1.0E+04	n	1.5E+03	5.0E+01	n	5.0E+03	n	1.5E+03	5.0E+01	n
>12-16 C aromatics (TPH)	NA	2.3E+03	2.0E+02	n	2.0E+04	n	2.0E+03	9.9E+01	n	9.9E+03	n	2.0E+03	9.9E+01	n
>16-21 C aromatics (TPH)	NA	1.9E+03	4.7E+02	n	4.7E+04	n	1.9E+03	2.3E+02	n	2.3E+04	n	1.9E+03	2.3E+02	n
>21-35 C aromatics (TPH)	NA	1.9E+03	3.7E+03	n	3.7E+05	n	1.9E+03	1.8E+03	n	1.8E+05	n	1.9E+03	1.8E+03	n
Transformer mineral oil	NA	2.6E+04	2.5E+05	n	1.0E+06	n	2.0E+04	1.3E+05	n	1.0E+06	n	2.0E+04	1.3E+05	n

In accordance with §350.72(b), when establishing Tier 1 PCLs for individual COCs for each of the individual and combined human health exposure pathways, the person must evaluate whether the PCLs need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level and hazard index criteria specified in §350.72(c). For COCs which exhibit both carcinogenic and noncarcinogenic characteristics, they shall be evaluated as both a carcinogen and noncarcinogen when determining whether the PCL established for an individual COC for each of the individual and combined human health exposure pathways needs to be adjusted to a lower concentration to meet the cumulative risk and hazard criteria. The person shall then use the lower of the carcinogenic or noncarcinogenic PCL as the Tier 1 human health PCL. In other words, the Tier 1 PCLs provided in this table for an individual COC should not be used as the final Tier 1 human health PCL for any of the individual or combined exposure pathways in cases where there are more than 10 carcinogenic and/or more than 10 noncarcinogenic COCs within a source medium unless it can be demonstrated that further downward adjustment is not necessary to meet the cumulative risk and hazard criteria.

¹Combined includes: inhalation, ingestion, dermal, vegetable consumption pathways
²c = carcinogenic; n = noncarcinogenic; m = primary MCL-based; a = EPA Action Level-based; > S = solubility limit exceeded during calculation; < GW Ing = less than GWGWing value
³For subsurface soils only
⁴Please contact the TCEQ for assistance in determining a site-specific approach for GWSolling values for these compounds.
⁵Note that much higher PCLs for mercury may be obtained using a pH-dependent Kd based on site-specific information (see Figure 30, TAC §350.72(e)(1)(C))
⁶Persons must use the value provided in the "GWSoil for Secondary MCL" column of this table as the GWSoil PCL for MTBE if the conditions described in §350.74(f)(3) exist.
⁷Asbestos URF and soil PCLs removed. Contact your TCEQ Project Manager if asbestos may be a chemical of concern.
⁸These compounds, acetic acid, ammonium polyphosphate, ammonium salts, calcium, chloride, ethylene, hydrogen chloride (hydrochloric acid), iron, limonene, d-, magnesium, phosphorus, total, potassium, sodium, sulfate, sulfide, and sulfur, are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at <http://www.tceq.texas.gov/remediation/trp/trp.htm>.
⁹All values capped at 1E+06

Texas-Specific Soil Background Concentrations milligrams per kilogram (mg/kg) ¹	
Metal	Median Background Concentration (mg/kg)
Aluminum	30,000
Antimony	1
Arsenic	5.9
Barium	300
Beryllium	1.5
Boron	30
Total Chromium	30
Cobalt	7
Copper	15
Fluoride	190
Iron	15,000
Lead	15
Manganese	300
Mercury	0.04
Nickel	10
Selenium	0.3
Strontium	100
Tin	0.9
Titanium	2,000
Thorium	9.3
Vanadium	50
Zinc	30

¹ Source: "Background Geochemistry of Some Rocks, Soils, Plants, and Vegetables in the Conterminous United States", by Jon J. Connor, Hansford T. Shacklette, et al., Geological Survey Professional Paper 574-F, US Geological Survey.

