

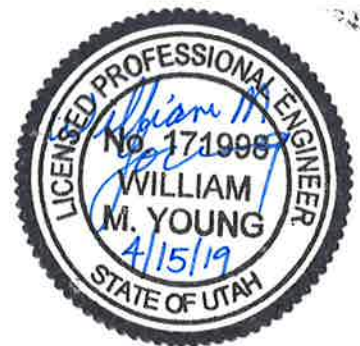


CITY OF LOGAN
LOGAN, UTAH

***AIRPORT ROAD RECONSTRUCTION
WEST FROM 2500 NORTH 1000 WEST TO CITY BOUNDARY***

Contract Documents
and Specifications
Engineering Number: ENG 18046
Date: April 2019

City Of Logan Engineering
City Of Logan, Utah



CIVIL ENGINEER

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PROJECT MANAGER

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PROJECT SPONSER

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BID REQUEST

Sealed bids will be received by the City of Logan Purchasing Agent at City Hall, 290 North 100 West, until 2:00 pm, May 10, 2019, for:

Airport Road Reconstruction

Bid opening will be held immediately after the bid closure on the above

date in the **City Hall Conference Room**

Specifications are available on the Logan City website and on file in the office of the Logan City Engineer, 290 North 100 West, Logan, Utah, and copies may be obtained by prospective bidders.

Contractors should be prepared to submit documentation with their PROPOSAL as outlined in the INSTRUCTIONS FOR BIDDERS as a part of a Contractor Qualification Process.

A Bid Bond, or cashier's check for 5% of bid, payable to City of Logan, must accompany each bid, along with a proposed SCHEDULE FOR CONSTRUCTION COMPLETION. Upon awarding of the bid, a PAYMENT BOND and a PERFORMANCE BOND will be required for 100% of any bid which exceeds \$5,000.

Questions regarding bid, please contact Tyler Cady at tyler.cady@loganutah.org.

The right is reserved by the City of Logan to reject any or all bids.

Dated this April 15, 2019.

Lori Mathys
Purchasing Agent

INSTRUCTIONS TO BIDDERS

Bids will be received by the **CITY OF LOGAN** (herein called "Owner"), at 290 North 100 West, Logan, Utah until **2:00 p.m.** on **May 10, 2019** and then immediately after the bid closure publicly opened and read aloud.

During the Bidding period, all questions pertaining to the project or bid shall be submitted in writing by May 6, 2019 @ 2:00 p.m. to tyler.cady@loganutah.org. The responses to these questions will be posted daily on the City of Logan's, Purchasing Division website. The website address is: <http://www.loganutah.org/government/departments/finance/purchasing/index.php>

Each Bid must be submitted in a sealed envelope addressed to Purchasing Agent, City of Logan, 290 North 100 West, Logan, Utah. Each sealed envelope should bear on the outside the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the owner at the address above.

All Bids must be submitted on the required BID SCHEDULE. All blank spaces for unit prices and total costs must be filled in, in ink or typewritten, and the BID SCHEDULE must be fully completed showing the total of the bid and executed when submitted. Please fill out both the BID SCHEDULE and the ALTERNATIVE ITEMS. Only one copy of the Bid Schedule and alternative items is required.

Any Bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. The purchasing agent or her representative shall have possession of the bids at the designated time and location. Any Bid en route, either in the mail or at other locations in the City; will not be considered timely and will be returned unopened. No Bidder may withdraw a Bid within 90 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the Owner and the Bidder.

The Bidder shall submit as a part of their Bid the included CONTRACTOR QUALIFICATION FORM outlining experience of the Bidder on similar projects over the past three (3) years. This form will be used to help determine the qualifications of the Bidder. Any Bid which does not include a CONTRACTOR QUALIFICATION FORM, shall be considered non-responsive and shall be returned to the BIDDER without being read.

Owner reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the Work and to negotiate contract terms with the successful Bidder, and the right to disregard all nonconforming, nonresponsive or conditional Bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by the Owner.

Each BID must include a detailed SCHEDULE FOR CONSTRUCTION COMPLETION showing the anticipated beginning date, the nature and sequence of construction activity including SWPPP implementation, obtaining of building permits, and the approximate completion date. The time to complete the work shall be less than or equal to the time allowed to complete the work as shown on the PROPOSAL form, but shall not exceed the time allowed for completion as shown on the PROPOSAL form. Any BID which does not include a SCHEDULE FOR CONSTRUCTION COMPLETION shall be considered non-responsive and shall be returned to the BIDDER without being read. If the TOTAL one or more BIDS submitted is within 5% of the lowest submitted BID, the bid may be awarded to the BIDDER with the earliest start time and/or the shortest, reasonable time for completion, as agreed upon by the Owner of the project.

Liquidated Damages are a part of this Contract. The only way to extend the completion date for a project is by CHANGE ORDER. If the work is not completed by the completion dates as set by the approved SCHEDULE FOR CONSTRUCTION COMPLETION submitted, or as adjusted by CHANGE ORDER, Liquidated Damages will be imposed for every day, Sundays and City observed holidays excluded, that the work proceeds past the completion date, including time to complete the "Punch List" items.

Bidders must satisfy themselves of the accuracy of the estimated quantities in the BID SCHEDULE by examination of the site and review of the Drawings and Specifications including Addenda. After Bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

The Owner shall provide to Bidders prior to bidding, all information which is pertinent to, and delineates and describes, the land owned and easements or rights-of way acquired or to be acquired.

The Contract Documents contain the provisions required for the construction of the project. Information obtained from an officer, agent, or employee of the Owner or any other person shall not affect the risks or obligations assumed by the Contractor. All questions about the meaning or intent of the Contract Documents are to be directed to the Engineer. Only questions answered by the formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

Each Bid must be accompanied by a BID BOND payable to the Owner for five percent of the total amount of the Bid. As soon as the bid prices have been compared, the Owner will return the Bid Bonds of all except the three lowest responsible Bidders. When the Contract for Construction is executed, the Bid Bonds of the two remaining unsuccessful Bidders will be returned. The Bid Bond of the successful Bidder will be retained until the Payment Bond and Performance Bond have been executed and approved, at which time it will be returned. A certified check may be used in lieu of a Bid Bond.

