

DOCUMENT 00 01 01
TITLE PAGE

CONSTRUCTION OF

2022 Holladay Mill & Overlay Project Phase 1



CONTRACT DOCUMENTS

Jared Bunch, P.E. – Public Services Director
4580 S 2300 E
Holladay, UT 84117
(801) 272-9450, x106

Bids will be received at the Holladay City Hall, 4580 S 2300 E, Holladay,
until 2:00 p.m.
Tuesday, February 22, 2022.

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DOCUMENT 00 11 16 INVITATION TO BID

PART 1 GENERAL

1.1 CONSTRUCTION CONTRACT

- A. Bidders are invited to bid on the Construction Contract known as 2022 Holladay Mill & Overlay Project Phase 1.
- B. The location of the work is: City of Holladay Utah
- C. The Work generally includes, but is not limited to, the following: resurfacing and paving of local streets within Holladay.
- D. For information about the Construction Contract, contact Jared Bunch, P.E., Public Services Director at (801) 272-9450, x106

1.2 BID LOCATION AND OPENING

- A. Bids will be received until 2:00 p.m. Tuesday, February 22, 2022, at the Holladay City Hall, 4580 S 2300 E, Holladay, Utah 84117, at which time and place all bids will be publicly opened and read aloud. Bids received after 2:00 p.m., as conclusively established by the clock at the Bid opening location, will not be accepted.

1.3 BID BONDS

- A. A Bid Bond in the amount of 5 percent of the Bid must accompany each Bid in accordance with the Instructions to Bidders. The Bid Bond will be returned to each unsuccessful Bidder after tabulation and award of the Construction Contract.

1.4 BASIS OF BIDS

- A. Bids shall be on a Unit Price basis. Unsealed or segregated Bids will not be accepted.

1.5 CONTRACT TIME

- A. The Work will be Substantially Complete by November 20, 2022.

1.6 RIGHT TO REJECT BIDS

- A. City of Holladay reserves the right to reject any or all bids or to waive any informality or technicality in any bid if deemed to be in the best interest of City of Holladay.

1.7 GOVERNING LAWS AND REGULATIONS

- A. This project is not federally funded and does not require the payment of specific wage rates. Payroll submittal will not be required.

- B. Bidders on this Work will be subject to the applicable provisions of all federal rules, laws and regulations or orders.

END OF DOCUMENT

DOCUMENT 00 21 13

INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

1.1 DEFINED TERMS

- A. Terms used in the Bid Documents that are defined in Article 1.1 of the General Conditions will have the meanings indicated in the General Conditions.
- B. General Conditions: as published in Document 00 72 00 in the 2017 Manual of Standard Specifications by the Utah Chapter of the American Public Works Association.

1.2 COPIES OF BID DOCUMENTS

- A. Bidders must use complete sets of Bid Documents in preparing Bids. OWNER and ENGINEER assume no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.
- B. Bid Documents are made available to bidders only for the purpose of obtaining Bids on the Work. No license or grant for any other use is given.
- C. Bidding Document copyrights shall remain with the OWNER.
- D. All provisions of the current edition of the 2017 Manual of Standard Specifications and Manual of Standard Plans published by the Utah Chapter of the American Public Works Association that are applicable to the Work are hereby made a part of the Contract Documents by reference. The publications may be purchased separately from the LTAP Center, Utah State University 8205 Old Main Hill, Logan UT 84322-8205.

1.3 PRE-BID COMMUNICATION

- A. The OWNER shall not be bound by any statements, representations, conclusions, or assumptions made by any party, whether oral or written, except for written statements that are issued in an Addendum by the ENGINEER to all prospective bidders.

1.4 PHYSICAL CONDITIONS

- A. **In General:** Prior to submitting a Bid, each Bidder is responsible to review all available explorations, tests and data concerning surface conditions, subsurface conditions and Underground Facilities at or contiguous to the site, or otherwise, which may affect cost, progress, performance or furnishing of the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
- B. **Additional Explorations and Tests:** If feasible as determined by OWNER, the OWNER will provide each Bidder access to the site to conduct any explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall obtain permits, fill all holes, clean up and restore the site to its former condition upon

completion of such explorations. by requesting such an exploration or test, Bidder agrees to release, indemnify, defend, and save the OWNER harmless from all costs damages and liabilities an any kind whatsoever, including reasonable attorneys' fees, that may arise in connection with or as a result of the performance of such explorations or tests.

1.5 COMPENSATION AND QUANTITIES

- A. **In General:** The bid price for any lump sum or unit price contract includes all labor, materials, and incidental work to fully complete the Work in a satisfactory manner under the terms of the Contract Documents. Bidders are responsible to inform themselves of the character of the Work to be performed.
- B. **Lump Sum Work:** If the Work is to be paid for on a lump sum basis, the lump sum will be the only sum paid.
- C. **Unit Price Work:** If any portion of the Work is to be paid for on a unit price basis, payment will cover only work actually performed and materials actually supplied at the unit prices bid and on the terms set forth in the Contract Documents, irrespective of any quantity approximations in the Bid Documents. Any quantity approximations in the Bid Documents are stated as a basis for determining bids, and the do not fix the amount of Work to be done or materials to be furnished. Stated quantities are estimates for the purpose of doing the class of work required. Actual quantities will vary. The OWNER may deviate in either direction from any indicated quantities. The Bidder shall have no claim for any variation in quantity, except to the extent permitted in the General Conditions.

1.6 EXAMINATION OF SITE AND CONTRACT DOCUMENTS

- A. **In General:** The OWNER shall not be bound by any statements, representations, conclusions, or assumptions made by any party, whether oral or written, except for written statements that are issued in an Addendum.
- B. **Access:** The Contract Documents designate the site for performance of the Work. Bidder is responsible to investigate the site and understand all access requirements. All additional off site lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Bidder.
- C. **Contract Documents:** The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 1.4; that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents; and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- D. **Bidder's Obligations:** In addition to Bidder's other responsibilities and obligations in connection with submitting a Bid, it is the responsibility of the Bidder before submitting a Bid, to:
 - 1. Examine the Contract Documents thoroughly;

2. Visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work;
3. Investigate all applicable construction and labor conditions, quantities, and the character of the Work as they affect cost, progress, performance, or furnishing of the Work;
4. Consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;
5. Study and carefully correlate Bidder's observations with the Contract Documents;
6. Review all available explorations and data concerning surface and subsurface conditions as set forth in Section 1.4 above; and
7. Identify and notify ENGINEER in writing in the manner set forth in article 2.1 below of all specific conflicts, omissions, errors, or discrepancies in the Contract Documents, or if Bidder doubts their meanings.

The failure or omission of any Bidder to take any of the foregoing actions shall not in any way relieve Bidder of its Bid, or its obligation to furnish all material, equipment, labor and services necessary to carry out the provisions of the Contract Documents and to complete the contemplated Work for the consideration set forth in its Bid. Submission of a Bid shall constitute prima facie evidence of compliance with these instructions.

- E. **Deviations from the Terms of the Contract Documents:** OWNER will not accept any deviations whatsoever from the printed terms of the Agreement and the Contract Documents, except by Addendum or Change Order.

1.7 EFFECT OF SUBMITTING BID.

- A. Bidders are responsible to carefully examine the Contract Documents, visit the site, and fully inform themselves so as to include in the Bid a sum to cover the cost of all items. Bidder's failure or omission to receive or examine any form, instrument, addendum or other document, visit the site and become acquainted with existing conditions, or attend any pre-Bid Conference, shall in no way relieve Bidder from any obligations with respect to Bidder's Bid or the Construction Contract.
- B. By submitting a Bid, Bidder represents that Bidder has complied with all requirements of the Bid Documents; that the Bid is premised on properly performing and furnishing the Work required by the Contract Documents within the times specified; that the Bidder is informed of the conditions to be encountered and the character, quality and quantities of the Work; and that the Bidder believes the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- C. Submission of a Bid constitutes a promise that the Bidder will enter the Contract Documents in the form presented in the Contract Documents. Bidders should carefully examine all Contract Documents, including the required Bonds and insurance to be provided by the Bidder.

1. The Performance Bond is a guarantee of faithful performance of the requirements of the Contract Documents, including all applicable warranties. The Payment Bond is a guarantee of payment of all labor, materials, or supplies used directly or indirectly in the prosecution of the Work provided in the Construction Documents.
 2. The sum of the Performance Bond and the Payment Bond shall be increased or decreased during the course of the Work in the event that Contract Modifications, Change Orders or Addenda increase or decrease the total contract price. The sum of each bond shall be in an amount equal to the completed contract price at the completion of the Work.
 3. OWNER does not provide any release of Performance Bonds or Payment Bonds. The bonds are in effect throughout all periods during which a suit may be brought under the provisions of applicable law.
- D. By submitting a Bid, Bidder represents that the matters stated therein are true and correct.

PART 2 BIDDING PROCEDURES

2.1 INTERPRETATIONS AND ADDENDA

- A. All requests for interpretation of the Contract Documents shall be made in writing and delivered to the ENGINEER via email no later than seven (7) calendar days prior to opening of Bids. In the ENGINEER's discretion, ENGINEER will send the written interpretation to all persons receiving a set of Bid Documents in the form of an Addendum. If the ENGINEER does not respond to a Bidder's request for interpretation the Bidder shall comply with the intent and terms of the Contract Documents.
- B. No oral interpretations shall be made to any Bidder. The OWNER shall not be responsible for or bound by any statements, interpretations, explanations, representations, conclusions or assumptions made by any party, whether oral or written, except for written statements that are issued in an Addendum by the ENGINEER to all prospective bidders.
- C. Each statement made in an Addendum is part of the Contract Documents at the location designated in the Addendum. A statement issued in an Addendum shall have the effect of modifying a portion of the Bid Documents when the statement in the Addendum specifies a particular section, paragraph or text and states that it is to be so modified. Only the specified section, paragraph or text shall be so modified, and all other portions of the Bid Documents shall remain in effect.
- D. Bidders shall sign to acknowledge their receipt of all Addenda issued. Bidders shall also acknowledge receipt of all Addenda in the space provided in the Bid.
- E. Except to postpone the Bid opening, no Addenda shall be issued within 48 hours of the Bid opening.

2.2 EQUIPMENT AND MATERIAL OPTIONS PRIOR TO BID OPENING

- A. If a Bidder or Supplier wishes to supply a product other than that identified in the Contract Documents, said Bidder or Supplier shall submit a written request for approval to the ENGINEER at least ten (10) calendar days prior to the date set for opening of bids.
- B. The procedure for submission of any such product option shall be as set forth in Article 6.4 of the General Conditions. It is the sole responsibility of the Bidder or Supplier to submit complete descriptive and technical information so that ENGINEER can make a proper appraisal.
- C. ENGINEER's failure to act upon such a request within five (5) days after receipt shall be deemed a denial thereof.
- D. Any such approval is at the sole discretion of the ENGINEER and will be in the form of an Addendum issued to all Bidder's holding Bid Documents indicating that the additional equipment or materials are approved as equal to those specified for the Project.
- E. The Construction Contract, if awarded, will be on the basis of materials and equipment specified in the Drawings and Specifications and any changes permitted in any Addenda.

2.3 BID SECURITIES

- A. **Amount of Bid Security:** A Bid Security must accompany each Bid. The total amount of the Bid on which Bid security is to be based shall be the sum of all items of the Bid constituting the maximum amount of the possible award to the Bidder. The Bid Bond amount must equal at least five (5) percent of the total amount of the Bid.
- B. **Form of Bid Security:** The Bid Security may be in the form of a certified check, cashier's check, cash, or Bid Bond. No other form of Bid Security will be accepted. A Bid Bond must be issued by a licensed Utah agency on behalf of a surety company licensed to do business in the State of Utah. A cashier's check must be drawn on a bank doing business in the State of Utah and made payable to OWNER. If a cashier's check is used in lieu of a Bid Bond, or if the Bid Bond does not specifically so provide, a certificate from an approved surety company guaranteeing execution of performance and payment bonds in the full amount of the bid must accompany the bid.
- C. **Purpose of Submission:** By submitting a Bid Bond Bidder assures OWNER it will take all steps necessary to properly execute the Contract Documents.
- D. **Return of Bid Security:** OWNER will return Bid securities to Bidder within 7 days after award of the Construction Contract. Bid Bonds and cashier's checks of all Bidders will be held until the Construction Contract is awarded or all bids have been rejected. The liability of OWNER in regards to the checks shall be limited only to the return of the checks.
- E. **Default:** In the event of failure or refusal of the Bidder to enter into the Construction Contract and the delivery to the OWNER a Performance Bond, Payment Bond and any

other Bonds or documents required by the Contract Documents after Notice of Intent to Award by the OWNER, the Bidder forfeits the sum of the Bid Bond or cashier's check as liquidated damages to the OWNER.

2.4 COMPLETING BID DOCUMENTS

- A. The General Conditions identify all forms comprising the Bid Documents. Additional copies may be obtained from the ENGINEER. The Bidder shall make no stipulations or alterations on the Bid forms. The Bidder must use and execute only the Bid form and Bid Schedules bound in the Contract Documents. The complete Contract Documents (excluding the Drawings) should be submitted as the Bidder's Bid, and Bidder shall complete and submit all forms included in the Bid Form, Document No. 00 41 00.
- B. The Bidder must fill in all items in the Bid form in ink or electronically. If applicable, furnish both the unit and total costs for each item. The total Bid price is the full price for the performance of all Work under the Contract Documents. Bidder shall initial in ink any corrections, interlineations, alterations, or erasures made by the Bidder on Bidder's entries in the Bid Documents.
- C. Any work or material which is specified in the Contract Documents or which is necessary because of the nature of the Work, but which is not listed separately in the Bid Schedule shall not be measured or paid for separately. The cost of such work or material shall be considered as included in the Contract Price.
- D. Bids by corporations must be executed in the corporate name by a corporate officer authorized to sign, and must be properly attested to as an official act of the corporation. At the OWNER's request, authority to sign shall be submitted.
- E. Bids by partnerships or joint ventures must be executed in the partnership or joint venture name and signed by a partner or joint venture whose title and official address must be shown. If a partnership or joint venture is the low bidder, the partnership or joint venture must also submit evidence to the OWNER of the responsibility of the partnership or joint venture as a bidder in the manner directed by the ENGINEER.
- F. Where the Bidder is wholly owned subsidiary of another company, the Bid must so state, and the owner or parent corporation also must agree to sign and be bound with the Bidder.
- G. All names must be typed or printed under or near the signature. Signatures shall be in longhand.
- H. The Bid shall contain an acknowledgment of receipt of all Addenda. The Addenda numbers must be filled in on the Bid form.
- I. The Bidder's address, telephone number, and email for communications regarding the Bid must be shown on the first page of the Bid form.
- J. The divisions and sections of the specifications, and the identifications of any Drawings, shall not control Bidder in dividing the Work among subcontractors or suppliers, or delineating the Work to be performed by any specific trade.

- K. The base Bid and alternates shall include all Work required to be performed by the Contract Documents.

2.5 CONFLICT OF INTEREST, SUBCONTRACTORS

- A. Conflict of interest pertaining to Subcontractors is described in paragraph 6.5H of the General Conditions (Document 00 72 00).
- B. Bidder shall not subcontract more than 75 percent of the dollar value of the total contemplated Work (exclusive of the supply of materials and equipment to be incorporated in the Work) without OWNER's prior written approval.

