



PUBLIC WORKS DEPARTMENT

SPECIAL PROVISIONS

FOR CONSTRUCTION OF

**LOCAL STREET RESURFACING  
PROGRAM FY 2022-23 SB1 -  
PAVEMENT REPAIR  
PROJECT NO. WD23003A**

**Bid Opens: Thursday, March 30, 2023 2 p.m.**

CONTRACTOR MUST HAVE CLASS "A" LICENSE

SECTION 1	SPECIFICATIONS AND PLANS.....	3
1-1.02	Contractor’s Responsibility .....	4
1-1.03	Terms and Definitions .....	4
SECTION 2	PROPOSAL REQUIREMENTS AND CONDITIONS.....	5
SECTION 3	AWARD AND EXECUTION OF CONTRACT.....	5
3-1.01	Addendum and Bid Inquiries .....	5
3-1.02	Contract Award .....	5
3-1.03	Bid Protest.....	6
3-1.04	Contract Execution .....	6
SECTION 4	BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED	
DAMAGES	.....	6
SECTION 5	GENERAL.....	9
5-1.01	Understanding of Conditions .....	9
5-1.02	Location .....	9
5-1.03	Partial Payment .....	9
5-1.04	Guaranty/Warranty.....	9
5-1.05	Construction Control .....	9
5-1.06	Inspection .....	9
5-1.07	Environmental Protection .....	10
5-1.08	Maintaining Public Convenience and Safety .....	10
5-1.09	Preservation and Perpetuation of Existing Survey Monuments.....	11
5-1.10	Maintaining Driveway Access.....	11
5-1.11	Maintaining Pedestrian Access.....	11
5-1.12	Encroachment Permit from City, County, Utilities, Railroads and Others.....	12
5-1.13	Schedule .....	12
5-1.14	Public Notification .....	13
5-1.15	Non-Highway Facilities and Obstructions.....	14
5-1.16	Site Maintenance and Cleanup .....	14
5-1.17	Disposal of Materials.....	14
5-1.18	Pre-Construction Meeting.....	15
5-1.19	Submittals.....	15
5-1.21	Unsatisfactory Progress .....	16
5-1.22	Noise Control Requirements.....	16
5-1.23	Dust Control .....	17
5-1.24	Staging Areas.....	17
5-1.25	As-built/Record Drawings.....	17
5-1.26	Relations with California Regional Water Quality Control Board .....	17
5-1.27	Increased or Decreased Quantities.....	18
5-1.28	Changes and Extra Work.....	18
5-1.29	Notice of Potential Claim .....	19
5-1.30	Stop Notice Withholds.....	19
SECTION 6	BLANK .....	19
SECTION 7	MEASUREMENT AND PAYEMNT .....	19
7-1.01	General.....	19
7-1.02	Payments .....	19
SECTION 8	BLANK.....	20
SECTION 9	DESCRIPTION OF WORK .....	20
9-1.01	Description of Work .....	20
9-1.02	Prosecution and Progress.....	21

9-1.03	Quantities.....	21
SECTION 12	HOT MIX ASPHALT .....	22
12-1.01	Pavement Repair.....	22
12-1.02	Hot Mix Asphalt for Pavement Repair .....	22
12-1.03	Asphalt.....	22
12-1.04	Applying Asphalt.....	22
12-1.05	Asphalt Grade .....	23
12-1.06	Aggregate.....	23
12-1.07	Contractor Mix Design Proposal .....	25
12-1.08	Engineer Review of Hot-Mix Asphalt Design .....	25
12-1.10	Engineer Quality Assurance .....	25
12-1.11	General Requirements .....	26
12-1.12	Spreading Equipment .....	26
12-1.13	Spreading.....	26
12-1.14	Compacting Equipment .....	27
12-1.15	Compacting – Pavement Repair .....	27
12-1.16	Hot Mix Asphalt Paving.....	27
12-1.17	Conform Tapers .....	28
12-1.18	Smoothness.....	28
12-1.19	Acceptance Testing for HMA.....	28
12-1.20	Contractor’s Quality Control and Acceptance Testing.....	29
12-1.21	Pay Factor for HMA .....	32
12-1.22	Measurement and Payment.....	33

# **SPECIAL PROVISIONS FOR PAVEMENT REPAIR ON VARIOUS STREETS PROJECT NO. WT22003A**

## **SPECIAL NOTES**

1. Official bid documents including plans and specifications are available online at [http://www.stocktongov.com/services/business/bidflash/pw.html?dept=Public\\_Works](http://www.stocktongov.com/services/business/bidflash/pw.html?dept=Public_Works)

All bids submitted for this project must conform to the requirements of the official bid documents, including plans and specifications.

## **SECTION 1 SPECIFICATIONS AND PLANS**

### **1-1.01 Specifications**

The work described herein shall be done in accordance with the current City of Stockton, Department of Public Works, Standard Specifications and the current Editions of the State of California, Department of Transportation Standard Specifications and Standard Plans and in accordance with the following Special Provisions. To the extent the California Department of Transportation Standard Specifications implement the STATE CONTRACT ACT they shall not be applicable since the City of Stockton is not subject to said ACT.

In case of conflict or discrepancy between any of the Contract Documents, the order of documents listed below shall be the order of precedence, with the first item listed having the highest precedence.

1. Contract Change Order (Modifications or changes last in time are first in precedence).
2. Project Special Provision
3. Project Plans
4. Permits
5. City of Stockton Standard Specifications
6. City of Stockton Standard Drawings
7. Revised 2018 Caltrans Standard Specifications
8. 2018 Caltrans Standard Specifications
9. Revised 2018 Caltrans Standard Plans
10. 2018 Caltrans Standard Plans
11. Supplemental Project Information

With regards to discrepancies or conflicts between written dimensions given on drawings and the scaled measurements, the written dimensions shall govern.