Attorneys-in-fact who sign Bid Bonds or Payment Bond and Performance Bond must file with each Bond a certified and effective dated copy of their power of attorney.

The party to whom the Project is awarded will be required to execute the CONTRACT FOR CONSTRUCTION and obtain the PERFORMANCE BOND AND PAYMENT BOND and PROOF OF INSURANCE within the (10) calendar days from the date when NOTICE OF

AWARD is delivered to the Bidder. The NOTICE OF AWARD shall be accompanied by the necessary CONTRACT FOR CONSTRUCTION and Bond forms. In case of failure of the Bidder to execute the CONTRACT FOR CONSTRUCTION, the Owner may at his option consider the Bidder in default, in which case the BID BOND accompanying the Proposal shall become the property of the Owner.

The Owner within sixty days of receipt of acceptable PERFORMANCE BOND, PAYMENT BOND and CONTRACT FOR CONSTRUCTION signed by the party to whom the Contract was awarded shall sign the Contract and return to such party an executed duplicate of the Contract. Should the Owner not execute the Contract within such period, the Bidder may by written notice withdraw his signed Contract. Such notice of withdrawal shall be effective upon receipt of the notice by the Owner.

The NOTICE TO PROCEED shall be issued within ten (10) calendar days of the execution of the CONTRACT FOR CONSTRUCTION by the Owner. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period; the time may be extended by mutual agreement between the Owner and Contractor. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the Contractor may terminate the Contract without further liability on the part of either party.

The Owner may make such investigations as the Owner deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data the Owner may request. The Owner may reject any Bid if the evidence submitted, or an investigation of such Bidder fails to satisfy the Owner that the Bidder will complete the work contemplated therein or if Bidder fails to furnish requested information.

A conditional or qualified Bid will not be accepted.

Award will be made according to Logan City Municipal Code.

All applicable laws, ordinances, and rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout.

Each Bidder is responsible for inspecting the site and for reading and being thoroughly familiar with the Contract Documents, including SPECIAL PROVISIONS and the CITY OF LOGAN STANDARDS AND SPECIFICATIONS. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve any Bidder from any obligation in respect to his Bid.

PROPOSAL

Bids will be received at the office of the Purchasing Agent of the City of Logan, at 290 North 100 West, Logan, Utah.

Dear Sir:

The undersigned, after having personally and carefully examined the Plans, Specifications and location which are a part hereof, proposes and agrees to furnish all materials, labor, equipment, and transportation necessary to install ready for service and to the satisfaction of the City Engineer for Logan City, in accordance with the Plans and Specifications which are a part hereof, all items included in the *Airport Road Reconstruction* in consideration of the unit prices totaling to the lump sum of \$_____ and further agree to complete the work within the time specified in the SCHEDULE FOR CONTRACT COMPLETION after being notified by the City Engineer to commence the work. Contractor further agrees to pay as liquidated damages, the sum of **\$1000** for each consecutive day thereafter as provided in the General Conditions.

It is understood that the quantities stated are approximate only and are for the purpose of comparing Bids and fixing the amount of Bonds, and the payments will only be made on the basis of the above unit prices of the actual quantities, as determined by the Owner's Engineer in the completed work. It is further understood that the quantities will be increased or decreased as necessary to maximize the benefit of the existing budgets.

It is hereby agreed that The City of Logan has the right to reject this proposal or to award the work to the undersigned at the sum stipulated, if action is taken within thirty (30) days after opening of Bids.

The Contractor hereby acknowledges receipt of the following Addenda: _____

Date

Contractor

BID SCHEDULE

Item	Description	Unit	Quantity	Unit Price	Item Price
1.	01 71 13 Mobilization	Lump Sum	1		
2.	01 55 26 Traffic Control	Lump Sum	1		
3.	01 57 00 Sediment and Control Plan	Lump Sum	1		
4.	01 45 00 and 32 11 24 Provide Quality Control Testing	Lump Sum	1		
5.	32 11 24 Pulverize/Compact Existing Asphalt	Square Foot	180,000		
6.	32 11 24 Cement Stabilizer	Ton	600		
7.	32 12 05 Construct Hot Mix Asphalt, 3 Inches Thick	Square Foot	180,000		
8.	32 17 23 Install Double Yellow Lines	Lineal Foot	1,800		
9.	32 17 23 Install Single Yellow Dashed Line	Lineal Foot	5,100		
10.	32 17 23 Install Single Solid 4-Inch White Right Edge Line	Lineal Foot	13,160		
11.	32 11 23 Shape/Install 4:1 Shouldering Untreated Base Course	Ton	1,800		
12.	31 05 13 Install Top Soil	Ton	1,500		
13.	32 92 00 Hydro Seed 4:1 Slopes	Lump Sum	1		

TOTAL \$ _____

COMPANY NAME _____

SIGNATURE _____

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

1. General Description of Measurement and Payment

1.2 GENERAL ITEMS

1. Units of measurement are listed in the bid schedule.
2. See measurement and payment procedures in APWA Section 01 29 00.
3. Unit of Measure: Refer to the measurement and bid item that identifies the unit of measurement to be used for unit price items.

1.3 SCHEDULE OF BID ITEMS

1. MOBILIZATION – APWA Section 01 71 13
 - A. Measurement will be lump sum complete. Payment shall be:
 1. 50% at first pay estimate; and
 2. 50% at final pay estimate
 - B. Payment covers cost of mobilization, installation of all temporary facilities and bringing all necessary construction equipment to the site. Upon completion of the Work any unpaid amount of the original contract for the separate item of mobilization and temporary facilities will be paid. Also includes: any and all temporary facilities including but is not limited to water, power, fencing (permanent or temporary), fence removal as required, solid waste disposal, sanitation facilities, and any other temporary facilities or utilities, etc., and all other items not covered in other bid items. Mobilization price should not exceed 5% of the total cost for this Bid.
 - C. Bid price includes cost of all permits not included in Item 2 of this document.
2. TRAFFIC CONTROL – APWA Section 01 55 26
 - A. Measurement shall be lump sum complete. Payment shall be:
 1. 25% at first pay estimate;
 2. 50% at 75% completion pay estimate;
 3. 25% at final pay estimate.
 - B. Bid price includes cost of creating a traffic control plan by a certified traffic control technician in accordance with the UDOT MUTCD, most current version, acceptable to Engineer, to provide a safe work zone including all vehicular, bicyclists, and pedestrian traffic. The contractor shall provide traffic control for this project.
 - C. Bid Price includes the placement of 2 VMS boards 14 Days in advance of any work to begin, one in each direction of traffic flow on airport road. VMS boards are to be used throughout the project to give advanced warning to motorists during the closure.
 - D. The road may be closed completely to perform this work. The road closure

may be for 15 consecutive calendar days once construction has begun. After the 15 calendar days, the roadway must be open to at least one-way traffic for 21 days.