2.6 SUBMISSION OF BIDS

- A. Bids shall be submitted at the time and place indicated in the Invitation to Bid and should be enclosed in an opaque sealed envelope, marked with the Construction Contract name, the name and address of the Bidder, and the date and the opening time for Bids. If the Bid is sent through the mail or other delivery system the sealed envelope should be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it. It is the sole responsibility of the Bidder to deliver the Bid before the scheduled time.
- B. Bidder will make no recapitulations, stipulations, alterations, alternate submissions, or modifications in any manner to any of the Contract Documents.
- C. **All bidders shall include the following Bid Form documents with required signatures and notarized when designated:**
 - 1. **Bid Form (Document 00 41 00)**
 - 2. **Bid Schedule (Document 00 43 00)**
 - 3. **Bid Security****Failure to include any of these documents will result in Bid being considered non-responsive and may be disqualified.**
- D. Alternate bids, other than those called for in the Bid form, will not be considered.
- E. No oral, telegraphic, telephonic, facsimile or modified bids will be considered.

2.7 MODIFICATION AND WITHDRAWAL OF BIDS

- A. At any time prior to the opening of Bids, Bids may be modified or withdrawn if a written notice of modification or withdrawal is signed by Bidder and delivered to the place where Bids are to be submitted. Bid Security will be returned upon proper withdrawal of a Bid prior to the time for Bid opening.
- B. Within 24 hours after Bids are opened, any Bidder may file written notice with OWNER that there was a substantial mistake made in the preparation of its Bid. Bidder must thereafter promptly demonstrate Bidder's mistake. The OWNER has sole discretion to determine whether to permit any modification or withdrawal or the return of any Bid Security.

- C. When it appears a mistake has been made, or when the OWNER desires an assurance of any matter, the OWNER may request a Bidder to confirm the Bid in writing.

2.8 OPENING OF BIDS

- A. Bids will be opened and read aloud publicly unless obviously non-responsive. An abstract of the amounts of the base schedule of prices and any alternate schedules will be made available for review after the opening of Bids.
- B. Any Bids received after the time specified in the Invitation to Bid will be returned unopened.

2.9 BIDS SUBJECT TO ACCEPTANCE FOR 45 DAYS

- A. All bids remain subject to acceptance for 45 days after the day of the Bid opening. OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that date.

PART 3 EVALUATION AND AWARD

3.1 SUBMITTALS REQUIRED FOR EVALUATION

- A. After Bid opening, the Bidder, whose Bid is under consideration, must submit the following at the times specified:
 - 1. **Proposed Subcontractor Form:** Document 00 43 36. The Bidder shall submit this report form within 24 hours of ENGINEER's request.

3.2 EVALUATION OF BIDDER'S QUALIFICATIONS

- A. Within seven (7) calendar days of ENGINEER's request, a Bidder, whose Bid is under consideration for award shall submit to the ENGINEER the following information for the Bidder. ENGINEER may request like information on Bidder's Subcontractors, Bidder's Suppliers or any other information the ENGINEER may require.
 - 1. A current financial statement for the Work (as provided to bonding company);
 - 2. A chronological list of "in progress" and "completed" construction work done by Bidder during the last 3 years; including project name, address, owner, contract name, and current telephone number;
 - 3. Present construction commitments other than items listed in paragraph 2 above;
 - 4. Proposed organizational structure such as firm ownership, project manager, progress scheduler, and superintendent for the Work of this Project;
 - 5. Owned and rented equipment which is to be used to do the Work;
 - 6. Investigations, arbitration, litigation or claims which are pending, threatened, settled or otherwise disposed of within the last three (3) years;

7. Evidence of ability to perform and complete the Work in a manner and within the time limit specified. As a minimum, identify specific experience on projects similar to the Work in physical size, cost, and commercial nature. If the work experiences of the project manager and superintendent designated to construct this project are different than that of the company, provide resumes of their work history. Include their actual project titles and indicate their actual responsibilities on each given project;
 8. All matters consistent with federal, state and local Laws and Regulations; and
 9. Such other data as may be called by the ENGINEER.
- B. If Bidder believes any information should be held confidential for business reasons, Bidder must submit a written claim of business confidentiality for that particular information and include a specific statement of the reasons supporting the claim pursuant to Utah Code Ann. § 63-2-308.
- C. Untimely response or failure to provide the requested information by Bidder will release OWNER of any obligation to further consider the Bidder's Bid.

3.3 EVALUATION OF BIDS

- A. OWNER reserves the right: to reject any and all Bids or any part thereof; to waive any informalities in the Bid Schedule and elsewhere; to negotiate and agree to contract terms with the successful Bidder; to disregard non-conforming, non-responsive, unbalanced or conditional Bids; and to withhold the award for any reason deemed in the best interests of the OWNER.
- B. OWNER reserves the right to reject any Bid if OWNER believes that it would not be in the best interest of the Project or the OWNER. Without limitation, such rejection may be because the Bid is not responsive, or the Bidder is unqualified or of doubtful ability or the Bid or Bidder fails to meet any other pertinent standard or criteria established by OWNER.
- C. If the OWNER intends to make an award to a Bidder, a Notice of Intent to Award will be issued.
- D. OWNER may consider all information which OWNER believes is relevant when evaluating a Bid, including, without limitation:
1. The qualifications and experience of the Bidder and of the Subcontractors, Suppliers, and other persons and organizations proposed (whether or not the Bid otherwise complies with the prescribed requirements).
 2. Such alternates, unit prices and other data, as may be requested in the Bid Form, Bid Schedule, or written requests issued prior to OWNER's Notice of Intent to Award the Construction Contract.
 3. Operating costs, maintenance requirements, performance data, and guarantees of ability to provide the required materials and equipment.
 4. Corporate organization and capacity for any party.

5. Ability to perform and complete the Work in the manner and within the time specified.
 6. Pending litigation.
 7. The amount of the Bid.
 8. Proper licensing to do the Work in compliance with licensing laws of the State of Utah for contractors and subcontractors.
 9. All other relevant matters, consistent with OWNER's procurement code and administrative rules, OWNER's ordinances and program policies.
- E. To establish qualifications of Bidder, OWNER may request such data indicated in the Bid Documents, conduct such investigations as OWNER deems appropriate, and consider any other information (whether obtained from the Bid, the Bidder, or any other source).
- F. If the Construction Contract is to be awarded, it will be awarded to the most responsive, qualified, and responsible Bidder as determined by the OWNER. Alternates may be accepted depending upon availability of OWNER's funds and as determined by the OWNER. Accepted alternates will be considered in determining the most responsive, qualified, and responsible Bidder.
- G. Bid Schedules will be evaluated as follows:
1. Discrepancies in the multiplication of quantities of Work items and unit prices will be resolved in favor of the unit prices. OWNER may correct Bid Schedule calculation errors accordingly.
 2. Prices written out in words shall govern over prices written out in numbers.
 3. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
 4. Bids shall not contain any recapitulations of or changes in the work to be done.
- H. The OWNER, in the OWNER's sole discretion, shall make determinations as to disqualification of Bidders or rejection of Bids. Such matters may include, without limitation, submission of more than one Bid by the Bidder (whether under the same or different names); among Bidders; other commitments of Bidder which, in the OWNER's sole judgment, might hinder the Work; previous defaults, Bid irregularities when not waived in the best interests of the OWNER, delays or poor performance by Bidder on any project; official action against Bidder; and any other cause which, in the OWNER's sole discretion and judgment, is sufficient to justify disqualification of a Bidder or rejection of a Bid.

3.4 ADJUSTMENTS TO THE COST OF THE WORK AFTER OPENING OF BIDS

- A. The Contract Price identified in the Agreement represents the cost of the work which is to be paid by the OWNER to the CONTRACTOR.
- B. Adjustments to the Contract Price which are agreed to between the OWNER and the successful Bidder shall be effected by signing an Agreement Supplement.

3.5 SUBSTITUTIONS

- A. The Construction Contract, if awarded, will be on the basis of materials and equipment described in the Drawings, Specifications and any Addenda.
- B. After the Effective Date of the Construction Contract, the procedure for submitting an application for substitution is set forth in Article 6.4 of the General Conditions.

3.6 SUBMITTALS REQUIRED FOR AWARD OF CONTRACT

In order to execute the contract, the following documents shall be submitted to OWNER within seven (7) calendar days of the receipt of the NOTICE OF INTENT TO AWARD.

- A. **Performance Bond:** The OWNER's requirements as to performance bonds are as set forth in the Modifications to General Conditions (Document 00 73 03). Specific requirements are set forth in the Performance Bond (Document 00 61 13).
 - 1. The form of the Bond should be carefully examined by the Bidder.
 - 2. When the successful Bidder delivers the executed Construction Contract to OWNER, it must be accompanied by the required Performance and Payment Bonds.
- B. **Payment Bond:** The OWNER's requirements as to payment bonds are as set forth in the Modifications to General Conditions (Document 00 73 03). Specific requirements are set forth in the Payment Bond (Document 00 61 14).
 - 1. The form of the Bond should be carefully examined by the Bidder.
 - 2. When the successful Bidder delivers the executed Construction Contract to OWNER, it must be accompanied by the required Performance and Payment Bonds.
- C. **Certificate of Insurance:** The OWNER's requirements as to insurance are as set forth in the Modifications to General Conditions (Document 00 73 03).
- D. **Other Information:** When a determination has been made to award the Construction Contract, Bidder is required, prior to the award or after the award, or both, to furnish such other information as the ENGINEER requests.

3.7 SIGNING OF AGREEMENT

- A. Within seven (7) calendar days after OWNER issues Notice of Intent to Award the Construction Contract to the successful Bidder, the Bidder shall pick up, sign and return to OWNER, the required number of copies of the Agreement (Document 00 52 00), bonds, and insurance. One executed original will be returned to the Bidder. Bidder shall comply with all execution requirements.
- B. All of Bidder's executions and submittals must be delivered to the OWNER before OWNER will execute the Construction Contract. The Construction Contract will not be deemed awarded and shall not be binding on the OWNER until it has been approved and executed by the OWNER, and a fully executed copy is formally delivered to the CONTRACTOR. The OWNER reserves the right to rescind its Notice of Intent to

Award without liability, except for the return of Bidder's Bid Security, at any time before the Construction Contract has been fully executed by all parties and delivered to the CONTRACTOR.

- C. Transfers, delegations or assignments of interests in the Contract Documents are prohibited, unless prior written authorization is received from the OWNER.
- D. At the time of Bidding, and the signing of the Agreement, and at all times during the Work, Bidder shall be properly licensed to do the Work and shall be in compliance with the license laws of the State of Utah, City of Holladay and Salt Lake County. The Bidder shall also require all Subcontractors to do the same.
- E. If a Bidder fails to fully and properly execute the Construction Contract and provide all submittals required therewith within seven (7) calendar days after the date of the Notice of Intent to Award, the OWNER may elect to rescind the Notice of Intent to Award, and the OWNER shall be entitled to the full amount of Bidder's Bid Security, not as a penalty, but in liquidation of and compensation for damages sustained. In the OWNER's sole discretion, a Notice of Intent to Award may then be provided to another bidder whose Bid is most advantageous to the OWNER, price and other factors considered.

END OF DOCUMENT

DOCUMENT 00 39 12
NOTICE OF INTENT TO AWARD

To: _____

PROJECT DESCRIPTION: **2022 Holladay Mill & Overlay Project Phase 1.**

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids called: **2022 Holladay Mill & Overlay Project Phase 1.**

You are hereby notified that your BID has been accepted for items in the amount of:

\$ _____.

In order to execute the contract, all documents as specified in Document 00 21 13 – 3.6 shall be submitted to the OWNER within seven (7) calendar days of the receipt of this NOTICE OF INTENT TO AWARD.

You are required to return an acknowledged copy of this NOTICE OF INTENT TO AWARD to the OWNER. Dated this ____ day of _____, 2022.

CITY OF HOLLADAY

Owner

By _____

Jared Bunch, P.E.

Title _____

Public Services Director

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF INTENT TO AWARD is hereby acknowledged

By _____

this the _____ day of _____, _____

By _____

Title _____

END OF DOCUMENT

DOCUMENT 00 39 13
NOTICE TO PROCEED

To: _____

Date: _____

PROJECT DESCRIPTION: 2022 Holladay Mill & Overlay Project Phase 1

You are hereby notified to commence work in accordance with the Agreement dated _____ on or before _____ and you are to substantially complete the WORK on or before November 20, 2022. The date of completion of all WORK is therefore December 10, 2022.

CITY OF HOLLADAY

Owner

By _____

Jared Bunch, P.E.

Title _____

Public Services Director

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged

By _____

this the _____ day of _____, _____

By _____

Title _____

END OF DOCUMENT

DOCUMENT 00 41 00
BID FORM

PART 1 GENERAL

1.1 BID PROPOSAL

- A. After having personally and carefully examined all conditions surrounding the Work and the Contract Documents, the undersigned proposes to furnish all labor, equipment, tools and machinery and to furnish and deliver all materials not specifically mentioned as being furnished by the OWNER, which is required in and about the construction of the Construction Contract known as **2022 Holladay Mill & Overlay Project Phase 1**.
- B. The undersigned proposes to complete the Work for the price or prices listed in the Bid Schedule (Document 00 43 00) and understands that quantities for Unit Price Work are not guaranteed.
- C. The undersigned proposes to furnish bonds with the Contract, signed by a surety company satisfactory to the OWNER, in an amount equal to the Contract amount conditioned to insure compliance with all requirements of the Contract Documents.
- D. The undersigned encloses a certified check, cashier's check, or a Bid Bond for _____ Dollars (\$ _____) which is five (5) percent of the Bid amount payable to the OWNER, as a guarantee of good faith, and which it is agreed will be forfeited to the OWNER as liquidated damages in the event of the failure of the undersigned to enter into a contract and furnish satisfactory bonds to the OWNER.
- E. The undersigned proposes to execute the attached contract within seven (7) days after the Notice of Intention to Award, and to begin work within seven (7) days after being notified to do so by the OWNER.
- F. The undersigned agrees the Bid is genuine. The Bid is not made in the interest of or on behalf of any undisclosed person, firm or corporation. The undersigned agrees that they have not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; that they have not solicited or induced any person, firm or corporation to refrain from bidding; and that they have not sought by collusion to obtain for itself any other advantage over any separate Bidder or over OWNER.
- G. If OWNER finds it necessary to further define the Work, Contract Price, Contract Time or some other portion of the Construction Contract, after Bid opening, the Bidder promises to execute an Agreement Supplement prior to or concurrent with the execution of the Agreement, if the Agreement Supplement is acceptable to the Bidder.
- H. It is understood that the OWNER has the right to reject this proposal or to accept it at the prices listed in the Bid Schedule.

PART 2 EXECUTION

2.1 BIDDER

- A. The Bidder is as follows

Name: _____

Address: _____

Telephone number: _____

Facsimile number: _____

Tax identification number: _____

- B. Bidder holds license number _____, issued on the _____ day of _____, _____, by the Utah State Department of Commerce, Division of Occupational and Professional Licensing. Bidder is licensed to practice as a _____ Contractor. License renewal date is the _____ day of _____, _____.
- C. The undersigned hereby acknowledges receipt of the following Addenda.

(list Addenda numbers here)

2.2 BIDDER'S SUBSCRIPTION

A. Date: _____

B. Bidder's Signature: _____

C. Print Bidder's name here: _____

D. Title: _____

END OF DOCUMENT

DOCUMENT 00 42 00
BID BOND

PART 1 GENERAL

1.1 PROCEDURE

- A. For filing purposes, add Bid Bond to the Contract Documents following this page.