With regards to discrepancies or conflicts between large-scale drawings and small-scale drawings, the larger scale shall govern.

With regards to discrepancies or conflicts between detailed drawings and referenced standard drawings or plans, the detailed drawings shall govern

In the event where provisions of codes, safety orders, contract documents, referenced manufacturer's specifications or industry standards are in conflict, the more restrictive and higher quality shall govern.

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in these specifications, the Special Provisions, or the plans, the Contractor shall apply to the Engineer in writing for such further explanations as may be necessary and shall conform to them as part of the contract. All responses from the Engineer shall also be in writing. In the event of any doubt or question arising respecting the true meaning of these specifications, the Special Provisions or the plans, reference shall be made to the Engineer, whose decision thereon shall be final.

**1-1.02 Contractor's Responsibility**

The Contractor shall examine carefully the site of the work and the plans and specifications therefore. The Contractor shall investigate to their satisfaction as to conditions to be encountered, the character, quality and quantity of surface, subsurface materials or obstacles to be encountered, the work to be performed, materials to be furnished, and as to the requirements of the bid, plans and specifications of the contract.

**1-1.03 Terms and Definitions**

Wherever in the Standard Specifications, Special Provisions, Notice to Contractors, Proposal, Contract, or other contract documents the following terms are used; the intent and meaning shall be interpreted as follows:

City or Owner -	City of Stockton
CA-MUTCD -	Current and latest California Manual on Uniform Traffic Control Devices and any amendments and revision thereto
Director -	Director of Public Works, City of Stockton
Standard Specifications -	City of Stockton Latest Standard Plans and Specifications And any amendments and revisions thereto.
Caltrans Specifications -	Current and latest State of California, Dept. of Transportation, and any amendments or revisions thereto.
Department -	Department of Public Works, City of Stockton
Engineer -	City Engineer, City of Stockton, acting either directly or through properly authorized Engineer agents and consultants.
Working Day -	Defined as any eight (8) hour day, except as follows: Saturdays, Sundays, City-observed holidays, and other days the City is closed as shown on the City of Stockton Working Calendar, days on which the Contractor is prevented by inclement weather or conditions resulting immediately there from adverse to the current controlling operation or operations, as determined by the Engineer, from proceeding with at least 75 percent of the normal labor and equipment force engaged on that operation or operations for at least 60 percent of the total daily time being currently spent on the controlling operation or operations.

## **SECTION 2 PROPOSAL REQUIREMENTS AND CONDITIONS**

### **2-1.01 General**

The bidder's attention is directed to the "Notice to Bidder" for the date, time and location of the Pre-Bid meeting, if applicable. Refer to the City of Stockton's Bid Flash webpage: <http://www.stocktongov.com/services/business/bidflash/default.html>

## **SECTION 3 AWARD AND EXECUTION OF CONTRACT**

### **3-1.01 Addendum and Bid Inquiries**

The addendum and bid inquiries will be posted on the City website. An e-mail notification will be issued to all registered plan-holders. It is the contractor's/sub-contractor's sole responsibility to register as a plan holder. If a firm is not registered as a plan holder, they will not receive the notifications about addendum/bid inquiries/other information related to the project. To register as a plan holder, please send an e-mail to Katrina Cooper at [Katrina.Cooper@stocktonca.gov](mailto:Katrina.Cooper@stocktonca.gov) referencing the project name. Bid inquiries will not be accepted within 5 calendar days of bid opening date.

### **3-1.02 Contract Award**

Each prospective bidder shall be required to bid on all items. Failure to bid an item shall be just cause for considering the bid as non-responsive. The City reserves the right to reject all bids. The bidders must be responsible and their bids must be responsive.

If the City awards the Contract, the basis of the award will be to the responsible bidder with the **lowest bid** whose proposal complies with all prescribed requirements.

The contract shall be executed by the successful bidder and shall be returned, along with the contract bonds, so that it is received by the City within ten (10) working days after the bidder has received the contract for execution. Failure to do so shall be just cause for forfeiture of the proposal guaranty. The executed contract documents shall be delivered to the following address:

Attention: Thinh Phan  
City of Stockton  
Public Works Department  
1465 S. Lincoln Street  
Stockton, CA 95206

*see following page*

### **3-1.03 Bid Protest**

All parties wishing to file a protest shall comply with the procedures set forth below:

All protests regarding the bidding process or award, or intended award, of any contract must be submitted in writing to the City Attorney on or before 5:00 p.m. of the fifth business day following the opening of all bids, unless a different time period is specified in the Notice Inviting Bids or other bid solicitation documents. All protests must be addressed to:

City Attorney  
City of Stockton  
425 North El Dorado Street, 2<sup>nd</sup> Floor  
Stockton, CA 95202

The party filing the protest must have submitted a bid for the work. A subcontractor of a bidder may not submit a bid protest.

The protest shall contain a complete statement specifying in detail the grounds of the protest and the facts in support thereof. The protest must be hand delivered or send via mail so that the City Attorney receives it within the time period set forth above. The protest documents must include the following:

- A complete statement of the factual and legal basis for the protest;
- The protest must include the name, address and telephone number of the person representing the protesting party; and
- The protesting party must concurrently transmit a copy of the written protest document and any attached documentation to all other bidders who may have a reasonable prospect of receiving the award depending on the outcome of the protest.

The procedure and time limits set forth herein are mandatory and the bidder's sole and exclusive remedy in the event of a protest. No bidder may bring an action or proceeding challenging the bidding process or any award, or intent to award, any contract unless the above procedures are followed. The failure of a party originating a protest to comply with these procedures shall constitute a waiver of any right to further pursue the protest, including filing a government code claim or legal proceeding. The City reserves the right to modify the bid protest procedures in the Notice Inviting Bids or other bid solicitation documents and to require any protesting party to submit additional or clarifying information or documentation in support of any protest.