- E. Bid Price includes the cost to have 5-Days of Radio adds, three weekdays and 2 weekend radio adds. Radio add to be reviewed and approved by Engineer.
 - F. Bid Price included the cost to have 4 separate newspaper adds. 2 weekdays and two weekend adds. Newspaper add to be reviewed and approved by Engineer.
 - G. Bid price includes cost of Logan City Work in the Right of Way Permit.
 - H. Access must be maintained for emergency vehicles throughout the project. Emergency vehicles need a hardened surface to pass through. A hardened surface can be compacted road base or compacted pulverized material.
3. SEDIMENT AND CONTROL PLAN - APWA Section 01 57 00
- A. Measurement will be lump sum complete. Payment shall be:
 - 1. 50% at first pay estimate; and
 - 2. 50% at final pay estimate
 - B. Payment covers all cost associated with, in cooperation with City of Logan, and implementation of best management practices acceptable to Logan City Storm Water Inspector throughout the duration of the project and until the site reaches 'Permanent Stabilization'.
 - C. Creation of a sediment and control plan.
 - D. Logan City will obtain an erosivity waiver from the State of Utah.
 - E. Payment includes labor, materials, equipment, and costs associated with installation of Best Management Practices.
 - F. Best Management Practices need to be installed where canal or wetland is within 50 feet of the project location.
4. PROVIDE QUALITY CONTROL TESTING – APWA 01 45 00 and Supplemental Specification Section 32 11 24
- A. Measurement will be lump sum complete. Payment shall be:
 - 1. 50% at first pay estimate; and
 - 2. 50% at final pay estimate
 - B. The unit price to be paid for this item shall be considered compensation in full for all subcontractors, labor, materials and equipment necessary to verify and ensure the quality of the installed project including in part proctor, modified proctors, gradation, CBR values, and compaction testing of the untreated base course, asphalt density, asphalt core samples of the asphalt and other testing required in the APWA 2007 Standard Specifications as amended by Logan City and in accordance with the design drawings.
 - C. This item also includes Quality Control for the cement treated base in accordance with APWA Supplemental Specification Section 32 11 24 included on page 36 of this document.
5. PULVERIZE/COMPACT EXISTING ASPHALT – Supplemental Specification Section 32 11 24
- A. Measurement will be per square foot.
 - B. Bid price covers the cost of pulverizing the existing asphalt road and road base to a depth of 8 inches, mixing existing asphalt pavement and road base with a hydraulic cement stabilizer, placing, shaping, grading, compacting, finishing, and any incidentals related to this item. Asphalt is an average of 6.5 Inches and an average 1.5 Inches of soil from the cores.
 - C. This item excludes the cost of the cement stabilizer, which is separated into

- Bid Item 6.
- D. Bid price includes the process of adding Portland Cement FDR to the pulverized asphalt and allowing to cure.
 - E. All Testing for this item shall be paid for in Item 4 “Provide Quality Control Testing”.
 - F. Any additional saw cutting required is to also be included in this item.
 - G. This Item also includes the cost of all work needed to create a mix design for the correct amount of cement to add to the pulverized material.
6. CEMENT STABILIZER – Supplemental Specification Section 32 11 24
- A. Measurement will be per ton by weight ticket.
 - B. Bid price includes cost of labor, materials, and equipment to add cement stabilizer to form road base. This item is separate because the actual amount of cement used in the mix will vary depending on conditions encountered in the field. The actual amount used must be determined from the mix design in Item #4 and coordinated and approved by the Engineer. The bid quantity assumes a cement content of 7% by weight.
7. CONSTRUCT HOT MIX ASPHALT, 3-INCHES THICK - APWA Section 32 12 05
- A. Measured by square foot.
 - B. Bid price includes cost of labor, materials, and equipment to provide and place asphalt pavement, costs include Tackifier between lifts and at all joints. All density testing and core sampling and repairs shall be paid for under Item #4 “Provide Quality Control Testing.”
 - C. All hot mix asphalt in the Logan City right of way shall be PG 58-28, DM ½ Marshall mix per APWA 32 12 05. See SN1 for all Asphalt information.
 - D. Engineer shall approve asphalt depth prepared prior to asphalt being ordered or placed to ensure compliance with plans.
 - E. Install road cross section as follows 2-12-foot lanes, 2-2-foot shoulders. The shouldering of the cross section is covered in Item 9.
8. INSTALL DOUBLE YELLOW LINES - APWA Section 32 17 23
- A. Measurement shall be per lineal foot.
 - B. Bid price includes cost of all labor, equipment, materials for layout, installation, and protection until cured of two yellow 4-Inch wide continuous parallel lines. This item shall be measured and paid for on a per linear foot installed basis.
9. INSTALL SINGLE YELLOW DASHED LINES - APWA Section 32 17 23
- A. Measurement shall be per lineal foot.
 - B. Bid price includes cost of all labor, equipment, materials for layout, installation, and protection until cured of a 4-Inch wide yellow dashed line. This item shall be measured and paid for on a per linear foot installed basis.
10. INSTALL SINGLE SOLID 4-INCH WHITE RIGHT EDGE LINE - APWA Section 32 17 23
- A. Measurement shall be per lineal foot.
 - B. Bid price includes cost of all labor, equipment, materials for layout, installation, and protection until cured of a 6-Inch wide white right lane line. This item shall be measured and paid for on a per linear foot installed basis.
11. SHAPE/INSTALL 4:1 SHOULDERING UNTREATED BASE COURSE - APWA Section 32 11 23