END OF DOCUMENT

DOCUMENT 00 43 00
BID SCHEDULE

PART 1 GENERAL

1.1 DOCUMENT INCLUDES

- A. Price schedules.
- B. Measurement and payment provisions.

1.2 CONSTRUCTION CONTRACT

- A. The Construction Contract is known as 2022 Holladay Mill & Overlay Project Phase 1

1.3 REFERENCES

- A. APWA 01 29 00: Payment Procedures.
- B. Document 00 52 00: Agreement.

1.4 SCHEDULES TO BE ADDED TO THE AGREEMENT

- A. This document will be added to the Agreement by reference.

1.5 QUANTITY VARIANCES

- A. Estimated quantities are for bidding purposes only. Actual quantities will be determined by the ENGINEER. Quantities may be reduced, deleted, or increased beyond the bid quantities listed in Schedule A. Actual quantities will be paid at the contract unit price.
-
-

PART 3 PRICE SCHEDULES

3.1 SCHEDULE A

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	General Requirements	Lump	1	\$	\$
2	Mobilization and Demobilization	Lump	1	\$	\$
3	Traffic Control	Lump	1	\$	\$
4	Flagging	Hours	1,000	\$	\$
5	Profile Mill	Ton	8,000	\$	\$
6	Bituminous Concrete Pavement ½" PG 58-28 Class 2 Mix, 15% max RAP or	Ton	11,000	\$	\$
7	Manhole Adjustment and Concrete Collar	Each	75	\$	\$
8	Water Valve Adjustment and Concrete Collar	Each	75	\$	\$
9	Soft Spot Repair	SF	25,000	\$	\$
10	Reconstruct Survey Monument	Each	10	\$	\$
Schedule A Total					\$

MEASUREMENT AND PAYMENT

4.1 GENERAL

- A. Units of measurement are listed above in the price schedule(s).
- B. See measurement and payment procedures in APWA Section 01 29 00.
- C. ENGINEER will take all measurements and compute all quantities.
- D. CONTRACTOR will verify ENGINEER's measurements and computations.
- E. CONTRACTOR will provide all equipment, workers, and survey crews to assist ENGINEER in making measurements.
- F. Frames and covers damaged by CONTRACTOR will be replaced at no additional cost to OWNER.
- G. If ENGINEER determines an existing frame or cover needs to be replaced, a new frame or cover will be either provided by OWNER or CONTRACTOR. A frame and cover supplied by CONTRACTOR will be paid for by using prices agreed to in a Change Order.
- H. CONTRACTOR responsible for the preservation of neighboring facilities not being demolished, if damage occurs during construction proper restoration of all damage is required at no additional cost. All shall be included in the Bid Item.

4.2 GENERAL REQUIREMENTS (ITEM 1)

- A. Payment includes cost of bonds, SWPP protection and maintenance, public noticing, and all other incidental work not included in other Bid Items.
- B. Payment will be made on percentage basis as follows.

Percent of Original Contract Amount Earned	Percent of Amount Bid to be Paid
5	80
100	20

4.3 MOBILIZATION AND DEMOBILIZATION (ITEM 2)

- A. Payment includes cost of mobilization, demobilization, installation of temporary facilities, and bringing all necessary construction equipment to site.
- B. This item shall be governed by Section 01 71 13 of the APWA Standard Specifications, and the contract documents provided.
- C. Payment will be made on percentage basis as follows.

Percent of Original Contract Amount Earned	Percent of Amount Bid to be Paid
5	25
50	40
100	35

4.4 TRAFFIC CONTROL (ITEM 3)

- A. Payment includes cost of creating a traffic control plan acceptable to OWNER's transportation engineer, vehicular and pedestrian protection from work zone, and certified traffic control technician.
- B. Payment include maintenance of traffic control.
- C. This item shall be governed by Section 01 55 26 of the APWA Standard Specifications and Manual on Uniform Traffic Control Devices.
- D. Payment will be made on percentage basis as follows.

Percent of Original Contract Amount Earned	Percent of Amount Bid to be Paid
25	25
50	25
75	25
100	25

4.5 FLAGGING (ITEM 4)

- A. Flagging shall be measured by the HOUR for each man-hour accrued directing traffic while on the project site. Timesheets for flaggers are to be submitted to the ENGINEER.
- B. This item shall be governed by Section 01 55 26 of the APWA Standard Specifications and Manual on Uniform Traffic Control Devices.
- C. Payment includes all labor, materials, equipment, tools, permits and approvals to provide traffic flagging in accordance with the contract documents, Manual on Uniform Traffic Control Devices, and any necessary incidentals to complete the item.

4.6 PROFILE MILL (ITEM 5)

- A. Milling depth will not be uniform. Typical depth adjacent to gutters is 1-3/4". Typical depth at the crown is 1". Milled surface cross slope between crown and gutter is to be a straight slope. Maximum cross slope not to exceed 4%. Where a gutter is not present, milling depth will be as directed by the ENGINEER.
- B. Milling shall be measured by the ton. Tonnage calculations will be based on weigh tickets collected and submitted to the ENGINEER.

- C. This item shall be governed by Section 32 01 16.71 of the APWA Standard Specifications.
- D. Payment includes cost of all labor, materials, equipment, tools, permits and approvals to perform the job including: cutting teeth, machines, transportation, removal, and disposal of millings at an authorized dump site provided by the CONTRACTOR, clean up, and any necessary incidentals to complete the item.

4.7 BITUMINOUS CONCRETE PAVEMENT (ITEM 6)

- A. Bituminous Concrete Pavement shall have a typical compacted thickness of 2”.
- B. Bituminous Concrete Pavement DM-1/2” PG 58-28 Class 2 Mix, 15% Max RAP shall be measured by the ton for in place asphalt. Rejected loads will not be paid. Tonnage calculations will be based on weigh tickets collected and submitted to the ENGINEER.
- C. Bituminous Concrete Pavement shall be governed by Section 32 12 05S of the Contract Documents provided.
- D. Payment includes cost of all labor; materials; equipment; and tools to perform the job. This item shall include the asphalt concrete; product delivery and handling; hot mix asphalt paving; compaction; sampling and testing; tack coat; water; dust control; cleanup; and any necessary incidentals for a complete job.

4.8 MANHOLE ADJUSTMENT AND CONCRETE COLLAR (ITEM 7)

- A. Adjust manhole to grade shall be measured by EACH manhole adjusted, complete.
- B. This item shall be governed by Section 33 05 14 of the APWA Standard Specifications and Standard Plan No. 413.
- C. Payment includes cost of all labor, materials, equipment, tools, permits and approvals to lower and reset existing manholes that have been cast in concrete to allow for milling and repaving or reconstruction of the existing asphalt surface. Item includes protection of pipe inverts within manhole; demolition of existing concrete collar; loading; hauling; proper disposal at an authorized dump site provided by the CONTRACTOR; placement of temporary decking, construction of a new concrete collar, and any required cold weather protection.

4.9 WATER VALVE ADJUSTMENT AND CONCRETE COLLAR (ITEM 8)

- A. Adjust water valve to grade shall be measured by EACH water valve adjusted, complete.
- B. This item shall be governed by Section 33 05 14 of the APWA Standard Specifications and Standard Plan No. 574.
- C. Payment includes cost of all labor, materials, equipment, tools, permits and approvals to perform the job of lowering the elevation of existing water valve covers that have been cast in concrete collars to allow for milling and repaving or reconstruction of the existing asphalt surface. Item includes: demolition of existing concrete collar; protection and/or replacement of water valve box sleeve and tracer wire; loading;

hauling; proper disposal at an authorized dump site provided by the CONTRACTOR; placement of temporary decking, construction of a new concrete collar and any required cold weather protection.

4.10 SOFT SPOT REPAIR (ITEM 9)

- A. Soft spot repair shall be measured by square foot for area repaired, complete.
- B. Payment includes cost of all labor, materials, equipment, and tools to excavate unsuitable soils to a minimum depth of 12" below underside of asphalt, a geotextile fabric at subgrade, and backfill with roadbase.
- C. Roadbase shall be governed by Section 32 11 23 of the APWA Standard Specifications. Roadbase to be Grade 3/4 UTBC Class A.
- D. Geotextile shall be Mirafi 150 or equivalent.

4.11 RECONSTRUCT SURVEY MONUMENT (ITEM 10)

- A. Reconstruct Survey Monument shall be measured by EACH monument lowered and raised, complete.
- B. This item shall be governed by Sections 33 05 14 and 31 05 10 of the APWA Standard Specifications, APWA Standard Plans No. 272-275 and Salt Lake County Standards.
- C. Payment includes cost of all labor, materials, equipment, tools, permits and approvals to perform the job of adjusting the elevation of existing survey monuments to allow for milling and repaving or reconstruction of the existing asphalt surface. Item also includes resetting monument cap, base and frame to proper grade and installing surrounding concrete collar in newly paved asphalt surface. Item includes: demolition of existing concrete collar; protection and/or replacement of survey cap, base and frame; loading; hauling; proper disposal at an authorized dump site provided by the CONTRACTOR; placement of temporary decking and bituminous concrete pavement; dust control; water; cleanup; and any necessary incidentals to complete the item.
- D. A Salt Lake County permit will be required for all work within 35 feet of any monument. Permit fees are \$400 per monument. A \$250 refund is provided if there is no damage to the monument in accordance to the conditions of the permit.
- E. If Salt Lake County determines the CONTRACTOR is required to hire a Utah licensed surveyor to reset or replace the cap in accordance with Salt Lake County Standards to meet the conditions of the permit, no additional payment will be made for this work.

END OF DOCUMENT

DOCUMENT 00 43 36
PROPOSED SUBCONTRACTOR FORM

PART 1 GENERAL

1.1 BIDDER

A. Name: _____

Address: _____

B. Telephone Number: _____

1.2 CONSTRUCTION CONTRACT

A. The Construction Contract is known as 2022 Holladay Mill & Overlay Project Phase 1.

PART 2 REPORT

2.1 SUBCONTRACTOR AND SUPPLIER REPORT

- A. Failure of the Bidder to specify a Subcontractor for any portion of the Work constitutes an agreement by the Bidder that the Bidder is fully qualified to perform that portion, and that Bidder shall perform that portion.
- B. Bidder will be fully responsible to OWNER for the acts and omissions of Subcontractors and Suppliers and of persons either directly or indirectly employed by them, as Bidder is for the acts and omissions of persons employed by Bidder directly.
- C. Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor or Supplier and the OWNER. Bidder agrees each subcontract with Bidder's Subcontractor will disclaim any third party or direct relationship between OWNER and any Subcontractor or Supplier.
- D. The names and addresses of the Subcontractors and Suppliers who will work under the terms of the Contract Documents and the estimated dollar amount of each subcontract (in excess of 2 percent of the Bid sum) are set forth as follows.

Table 1

SUBCONTRACTORS		
Name and Address	Nature and Extent of Work to be Sublet	Amount
1.		
2.		
3.		
SUPPLIERS		
Name and Address	Nature and Extent of Materials to be Supplied	Amount
1.		
2.		
3.		
4.		

PART 3 EXECUTION

3.1 EFFECTIVE DATE

- A. Bidder executes this Subcontractor and Supplier report and declares it to be a supplement to the Bid and in effect as of _____, _____.

3.2 BIDDER'S SUBSCRIPTION

- A. Bidder's signature: _____
- B. Please print Bidder's name here: _____
- C. Title: _____

END OF DOCUMENT

DOCUMENT 00 52 00
AGREEMENT

PART 1 GENERAL

1.1 CONTRACTOR

- A. Name: _____
- B. Address: _____

- C. Telephone number: _____
- D. Email: _____

1.2 OWNER

- A. The name of the OWNER is City of Holladay.

1.3 CONSTRUCTION CONTRACT

- A. The Construction Contract is known as 2022 Holladay Mill & Overlay Project Phase 1.

1.4 ENGINEER

- A. Jared Bunch, P.E. is the OWNER's representative and agent for this Construction Contract who has the rights, authority and duties assigned to the ENGINEER in the Contract Documents.

1.5 REPRESENTATION REGARDING ETHICAL STANDARDS FOR CITY OFFICERS AND EMPLOYEES AND FORMER CITY OFFICERS AND EMPLOYEES

- A. CONTRACTOR represents that it has not:
1. Provided an illegal gift or payoff to a City officer or employee or former City officer or employee, or his or her relative or business entity.
 2. Retained any person to solicit or secure this contract upon an agreement or understanding for a commission, percentage, or brokerage or contingent fee, other than bona fide employees or bona fide commercial selling agencies for the purpose of securing business.

PART 2 TIME AND MONEY CONSIDERATIONS

2.1 CONTRACT PRICE

- A. The Contract Price includes the cost of the Work specified in the Contract Documents, plus the cost of all bonds, insurance, permits, fees, and all charges, expenses or assessments of whatever kind or character.
- B. The Schedules of Prices awarded from the Bid Schedule (Document 00 43 00) are as follows.
 - 1. Schedule A
- C. An Agreement Supplement (~~is~~/is not) attached to this Agreement.
- D. Based upon the above awarded schedules and the Agreement Supplement (if any), the Contract Price awarded is: _____ dollars and _____ cents. (\$ _____).

2.2 CONTRACT TIME

- A. Substantial Completion of the Work shall occur:
 - 1. by **November 20, 2022**
- B. Any time specified in work sequences in the Summary of Work shall be a part of the Contract Time.
- C. The OWNER anticipates that a Notice to Proceed will be given on the following date, but reserves the right to change such date:

Anticipated date of Notice to Proceed: **March 15, 2022**

2.3 PUNCH LIST TIME

- A. The Work will be complete and ready for final payment within **14** days after the date CONTRACTOR receives ENGINEER's Final Inspection Punch List unless exemptions of specific items are granted by ENGINEER in writing or an exception has been specified in the Contract Documents.
- B. Permitting the CONTRACTOR to continue and finish the Work or any part of the Work after the time fixed for its completion, or after the date to which the time for completion may have been extended, whether or not a new completion date is established, shall in no way operate as a waiver on the part of the OWNER of any of OWNER's rights under this Agreement.

2.4 LIQUIDATED DAMAGES

- A. Time is the essence of the Contract Documents. CONTRACTOR agrees that OWNER will suffer damage or financial loss if the Work is not completed on time or within any time extensions allowed in accordance with Part 12 of the General Conditions.

CONTRACTOR and OWNER agree that proof of the exact amount of any such damage or loss is difficult to determine. Accordingly, instead of requiring any such proof of damage or specific financial loss for late completion, CONTRACTOR agrees to pay the following sums to the OWNER as liquidated damages and not as a penalty.

1. **Late Contract Time Completion:** Five hundred dollars and zero cents (**\$500.00**) for each day or part thereof that expires after the Contract Time until the Work is accepted as Substantially Complete as provided in Article 14.5 of the General Conditions.
 2. **Late Punch List Time Completion:** 50% of the amount specified for Late Contract Time Completion for each day or part thereof if the Work remains incomplete after the Punch List Time. The Punch List shall be considered delivered on the date it is transmitted by email, hand delivery or received by the CONTRACTOR by certified mail.
 3. **Interruption of Public Services:** No interruption of public services shall be caused by CONTRACTOR, its agents or employees, without the ENGINEER's prior written approval. OWNER and CONTRACTOR agree that in the event OWNER suffers damages from such interruption, the amount of liquidated damages stipulated below shall not be deemed to be a limitation upon OWNER's right to recover the full amount of such damages. Five hundred dollars and zero cents (**\$500.00**) for each day or part thereof of any utility interruption caused by the CONTRACTOR without the ENGINEER's prior written authorization.
- B. **Deduct Damages from Moneys Owed CONTRACTOR:** OWNER shall be entitled to deduct and retain liquidated damages out of any money which may be due or become due the CONTRACTOR. To the extent that the liquidated damages exceed any amounts that would otherwise be due the CONTRACTOR, the CONTRACTOR shall be liable for such amounts and shall return such excess to the OWNER.