### **3-1.04 Contract Execution**

The bidder's attention is directed to the provisions in Section 3, "Contract Award and Execution," of the Caltrans Specifications, Standard Specifications, and these Special Provisions for the requirements and conditions concerning award and execution of the contract. Bid protests are to be delivered to the address noted above.

## **SECTION 4 BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES**

### **4-1.01 Beginning of Work**

The Contractor shall perform and complete the proposed work in a thorough and workmanlike manner, and to furnish and provide in connection therewith all necessary labor, tools, implements, equipment materials and supplies.

Attention is directed to the provisions in Section 8-1.04B, "Standard Start," of the Caltrans Standard Specifications and these Special Provisions.

At no time shall construction begin without receiving notice that the contract has been approved by the City Attorney or an authorized representative. The Contractor shall follow the sequence of construction and progress of work as specified in Section 9-1.01, "Description of Work," and Section 10-1.01 "Prosecution and Progress" of these Special Provisions.

The Contractor shall diligently prosecute all work items to completion.

#### **4-1.02 Time of Completion**

Attention is directed to the provisions in Section 8-1.05, "Time" of the Caltrans Standard Specifications and these Special Provisions.

The contract for the performance of the work and the furnishing of materials shall commence within ten (10) calendar days from the Notice to Proceed date and shall be diligently prosecuted to completion before the expiration of the working days specified in this section from the date of said commencement.

The Contractor shall diligently prosecute the contract work to completion within **twenty (20)** working days. The days to finish the punch list, provided by the City, are included in the Working Days.

Should the Contractor choose to work on a Saturday, Sunday, City Holidays or on a holiday recognized by the labor unions, the Contractor shall reimburse the City of Stockton the actual cost of engineering, inspection, testing, superintendent, and/or other overhead expenses which are directly chargeable to the contract. Should such work be undertaken at the request of the City, reimbursement will not be required.

*See following page*



**4-1.03 Liquidated Damages**

Attention is directed to the provisions in Section 8-1.10, "Liquidated Damages," of the Caltrans Specifications and these Special Provisions.

The Contractor shall pay liquidated damages to the City of Stockton in the amount of **\$2,700** (Two Thousand Seven Hundred Dollars) per day for each and every calendar day that the work remains incomplete after expiration of the contract working days specified in these Special Provisions. Liquidated damages assessment applies to base bid and alternate bid if awarded.

In addition, the Contractor shall pay the following sums for the associated liquidated damages:

Failure to provide adequate Project Site Maintenance 24/7, per Sections 5-1.08, and 5-1.17	\$250.00	per each calendar day
--	----------	-----------------------

**4-1.04 CITY OF STOCKTON HOLIDAY SCHEDULE FOR 2021**

- Monday, January 16, 2023.....Martin Luther King, Jr.'s Birthday
- Monday, February 13, 2023.....Lincoln's Birthday Observance
- Monday, February 20, 2023.....Washington's Birthday
- Monday, May 29, 2023.....Memorial Day
- Tuesday, July 04, 2023.....Independence Day Observance
- Monday, September 04, 2023.....Labor Day
- Monday, October 09, 2023.....Indigenous People Day
- Friday, November 10, 2023.....Veteran's Day
- Thursday and Friday, November 23 and 24, 2023.....Thanksgiving Holidays
- Monday, December 25, 2023.....Christmas Day Observance
- Monday, January 01, 2024.....New Year's Day

Similar holidays are scheduled in year 2024.

Full compensation for any costs required to comply with the provisions in this section shall be considered to be included in the prices paid for the various contract items of work and no additional compensation will be allowed, therefore.

*See following page*

## **SECTION 5 GENERAL**

### **5-1.01 Understanding of Conditions**

Bidders will be required to carefully examine these Special Provisions and attachments to judge for themselves as to the nature of the work to be done and the general conditions relative thereto and the submission of a proposal hereunder shall be considered prima-facie evidence that the bidder has made the necessary investigation and is satisfied with respect to the conditions to be encountered, the character, quantity and quality of the work performed.

Bidders must be thoroughly competent and capable of satisfactorily performing the work covered by the proposal, and when requested, shall furnish such statements relative to previous experience on similar work, the plan or procedure proposed, and the organization and the equipment available for the contemplated work, and any other as may be deemed necessary by the Project Engineer in determining such competence and capability.

It shall be understood that the Contractor shall be required to perform and complete the proposed work in a thorough, workmanlike and professional manner, and to furnish and provide in connection therewith all necessary labor, tools, equipment, materials and supplies. The Contractor is responsible to take all necessary precautions and use best practices in the industry to perform all work require completing the project.

### **5-1.02 Location**

See attached list of locations, which include length, width, area, estimated quantities, utilities, and other details.

### **5-1.03 Partial Payment**

The five percent (5%) retention withheld of all construction contract payments will remain with the City until thirty-five (35) calendar days after the date the Notice of Completion was recorded.

### **5-1.04 Guaranty/Warranty**

The work furnished under these specifications shall be guaranteed for a period of one (1) year from date of acceptance by the Engineer thereof against all defective materials, equipment and workmanship. Upon receipt of notice from the City of failure of any part of the materials, equipment, or workmanship during the guaranty period, the affected part or parts shall be replaced with new material and/or equipment, and at the expense of the Contractor within two weeks of the Engineer's notification date.

### **5-1.05 Construction Control**

The City reserves the right to order discontinuance of any equipment in use. This will be determined at the discretion of the Engineer on the basis that the use of said equipment would prohibit obtaining the best possible result.