- A. Measurement shall be by ton of material placed.
 - B. Use extra existing road base first to shape a 4:1 slope off the completed 3-Inches of asphalt.
 - C. When/If new material is needed Measurement is per ton, compacted in place, as verified by truck weight tickets. No adjustment to plan quantities if weighed quantities differ by 5 percent or less.
 - D. Bid price includes cost of labor, material, and equipment needed to place shouldering on new road at a 4:1 slope.
12. INSTALL TOP SOIL – APWA SECTION 31 05 13
- A. Measurement shall be by ton, as verified by truck weight tickets. No adjustment to plan quantities if weighed quantities differ by 5 percent or less. of backfill installed.
 - B. Bid price includes cost of all labor, equipment, and materials to backfill were needed.
 - C. See SN1 for more information.
13. HYDRO SEED 4:1 SLOPES – APWA SECTION 32 92 00
- A. Measurement shall be lump sum complete.
 - B. Bid price includes cost of all labor, equipment, and materials to complete installation of Revegetation to shape and contour existing yards to match new grades
 - C. See SN1 for more information.

SCHEDULE FOR CONTRACT COMPLETION

TO BE COMPLETED BY CONTRACTOR

Contractor shall provide a detailed Gantt chart that including all critical dates from notice of award to the final construction approval and a detailed critical path.

All construction shall be completed by not later than October 15th, 2019. Once work has started it then must be completed in the given window stated in the Traffic Control section of the Measurement and Payment.

No construction activity allowed during these events:

- LoToJa – September 7, 2019
- Little Red – June 1, 2019
- MS 150 – June 22, 2019

Construction schedule shall take into consideration access to Businesses, Agricultural and Residents around Airport Road.

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,
as Principal, and _____ as Surety, are hereby held and firmly bound unto
as OWNER in the penal sum of _____ for the payment of
which, well and truly to be made, we hereby jointly and severally bind ourselves, successors, and
assigns. Signed, this _____ day of _____, 20____. The Condition of the
above obligation is such that whereas the Principal has submitted to _____ a
certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the

Airport Road Reconstruction

NOW, THEREFORE,

- (a) If the BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND or bonds for his faithful performance of said contract, and for the payment of all persons performing labors and furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID.

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated. The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby wave notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____ (L.S.)
Principal

Surety

By:

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

NOTICE OF AWARD

TO:

PROJECT DESCRIPTION: Airport Road Reconstruction

The Owner has considered the Bid submitted by you for the above described work and you are hereby notified that your bid has been accepted for items in the amount of \$_____.

You are required by the Instructions for Bidders to execute the Contract for Construction and furnish the required Contractor's Performance Bond, Payment Bond and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Contract and to furnish said Bonds within ten (10) days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid as abandoned and as forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

The instructions in Paragraph 2.5 of Section 00 72 00 of the APWA Manual of Standard Specifications are expected to be complied with as part of this project. This information is included as Attachment A.

Dated this _____, 2019.

Owner: City of Logan, Utah

By:

Title:

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged.

This _____ day of _____, 2019.

By:

Title:

Attachment A

APWA Manual of Standard Specifications 2007 Edition

Section 00 72 00

Paragraph 2.5

2.5 BEFORE STARTING CONSTRUCTION

A. **In General:** Before starting each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error or discrepancy that CONTRACTOR may discover and shall obtain a written interpretation or clarifications from ENGINEER before proceeding with any work affected thereby.

B. **Submittals:** Within 10 Days after the Effective Date of the Construction Contract, CONTRACTOR shall submit to ENGINEER, in reasonable detail and form acceptable to ENGINEER, copies of the following documents.

1. **Preliminary Progress Schedule:** The preliminary progress schedule shall show starting and completion dates for each construction sequence and:

- a. submittal dates and dates required for approved submittals for shop drawings, product data and samples;
- b. decision dates for products specified by allowances, selection of finishes and critical material or equipment release orders;
- c. product procurement and delivery dates;
- d. holiday cleanup preparations, And
- e. specific dates for all special Inspections required prior to any utilities "turn-on" including temporary power.

2. **Preliminary Shop Drawing Schedule:** A supplemental schedule to the preliminary progress schedule shall show all Shop Drawing submissions required for the Work.

3. **Preliminary Schedule of Values:** The preliminary schedule of values (for Lump Sum Work), which includes provisions set forth in quantities and prices of items aggregating the Contract Price, shall subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of work. Bond expense shall not be prorated, but shall be shown as a separate item.

4. **Mobilization Program:** The site mobilization program shall allow for field office and trailer locations, material storage locations, power requirements for trailers, if any, and sanitary facilities.

5. **Permits:** The listing of, and photocopies of permits that the CONTRACTOR is required to purchase and maintain in accordance with Article 6.7.

6. **Quality Control Program:** The written program for the control of product quality and workmanship.

7. **Safety and Protection Plan:** The safety and protection plan shall comply with Article 6.12.

C. **Field Office:** When specified, the CONTRACTOR shall establish and maintain a field office in such a location that ENGINEER may always contact CONTRACTOR for transmittal of Plans, instructions and dissemination of Project information. Unless waived by ENGINEER, CONTRACTOR shall provide and maintain a telephone and facsimile machine in the field office during work performance.

CONTRACT FOR CONSTRUCTION

This Contract is by and between The City of Logan (hereinafter called the OWNER) and _____ (hereinafter called CONTRACTOR). OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 – THE PROJECT

1.01 The Project for which the Work under the Contract Documents shall apply is generally described as follows: Airport Road Reconstruction

- *Pulverize a 6420 foot or roughly 6 1.2-Mile-long stretch of road in Logan Utah.*
- *The location of the work is roughly 2500 North and 1000 West, the work goes west to the City boundary.*
- *Existing asphalt is to be pulverized. A cement additive mixed into the pulverized material to create a cement treated base.*
- *All storm drains and canal irrigations pipes are to be protected.*
- *Install a 3-Inch overlay of Asphalt.*
- *Stripe new road.*
- *Shoulder Road with a 4:1 slope of Top Soil and Hydro Seed.*

ARTICLE 2 – WORK

2.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents for completion of the project.