PART 3 EXECUTION

3.1 CONTRACTOR'S SUBSCRIPTION AND ACKNOWLEDGMENT

- A. CONTRACTOR's signature: _____
- B. Please print name here: _____
- C. Title: _____
- D. CONTRACTOR's Utah license number: _____
- E. Notary Acknowledgement: In the Country of _____,
State of _____, on the _____ day of _____, 20____,
the foregoing instrument was acknowledged before me

(person acknowledging and the title or representative capacity, if any).

Notary's signature

Residing at

My commission expires:

Notary's seal

3.2 OWNER'S SUBSCRIPTION AND ATTESTATION

A. OWNER: City of Holladay

(City Manager's Signature)

B. Attest

(SEAL)

C. Address for giving notices:

City of Holladay
4580 S 2300 E
Holladay, UT 84117
(801) 272-9450

Recommended for approval:

(Public Services Director)

3.3 EFFECTIVE DATE

OWNER and CONTRACTOR execute this Agreement and declare it in effect as of the
___ day of _____, _____.

END OF DOCUMENT

DOCUMENT 00 61 13
PERFORMANCE BOND

PART 1 GENERAL

1.1 BOND

- A. Number: _____
- B. Amount: _____
- _____ Dollars (\$ _____)

1.2 SURETY

- A. Name: _____
- B. Address: _____
- _____
- C. Telephone number: _____
- D. Email: _____

1.3 CONTRACTOR

- A. Name: _____
- B. Address: _____
- _____
- C. Telephone number: _____
- D. Email: _____

1.4 OWNER

- A. City of Holladay

1.5 CONSTRUCTION CONTRACT

- A. The Construction Contract is known as 2022 Holladay Mill & Overlay Project Phase 1.

1.6 DEFINED TERMS

- A. Terms used in this Performance Bond which are defined in Article 1.1 of the General Conditions (Document 00 72 00) will have the meanings indicated in the General Conditions.

PART 2 COVENANTS

2.1 SURETY'S AND CONTRACTOR'S RELATIONSHIP

- A. Surety as surety, and CONTRACTOR as principal, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER as obligee, for the performance of the Construction Contract, whether awarded or about to be awarded.
- B. If CONTRACTOR performs the Construction Contract, the Surety and the CONTRACTOR shall have no obligation under this Bond, except to participate in conferences indicated in Article 2.3.

2.2 NOTICE

- A. Notice to the Surety, the OWNER or the CONTRACTOR shall be sent by certified mail, or hand delivered to the address shown on this Bond agreement.
- B. Notices sent as required by paragraph 2.2A shall be effective on the date on which such notice was sent.
- C. If any notice requires a period of less than seven (7) days for response, the notice shall be sent by hand delivered.
- D. If the time for response to any notice expires on a Saturday, Sunday or a legal holiday in the State of Utah, the time shall be extended to the next working day.

2.3 PROCEDURE TO INVOKE SURETY'S OBLIGATION

- A. If the CONTRACTOR fails to perform or to comply with the terms of the Construction Contract, and such failure to perform or to comply has not been waived by the OWNER, the OWNER may notify the CONTRACTOR and the Surety, at their addresses described above, that the OWNER is considering declaring the CONTRACTOR in default.
- B. Before declaring the default, the OWNER shall request and attempt to arrange a conference with the CONTRACTOR and the Surety to be held at a time and place required by the OWNER to discuss methods of performing the Work.
- C. If the CONTRACTOR does not attend the conference or agree to cure any deficiencies in the CONTRACTOR's performance of the Work to the satisfaction of the OWNER, the OWNER may declare the CONTRACTOR in default and formally terminate the CONTRACTOR's right to complete the Work. Such default shall not be declared earlier

than 10 days after the CONTRACTOR and the Surety have received notice as provided in article 2.2.

- D. If the Contract with the CONTRACTOR is terminated, the OWNER agrees to pay the unpaid Balance of the Contract Price to the Surety for completion of the Work in accordance with the terms of the Construction Contract or to a contractor selected by the Surety to perform the Work in accordance with the terms of the Construction Contract.

2.4 SURETY'S OPTIONS AT CONTRACTOR TERMINATION

- A. Surety Completes the Work: The Surety may undertake to perform and complete the Work itself, through its agents or through independent contractors.
- B. Surety Obtains Bids or Proposals: The Surety may obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Work.
 - 1. Such bids or proposals shall be prepared by the Surety for execution by the OWNER and the completion contractor selected.
 - 2. Surety shall secure the contract with Performance and Payment Bonds executed by a qualified surety equivalent to this Performance Bond and the Payment Bond (Document 00 61 14); and
 - 3. Surety shall pay to the OWNER the amount of damages as described in paragraph 2.6 in excess of the balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR's default.
 - 4. Surety to Pay OWNER: Surety may determine the amount not to exceed the amount of this bond specified in paragraph 1.1B, for which Surety believes it may be liable to pay, and tender payment therefore to the OWNER. OWNER has sole discretion to accept payment. If the OWNER refuses the payment tendered, or the Surety has denied liability in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

2.5 PROCEDURE FOR OWNER TO DECLARE SURETY IN DEFAULT

- A. The OWNER may declare the Surety to be in default upon the following procedures.
 - 1. The OWNER shall issue an additional written notice to the Surety, after declaring the CONTRACTOR in default as provided in Article 2.3, demanding that the Surety perform its obligations under this Bond.
 - 2. Surety shall respond to the OWNER within 15 days after receipt of the OWNER's additional notice, either denying the claim or accepting liability and exercising its' options under Article 2.4.

2.6 SURETY'S OBLIGATIONS

- A. After the OWNER has terminated the CONTRACTOR's right to complete the Construction Contract, and if the Surety elects to complete the Construction Contract as provided in Article 2.4, then the responsibilities of the Surety to the OWNER shall not

be greater than those of the CONTRACTOR under the Construction Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Construction Contract.

- B. To the limit of the amount of this Bond, but subject to commitment by the OWNER to pay all valid and proper payments made to or on behalf of the CONTRACTOR under the Construction Contract, the Surety is obligated, without duplication, for:
 - 1. the responsibilities of the CONTRACTOR for correction of Defective Work and completion of the Construction Contract;
 - 2. design professional and delay costs resulting from the CONTRACTOR's default, and resulting from the actions or failure to act of the Surety under article 2.4; and
 - 3. liquidated damages which are or may become due for any reason.

2.7 UNRELATED OBLIGATIONS OF THE CONTRACTOR

- A. The Surety and the OWNER shall not be liable to others for obligations of the CONTRACTOR that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or changed on account of any such unrelated obligations.
- B. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

2.8 SURETY WAIVES NOTICE OF ANY CHANGE

- A. Surety hereby waives notice of any change, including changes of Contract Time, Contract Price and scope of Work, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

2.9 VENUE

- A. Any suit or action commenced by OWNER under this Bond shall be for action in a court of competent jurisdiction in the State of Utah.

PART 3 EXECUTION

3.1 EFFECTIVE DATE

- A. Surety and CONTRACTOR execute this Bond agreement and declare it to be in effect as of the ____ day of _____, _____.

3.2 CONTRACTOR'S SUBSCRIPTION AND ACKNOWLEDGMENT

- A. Type of organization: _____
(corporation, partnership, individual, etc.)

B. If CONTRACTOR is a corporation, attach a corporate resolution evidencing CONTRACTOR's authority to sign.

C. CONTRACTOR's signature: _____

D. Please print name here: _____

E. Title: _____

F. Notary Acknowledgement: In the Country of _____,
State of _____, on the _____ day of _____, 20____,
the foregoing instrument was acknowledged before me

(person acknowledging and the title or representative capacity, if any).

Notary's signature

Residing at

My commission expires:

Notary's seal

3.3 SURETY'S SUBSCRIPTION AND ACKNOWLEDGMENT

- A. Attach evidence of Surety's corporate authority to sign.
- B. Surety's signature: _____
- C. Please print name here: _____
- D. Title: _____
- E. **Acknowledgment:** In the County of _____,
State of _____, on the _____ day of _____, _____,
before me, the undersigned notary, personally appeared _____,
who proved to me his/her identity through documentary evidence in the form of a
_____ to be the
person whose name is signed as the authorized Surety and acknowledged to me that this
document was signed voluntarily for its stated purpose.

Notary Public signature

Notary Public seal

END OF DOCUMENT

DOCUMENT 00 61 14
PAYMENT BOND

PART 1 GENERAL

1.1 BOND

- A. Number: _____
- B. Amount: _____
- _____ Dollars (\$_____)

1.2 SURETY

- A. Name: _____
- B. Address: _____
- _____
- C. Telephone number: _____
- D. Email: _____

1.3 CONTRACTOR

- A. Name: _____
- B. Address: _____
- _____
- C. Telephone number: _____
- D. Email: _____

1.4 OWNER

- A. City of Holladay

1.5 CONSTRUCTION CONTRACT

- A. The Construction Contract is known as 2022 Holladay Mill & Overlay Project Phase 1.

1.6 DEFINED TERMS

- A. Terms used in this Performance Bond which are defined in Article 1.1 of the General Conditions (Document 00 72 00) will have the meanings indicated in the General Conditions.

PART 2 COVENANTS

2.1 SURETY'S AND CONTRACTOR'S RELATIONSHIP

- A. Surety as surety, and CONTRACTOR as principal, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER as obligee, for the performance of the Construction Contract, whether awarded or about to be awarded.
- B. If CONTRACTOR performs the Construction Contract, the Surety and the CONTRACTOR shall have no obligation under this Bond.

2.2 NOTICE

- A. Notice to the Surety, the OWNER or the CONTRACTOR shall be sent by certified mail, facsimile, or hand delivered to the address shown on this Bond agreement.
- B. Notices sent as required by paragraph 2.2A shall be effective on the date on which such notice was sent.
- C. Notice may be sent by facsimile. Facsimile notice shall be effective on the date of transmission provided that a confirmation establishing the successful transmission of the notice is sent by first-class mail, postage prepaid, along with a copy of the notice transmitted, no later than twenty-four (24) hours after the facsimile notice is transmitted.
- D. If any notice requires a period of less than seven (7) days for response, the notice shall be sent by facsimile.
- E. If the time for response to any notice expires on a Saturday, Sunday or a legal holiday in the State of Utah, the time shall be extended to the next working day.

2.3 CONDITIONS OF SURETY'S LIABILITY

- A. With respect to the OWNER, this Bond agreement shall be null and void if the CONTRACTOR promptly takes the following actions:
 - 1. promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2. defends, indemnifies and saves harmless the OWNER from all claims, demands, Liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Work, provided the OWNER has tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety.

2.4 PROCEDURE TO INVOKE SURETY'S OBLIGATION

- A. **Concerning Claimants who have a Direct Contract with the CONTRACTOR:** The Surety shall have no obligation to Claimants under this Bond who are employed by or have a direct contract with the CONTRACTOR until Claimants have given notice to the Surety at the address shown on this Bond agreement and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
- B. **Concerning Claimant who does not have a Direct Contract with the CONTRACTOR:** The Surety shall have no obligation to Claimant under this Bond who does not have a direct contract with the CONTRACTOR until Claimant takes the following actions.
1. The Claimant shall furnish written notice to the CONTRACTOR and send a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed.
 2. The Claimant shall have either received a rejection in whole or in part from the CONTRACTOR, or not received within 15 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR has indicated the claim will be paid directly or indirectly.
 3. Not having been paid within the above 15 days, the Claimant shall have sent a written notice to the Surety at the address described on this Bond agreement and sent a copy, or notice thereof, to the OWNER stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

2.5 SURETY'S OPTION TO SETTLE CLAIMS

- A. When the Claimant has satisfied the conditions of article 2.4, the Surety shall promptly and at the Surety's expense take the following actions.
1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 2. Pay or arrange for payment of any undisputed amounts.

2.6 SURETY'S OBLIGATION

- A. Surety's total obligations under this bond shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

2.7 USE OF FUNDS

- A. Amounts owed by OWNER to CONTRACTOR under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, against the Performance Bond (Document 00 61 13). By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Work are dedicated as follows:
1. The OWNER has first priority to use the funds for the completion of the Work.
 2. The CONTRACTOR and the Surety have second priority to use the funds to satisfy the obligations of the CONTRACTOR and the Surety under this Bond.

2.8 UNRELATED OBLIGATIONS OF THE CONTRACTOR

- A. The Surety and the OWNER shall not be liable to Claimants or others for obligations of the CONTRACTOR that are unrelated to the Construction Contract.
- B. The OWNER shall not be liable for payment of any damages, costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

2.9 SURETY WAIVES NOTICE OF ANY CHANGE

- A. Surety hereby waives notice of any change to the Construction Contract including changes of Contract Time, Contract Price, and scope of Work, or to related subcontracts, purchase orders or other obligations.

2.10 VENUE

- A. Any suit or action commenced by a Claimant under this Bond shall be for action in a court of competent jurisdiction in the State of Utah.

2.11 COPIES OF THIS BOND

- A. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR or OWNER shall promptly furnish a copy of this Bond or shall permit a copy to be made.

PART 3 EXECUTION

3.1 EFFECTIVE DATE

- A. Surety and CONTRACTOR execute this Bond agreement and declare it to be in effect as of the ____ day of _____, _____.

3.2 CONTRACTOR'S SUBSCRIPTION AND ACKNOWLEDGMENT

- A. Type of organization: _____
(corporation, partnership, individual, etc.)
- B. If CONTRACTOR is a corporation, attach a corporate resolution evidencing CONTRACTOR's authority to sign.
- C. CONTRACTOR's signature: _____
- D. Please print name here: _____
- E. Title: _____
- F. Notary Acknowledgement: In the Country of _____,
State of _____, on the _____ day of _____, 20____,
the foregoing instrument was acknowledged before me

(person acknowledging and the title or representative capacity, if any).

Notary's signature

Residing at

My commission expires:

Notary's seal

3.3 SURETY'S SUBSCRIPTION AND ACKNOWLEDGMENT

- A. Attach evidence of Surety's corporate authority to sign.
- B. Surety's signature: _____
- C. Please print name here: _____
- D. Title: _____
- E. **Acknowledgment:** In the County of _____,
State of _____, on the _____ day of _____, _____,
before me, the undersigned notary, personally appeared _____,
who proved to me his/her identity through documentary evidence in the form of a
_____ to be the
person whose name is signed as the authorized Surety and acknowledged to me that this
document was signed voluntarily for its stated purpose.

Notary's signature

Residing at

My commission expires:

Notary's seal

END OF DOCUMENT

DOCUMENT 00 62 16
CERTIFICATE OF INSURANCE

PART 1 GENERAL

1.1 PROCEDURE

- A. For filing purposes, add Certificates of Insurance to the Contract Documents following this page.
- B. Certificates of Insurance must include all requirements in Section 5.2 of the Modifications to General Conditions (Supplementary Conditions) (Document 00 73 02).