Additional operated equipment may be requested by the Engineer for the above reasons. Failure to comply with the Engineer's request concerning equipment use or removal will be deemed sufficient cause for shutting down all work until the requirements are met at no additional cost to the City. Days lost for this type of shutdown will be charged as workable days.

### **5-1.06 Inspection**

All work under this contract shall be under the control and inspection of the Engineer or his/her appointed representative. The Contractor shall be responsible for notifying the Engineer forty-eight (48) hours in advance of all stages of construction to arrange for inspection. The Contractor/sub-contractor shall report to the Engineer before starting the work on each working day.

### **5-1.07 Environmental Protection**

The Contractor shall be responsible for all applicable permits, licenses and fees required for the construction and completion of the project.

Any Contractor or person engaged in activities that will or may result in pollutants entering the City storm drainage system shall undertake all practicable measures to prevent the introduction of such pollutants. The Contractor shall be fully responsible for removing the materials out of the storm system generate from the construction work.

The Contractor shall follow Caltrans' best management practices regarding environmental protection and comply with all City regulations, ordinances, and City Storm Water Quality Control Criteria Plan. It is available for download at:

<http://www.stocktongov.com/government/departments/municipalUtilities/utilStorm.html>

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved in environmental protection including the payment of all permits & fees, shall be included in the various bid items and no additional compensation will be made therefore.

### **5-1.08 Maintaining Public Convenience and Safety**

Attention is directed to Section 7-1.03, "Public Convenience," Section 7-1.04, "Public Safety," and 12, "Temporary Traffic Control," of the Caltrans Standard Specifications and these Special Provisions. Adequate ingress and egress shall be maintained through the site for residents, police, fire, and other emergency vehicles. The Contractor shall provide the City with an Emergency Contacts List which includes the name and telephone number (business, home, and mobile) of three (3) representatives available at all times for the duration of the contract.

All traffic plans shall conform to the applicable provisions of the latest and amended "California Manual on Uniform Traffic Control Devices" - MUTCD. The Contractor shall submit a construction area traffic control/detour plan for approval by the Engineer before the commencement of any work. Traffic control/detour plan shall show the placement of signs, barricades, delineators, and other traffic control devices required by Contractor's operation. Traffic Control plans shall comply with MUTCD. Any revisions to MUCD requirements require traffic control plans be designed and stamped by a licensed Traffic or Civil Engineer and submitted to the Engineer for review and approval.

The Contractor shall furnish, install, and maintain in good working order all cones, delineators, barricades, arrow boards, direction signs, and flashers until project completion. All safety devices, their maintenance, and use shall conform to the latest requirements of OSHA. It shall be the complete responsibility of the Contractor to protect persons from injury and to avoid property damage. Whenever required, flagmen shall be provided to control traffic. The Contractor shall provide for the proper routing of vehicles and pedestrian traffic in a manner that will hold congestion and delay of such traffic to a practicable minimum by furnishing, installing, and maintaining all necessary temporary signs, barricades and other devices and facilities as approved by the Engineer. As the work progresses, the Contractor shall relocate such devices and facilities as necessary to maintain proper routing. Unless otherwise specified, upon conclusion of the need therefore, all temporary traffic routing devices and facilities shall be removed from the site of the work by the Contractor within 48 hours of completion of construction at that site.

The Contractor is allowed only one (1) lane-closure in each direction during daytime. Each traffic lane shall not be less than twelve (12) feet wide, unless approved by the Engineer in writing. Any deviations from the approved traffic control plan, must be notified to and approved by the Engineer.

Lane closures and normal operation for all items of work are allowed only during **8:30 AM to 4:30 PM**. The Engineer may restrict or alter the hours of work on a particular street due to traffic or other considerations. Any modifications to lanes closure hours shall require a written request to the Engineer for approval.

The unit bid price for various bid items, whether used partially, completely or not, includes full compensation for furnishing all labor, materials, tools, equipment, incidentals, overhead and mark-up, and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of traffic control as specified in the Standard Specifications and these Special Provisions, and as

directed by the Engineer.

Full compensation for furnishing, placing, maintaining, and removing temporary traffic striping shall be considered as included in the price paid for "Mobilization and Traffic Control" and no separate payment will be made.

Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in this section.

#### **5-1.09 Preservation and Perpetuation of Existing Survey Monuments**

**This section is only applicable if any existing survey monuments will be impacted by Contractor's Construction activities.**

The Contractor shall preserve and perpetuate existing monuments, property pins, chiseled cross and etc., affected by the work included in the project in accordance with Section 8771 of the Professional Land Surveyors Act in the Business and Professionals Code of the State of California.

The Contractor shall perform the survey to preserve any existing survey monuments such as chiseled crosses, survey iron pipes and etc. that may be present on the pavement, round corners and concrete flat work to be improved by this project. **Monument preservation shall be done by or under the supervision of a Licensed Land Surveyor. Prior to construction of work, a new record of survey shall be filed at the San Joaquin County Surveyor's Office, with copies submitted to the Engineer.**

The Contractor shall notify the Engineer immediately if any monument is disturbed. The Contractor shall be responsible for hiring a Licensed Land Surveyor to reset any survey monument disturbed by his/her operations. All survey monument records shall be filed with San Joaquin County Recorder's Office.

Full Compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work, and no additional compensation will be allowed therefore.

#### **5-1.10 Maintaining Driveway Access**

Driveways shall remain open at all times. Egress and ingress to all residents or businesses shall be maintained at all times. Working periods shall be interpreted as the time that work is actively in progress at the driveway location. At least one principal ingress/egress driveway to the residence or business must be maintained at all other times. Where there are two (2) or more driveways available, the principal driveway shall be designated at the sole discretion of the Engineer or property owner/tenant.