ARTICLE 3 – ENGINEER

3.01 The ENGINEER, unless otherwise indicated in the Contract Documents, shall be the CITY ENGINEER, or his appointed representative.

ARTICLE 4 – CONTRACT TIMES

4.01 Time of the Essence:

- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Dates for Substantial Completion and Final Payment:

- A. The Work will be substantially completed on or before October 15, 2019.

4.03 Liquidated Damages:

- A. CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and the OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02, plus any extensions thereof allowed in accordance with the General Conditions. The parties also recognize that it will be impracticable to determine actual damages which OWNER will sustain in the event of or by reason of the delay. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER \$ 1000.00 for each day that expires after

the specified time in paragraph 4.02 for substantial completion until the Work is substantially complete. After substantial completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the contract time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER \$ 1000.00 for each day that expires after the time specified in paragraph 4.02 for completion and readiness for the final payment until the Work is completed and ready for final payment. It is further agreed that the amount stipulated for liquidated damages per day of delay is a reasonable estimate of the damages that would be sustained by OWNER, and CONTRACTOR agrees to pay such liquidated damages as herein provided. In case the liquidated damages are not paid, CONTRACTOR agrees that OWNER may deduct the amount thereof from any money due or that may become due to CONTRACTOR by progress payments or otherwise under the Agreement, or if said amount is not sufficient, recover the total amount.

ARTICLE 5 – CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR FOR COMPLETION OF THE Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 5.01.A below:

A. For all Work, the sum of:

_____ \$ _____
(use words) (use figures)

ARTICLE 6 – PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments:

A. CONTRACTOR shall submit Applications of Payment in accordance with the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

6.02 Progress Payments; Retainage:

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR’s Applications for Payment once each month during performance of the Work as provided in paragraphs 6.02.A.1 and 6.02.A.2 below. All payments will be made based on the percentage of job completion, and will be verified by Engineer prior to invoicing:

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER may determine or OWNER may withhold, in accordance with the General Conditions:
 - a. The OWNER will pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate submitted by the CONTRACTOR and verified by the ENGINEER, including any approved Change Orders, but will not hold retainage.
2. Upon Substantial Completion of the project, the OWNER will pay to 95 percent of the revised contract amount including any approved Change Orders.

6.03 Final Payment

- A. When all items on any generated 'Punch' or Completion List have been completed, the OWNER will pay the remaining 5 percent of the revised contract amount within 30 days of notification to the OWNER in writing by the CONTRACTOR that all items have been completed. The OWNER shall verify that all items have been completed before final payment is made.

ARTICLE 7 – INTEREST

- 7.01 All moneys not paid when due as provided in the General Conditions shall bear interest at the same rate that OWNER's funds accrue interest in the State's treasury account.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:
 - A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect the cost, progress, and performance of the Work.
 - C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. CONTRACTOR has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which is identified in the Supplementary Conditions as provided in the General Conditions..
 - E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.
 - F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
 - G. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.

- H. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents , and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- I. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.
- J. CONTRACTOR agrees to register and participate in the Status Verification System to verify the work eligibility status of the CONTRACTOR's new employees that are employed in the state as set forth in Utah Code Section 63G-12-302. Each contractor or subcontractor who works under or for another contractor shall certify to the main contractor by affidavit that the contractor or subcontractor has verified through the Status Verification System the employment status of each new employee of the respective contractor or subcontractor.
- K. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions of performance and furnishing of the work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 Contents:

- A. The Contract Documents consist of the following:
 - 1. Instructions to Bidders
 - 2. Bid Bond
 - 3. This Agreement
 - 4. Performance Bond
 - 5. Payment Bond
 - 6. General Conditions, Document 00 72 00 of the APWA Manual of Standard Specifications, 2017 Edition, as modified herein.
 - 7. Special Provisions
 - 8. APWA Manual of Standard Specifications, including Standard Drawings
 - 9. City of Logan Standards and Specifications, including Standard Drawings
 - 10. Addenda (numbers _____ to _____, inclusive)
 - 11. Insurance and Bond Requirements
 - 12. Exhibits to this Agreement (enumerated as follows):
 - a. Proposal
 - b. Bid Schedule
 - c. Schedule of Values (for Lump Sum Bid)
 - d. Measurement and Payment
 - e. Schedule of Project Completion
 - f. Contractor Qualification Form
 - g. Certificate of Insurance, approved by OWNER’s Risk Management Division
 - 13. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice of Award
 - b. Notice to Proceed
 - c. Written Amendments
 - d. Change Orders

e. Field Orders

- B. There are no Contract Documents other than those listed above in this Article 9.
- C. The Contract Documents may only be amended, modified or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms:

Terms used in this Agreement will have the meanings indicated in the General Conditions

10.02 Assignment of Contract:

No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns:

OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party thereto, its partners, successors assign and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Termination for OWNER's Convenience:

- A. Upon ten (10) days' written notice to Contractor, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any payment amounts or work items):
 1. completed and acceptable Work executed prior to the effective date of termination, in accordance with the payment provisions of the Contract Documents; provided, however, that no completed work items shall be paid on a cost-plus basis;
 2. reasonable expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work or unacceptable Work (but only those portions of the unacceptable Work that are acceptable and Contractor shall not be entitled to any compensation for any portions of the Work which are unacceptable), plus fair and reasonable sums for overhead and profit on such expenses; provided, however, that Contractor shall not be entitled to additional compensation for Work items paid under subparagraph 10.04 A.1. above;
 3. costs incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; provided, however, that Contractor shall not be entitled to additional compensation for Work items paid under subparagraphs 10.04 A.1. and 2. above; and

4. reasonable expenses directly attributable to termination; provided, however, that Contractor shall not be entitled to additional compensation for Work items paid under subparagraphs 10.04 A. 1., 2. and 3. above.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination. Termination under this Subparagraph 10.04 shall not entitle Contractor to compensation on a cost-plus basis except for items paid under Subparagraph 10.04 A. 2. above.