END OF DOCUMENT

DOCUMENT 00 73 03
MODIFICATIONS TO GENERAL CONDITIONS
(Supplementary Conditions)

This document changes provisions specified in the General Conditions in the 2017 Manual of Standard Specifications published by the Utah Chapter of the American Public Works Association.

Add the following paragraphs to Article 2.2 (page 20).

2.2 COPIES OF DOCUMENTS

- B. OWNER shall not furnish to CONTRACTOR published Contract Documents which include the Manual of Standard Plans and the Manual of Standard Specifications. Such documents shall be purchased separately by the CONTRACTOR.

Modify Article 5.1 (page 28) to read as follows.

5.1 PERFORMANCE, PAYMENT AND OTHER BONDS

- A. Prior to OWNER executing the Agreement, CONTRACTOR shall file with the OWNER a good and sufficient performance Bond and a payment Bond, each in the sum of not less than 100 percent of the Contract Price.
- B. The Bonds shall be executed by the CONTRACTOR and secured by a company duly and regularly authorized to do a general surety business in the State of Utah and either (i) named in the current U.S. Treasury Department's listing of approved sureties (Department Circular 570) (as amended) with an underwriting limitation equal to or greater than the Contract Price which the Bond guarantees, or (ii) with a current "A-" rating or better in A.M. Best Co., Inc's. Best Insurance Reports, Property and Casualty Edition.
- C. The Performance Bond shall guarantee the faithful performance of the Construction Contract by the CONTRACTOR and the payment Bond shall guarantee the payment of labor and materials. The Bonds shall inure by their terms to the benefit of the OWNER. Neither this nor any other provision requiring a performance Bond shall be construed to create any rights in any third party Claimant as against the OWNER for performance of the Work under the Construction Contract.
- D. All Bonds required by the Contract Documents to be purchased and maintained by CONTRACTOR shall be obtained from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds for the limits so required. Such surety companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.
- E. If the surety on any Bond furnished by CONTRACTOR is subject to any proceeding under the Bankruptcy Code (Title 11, United States Code) or becomes insolvent or its right to do business is terminated in the State of Utah or it ceases to meet the

requirements of this Article, CONTRACTOR shall, within 15 days thereafter, substitute another Bond and surety, both of which must be acceptable to OWNER.

Modify Article 5.2 (page 28) to read as follows.

5.2 INSURANCE

- A. Contractor shall provide the following minimum insurance coverage from companies holding a General Rating of “A” or better as set forth in the most current issue of Best’s Key Rating Insurance Guide written for not less than the following, or greater if required by law and all such insurance to be primary to any insurance maintained by Owner, shall name Owner as additional insured with waiver of subrogation:
1. The Contractor’s Worker’s Compensation Insurance shall be written for not less than the statutory limits for the locale of the Project and the Contractor’s Employer’s Liability Insurance shall be written for not less than \$2,000,000.
 2. The Contractor’s Comprehensive Automobile Liability Insurance shall be written with combined single limits of not less than \$2,000,000 each occurrence.
 3. The Contractor’s Comprehensive General Liability Insurance with contractual liability coverage on occurrence form with limits not less than \$2,000,000 each occurrence. Completed Operations insurance must be kept in effect for 2 years after completion of work.
 4. The Contractor shall not commence Work under this Agreement until all of the insurance required herein shall have been obtained by the Contractor. The Contractor shall furnish to the Owner Certificates of Insurance verifying that such insurance has been obtained. Such certificates will provide that Owner will receive at least thirty (30) days prior written notice of any material change in, cancellation of, or non-renewal of such insurance.
 5. If applicable, professional liability (errors & omissions) Insurance coverage for a limit of \$2,000,000. Insurance shall be carried for two years after the work has been completed.
 6. If Contractor uses any subcontractors, Contractor will provide for subcontractors or require the same insurance provisions for its subcontractors.

END OF DOCUMENT

DOCUMENT 00 91 13
ADDENDA

PART 1 GENERAL

1.1 PROCEDURE

- A. For filing purposes, add Addenda and Modifications to the Contract Documents following this page.

END OF DOCUMENT

DOCUMENT 00 92 45
CHANGE ORDER FORM

CHANGE ORDER No. _____

Project: 2022 Holladay Mill & Overlay Project Phase 1

Date of Issuance:

Owner: City of Holladay

Contractor:

Owner's Rep:

Contact For: Jared Bunch, P.E. – Public Services Director

You are directed to make the following changes in the Contract Documents:

Description:

Purpose of Change Order:

Attachments:

Change in Contract Price:

Original Contract Price: \$

Prior Change Orders No. to No. _____

Contract Price with all approved Change Orders: \$ _____

Change to CONTRACT TIME:

The CONTRACT TIME will be increased by calendar days.

The date for completion of all work will be _____.
(Date)

Approvals Required:

To be effective, this order must be approved by the City of Holladay if it changes the scope or objective of the PROJECT, or as may otherwise be required by the SUPPLEMENTAL GENERAL CONDITIONS.

RECOMMENDED:

APPROVED:

ACCEPTED:

by _____
Public Services
Director

by _____
Owner

by _____
Contractor

END OF DOCUMENT

SECTION 01 11 00S SUMMARY OF WORK

Delete section 01 11 00 and replace with the following:

PART 1 GENERAL

1.1 GENERAL

- A. The WORK to be performed under this contract shall consist of furnishing all plant, tools, equipment, materials, supplies, and manufactured articles and furnishing all labor, transportation, and services including fuel, power, water, and essential communications, and performing all work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The WORK shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the WORK in good faith shall be provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the OWNER.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The WORK to be performed primarily includes, but not limited to, the following:
Bid Schedule A: Work generally includes: Average 2" profile mill, hauling and disposal of millings at a legal dumping location selected by the contractor, hauling, placement and compaction of 2" thick bituminous asphalt concrete, valve and manhole adjustment and concrete collars, traffic control, and protection of survey monuments.

1.3 CONTRACT TYPE

- A. The WORK hereunder shall be completed under a unit price contract.

1.4 WORK BY OTHERS

- A. The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or the forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize the interference with said relocation, altering or other rearranging of facilities.
- B. All surveying and construction staking will be performed by the OWNER. The CONTRACTOR shall notify the ENGINEER of any surveying needs 72 hours prior to the anticipated work.

1.5 LIMITATION OF OPERATIONS

- A. **Work Hours:** No operation of heavy equipment is allowed between the hours of 10:00 PM and 8:00 AM without prior written approval from the City of Holladay.

1.6 WORK SEQUENCE

- A. The CONTRACTOR's sequencing and schedule for this project must conform to all provisions of the Contract Documents and applicable traffic control requirements.
- B. **Paving of Rotomilled Street Surface:** The OWNER requires that the WORK under this contract be completed as quickly as reasonably possible. The CONTRACTOR may choose to perform all rotomilling identified in the Contract Documents in a single mobilization provided that paving of each street is completed within two (2) weeks from the completion of the milling operation on each street or street segment. The ENGINEER, at his discretion, may extend the paving timeframe requirement, if the CONTRACTOR demonstrates a good faith effort in completing the paving within the required timeframe and can demonstrate the following:
 - 1. Continuous and uninterrupted construction activities (replacement of curb and gutter, sidewalks, soft spot repair, etc.) have occurred where paving is not complete.
 - 2. The CONTRACTOR has made every effort to employ the necessary resources to complete the paving, including:
 - a. mobilization and utilization of multiple paving crews
 - b. continuous and uninterrupted supply of asphalt concrete from batch
- C. Failure to comply with the requirements listed in this section shall be considered as an Interruption of Public Services and shall be subject to the liquidated damages for Interruption of Public Services outlined in Document 00 52 00 – Agreement, Article 2.4, Paragraph A.3.

1.7 CONTRACTOR USE OF PROJECT SITE

- A. The CONTRACTOR's use of the project site shall be limited to its construction operations within the construction work zone. This includes on-site storage of materials, on-site fabrication facilities, and field offices. Storage of project materials will not be permitted on public streets outside of the construction work zone.

1.8 OWNER USE OF THE PROJECT SITE

- A. The CONTRACTOR shall cooperate and coordinate with the OWNER to facilitate the OWNER's operations and to minimize interference with the CONTRACTOR's operations at the same time. In any event, the OWNER shall be allowed access to the project site during the period of construction.

1.9 STORM WATER POLLUTION PREVENTION

- A. The CONTRACTOR shall be responsible for implementation of Best Management Practices for the project to eliminate illicit discharge into the Storm Water System. The CONTRACTOR shall be responsible to follow the guidelines of the OWNER's Standard Operating Procedure #45 – Overlays and Patching. See Schedule B.

1.10 PUBLIC NOTICING

- A. The CONTRACTOR shall provide a Public Relations Plan for the project and submit the plan to the OWNER at the pre-construction conference for approval. The Public Relations Plan shall address the following minimum requirements:
 - 1. The CONTRACTOR shall provide a Public Relations Supervisor who is responsible for interfacing with the public throughout the project and resolving complaints and concerns of property/business owners and the public in general. The name and qualifications of the Public Relations Supervisor shall be identified in the Public Relations Plan and shall be presented to the ENGINEER at the pre-construction conference. The Public Relations Supervisor shall:
 - a. Be listed with name and phone number on all project flyers, notifications, and project signs.
 - b. Have a 24-hour access phone number to respond to construction complaints.
 - c. Have the authority to direct the work as required to resolve concerns and complaints.
 - d. Provide an updated progress schedule to the ENGINEER on a bi-weekly basis.
 - e. Provide an updated long-term progress schedule to the ENGINEER with each pay request.
 - f. Ensure all notifications to adjacent property owners and any connecting dead end streets are made as described in the Contract Documents.
 - g. Within 60 minutes of being notified, contact any property owners who have called with complaints or expressed concerns.
 - h. Resolve all complaints and expressed concerns within 24 hours.
 - i. Follow-up with individuals or entities making complaints 24 hours after resolution to ensure that satisfactory results were obtained.
 - j. Document all complaints in a public relations log, including name, address, and contact information for the individual or entity, date and time of initial notification, nature of complaint, actions taken to resolve the complaint, date and time of complaint resolution, and the date and time of follow-up actions.

- k. Provide an updated copy of the public relations log to the ENGINEER on a bi-weekly basis.
- 2. Failure to comply with the approved Public Relations Plan shall be considered grounds for project suspension per Article 15.1 of the General Conditions (APWA Document 00 72 00).

END OF SECTION

**SECTION 32 12 05S
BITUMINOUS CONCRETE**

Delete section 32 12 05 and replace with the following:

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Composition of a bituminous concrete mix.

1.2 REFERENCES

A. AASHTO Standards:

- M323 Superpave Volumetric Mix Design, Single User Digital Publication
R18 Standard Recommended Practice for Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
R30 Mixture Conditioning of Hot-Mix Asphalt (HMA)
T324 Hamburg Wheel-Track Testing of Compacted Hot-Mix Asphalt (HMA)

B. AI Standards:

- MS-2 Asphalt Mix Design Methods.

C. ASTM Standards:

- C29 Unit Weight and Voids in Aggregate.
C88 Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
C117 Materials Finer Than 0.075mm (No. 200) Sieve in Mineral Aggregates by Washing.
C131 Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
C136 Standard Method for Sieve Analysis of Fine and Coarse Aggregate.
C142 Clay Lumps and Friable Particles in Aggregates.
D75 Sampling Aggregates.
D140 Sampling Bituminous Materials.
D242 Mineral Filler for Bituminous Paving Mixtures.
D979 Sampling Bituminous Paving Mixtures.
D995 Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
D2041 Theoretical Maximum Specific Gravity of Bituminous Paving Mixtures.
D2419 Sand Equivalent Value of Soils and Fine Aggregate.
D3203 Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures.
D3515 Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
D3665 Random Sampling of Construction Materials.
D3666 Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials.
D4318 Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
D4552 Classifying Hot-Mix Recycling Agents.
D4791 Flat or Elongated Particles in Coarse Aggregate.
T283 Effect of Moisture on Asphalt Concrete Paving Mixtures.
D5444 Mechanical Size Analysis of Extracted Aggregate.
D5821 Determining the Percentage of Fractured Particles in Coarse Aggregate.
D6307 Determining Asphalt Content of Hot-Mix Asphalt by Ignition Method.
D6373 Performance Graded Asphalt Binder.

1.3 DEFINITIONS

- A. **Mix Designator:** An alphanumeric code that identifies binder grade, aggregate grade, and compaction level for a bituminous concrete mix. For example.

- *PG64-34, SP-1/2, 75Nd*: PG64-34 is a Performance Graded Asphalt Binder. SP-1/2 is the aggregate gradation. 75Nd is the compaction level using Superpave mix design process.

B. Bituminous Binder: A graded bituminous cement composed of any of several viscous or solid mixtures of hydrocarbons and their nitrogen and sulfur derivatives, whose combined properties meet a defined standard.

1. Virgin Asphalt Binder: A refined or manufactured bituminous cement known as performance graded asphalt binder (PG or PGAB).
2. Recycled Asphalt Binder: A bituminous cement contained in recycled asphalt pavement known as performance graded asphalt binder (PG or PGAB).

C. Mean of Deviations: Defined in Section 32 11 23.

D. Nominal Maximum Size: One sieve size larger than first sieve size retaining more than 10 percent of the Sample. One hundred percent of the aggregate might be able to pass through the nominal maximum size sieve but not more than 10 percent will be retained on the sieve below. The **maximum size** sieve will be one (1) sieve size larger than the nominal maximum size.

E. RAP: Acronym for reclaimed asphalt pavement. A granular product recovered from a bituminous pavement containing aggregate and an Asphalt Binder.

F. Quality Control: Sampling, testing and inspection efforts performed by the Contractor to control the mix production and placement operations. Locations, times, practices and personnel (other than Lab AMRL Accreditation and minimum requirements in Article 3.3) are the contractor's decision.

1. Requirements for Quality Control that may/will be used in acceptance decisions will be defined by the Owner in Section 32 12 05S - Project Specific Surfacing Requirements.

G. Quality Assurance: Sampling, testing and inspection efforts, and personnel/laboratory qualifications that are utilized by the Owner to verify compliance of the mix production and placement with specifications. Locations, times, practices and personnel are at the Owner's decision.

1.4 SUBMITTALS

A. General:

1. Pre-approved Mix Design: Submit name and address of Supplier.
2. Allow ENGINEER 10 days to evaluate mixing equipment and mix design submittals.
3. Once a mix design is accepted, a new mix design submittal is required if the following occurs.
 - a. Asphalt Binder grade is changed.
 - b. Aggregate source is changed. When this occurs, submit a physical properties report on the proposed aggregates.

B. Quality Assurance:

1. Certified Laboratory: Submit names, certification levels, and years of experience of Quality Control field technicians that are assigned to the Work. Verify laboratory complies with ASTM D3666 or AASHTO R-18, and follows Section 01 45 00 requirements.
2. Mix Production Equipment: Submit verification by an individual acceptable to ENGINEER, that plant equipment complies with requirements of ASTM D995.
3. Testing Report: Submit a report of source quality control testing performed by CONTRACTOR and Suppliers.
4. Testing Report: Submit Quality Control data to the ENGINEER within three (3) working days after completion of each day of paving or prior to the start of the next paving day, whichever is sooner.
5. Plant Production Report: Submit daily plant production records to the Engineer within one (1) working day after completion of each day of paving and prior to the start of the next paving day.
 - a. Plant report must include weights of all individual aggregates, bitumens, water and other additives incorporated in mix, including RAP, lime, mineral filler, fiber or other additives.