Appendix C

Soil Stockpile Plan

SAAS Material Stockpiles

Stockpile Number	Approximate			Estimated *** Volume (yd ³)	Material Type	Location (See Maps)
	Length (ft)	Width (ft)	Height (ft)			
SP-1	33	23	12	169	Base Material	North side by Valero
SP-2*	150	115	5	1,600	Topsoil, rock, paint chips	ARFF
SP-3**	350	290	10	18,800	Topsoil, rock, concrete, asphalt, pipe	Mt. Yantis
SP-4	23	25	4	25	4" to 6" Rock	Northeast of Cessna
SP-5	21	15	6	35	2" to 4" Rock	Northeast of Cessna
SP-6	79	27	12	475	Base Material	Northeast of Cessna
SP-7	18	14	5	24	Sand	Northeast of Cessna
SP-8	34	30	10	180	Topsoil	Northeast of Cessna
SP-9	30	16	12	107	Pea gravel	Northeast of Cessna
SP-10	22	17	8	55	Pea gravel	Northeast of Cessna
SP-11	17	14	5	22	1" Rock	Northeast of Cessna
SP-12	14	8	3	6	River Rock	Northeast of Cessna
SP-13	25	24	10	111	Mulch	Northeast of Cessna
SP-14	18	16	8	43	Mulch	Northeast of Cessna
SP-15	65	42	10	506	Recycle Material	Northeast of Cessna
SP-16	17	14	6	26	Topsoil	Northeast of Cessna
SP-17	205	175	18	24,000	Concrete Rubble	Northeast corner of AOA
SP-18	168	65	18	7,300	Concrete Rubble	Northeast corner of AOA
SP-19	215	75	10	6,000	Concrete Rubble	Northeast corner of AOA
SP-20	164	100	6	3,640	Topsoil, concrete, pipe, rock	Northeast corner of AOA
SP-21	21	15	3	18	Rock	Northeast corner of AOA
SP-22	180	15	8	400	Construction Debris	East side near Greenlight
SP-23	355	270	12	21,300	Construction Debris	East side near Greenlight
SP-24	62	32	10	368	Concrete Rubble	East side near Greenlight
SP-25	440	245	15	37,000	Fill Material	Buckhorn
SP-26	180	140	15			
SP-26	240	175	3	1,333	Fill Material	Buckhorn
SP-27	190	150	2	1,055	Fill Material	Buckhorn
SP-28	220	135	15	8,250	Fill Material	Buckhorn
SP-29	350	80	10	5,185	Fill Material	Buckhorn
SP-30	315	87	10	5,075	Fill Material	Buckhorn
SP-31	330	140	8	6,845	Fill Material	Buckhorn
SP-32	440	240	5	9,800	Fill Material	Buckhorn
SP-33	200	25	5	460	Fill Material	Buckhorn
SP-34	300	32	5	889	Fill Material	Buckhorn
SP-35	250	50	10	232	Fill Material	Buckhorn

* - See SP-13 photograph and drawing

** - See SP-14 photograph and drawing

*** - Volumes are very rough estimates





Google earth

feet
meters

800
200



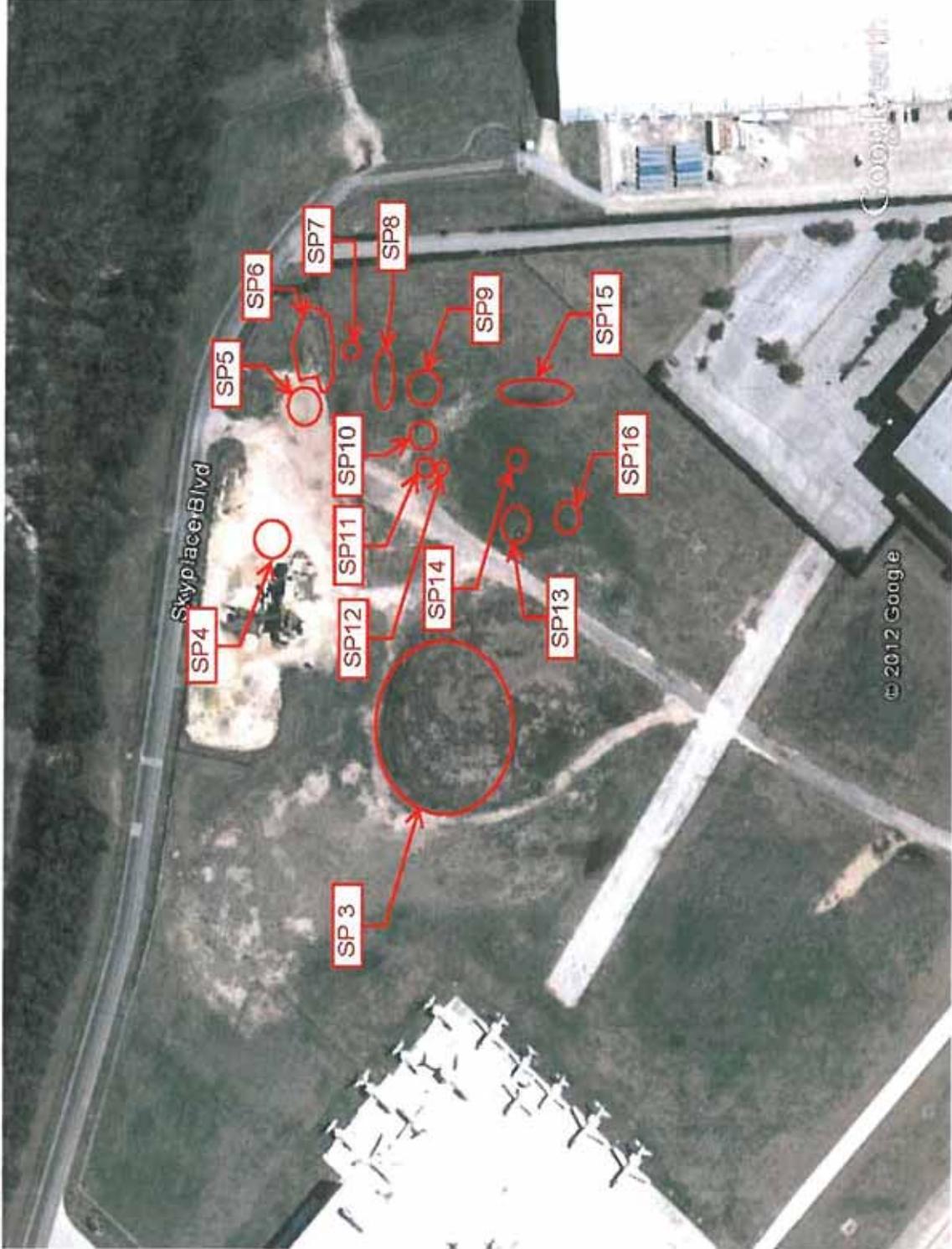


Google earth

feet
meters

700
200





Google earth

feet
meters

900
300