C. This Article 10.04 shall amend the General Conditions, Document 007200 referenced in Article 9.01 A. 6. by replacing the "Termination for Owner's Convenience" clause contain in 15.2 F. therein.

10.05 Severability:

Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision of part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.06 Guarantee Period

The CONTRACTOR agrees to indemnify and save harmless the OWNER from any and all defects appearing or developing in the workmanship or materials performed or furnished under the Contract for a period of **one (1) year after** the date of the written notice from the Engineer recommending final acceptance of the entire project by the OWNER.

10.07 Counterparts:

This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which shall constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties have duly caused this Agreement to be executed on their respective behalves.

This Agreement will be effective on _____, 20____.

OWNER:

CONTRACTOR:

By: _____

By: _____

Attest: _____

Attest: _____

Address for giving notices:

Address for giving notices:

END OF DOCUMENT

CITY OF LOGAN INSURANCE AND BOND REQUIREMENTS

FOR: Airport Road Reconstruction

The Contracting party shall procure and maintain for the duration of the contract insurance and bonds against claims or liability which arises out of or in connection with the performance of the work hereunder by the Contracting party, his agents, representatives, employees or subcontractors. The cost of such insurance and bonds shall be included in the Contracting party's bid or proposal.

A. MINIMUM LIMITS OF INSURANCE

Contracting party shall maintain limits not less than:

1. **GENERAL LIABILITY:** \$2,000,000 combined single limit per occurrence, personal injury and property damage, \$3,000,000 aggregate. Broad Form Commercial General Liability is required. (ISO 1993 or better) to include Products - Comp/OP aggregate of \$2,000,000. Limits to apply to this project individually.
2. **PROFESSIONAL LIABILITY:** Not applicable to this project.
3. **AUTOMOBILE LIABILITY:** \$2,000,000 per occurrence. "Any Auto" coverage is required.
4. **WORKERS' COMPENSATION and EMPLOYERS LIABILITY:** Workers' Compensation statutory limits as required by the Workers Compensation Act of the State of Utah and Employers Liability limits at a minimum of \$100,000 per occurrence.
5. **PAYMENT and PERFORMANCE BONDS:** Contracting party shall provide payment and performance bonds in a form acceptable to the City and in the full amount of the contract.

B. ACCEPTABILITY OF INSURERS

Insurance and bonds are to be placed with insurers admitted in the State of Utah with an A. M. Best rating of not less than A-: IX, and in the limits as listed in this document, unless approved by the City's Risk Manager, or his designee, **a minimum of five (5) business days prior to bid or proposal deadline.**

C. NOTICE OF INCIDENT OR ACCIDENT

Contracting party shall agree to promptly disclose to Logan City, all incidents or occurrences of accident, injury, and/or property damage covered by the insurance policy or policies.

D. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

I. General Liability and Automobile Liability Coverages

A. Logan City, its officers, officials, employees and volunteers are to be covered as additional insureds as respects: liability arising out of activities performed by or on behalf of the contracting party; products and completed operations of the Contracting party; premises owned, leased, hired or borrowed by the Contracting party. The coverage shall contain no special limitations on the scope of protection afforded to Logan City, its officers, officials, employees or volunteers.

B. The Contracting party's insurance coverage shall be a primary insurance as respects to Logan City, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by Logan City, its officers, officials, employees or volunteers shall be in excess of the Contracting party's insurance and shall not contribute with it.

C. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to Logan City, its officers, officials, employees or volunteers.

D. The Contracting party's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respects to the limits of the insurer's liability.

E. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retention exceeding 5% of the policy limits must be declared to and approved by Logan City. At the option of Logan City, either (1) the insurer may be required to reduce or eliminate such deductibles or self-insured retention as respects Logan City, its officers, officials and employees; or (2) the Contracting party may be required to procure a bond guaranteeing payment of losses and related investigations, claim distribution and defense expenses.

F. VERIFICATION OF COVERAGE

Contracting party shall furnish Logan City with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms acceptable to Logan City before work commences. Logan City reserves the right to require complete, certified copies of all required insurance policies, with all endorsements, at any time.

G. SUBCONTRACTORS

Contracting party shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

PERFORMANCE AND PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____ as Principal, and _____, a corporation duly authorized to do a general surety business in Utah, as Surety, are jointly and severally held and bound unto _____. Hereinafter called the Obligee, in the sum of _____ dollars (\$) for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns, firmly by these presents:

THE CONDITION OF THIS BOND IS SUCH THAT

WHEREAS, the Principal herein entered into a Contract with Obligee dated _____, 20____, which Contract includes and consists of Advertisement for Bids, Information for Bidders, Proposal, Special Provisions, General Conditions, Contract for Construction, Specifications and Plans, all of which are hereinafter referred to as Contract Documents and are attached hereto and made a part hereof and pursuant to the terms and conditions of all of which Principal has undertaken to perform all labor and to furnish all material, tools, and equipment of every kind and nature necessary or required in accordance with the terms and conditions set forth in said Contract Documents, and has undertaken to make payment promptly for all such labor (including all sums required to be paid by the laws of the State of Utah for the benefit and welfare of all workers, including workmen's compensation and unemployment security), all taxes of every kind and nature, and for all materials and services furnished or rendered pursuant to such Contract: and,

WHEREAS, said Principal has agreed to save the Obligee harmless from any claim for damages and injury to property or persons arising by reason of said work, as set out more fully in said Contract Documents, and to do and perform all things in said Contract Documents required in the time and manner and under the terms and conditions therein set forth, and in conformity with all laws, State and National, applicable thereto.

NOW, THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material to Principal or to any subcontractor in the prosecution of the work provided for, and shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term of said Contract and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said Contract that may hereafter be made to Principal and/or to subcontractors, or their assigns, and shall, commencing with the date hereof and continuing for one

(1) year after the complete performance of the Contract and the final settlement thereof, save harmless the Oblige, its officers and agents, from all claims therefore, or from any claim for damages or injury to property or persons arising by reason of said work; and shall, in the time and manner and under the terms and conditions prescribed, well and faithfully do, perform, and furnish all labor, materials, and things as by it in said Contract undertaken and as by law, State and National, prescribed, then this obligation shall be void, but otherwise it shall remain in full force and effect.