C. Mix Design: Submit the following.

1. Date of mix design. If the date is not from the current paving season (calendar year), the mix design is deemed invalid and 1) must be accompanied with a letter from the Asphalt Supplier certifying that the mix design is still valid for the current paving season, or 2) a new mix design must be substituted.
 - a. Mix designs dated prior to the previous paving season are invalid.
 - b. Mix designs are invalid if aggregate source or binder grade are changed.
 - c. Invalidated mix designs must be revalidated for volumetric properties (minimum 4 pucks), or a replaced with a new mix design.

2. Binder source type, and grade. Disclose if RAP is used in the mix.
3. Optimum compaction temperature at the project site.
4. Theoretical maximum specific gravity.
5. Compaction density at design target air voids.
6. Target Grading Curve for aggregate.
7. Binder target percentage, dust to binder ratio, and the following:
 - a. Voids in the mineral aggregate (VMA)
 - b. Voids filled with Asphalt (Bituminous Binder) also known as VFA
 - c. Hamburg Wheel Tracker results.
8. Percentages of 1) mineral filler, 2) anti-strip (if required), 3) reclaimed bituminous pavement (RAP), 4) recycle agent in the mix, and 5) virgin aggregate.
9. Aggregate physical properties (this section article 2.2). The information is for suitability of source and not for project control. A new report may be required if aggregate source is changed. Test results shall not be older than two (2) calendar years from the date of submission.

1.5 MATERIALS QUALITY

- A. Do not change aggregate source or binder grade until ENGINEER accepts new grades and new or revalidated mix design.
- B. HMA Mixing Plant: Capable of meeting ASTM D995 requirements or use UDOT Qualified Plant.
- C. Perform Quality Control efforts in accordance with Article 3.3 of this specification.
 1. Submit Quality Control data to the ENGINEER. Submit data within three (3) working days after completion of each day of paving or prior to the start of the next paving day, whichever is sooner.

1.6 ACCEPTANCE

A. General:

1. Acceptance is by Lot. One (1) Lot is one (1) days' production. At ENGINEER's discretion and in concurrence with the contractor, multiple small lots may be combined into one lot. Obtain concurrence prior to placement of lots.
2. If non-complying material has been installed and no price for the material is specified, apply pay adjustment against cost of work requiring material as part of its installation, Section 01 29 00.
3. If test results are not within this section's limits, options include correction of production procedures or production of an alternate mix design acceptable to ENGINEER.
4. Observation of CONTRACTOR's field quality control testing does not constitute acceptance. Such testing; however, may be used by ENGINEER for acceptance if requirements in Section 01 35 10 are met.

B. Mix Sampling and Testing:

1. Sub-lot size is 500 tons or part thereof.
2. Sampling Protocol: ASTM D3665 and ASTM D979. Collect at least one (1) random Sample per sub-lot from behind paver and before compaction. For placements with a design thickness of 2 inches or less, samples may be taken at the plant. Any sample collected because of non-uniform appearance shall not be used in determining a pay factor for the Lot.
 - a. Sampling binder, ASTM D140. At owner's request, take 1 qt sample and provide to owner's representative.
3. Testing Protocol (Performed by OWNER's Quality Assurance Organization):
 - a. Project Less than 1000 tons – At OWNER's discretion, mix samples will be compacted in the laboratory and tested for:
 - 1) Binder content, ASTM D6307.
 - 2) Aggregate gradation, ASTM D5444.
 - 3) Maximum Specific Gravity (Rice), ASTM D2041
 - b. Project greater than 1000 tons - Mix samples will be compacted in the laboratory and tested for:
 - 1) Air voids, ASTM D3203.
 - 2) Voids in the mineral aggregate, AI MS 2.
 - 3) Binder content, ASTM D6307.
 - 4) Aggregate gradation, ASTM D5444.
 - 5) Maximum Specific Gravity (Rice), ASTM D2041

4. Reporting: Quality Assurance organization will provide the contractor with acceptance results within three (3) working days after completion of each day of paving, or prior to the start of the next paving day, whichever is sooner.
- C. **Lot Acceptance:** A Lot is acceptable if binder content and aggregate gradation test average deviations are within pay factor 1.00 limits in Table 1 and no sub-lot deviation exceeds 0.85 pay factor limit.
- D. **Un-Accepted Lots:** At the ENGINEER's discretion, a lot with an average deviation that does not meet 1.00 pay factor and does not have a sub-lot test deviation greater than pay factor 0.85 limits may be accepted with a pay factor in accordance with Table 1.
 1. Lots with a pay factor lower than 0.85 or with a sub-lot with a test deviation greater than the pay factor 0.85 limits, and with ENGINEER and CONTRACTOR concurrence, are subject to an Engineering Analysis.

Table 1 – Pay Factors					
Criteria	Pay Factor	Range of Mean of Deviations of Tests Results in Percentage Points from Binder and Gradation Targets			
		500 Tons	1,000 Tons	1,500 Tons	≥ 2,000 Tons
Binder Content	1.00	0.0 – 0.46	0.0 – 0.41	0.0 – 0.38	0.0 – 0.35
	0.95	0.47 – 0.58	0.42 – 0.52	0.53 – 0.58	0.47 – 0.52
	0.90	0.59 – 0.64	0.53 – 0.56	0.59 – 0.64	0.53 – 0.56
	0.85	0.65 – 0.69	0.57 – 0.61	0.65 – 0.69	0.57 – 0.61
Nominal Sieve	1.00	0.0 – 6.3	0.0 – 5.6	0.0 – 5.3	0.0 – 5.0
	0.95	6.4 – 7.9	5.7 – 7.0	5.4 – 7.9	5.1 – 7.0
	0.90	8.0 – 8.7	7.1 – 7.7	8.0 – 8.7	7.1 – 7.7
	0.85	8.8 – 9.5	7.8 – 8.4	8.8 – 9.5	7.8 – 8.4
No. 8 Sieve	1.00	0.0 – 4.8	0.0 – 4.3	0.0 – 4.0	0.0 – 3.8
	0.95	4.9 – 6.0	4.4 – 5.3	4.1 – 5.0	3.9 – 4.3
	0.90	6.1 – 6.6	5.4 – 5.8	5.1 – 5.6	4.4 – 4.8
	0.85	6.7 – 7.2	5.9 – 6.4	5.7 – 6.2	4.9 – 5.4
No. 50 Sieve	1.00	0.0 – 3.8	0.0 – 3.3	0.0 – 3.0	0.0 – 2.8
	0.95	3.9 – 5.0	3.4 – 4.3	3.1 – 4.0	2.9 – 3.3
	0.90	5.1 – 5.6	4.4 – 4.8	4.1 – 4.6	3.4 – 3.8
	0.85	5.7 – 6.2	4.9 – 5.4	4.7 – 5.2	3.9 – 4.4
No. 200 Sieve	1.00	0.0 – 2.0	0.0 – 1.8	0.0 – 1.8	0.0 – 1.8
	0.95	2.1 – 2.4	1.9 – 2.2	1.9 – 2.2	1.9 – 2.2
	0.90	2.5 – 2.7	2.3 – 2.4	2.3 – 2.4	2.3 – 2.4
	0.85	2.8 – 3.0	2.5 – 2.6	2.5 – 2.6	2.5 – 2.6
NOTES					
(a) Test binder content using a burn-off oven, ASTM D6307.					
(b) Determine aggregate gradation by extraction, ASTM D5444.					

E. **Engineering Analysis:**

1. Submit an Engineering Analysis, performed and stamped by a Utah Registered Professional Engineer or Mix Supplier QC Manager with commensurate experience in materials and pavements performance, for approval within one (1) week of receipt of test results or at least 24 hours before performing any work that may prevent the evaluation, correction, or removal of the lot in question.
2. Include information, engineering analysis, statistical analysis, and test results related to the dispute.
 - a. Reasons for disputing the acceptance or verification test results.
 - b. The CONTRACTOR's project quality control test results, including any split sample test results.
 - 1) Test results must be from a UDOT qualified laboratory using UDOT qualified technicians, or results must be verified and certified (stamped) by a Utah Registered Professional Engineer.
 - 2) Include all supporting test data and calculations for reported values.
 - c. Successful laboratory correlation information when required by material specification.
 - d. Statistical analysis or identification of potential outliers.
 - e. Procedures or issues leading to disputed acceptance test results.

F. **Installation:** See Section 32 12 16.13 acceptance requirements.

PART 2 PRODUCTS

2.1 BINDER

A. **Performance Graded Asphalt Binder (PGAB):** See ASTM D6373.

1. Use the following minimum binder grades unless otherwise specified. Adjust virgin binder grade to accommodate RAP contents in excess of 15% as identified in Table 2. Do not use grades lower than xx-34.
 - a. Use M323 Appendix X1 Blending chart to determine acceptable RAP content up to maximum allowed based on virgin binder grade selected or additives incorporated. Submit RAP binder grading and blending charts with mix design.

Table 2 – Minimum Virgin Binder Grade		
	Elevation	
Road Class	Above 4000 Feet	Below 4000 Feet
Class I & II	PG 58-28	PG 64-22
	PG 64-34 (>15% RAP)	PG 58-28 (>15% RAP)
Class III	PG 64-34	PG 70-28
	(Up to 30% RAP)	PG 64-34 (>15% RAP)
Notes: A. Virgin Binder grade is the grade of asphalt binder received from binder supplier and added to the mix. Design Binder grade is the grade of virgin asphalt binder specified when using 15% or less RAP. Resultant Binder grade is the resultant grade of binder in the mix based on blending of virgin binder and RAP binder grades. B. Use of Virgin or grades exceeding minimum Virgin grade is acceptable.		

2.2 AGGREGATE

- A. Crushed stone, crushed gravel, slag, sand, or combination.
- B. Use Table 3 to determine suitability of aggregate source.

Table 3 – Aggregate Physical Properties				
		Standard	Road Class	
			I & II	III
Coarse Aggregate				
Angularity, percent, minimum	One Fractured face	D5821	90	95
	Two Fractured faces		90	90
Wear (hardness or toughness), percent, maximum		C131	35	35
Flats or elongates (3:1 length to width), percent, maximum		D4791	--	20
Fine Aggregate				
Angularity (uncompacted void content), percent, minimum		T304	40	45
Sand equivalent, percent, minimum		D2419	45	60
Plastic limit, maximum		D4318	0	0
Blended Physical Properties				
Dry-rodded Unit Weight, lb/ft³, minimum		C29	75	75
Weight Loss (Soundness), percent, maximum		C88	16	16
Friable particles, percent, maximum		C142	2	2
NOTES				
(a) Road Class is defined in the Bid Schedule.				
(b) Course aggregate does not pass No. 4 sieve. Fine aggregate does pass.				
(c) Angularity is determined by weight.				
(d) Wear of aggregate may have higher values if aggregate source is known to have higher values.				
(e) Sand equivalent is waived for RAP or ROSP aggregate but applies to the remainder of the aggregate blend.				
(f) Plastic limit, passing No. 40 sieve. Aggregate is non-plastic even when filler material is added to the aggregate.				
(g) Weight loss, using sodium sulfate.				
(g) Friable particles are clay lumps, shale, wood, mica, coal passing the No. 4 sieve, and other deleterious materials.				

2.3 ADDITIVES

- A. Mineral Filler: ASTM D242.
- B. Recycle Agent: ASTM D4552.
- C. Anti-strip Agent: Heat stable cement slurry, lime slurry, or chemical liquid as required to meet TSR or Hamburg test requirements.

D. RAP: Free of detrimental quantities of deleterious materials.

1. Allowed up to 15 percent by weight of RAP or binder, whichever is lesser, with no change in virgin binder grade.
2. ~~Allowed from 15 to 30 percent by weight of RAP or binder, whichever is lesser, if the virgin binder grade is adjusted according to Table 2 or according to AASHTO M323 to meet the design binder grade.~~
3. Determine RAP binder content by chemical extraction.

2.4 MIX DESIGN

A. Preparation:

1. Mix Designator and Road Class: Class as defined by the Bid Schedule.
2. Use paragraph 1.4C to determine submittal requirements.

B. **Aggregate Gradation:** See Table 4. The Target Gradation Curve for the specified aggregate grade must lie within the Master Grading Band limits. The target grading band limits for the Target Grading Curve are the appropriate grading limits for pay factor 1.00 in Table 1. The target grading band limits are allowed to extend outside of the Master Grading Band limits.

1. Use SP-1/2 unless otherwise identified.

Table 4 - Master Grading Bands - Superpave Mix Design		
Sieve	Gradation Limits of Target Gradation	
	SP-1/2	SP-3/8
1 inch	—	—
3/4 inch	100.0	—
1/2 inch	90.0 – 100.0	100.0
3/8 inch	< 90	90.0 – 100.0
No. 4	—	< 90
No. 8	28.0 – 58.0	32.0 – 67.0
No. 200	2.0 – 10.0	2.0 – 10.0
NOTES		
(a) Gradation is expressed in percent passing by weight per ASTM C136. Percentage of fines passing No. 200 sieve determined by washing per ASTM C117.		
(b) The alpha portion of the grade designator (SP) represents Superpave mix. The numerical portion (1/2, 3/8) represents the nominal maximum sieve size.		

D. **Design Parameters:** Determined by AI MS-2 and in accordance with Table 5.

Table 5 - Mix Design Parameters		
	SuperPave	
Compaction Level	Road Class I/II	50Nd
	Road Class III	75Nd
Design Air Void Target, percent (b)	3.5	
Voids in Mineral Aggregate (VMA) relative to nominal sieve size grading and calculated using Gsb(dry), percent, minimum	ASTM D3203	
	Nominal Grading	
Road Class II/III	1/2	14.2
Road Class I	3/8	15.2
RAP specific gravity for calculations	Gsb (dry) by chemical extraction	
Dust to Binder Ratio, maximum	1.6	
Tensile Strength Ratio (moisture sensitivity), minimum (c,e)	AASHTO T283	
Road Class I	80%	
Rutting (Hamburg Rut Test) (a,d,e)	AASHTO T324	
Road Class II	15 mm/10,000 passes	
Road Class III	10 mm/20,000 passes	
NOTES		
(a) Road Class is defined in Section 32 01 31.		
(b) Design Density Target: See ASTM D2041 T209. Percent of maximum theoretical specific gravity.		

- (c) Tensile Strength Ratio (moisture sensitivity): Use one cycle of Freeze-thaw conditioning. Compact test specimen to seven (7) percent plus or minus one (1) percent air voids.
- (d) With testing performed at temperatures representing the specified binder grade in the Hamburg rut test, the average rut depth of two (2) mix design test samples is less than the amount shown for the respective Road Classes.

PART 3 EXECUTION

3.1 CONSTRUCTION EQUIPMENT

- A. Mixing Plant: Capable of meeting ASTM D995 or UDOT Qualified Plant. Provide:
 - 1. Positive means to determine the moisture content of aggregate.
 - 2. Positive means to sample all material components.
 - 3. Sensors to measure the temperature of the mix at discharge.
 - 4. Ability to maintain discharge temperature of mix.
 - 5. Capability of maintaining plus or minus five (5) percent tolerance on component percentages in final mix.
 - 6. Ability to document control efforts.