At locations with less than two (2) ingress/egress driveways, the Contractor shall maintain ingress and egress at all times and phase new improvements at driveway locations to the satisfaction of the Engineer.

The Contractor shall provide at least 48-72 hours advance written notice to the Engineer and property owner/tenant prior to any work requiring the temporary closure of any driveway. The Contractor shall conduct operations to cause the least possible disruption to the property owner/tenant and damage to property. On completion of the construction work shift, unpaved driveway approaches shall be graded with aggregate base and rolled smooth in order to accommodate vehicular traffic, as directed by the Engineer.

All costs incurred by this provision shall be included in the various bid items and no additional compensation will be made.

#### **5-1.11 Maintaining Pedestrian Access**

Means of passage of pedestrian traffic around and through the work area shall be provided at all times. Pedestrian

walkways shall be surfaced with asphalt concrete, Portland cement concrete, or timber. The surface shall be skid-resistant and free of irregularities. Pedestrian walkways shall be maintained in good condition, and shall be suitable for wheelchair use. Walkways shall be kept clear of obstructions.

At least one (1) continuous walkway along one (1) side of the street shall be available at all times. At locations where work is actively in progress, the pedestrian walkway within a single block may temporarily be closed at one (1) end of the block along one (1) side of the street. Pedestrians shall be rerouted to the walkway on the opposite side of the street.

The Contractor shall cause the least possible disruption to the affected properties and restore suitable pedestrian access immediately following completion of the active work in progress. Minor deviations from the requirements of this section, which do not significantly change the cost of the work, may be permitted upon the written request of the Contractor if, in the opinion of the Engineer, public traffic will be better served and the work expedited. These deviations shall not be adopted by the Contractor until the Engineer has approved them in writing. All other modifications will be made by contract change order.

Full compensation for maintaining pedestrian access shall be included in the contract price for mobilization, and no additional compensation will be allowed.

#### **5-1.12 Encroachment Permit from City, County, Utilities, Railroads and Others**

Attention is directed to Section 5-1.20B, "Permits, Licenses, Agreements, and Certifications," of the Caltrans Specifications and these Special Provisions. The following is not an all-inclusive list of the required permits and/or licenses, if applicable:

- The Contractor shall obtain an encroachment permit and pay all required fees from all affected owners of right-of-way.
- Contractor's License. Contractor shall possess a valid California Class A Contractor License at the time of bid and maintain it throughout the duration of the contract.
- Business License. Contractor shall possess a valid City of Stockton business license prior to the execution of the contract and maintain it throughout the duration of the contract.
- City of Stockton encroachment permit and fees must be obtained from the City Permit Center (937-8366) before the start of construction.
- Construction Notification (Dust Control). The Contractor is responsible for the preparation and submittal of the San Joaquin Valley Air Pollution Control District Construction Notification Form. The form and more information can be found at the following web site: <http://www.valleyair.org>.
- Submit the Construction and Demolition (C&D) Debris Recycling Report within 60 days of construction or demolition project completion. The completed form must be accompanied by the official weight tags or receipts verifying the information provided in the report and must be submitted to the City of Stockton Public Works Department, Solid Waste Division, 22 E. Weber Ave. Room 301, Stockton, CA 95202. Failure to provide the C&D Debris Recycling Report form will result in a 5% withholding of the contract amount.
- Construction Water. A water meter is required for the use of City water for construction. A similar permit and water meter and its fees are required from California Water Service, if the water is taken from the fire hydrant located in their service area. The Contractor is responsible for obtaining a permit for water from California Water Service, as applicable, for construction water obtained from a City hydrant. The City permit shall be approved by the City of Stockton Permit Center at 345 North El Dorado Street, Stockton, Ca 95202, (209 937-8436). Full compensation for conforming to the provisions in this section including applicable permit fees, shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed therefore.

#### **5-1.13 Schedule**

Attention is directed to Section 8-1.02, "Schedule" of the Caltrans Specifications and these Special Provisions. The Contractor shall submit a P6 construction schedule to the Engineer for review and approval. Construction schedule must be approved before the start of any construction.

Full compensation for conforming to the provisions in this section shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed therefore.

### 5-1.14 Public Notification

The Contractor shall circulate printed form letters/door hangers, approved by the Engineer, explaining the project to be done and the length of time inconvenience will be caused by the project and deliver same to the residents and/or businesses to be affected no earlier than 48-72 hours, nor later than 24 hours, before work is to commence. The Contractor shall install "Road Closed," arrows, Detour signs, and barricades as necessary.

In addition, the Contractor shall provide temporary "Tow-away, No Parking" signs posted in advance of the work which signs shall be removed upon completion of the work and the opening of the street to traffic. The signs shall not be less than 12"x18" size, "Tow-away, No Parking" words shall be in white letters on red background, and must have Stockton Municipal Code 10-011.6, California Vehicle Code 22651(l)(n), Stockton Police Department telephone number 937-8354, and date and time of parking restriction clearly indicated on it. Such signs shall be placed no farther than fifty (50) feet apart. It shall be the Contractor's responsibility to arrange for the removal of any vehicles obstructing his/her operations.

The Contractor shall notify all residents and businesses affected by the construction, Utilities, School Districts, Sunrise Sanitation, Stockton Scavenger, and San Joaquin Regional Transit District at least 48 -72 hours prior to starting the work. Any changes to the original schedule/notification would prompt the re-notification by the Contractor. A list of agencies with the contact information is available below.

The Contractor shall inform the City Fire Comm, (209) 464-4648, no later than twenty-four (24) hours before work is to begin. Any changes in the Contractor's original schedule/notification shall be promptly reported to the City Fire Comm, so that they are fully informed at all times of the locations of street closures/construction.