PROVIDED HOWEVER, that this Bond is subject to the following further conditions:

a) All material suppliers, and all persons who shall supply such laborers, mechanics, or subcontractors with material, supplies, or provisions for carrying on such work, shall have a direct right of action against the Principal and Surety on this Bond, second only to the right of the Oblige under this Bond, which right of action shall be asserted in proceedings instituted in the appropriate court of the State of Utah and insofar as permitted by the law of Utah, such right or action shall be asserted in a proceeding firm, or corporation instituting such action and of all persons, firms, or corporations having claims thereunder, and any other person, firm, or corporation having a claim hereunder shall have the right to be made a party to such proceeding, but not later than one (1) year after, the complete performance of said Contract and final settlement thereof and to have such claim adjudicated in such action and judgement rendered thereon.

b) In no event shall the Surety be liable for a greater sum than the penalty of this Bond, or subject to any suit, action, or proceeding thereon that is instituted later than one (1) year after the complete performance of said Contract and final settlement thereof.

c) The said Surety, for value received, hereby stipulates and agree that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the Specifications.

IN WITNESS WHEREOF, the parties hereto have caused this Bond to be executed in _____
_____, this _____ day of _____, 20 _____ .

_____ (Seal)

_____ (Seal)

_____ (Seal)

Principal

Witnesses:

_____ (Seal)

_____ (Seal)

_____ (Seal)

Surety

Countersigned:

By

Resident Agent

The Attorney-in-Fact (Resident Agent), who executes this Bond in behalf of the surety company, must attach a copy of their power-of-attorney as evidence of their authority.

NOTICE TO PROCEED

Date:

To:

Project: AIRPORT ROAD RECONSTRUCTION

You are hereby notified to commence work in accordance with the Contract for Construction dated _____, 2019. The date of completion of all work is _____, 2019.

City of Logan, Utah

By:

Title:

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged.

By:

Title:

Date:

CITY OF LOGAN
CHANGE ORDER FORM

CHANGE ORDER # : _____ DATE _____

PROJECT NAME AIRPORT ROAD RECONSTRUCTION

CONTRACTOR _____

DESCRIPTION:

<u>Item</u>	<u>Description</u>	<u>Total</u>
-------------	--------------------	--------------

CHANGE ORDER AMOUNT \$ _____

TOTAL ADJUSTED CONTRACT AMOUNT \$ _____

TIME EXTENSION PER THIS CHANGE ORDER: _____

REVISED COMPLETION DATE: _____

Date _____ Project Manager _____

Date _____ Assistant City Engineer _____

Date _____ Sponsoring Dept. Rep. _____

Date _____ Contractor _____

NOTIFICATION OF PROJECT COMPLETION

PROJECT NAME AND LIMITS: _____

CONTRACTOR: _____

DATE: _____

PROJECT MANAGER: _____

This is to certify that as of the above date, all work connected with the above PROJECT, including BID items, CHANGE ORDER items, and PUNCH LIST items have been completed.

We further certify that payment for any testing that was required by the project has been paid, including all bacteriological testing of pipe lines.

We hereby request that the Project Manager verify completion of the PROJECT

CONTRACTOR Signature: _____

(ABOVE TO BE COMPLETED BY THE CONTRACTOR)

(BELOW TO BE COMPLETED BY ENGINEERING DIVISION)

DATE OF COMPLETION VERIFICATION: _____

(For verification of payment for bacteriological testing, call 753-5135 ext. 119 or 111)

PROJECT MANAGER Signature: _____

CITY ENGINEER Signature: _____

GENERAL CONDITIONS AND SPECIAL PROVISIONS

TECHNICAL SPECIFICATIONS

As specified in the construction plans general and special notes.
Also See Included Supplemental Specifications Section 32 11 24.

STANDARD DRAWINGS

As specified in the construction plans general and special notes.

SPECIAL PROVISIONS:

- 1- See Supplemental Specifications Section 32 11 24.
- 2- Contractor shall familiarize themselves with the full construction plan set, especially the general notes and special notes which take precedence over all conflicts.
- 3- Final quantities and project locations will be dependent upon bids and the final budgets.
- 4- The Contractor is required to use Logan City Environmental Department solid waste collection and disposal services for all waste generated from the construction site. The Contractor is responsible for all fees and costs associated with solid waste collection and disposal services. A solid waste collection and disposal fee schedule can be obtained from the City of Logan Environmental Department by calling 435-716-9755 or 435-716-9763.

SUPPLEMENTAL SPECIFICATION SECTION

SECTION 32 11 24 PULVERIZED PAVEMENT BASE COURSE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Full depth reclamation by pulverizing and mixing an existing asphalt pavement and/or road base with a hydraulic cement or pozzolan. This specification is not intended for use with emulsion, foamed asphalt or other bituminous stabilizing agents.

1.2 REFERENCES

A. [ASTM Standards:](#)

- C 136 Sieve Analysis of Fine and Coarse Aggregates
- C 150 Portland Cement
- C 593 Standard Specification for Fly Ash and Other Pozzolans for Use With Lime for Soil Stabilization
- C 595 Blended Hydraulic Cement
- C 618 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Concrete
- C 977 Standard Specification for Quicklime and Hydrated Lime for Soil Stabilization
- C 1157 Blended Hydraulic Cement (Performance)
- D 558 Moisture-Density Relations of Soil-Cement Mixtures
- D 1633 Compressive Strength of Molded Soil-Cement Cylinders
- D 1883 Standard Test Method for California Bearing Ratio (CBR) of Laboratory-Compacted Soils
- D 2922 Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
- D 4318 Liquid Limit, Plastic Limit, and Plasticity Index of Soils

B. Technical Documents

1. NCHRP 144: Recommended Practice for Stabilization of Subgrade Soils and Base Materials
2. PCA Guide to Full-Depth Reclamation (FDR) with Cement
3. PCA Soil Cement Laboratory Handbook

1.3 SUBMITTALS

- A. [Traffic control plan, APWA Section 01 55 26.](#)
- B. List of equipment to be used.
- C. Mix design showing percentage and quantity of stabilizer needed.
- D. Contractor Quality Control Data.