3.2 INSTALLATION

- A. Pavement placement, Section 32 12 16.13.
- B. Pavement restoration, Section 33 05 25

3.3 QUALITY CONTROL

- A. For all projects, test temperature of mix placed in the transport vehicle at the production plant.
 - a. Reject mixes exceeding the limits identified in the mix design.
- B. For projects requiring testing, collect mix samples randomly from the plant (from truck or hot-drop) or the field (windrow or behind paver), ASTM D3665.
 - 1. Sampling bituminous paving mixture, ASTM D979, minimum one sample per sub-lot.
- C. For projects less than 500 tons, provide one of the following:
 - 1. Plant Report; or
 - 2. Test results for binder content and combined gradation of mix
- D. For projects between 500 and 1500 tons, provide the following:
 - 1. Combined aggregate gradation in the mix, ASTM D5444.
 - 2. Binder content in the mix, ASTM D6307.
 - 3. Maximum Specific Gravity (Rice), ASTM D2041.
- E. For projects greater than 1500 tons, provide the following:
 - 1. Combined aggregate gradation in the mix, ASTM D5444.
 - 2. Binder content in the mix, ASTM D6307.
 - 3. Air voids, ASTM D3203.
 - 4. Voids in the mineral aggregate, AI MS 2.
 - 5. Maximum Specific Gravity (Rice), ASTM D2041.
- F. Warm Mix Testing: When rutting or moisture susceptibility tests are required on warm mix produced at temperatures below 275 deg F, condition the warm mix material before testing for two (2) hours at design mixing temperature plus or minus five (5) deg F per AASHTO R30 (short term aging). The material may be cooled to room temperature before conditioning.

END OF SECTION

SECTION 32 12 16.13
PLANT-MIX BITUMINOUS PAVING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Place a bituminous concrete pavement base course, leveling course, surface course, overlay course, or an inlay course.

1.2 REFERENCES

A. AASHTO Standards:

- | | |
|------|--|
| R9 | Acceptance Sampling Plans for Highway Construction. |
| P68 | Bulk Specific Gravity and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method. |
| T324 | Hamburg Wheel-Track Testing of Compacted Hot-Mix Asphalt (HMA). |

B. ASTM Standards:

- | | |
|-------|--|
| D979 | Sampling Bituminous Paving Mixtures. |
| D1188 | Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples. |
| D2041 | Theoretical Maximum Specific Gravity of Bituminous Paving Mixtures. |
| D2726 | Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures. |
| D2950 | Density of Bituminous Concrete in Place by Nuclear Method. |
| D3549 | Thickness or Height of Compacted Bituminous Paving Mixture Specimens. |
| D3665 | Random Sampling of Construction Materials. |
| D5361 | Sampling Compacted Bituminous Mixtures for Laboratory Testing. |
| D6927 | Marshall Stability and flow of Bituminous Mixtures. |

1.3 DEFINITIONS

- A. Must Grind: Defined in Section 32 01 31.
- B. Road Class: Defined in Section 32 01 31

1.4 SUBMITTALS

- A. Bituminous Concrete Mix Design, Section 32 12 05

B. Before Delivery: Submit 48 hours before delivery:

1. Materials Quality Data, this section Article 1.5
2. Traffic control plan, Section 01 55 26.
3. Manufacturer's certificate of compliance for paving geotextiles. (Refer to Section 31 05 19).
4. Certification of profilograph and profilograph operator.
5. Cold weather paving plan.

- C. **At Delivery:** For each batch delivered to site provide a paper or electronic (e-ticket) delivery ticket with the following:

1. Date and project description.
2. Producer and plant.
3. Name of contractor.
4. Serial number of ticket.
5. Mix identification number or code.
6. Truck number and time dispatched.
7. Weight of mix delivered.

D. **After Placement:**

1. **Quality Control Test Report:** If required by Section 32 12 05S, submit density and thickness Quality Control data to the Engineer within 3 working days after completion of each day of paving or prior to the start of the next paving day, whichever is sooner.
2. **After Placement:** Before final payment submit summary report describing profile deviation and profile roughness. Section 32 01 31.

1.5 **MATERIALS QUALITY**

- A. Do not change aggregate source or binder grade until ENGINEER accepts new source and new mix design.
- B. Reject product and work that does not meet requirements of this Section.
- C. Remove product found defective after installation and install acceptable product at no additional cost to OWNER.
- D. Foreman of paving crew has completed at least three (3) projects of similar size and nature.
- E. For all equipment and hand tools used to mix, haul, and place the bituminous concrete, use a release agent that does not dissolve asphalt and is acceptable to ENGINEER.

1.6 **WEATHER**

- A. Temperature:
 1. April 15 to October 15: Place pavement when air temperature in the shade and the roadway surface temperature are above 50 deg F. The ENGINEER determines may provide written approval if it is acceptable to place outside of this temperature limit.
 2. Before April 15 and After October 15: Provide a Cold Weather Paving Plan. ENGINEER must accept the plan before proceeding. Include the following details.
 - a. Haul details.
 - b. Placement details.
 - c. Compaction aids used in production.
 - d. Additional equipment and procedures for achieving compaction.
 - e. Coordination procedure for acceptance testing.
- B. Moisture: Do not place on frozen base, during adverse climatic conditions such as precipitation, or when roadway surface is wet or icy.

1.7 **NOTICE**

- A. Follow Laws and Regulations concerning when and to whom notices are to be given. Send written notice at least three (3) days before start of paving.
- B. Indicate paving time and when new surface can be used.
- C. Warn of potential vehicle tow away and other construction issues affecting neighborhood.
- D. Should work not occur on specified day, send a new notice.

1.8 **ACCEPTANCE**

- A. **General:**
 1. Acceptance is by Lot.
 2. If non-complying material has been installed and no price for the material is specified, apply pay adjustment against cost of work requiring complying material as part of its installation, Section 01 29 00.
 3. Dispute resolution, Section 01 35 10.
 4. Opening a paved surface to traffic does not constitute acceptance.
 5. Observation of CONTRACTOR's field quality control testing does not constitute acceptance. Such testing; however, may be used by ENGINEER for acceptance if requirements of Section 01 35 10 are met.
- B. **Mix Material:** Accepted as specified for bituminous concrete, Section 32 12 05, or rubberized asphalt concrete, Section 32 12 08.
- C. **Mix Temperature at Site:**
 1. Reject mixes in the transport material exceeding the limits identified in the mix design.
 - a. Use calibrated temperature probes for rejection of mix. Use temperature guns for

quick approximate temperature readings only.

2. Dispose of cold mix in paver hopper as thin spread underlay.
- D. **Grade, Cross Slope:** Perform minimum one grade and one cross-slope check per sub-lot.
- E. **Compaction:** Options for acceptance are 1) core density, 2) non-destructive test density, or 3) control strip density with visual observation. Use core density unless specified elsewhere. A Lot is acceptable if density test average is within pay factor 1.00 limits and no test is below Lowest Test limit. For remediated sublots, include remediated sub-lot tests in Lot evaluation.
 1. Un-Accepted Lots: At the Engineer's discretion, a lot with an average deviation that does not meet 1.00 pay factor and does not have a sub-lot test deviation greater than pay factor 0.80 limits may be accepted with a pay factor in accordance with Table 1.
 - a. Lots with a matt pay factor lower than 0.80 or with a sub-lot with a test deviation greater than the pay factor 0.80 limits, and with Engineer and Contractor concurrence, are subject to an Engineering Analysis.

Table 1 – Compaction Pay Factors				
Pay Factor	Matt Density, in Percent Relative to ASTM D2041 (a)		Joint Density, in Percent Relative to ASTM D2041 (a) (d)	
	Average	Lowest Test	Average	Relative to Matt Density (b)
0.80	More than 98.0	–	More than 98.0	–
1.00	93.0 to 98.0	90.0 or greater	91.0 to 98.0	Less than 2.0%
0.90	93.0 to 98.0	Less than 90.0	91.0 to 98.0	More than 2.0%
0.80	Less than 93.0	90.0 or greater	Less than 91.0	Less than 2.0%
Eng. Analysis	Less than 93.0	Less than 90.0	Less than 91.0	More than 2.0%
Notes:				
(a) For overlay design thicknesses of less than 2.0", matt density targets are reduced by 1% and no joint density cores are taken.				
(b) Difference based on actual subplot mat density and subplot core density values.				
(c) Report and calculate all density values to 0.1%.				
(d) A paving Joint is defined as a longitudinal seam between two adjacent passes of asphalt placed during the project, and where the initial pass cools below 180 deg F prior to placement of the adjacent pass. Do not take Joint cores where the "Joint" is comprised of existing asphalt or concrete. Use 6" diameter cores for joint density determination.				

1. **Core Density:** This method compares the average density of cores extracted from a pavement surface to maximum theoretical density:
 - a. Lot Size: One (1) day production with 1,000 square yard sub-lots or part thereof.
 <500 T, use Nuke with Coring for Dispute
 500-1000 – 4 cores
 1000-1500 – 6 cores
 1500+ - 8 cores
 - b. Sampling Protocol: Use ASTM D3665 to randomly select in each sub-lot at least one (1) surface test location. Samples are full depth or overlay depth in overlay construction.
 - c. Sampling Protocol: Use ASTM D3665 to randomly select in a total of three (3) longitudinal joint test locations. Samples are full depth or overlay depth in overlay construction.
 - no cores for less than 250 feet of joint in one day.
 - d. Testing Protocol: ASTM D2726 for core density and ASTM D2041 (Rice) for maximum theoretical density.
2. **Non-Destructive Density Testing by Electronic Gauge:**
 - a. Lot Size: One (1) day production with 1,000 square yard sub-lots or part thereof.
 - b. Sampling Protocol: Use ASTM D3665 to randomly select in each sub-lot at least one (1) surface test location and one (1) longitudinal joint test location.

- c. Testing Protocol: ASTM D2950 (nuclear gauge) or AASHTO TP68 (non-nuclear gauge) and ASTM D2041 (Rice) for maximum theoretical density. A non-destructive test is the average of two (2) test samples at each test location with a minimum 90 degree offset between test samples using mix correlated gauges. Use minimum 30 second count with Nuclear Gauge.

3. **Compaction Dispute Resolution:**

- a. Submit an Engineering Analysis for approval within one week of receipt of test results or at least 24 hours before performing any work that may prevent the evaluation, correction, or removal of the lot in question.
 - b. Include information, engineering analysis, statistical analysis, and test results related to the dispute.
 1. Reasons for disputing the acceptance or verification test results.
 2. The Contractor's project quality control test results, including any split sample test results.
 - a) Test results must be from a UDOT qualified laboratory using UDOT qualified technicians, or results must be verified and certified (stamped) by a Utah Registered Professional Engineer.
 - b) Include all supporting test data and calculations for reported values.
 3. Successful laboratory correlation information when required by material specification.
 4. Statistical analysis or identification of potential outliers.
 5. Procedures or issues leading to disputed acceptance test results.
3. Provide recommended corrective measures or adjusted pay factor based on engineering evaluation based on durability and serviceability relative to the specified product requirements, including expected performance compared to design life.

F. **Thickness:** A Lot is acceptable if average of test deficiencies, applied to the total design thickness, is within pay factor 1.00 limits and no sublot or individual test below 0.90 pay factor.

1. Un-Accepted Lots: At the Engineer's discretion, a lot with an average deviation that does not meet 1.00 pay factor and does not have a sub-lot test deviation greater than pay factor 0.90 limits may be accepted with a pay factor in accordance with Table 2.
 - a. Lots with a pay factor lower than 0.90 or with a sub-lot with a test deviation greater than the pay factor 0.90 limits, and with Engineer and Contractor concurrence, are subject to an Engineering Analysis.

Note: Can we absolve paving contractor thickness limitations if the base course cannot be demonstrated as accepted for grade and compaction?

How do we force the issue back to the proper person? (Engineer or owner or developer)

Table 2 – Thickness Pay Factor		
Pay Factors	Deficiency Limits, in Inches	
	Design Thickness < 4 Inches	Design Thickness ≥ 4 Inches
1.00	0.00 to 0.10	0.00 to 0.25
0.90	0.10 to 0.25	0.25 to 0.375
Remediate	>0.25	>0.375

2. **Lot Size:** One (1) day production with 1,000 square yard sub-lots or part thereof.
3. **Sampling Protocol:** Use ASTM D3665 to randomly select at least one surface test location and one longitudinal joint test location in each sub-lot. Samples are full depth. Overlay construction measured only on overlay portion of core sample. Use one of the following methods for thickness determination:
 - a. Density Cores

- b. Probe of uncooled mix – perform between intermediate and final rolling operations.
- c. Ground Penetrating Radar (not applicable to overlay applications).
 - 1) Perform GPR evaluation by scanning and recording depth for full-width of the pavement at one random location for each subplot. Engineer will mark locations for scans. Measure HMA thickness every 6 inches on the recorded scan. Calculate the average thickness, and the percentage of the thickness below each of the tolerance levels described below.

4. **Testing Protocol:** ASTM D3549:

- a. Minimum Specified Thickness (Cores or Probes): A Lot specified to have minimum thickness will be accepted if all sub-lot measurements meet or exceed minimum.
 - 1) Cores not meeting full payment will be provided to the Contractor for verification of measurements.
 - 2) If thickness is deficient, additional material may be placed over the deficient thickness if rotomilling is utilized for edge tie-in; placement matches this section's thickness tolerance; surface continues to drain; and roughness tolerance is met.
- b. Actual Specified Thickness (Cores or Probes): A Lot specified to have actual thickness is acceptable if any sub-lot measurement does not exceed deficiency limits for thickness pay factor 1.00.
- c. A lot is accepted for thickness based on GPR evaluation when:
 - 1) The average thickness of all scans is not more than $\frac{1}{4}$ inch less than the total thickness specified.
 - 2) No individual scan shows a deficient thickness of more than $\frac{3}{8}$ inch for more than 5% of any scan.

5. **Thickness Dispute Resolution:**

- a. CONTRACTOR:
 - 1) Hire an Independent Testing Agency, Section 01 45 00, or perform in the presence of Engineer (or their representative)
 - 2) Coring Option:
 - i. Take two (2) additional cores midway between deficient acceptance test locations, and midway between a deficient test location and the next adjacent acceptable test location.
 - ii. Patch core holes.
 - 3) Ground Penetrating Radar (GPR) Option:
 - i. Use GPR to determine extents of deficient area.
 - 4) Conduct testing at no additional cost to OWNER.
- b. ENGINEER:
 - 1) Graph deficient areas by plotting new cores and original cores, or GRP results, to define deficient areas assuming the following.
 - a) The graph represents the thickness of the pavement.
 - b) Thicknesses vary linearly along the pavement length from core depth to core depth.
 - c) The pavement is a constant depth in the transverse direction.
 - 2) Accept Lot at full pay if new information shows minimum of 95% of sub-lot area is in compliance, or
 - 3) Accept Lot at pay reduction using new test information, or
 - 4) Reject Lot.
- c. REJECT LOTS:
 - 1) Remediate reject thickness lots by adding additional thickness of bituminous concrete, adhering to all requirements of Sections 32 12 05

and 32 1216.13.

- 2) Utilize rotomilling as necessary to achieve proper cross-slope and elevations in relation to existing curb and gutter.

G. **Profile Roughness and Profile Deviation:** Section 32 01 31.

1.9 WARRANTY

- A. Joints at Street Fixtures and Portland Cement Concrete Flat Work: If wider than 1/2 inch before end of the correction period seal joints with asphalt rubber or rubberized asphalt; Section 32 01 17.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Bituminous concrete, Section 32 12 05.
- B. Rubberized asphalt concrete, Section 32 12 08.
- C. Tack coat, Section 32 12 13.13.
- D. Prime coat, Section 32 12 13.19.
- E. Paving geotextile, Section 31 05 19.
- F. Paving geogrid, Section 31 05 21.