<b><u>Agency</u></b>	<b><u>Phone</u></b>	<b><u>Fax</u></b>	<b><u>email address</u></b>
<b>Lodi Unified School District</b> (Transportation) 1305 E. Vine Street, Lodi, CA.	953-8170	331-7821	
<b>Lincoln Unified School District</b> (Transportation) 6749 Harrisburg Place, Stockton, CA	953-8596	957-3626	
<b>Stockton Unified School District</b> (Transportation) 2963 Sanguinetti Lane, Stockton, CA	933-7145	943-0079	
<b>Stockton Scavengers Waste Management</b> 1240 Navy Drive, Stockton, CA	(530) 356-3756	948-4013	<a href="mailto:sjager@wm.com">sjager@wm.com</a>
<b>Sunrise Sanitation</b> 1145 W. Charter Way, Stockton, CA	483-2934	466-2371	donald.gomez@awin.com
<b>Stockton Police Dispatch</b>	937-8377	937-8845	
<b>Towed Vehicle Information</b>	937-8354		
<b>Stockton Fire Dispatch</b>	464-4648	937-8013	
<b>San Joaquin Regional Transit District</b> (Bus Dispatch)	948-5566 ext. 652	948-8516	jram@sj-smart.com

All cost incurred by this provision shall be included in the various bid items and no additional compensation will be made therefore.

**5-1.15 Non-Highway Facilities and Obstructions**

Attention is directed to Section 5-1.36, "Property and Facility Preservation" and Section 5-1.36C, "Nonhighway Facilities," of the Caltrans Specifications. The Contractor shall protect from damage any utility and other non-highway facilities that are to remain in place, be installed, relocated or otherwise rearranged.

The Contractor's attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety and welfare of workers and of the public. Facilities requiring special precautions include, but limited to: conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases, natural gas in pipelines 6 inches or greater in diameter or pipelines operating at pressures greater than 60 pounds per square inch (gage); underground electric supply system conductors or cables, with potential to ground of more than 300 V, either directly buried or in duct or conduit which do not have concentric grounded or other effectively grounded metal shields on sheaths.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least two (2) working days, but not more than fourteen (14) calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Regional notification centers include but are not limited to the following:

Notification Center	Telephone Number
Underground Service Alert-Northern California (USA)	1-800-642-2444
	1-800-227-2600
Underground Service Alert-Southern California (USA)	1-800-422-4133
	1-800-227-2600

The Contractor shall verify the horizontal and vertical locations of all existing utilities prior to start of construction. The Contractor shall be responsible for the repair and replacement of these or any other facilities damaged during construction. The Contractor shall notify Underground Services Alert (USA) to have existing facilities marked in the field.

If unknown existing facilities are encountered, the Contractor shall notify the Engineer in writing of the situation, request coverage of the work as extra work, and aid the Engineer in determining due diligence.

Payment for complying with this Special Provision shall be included in the various other items of work, and no additional compensation will be allowed therefor.

**5-1.16 Site Maintenance and Cleanup**

The Contractor shall maintain the work sites in a neat and orderly manner throughout construction. Construction debris, including but not limited to broken concrete shall be removed and disposed from the site immediately. If, in the determination of the Project Inspector, the Contractor has not adequately maintained a clean, neat and orderly work site, the Contractor may be required to pay to the City of Stockton the sum of two hundred fifty dollars (\$250) per work site. The work shall be conducted in a manner that will control the dust. When ordered to provide dust control, the Contractor shall provide a vacuum sweeper to reduce the dusty conditions to the satisfaction of the Project Engineer. A permit shall be obtained from both, the City Permit Center and California Water Service Company, for construction water that is obtained from a fire hydrant. During and upon completion of construction, the Contractor shall remove all equipment, debris, and shall leave the site in a neat and clean condition to the satisfaction of the Project Engineer. Full compensation for Site Maintenance and Cleanup shall be considered as included in the price paid for the various items of work and no separate payment will be made therefore.

**5-1.17 Disposal of Materials**

All materials designated to be removed and not salvaged shall become the property of the Contractor and shall be disposed of in accordance with Federal, State and local laws, and ordinances. The Contractor shall file: 1) Construction and Demolition Debris Materials Checklist at the time of permit application, and 2) Construction and Demolition Debris Recycling Report within fifteen (15) days of job completion. Full compensation for conforming to the requirements of this section shall be considered included in the various bid items of work and no additional compensation will be considered therefore.

**5-1.18 Pre-Construction Meeting**

The Engineer (209 937-8885) will schedule a pre-construction meeting with the Contractor following an award of the contract and prior commencing. Full compensation for any activity associated with this work shall be included in the prices for the various contract items of work, and no additional compensation will be allowed therefore.

**5-1.19 Submittals**

The following is a list of anticipated submittals for the project. The list is provided to aid the Contractor in determining the scope of work, but is not intended to be all inclusive and additional submittals may be required:

<b>NO.</b>	<b>SUBMITTAL</b>	<b>DEADLINE</b>
<b>1</b>	DAS 140	Prior to Notice of Proceed
<b>2</b>	DAS 142	Prior to Notice of Proceed
<b>3</b>	Local Employment Ordinance or Good Faith Effort prior to Contract Execution.	Prior to Contract Execution
<b>4</b>	Material Submittal and pertinent MSDS	Prior to Notice of Proceed
<b>5</b>	Water Pollution Control Program (WPCP) by a QSD. Best Management Practices	Prior to Notice of Proceed
<b>6</b>	Traffic Control Plans	Prior to Notice of Proceed
<b>7</b>	Emergency Contacts List	Prior to Notice of Proceed
<b>8</b>	Project Baseline Schedule	Prior to Notice of Proceed
<b>9</b>	Staging agreement with private property owners (if applicable)	During Construction
<b>10</b>	Copy of City of Stockton Business License	Prior to Notice of Proceed
<b>11</b>	City of Stockton Road Encroachment Permit & all other applicable permits (Contractor is responsible to pay all fees associated with said permits)	Prior to Notice of Proceed
<b>12</b>	Public Notifications (Flyers, News Release letter, etc)	Prior to Notice of Proceed
<b>13</b>	3 <sup>rd</sup> Party Licensed Material Testing Lab Caltrans Certifications	Prior to Notice of Proceed
<b>14</b>	HMA Mix Design (1/2” Aggregate, Type A, PG64-10)	Prior to Notice of Proceed