1.4 WEATHER

- A. Temperature: Do not pulverize when the soil, aggregate or subgrade is frozen, or when the ambient temperature is below 40 deg F or when freezing temperatures are anticipated within seven (7) days of the end of the full depth replacement process.
 - 1. Contractor may request permission from Engineer to process in above conditions. Submit a cold weather plan detailing changes to mix design, construction practices, curing practices and testing practices to achieve design results. Obtain written approval of cold weather plan and permission to process from the engineer before beginning pulverization efforts.

1.5 ACCEPTANCE

- A. Acceptance will be based on Engineer review and approval of Contractor Quality Control data.
- B. The Engineer reserves the right to test and verify any material, including moisture content, density, gradation, depth and stabilizer yield. Material represented by tests not meeting specification will not be accepted until Contractor has corrected the deficiency or presented sufficient Quality Control data to substantiate material being in compliance with the specification.

PART 2 PRODUCTS

2.1 TACK COAT CURING COMPOUND

- A. [Cationic or anionic emulsified asphalt, 2017 AWWA Section 32 12 03.](#)

2.2 STABILIZERS and ADDITIVES

- A. Hydraulic Cements:
 - 1. Type I or II, ASTM C 150
 - 2. Type GU or MS, ASTM C 1157
 - 3. Type IP or IS, ASTM C 595.
 - 4. Non-specification cement is acceptable, provided mix design requirements are met and Contractor can demonstrate consistency of cement to be supplied for duration of the stabilization efforts.

2.3 MIX DESIGN

- A. Mix Design Requirements:
 - 1. Unless otherwise specified or approved, follow mix design recommendations of NCHRP 144: Recommended Practice for Stabilization of Subgrade Soils and Base Materials
 - 2. Perform mix design on materials obtained from project. Do not use “Representative” materials not obtained from project site.
 - a. Site sampling: Contractor is responsible for obtaining representative samples from the pavement for the mix design. Sampling should be done in advance of the project starting, this is due to the mix design process needing 7-10 days to complete. Site sampling area needs to be temporarily patched or maintained for the time in-between sampling and construction start date.
 - 3. Unless otherwise specified, meet unconfined compressive strength per ASTM D 1633, method A, of 300 to 500 psi at seven (7) days, *using samples vacuum*

saturated according to ASTM C 593.

- B. Stabilizer Selection: Select stabilizer based on application and mix design results.
- C. Pulverized Pavement Material Requirements
 - 1. Pulverize existing pavement to the following gradation, ASTM C 136.

<u>Sieve</u>	<u>Percent Passing by Weight</u>
3"	100
2"	< 95
#4	> 55

- 2. For pulverized materials with PI>20, demonstrate ability to intimately mix stabilizer with the pulverized material that will produce a reasonably homogeneous and continuous stabilized matrix.

PART 3 EXECUTION

3.1 CONSTRUCTION EQUIPMENT

- A. Pulverizing Machine: Capable of cutting to the required depth, pulverizing, and sizing the material.
- B. Blending Machine: Capable of mixing stabilizer and pulverized material to a reasonably homogeneous and continuous stabilized matrix.

3.2 PREPARATION

- A. Identify location of all buried utilities.
- B. Notify neighborhood of day and time of operation.
- C. [Implement traffic control plan requirements](#) in 2017 APWA Section 01 55 26.
- D. Install [Invert Covers, 2017 APWA Section 01 71 13](#).
- E. Lower [Street Fixtures](#).

3.3 CONSTRUCTION

- A. Pulverize asphalt pavement and untreated base course to a depth of 8 inches.
- B. [Control dust, 2017 APWA Section 01 57 00](#).
- C. Grade pulverized material to slopes shown on plans, or as directed by the engineer. If contractor is directed to remove poor materials situated below the pulverized materials, push the pulverized material to the side, remove underlying material as directed, and push pulverized material back to original location.
 - 1. If it is necessary to remove material below pulverized product to meet specified grade, method of payment is to be determined by ENGINEER.
- D. Prior to adding stabilizer, verify that the moisture content of the UNSTABILIZED material is between minus 1% and plus 3% of optimum or design moisture content.
- E. If stabilizer is required, add stabilizer using a metered process and pulverize a second time.
 - 1. For powdered stabilizers, slurry format is not required.
- F. Shape, grade, compact, finish. Complete all finishing operations within 4 hours of application of stabilizer.
- G. Cure stabilized material for 7 days with asphalt tack coat at a minimum residual

application rate of 0.06 gal/SY. Apply in a manner that achieves >99% coverage.

H. Pre-crack treated surface between 24 and 48 hours after final compaction.

1. Roll treated surface with 2 to 3 passes (1 pass is down and back) of a 12 ton, minimum, vibratory roller at maximum amplitude and walking speed.

3.4 FIELD QUALITY CONTROL

A. Gradation: Test gradation twice daily, and after visual changes in type of material being processed, i.e. change from granular to clay.

1. If -#200 material changes by more than 10% of total sample weight, revise mix design to accommodate.

B. Compaction:

1. Ninety-eight (98) percent or greater relative to a standard proctor density, 2017 APWA [Section 31 23 26](#). Use the following procedures:
 - a. Maintain moisture content between minus 1% and plus 2% of optimum moisture content, ASTM D 558. Test 1 time per every two hours of processing, minimum, and immediately after a precipitation event.
 - b. Nuclear gauge, direct transmission procedure, ASTM D 2922.

C. Depth: Random measure each 1,000 square yards.

E. Stabilizer Quantity: Perform yield calculations for each load of stabilizer delivered.

F. Submit summary of daily Quality Control data to the Engineer within 24 hours after end of each production day.

3.5 REPAIR

A. Repair surface irregularities.

B. Seal cracks in cured stabilized material.

3.6 OPENING TO TRAFFIC

A. Completed portions of pulverized pavement can be opened to low-speed traffic and to construction equipment, provided the curing material or moist curing operations are not impaired and provided the pulverized material is sufficiently stable to withstand marring or permanent deformation.

B. Open to all traffic after the pulverized material has received a curing compound or a subsequent overlay surface, or it is sufficiently stable to withstand marring or permanent deformation.

END OF SECTION