PART 3 EXECUTION

3.1 CONSTRUCTION EQUIPMENT

- A. Paver Machine: Use track equipment when operating on fabrics, geogrids or pavement mats hotter than 180 deg F
- B. Compactors: Steel wheel static or vibratory. Use pneumatic tire roller for intermediate rolling only.

3.2 PREPARATION

- A. General:
 1. Locate and preserve utilities Section 01 31 13. Contact utility companies and other agencies, for dangerous concentration of combustible, flammable, or explosive matter.
 2. Lower Street Fixtures if paving machine is not capable of passing over the fixtures.
 3. Remove vegetation from cracks, edges and joints. Sweep surface clean. Blow cracks clean. Remove leaves.
 4. Fill cracks and fix Potholes, Section 32 01 17.
 5. Stabilize Portland cement concrete subgrade slabs.
- B. Traffic Control:
 1. Implement notification and traffic control plan requirements, Section 01 55 26. Do not proceed without certified flaggers.
 2. Apply temporary lane marking tape or paint after layout has been verified with ENGINEER.
- C. Aggregate Base Course:
 1. Do not pave on aggregate base course without confirmation, in writing, that the aggregate base course has been inspected and accepted by the project approving authority (Owner or Engineer)
 2. Do not pave on uncompacted or uneven base course. Placement over uneven base course will not be acceptable justification for thickness deficiencies.
 3. If indicated, follow Section 31 31 19 requirements for herbicide treatment or Section 32 12 13.19 for prime coat applications.

3.3 PROTECTION

- A. Trees, Plants, Ground Cover:
 - 1. Protect trees, plants and other ground cover from damage.
 - 2. Prune trees to allow equipment passage underneath, Section 32 01 93. Repair tree damage at no additional cost to OWNER.
- B. Protect all structures, including curb, gutter, sidewalks, guard rails and guide posts from physical damage. Remove spatter, over-coat, or mar.
- C. Do not discharge bituminous materials into borrow pits or gutters.
- D. Protect hot pavement from traffic until cool enough not to become marred.
- E. Remove saw-cut dust immediately. Protect neighborhood, storm drains and down-stream fish habitat.

3.4 TEMPORARY SURFACING

- A. Place, roll, maintain, remove and dispose of temporary Pavement surfaces.
- B. In sidewalk areas construct temporary pavements at least 1 inch thick and in all other areas at least two (2) inches thick. At major intersections and other critical locations a greater thickness may be required.

3.5 LINE AND GRADE CONTROL

- A. Provide necessary survey stakes for horizontal and vertical control.
- B. Furnish, place, and maintain supports, wire devices, and materials as required to provide continuous line and grade reference controls for placing pavement, matching existing pavement surfaces, etc.

3.6 FABRIC PLACEMENT

- A. Section 31 05 19.

3.7 PAVEMENT PLACEMENT

- A. General:
 - 1. Barricade off or eliminate fall off edges.
 - 2. Provide continuous forward paver movement so temperature 10 feet behind paver is as follows:
 - a. Warm Mix Placement: 200 deg F minimum.
 - b. Hot Mix Placement:

Table 3 – Minimum Pavement Temperature in Degrees F.						
Air Temperature Deg F	Compacted Mat Thickness					
	3/4"	1"	1-1/2"	2"	3"	4"+
45 – 50	–	–	–	–	280	265
50 - 59	–	–	–	280	270	255
60 - 69	–	–	285	275	265	250
70 - 79	285	285	280	270	265	250
80 - 89	280	275	270	265	260	250
90 +	275	270	265	260	250	250

- B. Overlays or Subsequent Lifts:
 - 1. Allow new base pavement or new inlay pavement to cure (harden) before placing overlays.
 - 2. Apply tack coat per Section 32 12 13.13 if inlay or sub-base Pavement surface is dirty or older than 24 hours.
- C. Irregular Areas: Handwork is acceptable if specified grade, slope, compaction and smoothness are achieved.
- D. Compaction:
 - 1. Test mix placement for density until a compaction pattern is acceptable to CONTRACTOR. Continue random quality control testing throughout placement.
 - 2. Do not over compact or under compact.
 - 3. Complete compaction before mix cools to uncompactable condition. Cease compaction

efforts if aggregate begins to fracture.

E. Joints:

1. Construct joints to industry standards for texture, density and smoothness. Construct upslope matt flush or above downslope matt. Meet transverse smoothness requirements.
2. Clean contact surfaces and apply tack coat. Ensure continuous bond between old and new pavements, or between successive day's work.
3. Offset longitudinal joints a minimum of 12 inches in succeeding courses and at least six (6) feet transversely to avoid a vertical joint through more than one course. In the top course restrict longitudinal joint to 1 foot either side of lane lines.
4. Prevent traffic, including construction traffic, from crossing vertical edges. Apply tack coat to vertical edges before making another pass with paver if mix has cooled to 90 deg F.

3.8 **QUALITY CONTROL – IF IDENTIFIED AS REQUIRED BY SECTION 32 12 05S**

A. Compaction

1. Use trained and experienced Density Technicians
 - a. Use technicians trained in the aspects of gauge operation and offsets, rolling patterns, mat temperature maintenance.
 - b. Use technicians that have controlled a minimum of 3 previous projects under the supervision of a UDOT TTQP certified (current certifications that cover sampling, density and field asphalt properties) technician.
2. Develop Rolling Pattern for achieving density using gauges (nuclear or non-nuclear) correlated to mix being supplied.
3. Perform systematic testing to verify full lot placement (length, width and joints) is in conformance with density requirements.
4. Do not substitute owner Quality Assurance activities for Quality Control. Owner QA activities may be used to correlate Quality Control activities and devices.

B. Thickness

1. Perform systematic depth determinations throughout each subplot. Determinations may be made on compacted mix, or on uncompacted mix with appropriate adjustment for compaction.
2. Perform a minimum of two depth determinations for each edge of paving pass and for center of paving pass for each subplot.

C. Submit Quality Control Documentation to Engineer within 72 hours of placement of Lot, or prior to any subsequent overlay, whichever is sooner.

3.9 **TOLERANCES**

A. Lift Thickness: If not indicated, meet the following tolerances.

Table 4 – Lift Thickness Tolerance (a)		
Mix	Minimum	Maximum
Bituminous Concrete	2.5 times <i>nominal</i> aggregate size	3.5 inches (b)
NOTES (a) Thickness is measured after compaction. (b) Maximum lift thickness may be exceeded if contractor can demonstrate ability to achieve consistent compaction from top to bottom of lift without breaking down aggregate. Determine compaction consistency by cutting a minimum of 3 random cores in half vertically and testing top and bottom half of cores. If density range between top half and bottom half of each core is equal to or less than 1%, compaction consistency is verified. If range exceeds 1%, placement must adhere to Maximum lift thickness requirement.		

B. Smoothness:

1. Parallel to Centerline: Section 32 01 31.

2. Cross Slope: 1/4 inch in 10 feet except at cross section grade breaks.

3.10 **SURFACE REPAIR**

- A. Repair ride disturbing or unsafe butt joints. Repair expense is at no additional cost to OWNER.
- B. If pavement smoothness is deficient, follow Section 32 01 31 repair requirements.
- C. Corrective Action for Profile Deviations ("Must Grinds"): Grinding is acceptable. See Section 32 01 26. Apply a fog seal over grind areas. See Section 32 01 13.50. If depressions cannot be corrected by grinding, remove and replace.
- D. Corrective Action for Profile Roughness Index: Grinding is acceptable. Re-profile corrected segments to verify ride index meets tolerance. Apply a fog seal over grind areas. See Section 32 01 13.50.
- E. When thickness is deficient, place additional material over deficient areas. DO NOT skin patch. Mill for inlay if necessary.
- F. Defective Joints, Seams, Edges: Repair.
- G. Unacceptable Paving: Remove and replace.

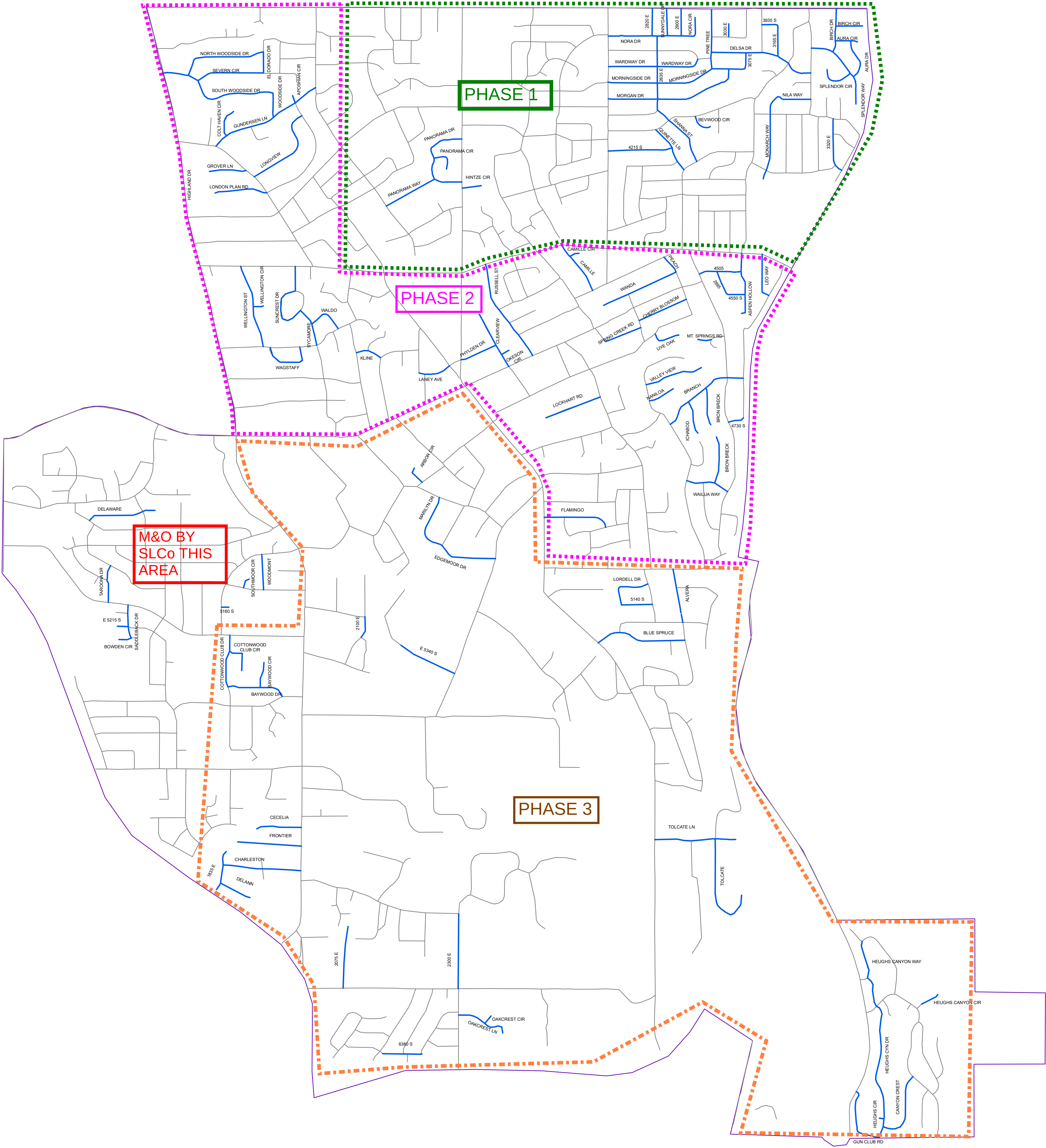
3.11 **OPENING TO TRAFFIC**

- A. Temperature of pavement surface is not more than 180 deg F

END OF SECTION

SCHEDULE A

STREET OVERLAY MAP AND SEGMENT LIST



Legend

- Export_OVERLAY
- Holladay_Centerline
- City_Boundary



Phase 1

Route	From	To	Dir	Length (ft)	Width (ft)	Pave Area (ft2)
Panorama Way	Lynne Ln	2300 E	E	1,503.02	25	37,575.62
Panorama Dr	Panorama Way	2300 E	S	1,190.98	25	29,774.62
Panorama Cir	Panorama Dr	Cul-de-sac	S	443.56	31	13,750.46
Hintze Dr	2300 E	Cul-de-sac	E	347.66	32	11,125.23
2820 E	3900 S	Nora Dr	S	493.84	25	12,346.01
Sunnydale Dr	3900 S	Nora Dr	S	485.90	25	12,147.42
2900 E	3900 S	Nora Dr	S	484.17	25	12,104.36
Nora Cir	3900 S	Nora Dr	S	324.53	33	10,709.56
Nora Dr	2700 E	Nora Cir		1,574.32	25	39,357.91
Wardway Dr	2700 E	Delsa Dr	E	1,691.67	29	49,058.47
Morningside Dr	2700 E	3075 E	E	2,570.80	29	74,553.27
3075 E	Delsa Dr	Morningside Dr	S	265.87	29	7,710.12
Pine Tree Dr	3900 S	Morningside Dr	S	1,066.25	28	29,854.92
3030 E	3960 S	Cul-de-sac	S	238.00	38	9,044.06
Morgan Dr	2700 E	Morningside Dr	E	2,441.26	29	70,796.59
2835 E	Nora Dr	4135 S	S	1,346.13	30	40,383.88
Shanna St	4135 S	Bluebell Dr	S	1,204.24	36	43,352.52
4215 S	2700 S	Quinette Ln	E	1,164.06	25	29,101.51
Quinette Ln	Nila Way	Bluebell Dr	S	899.96	25-35	25,154.57
Bevwood Cir	Nila Way	Cul-de-sac	S	390.94	32	12,510.02
Delsa Dr	Pine Tree	Olympic Way	E	1,928.51	29	53,974.64
3935 S	3120 E	3165 E	E	281.69	29	8,168.98
3165 E	3935 S	Delsa Dr	S	563.59	31	17,471.44
Monarch Way	Nila Way	Dead-end	S	1,554.24	25	38,856.02
Nila Way	Monarch Way	Olympic Way	E	608.19	26	15,812.81
Splendor Way	2700 E	Cul-de-sac	S	1,487.44	37	55,035.30
Splendor Cir	Splendor Way	Cul-de-sac	E	605.57	30	18,167.06
Aura Cir	Birch Dr	Cul-de-sac	E	404.87	31	12,551.01
Birch Cir	Birch Dr	Cul-de-sac	E	484.99	26	12,609.63
Birch Dr	3900 S	Splendor Way	S	786.98	26	20,461.52

Total
28,833
823,520

SCHEDULE B

SOP OVERLAYS AND PATCHING



Construction Site Storm Water Runoff Control

Overlays and Patching

Standard Operating Procedure #45

PURPOSE:

To protect storm water by utilizing proper techniques and controls during overlay and patching activities.

PROCEDURE:

1. Review:
 - a. Review SOP with contractor prior to authorizing work.
2. Preparation:
 - a. Check weather conditions and avoid working in rain or any precipitation.
 - b. Measure and mark locations of manholes and valves on the curb.
 - c. Manholes and catch basins are to be covered as needed to prevent oil and materials from getting inside the structures or system.
 - d. If milling is required, install inlet protection as needed.
3. Process:
 - a. Place asphalt
4. Clean-up:
 - a. Covering should be removed as soon as the threat of imported materials entering the system is reduced and prior to a storm event.
 - b. After pavement has cooled, sweep gutters to remove loose aggregate.