The Contractor shall transmit each submittal to the Engineer for review and approval with the submittal form approved by the Engineer. Submittals shall be sequentially numbered on the submittal form. Resubmittals shall be identified with the original number and a sequential resubmittal suffix letter. The original submittal shall be numbered X. The first resubmittal shall be numbered X-a and so on. Identify on the form the date of the submittal, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and/or special provision number, as appropriate. The Contractor shall sign the form certifying that review, approval, verification of Products required (if any), field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and contract documents. Any incomplete submittals will be returned for resubmittal.

Schedule submittals to expedite the Project, and deliver to Engineer at the Engineer’s office, see Section 10- 9.02, “Contractor Work Procedure,” of these Special Provisions.

For each submittal for review, allow five (5) calendar days excluding delivery time to and from the Contractor. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work. When revised for resubmission, identify all changes made since previous submission. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to



comply with requirements.

Submittals not requested either in the Contract Documents or in writing from the Engineer will not be recognized or processed.

Within ten (10) calendar days after Notice of Award, submit a complete list of all submittals to be submitted and the dates when they will be submitted. All submittals shall be submitted within ten (10) calendar days from the date the Notice of Award; otherwise project working days may commence, with or without issuance of the Notice to Proceed.

Except as may otherwise be indicated herein, the Engineer will return prints of each submittal to the Contractor with their comments noted on the submittal. The Contractor shall make complete and acceptable submittals to the Engineer by the second submission of a submittal item. The City reserves the right to withhold monies due to the Contractor to cover additional costs of the Engineer's review beyond the second submittal.

If a submittal is returned to the Contractor marked "NO EXCEPTIONS TAKEN", formal revision and resubmission of said submittal will not be required.

If a submittal is returned to the Contractor marked "MAKE CORRECTIONS NOTED", formal revision and resubmission of said submittal will not be required.

If a submittal is returned to the Contractor marked "Amend and Resubmit", formal revision and resubmission of said submittal will be required as noted.

Full compensation for conforming to the requirements of this section shall be considered included in the various bid items of work and no additional compensation will be considered therefore.

#### **5-1.21 Unsatisfactory Progress**

If the number of working days charged to the contract exceeds 75 percent of the working days in the current time of completion and the percent working days elapsed exceeds the percent work completed by more than 15 percentage points, the City will withhold 10 percent of the amount due on the current monthly estimate.

The percent working days elapsed will be determined from the number of working days charged to the contract divided by the number of contract working days in the current time of completion, expressed as a percentage. The number of contract working days in the current time of completion shall consist of the original contract working days increased or decreased by time adjustments approved by the Engineer.

The percent work completed will be determined by the Engineer from the sum of payments made to date plus the amount due on the current monthly estimate, divided by the current total estimated value of the work, expressed as a percentage.

When the percent of working days elapsed minus the percent of work completed is less than or equal to 15 percentage points, the funds withheld shall be returned to the Contractor with the next monthly progress payment.

Funds kept or withheld from payment, due to the failure of the Contractor to comply with the provisions of the contract, will not be subject to the requirements of Public Contract Code 7107 or to the payment of interest pursuant to Public Contract Code Section 10261.5.

#### **5-1.22 Noise Control Requirements**

Noise control shall conform to the provisions in Section 14-8-02, "Noise Control," of the Caltrans Specifications and these Special Provisions. Nothing in the Caltrans Specifications or these Special Provisions voids the Contractor's public safety responsibilities or relieves the Contractor from the responsibility to comply with other ordinances regulating noise level.

The noise level from the Contractor's operations, between the hours of 8:00 p.m. and 6:00 a.m., shall not exceed 86 dBa at a distance of fifty (50) feet. This requirement shall not relieve the Contractor from responsibility for

complying with other ordinances regulating noise level.

The noise level requirement shall apply to the equipment on the job or related to the job, including, but not limited to, trucks, transit mixers, or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed therefore.

#### **5-1.23 Dust Control**

Dust control shall conform to any requirements set forth in the San Joaquin Valley Air Pollution Control District Construction Notification Form, see Section 5-1.11, "Permits," of these Special Provisions and Section 14-11.04, "Dust Control", of the Caltrans Specifications.

Use of water except for recycled, reclaimed, or other non-potable water for the purpose of dust control or other construction used unless for health or safety purposes is prohibited." All dust control operations shall be performed by the Contractor using a vacuum sweeper at the time, location and in the amount ordered by the Engineer. Contractor shall maintain all residential streets clean at all times during construction. The application of either water or dust palliative shall be under the control of the Engineer at all times. Watering shall conform to the provisions of Section 10-6, "Watering," of the Caltrans Specifications and these Special Provisions. Contractor shall use a power vacuum sweeper on the next day to sweep all loose aggregates and additional sweeping as directed by the Engineer. This includes removal of all loose aggregates from concrete gutter pans, sidewalks and driveways.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed.

#### **5-1.24 Staging Areas**

The street right of way shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right of way or allow others to occupy the right of way for purposes, which are not necessary to perform the required work.

The Contractor shall secure at his own expense any area required for storage of equipment or materials, or for other purposes. No additional compensation will be considered there. A copy of the "agreement shall be submitted to the Engineer for his record.

#### **5-1.25 As-built/Record Drawings**

The Contractor shall maintain a complete set of red line drawings on site for the purpose of keeping up to date all field modifications. This plan set shall be available for review by the project Inspector or the Engineer. These plans shall be provided to the Inspector after the completion of construction at the Post Construction Meeting and prior to the final payment. All revision, modifications and/or changes shall be marked clearly. Notes and dimensions shall be in red and be clear and legible. These plans will be used by the Design Engineer to mark up the original plan sheets with the revisions made during construction.

Full compensation for furnishing the As-Built/Record Drawings shall be considered included in the various bid items of work and no additional compensation will be considered therefore.

#### **5-1.26 Relations with California Regional Water Quality Control Board**

This project lies within the boundaries of the Central Valley Regional Water Quality Control Board (RWQCB).

The State Water Resources Control Board (SWRCB) has issued to the City a permit that governs storm water and non-storm water discharges from City properties, facilities, and activities. The City's permit is entitled

"Order No. R5-2007-0173, NPDES No. CAS083470, Waste Discharge Requirements City of Stockton and County of San Joaquin Stormwater Discharges From Municipal Separate Storm Sewer System San Joaquin County Copies of the permit may be obtained at:

<http://www.stocktongov.com/government/departments/municipalUtilities/util.html>

The NPDES permits that regulate this project, as referenced above, are collectively referred to in this section as the "permits."

This project shall conform to the permits and modifications thereto. The Contractor shall maintain copies of the permits at the project site and shall make them available during construction.

The Contractor shall know and comply with provisions of Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from the project site and areas of disturbance outside the project limits during construction. Attention is directed to Sections 7-1.02, "Laws" 5-1.36, "Property and Facility Preservation," 7-1.05, "Indemnification", of the Caltrans Specifications.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to water pollution control work. The Contractor and the City shall provide copies of correspondence, notices of violation, enforcement actions, or proposed fines by regulatory agencies to the requesting regulatory agency.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved, and no additional compensation will be allowed.

#### **5-1.27 Increased or Decreased Quantities**

The City reserves the right to make such alterations, deviations, additions to, or omissions from the plans and specifications, including the right to increase or decrease the quantity of any item or portion of the work or to omit any item or portion of the work, as may be deemed by the Engineer to be necessary or advisable and to require such extra work as may be determined by the Engineer to be required for the proper completion or construction of the whole work contemplated, without adjustment in the unit price as bid. Section 9-1.06B and Section 9-1.06C of the Caltrans Standard Specifications shall not apply.

#### **5-1.28 Changes and Extra Work**

New and unforeseen work will be considered as extra work when determined by the Engineer that the work is not covered by any of the various items for which there is a bid price or by combinations of those items. In the event portions of this work are determined by the Engineer to be covered by some of the various items for which there is a bid price or combinations of those items, the remaining portion of the work will be classed as extra work. Extra work also includes work specifically designated as extra work in the plans or specifications.

Any such extra work will be outlined in a contract change order, which will specify the work to be done in connection with the change made, adjustment of contract time, if any, and the basis of compensation for such work. A contract change order will not become effective until approved by the City Manager and / or City Council.

The Contractor shall do the extra work and furnish labor and equipment therefore upon receipt of an approved contract change order or other written order of the Engineer. In the absence of an approved contract change order or other written order of the Engineer, the Contractor shall not be entitled to payment for the extra work.

If, in the opinion of the Engineer, such work cannot reasonably be performed concurrently with other items of work, and if a controlling item of work is delayed thereby, an adjustment of contract time will be made.

Payment for extra work required to be performed pursuant to the provisions in this section, in the absence of an executed contract change order, will be made by force account as provided in Section 9-1.04 "Force Account" of the Caltrans Specifications; or as agreed to by the Contractor and the Engineer.

**5-1.29 Notice of Potential Claim**

The Contractor shall not be entitled to the payment of any additional compensation for any cause, or for the happening of any event, thing, or occurrence, including any act or failure to act, by the Engineer, unless he has given the Engineer due written notice of potential claim as hereinafter specified, provided, however, that compliance with this section shall not be a prerequisite for matters within the scope of the protest provisions under "Changes" or "Time of Completion" or within the notice provisions in "Liquidated Damages" not to any claim which is based on differences in measurements or errors of computation as to Contract quantities. The written notice of potential claim shall set forth the items and reasons which the Contractor believes to be eligible for additional compensation, the description of work, the nature of the additional costs and the total amount of the potential claim. If based on an act or failure to act by the Engineer, written notice for potential claim must be given to the Engineer prior to the Contractor commencing work; in all other cases, written notice for potential claims must be given to the Engineer within fifteen (15) days after the happening of the event, thing or occurrence giving rise to the potential claim.

It is the intention of this section that potential differences between the parties of this Contract be brought to the attention of the Engineer at the earliest possible time appropriate action may be taken and settlement may be reached. The Contractor hereby agrees that he shall have no right to additional compensation for any claim that may be based on any act or failure to act by the Engineer or any event, thing or occurrence for which no written notice of potential claim was filed.

**5-1.30 Stop Notice Withholds**

Section 9-1.16E(4) "Stop Notice Withholds" of the Caltrans Specifications is amended to read as follows: "The City of Stockton, by and through the Department of Public Works, may at its option and at any time retain out of any amounts due the Contractor, sums sufficient to cover claims, filed pursuant to Section 3179 et seq. of the Code of Civil Procedures".

**SECTION 6                      BLANK**

**SECTION 7                      MEASUREMENT AND PAYEMNT**

**7-1.01                      General**

Payment for the various bid items shall be made at the unit bid prices for the final measured quantities of the work actually completed and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing, complete and in-place, items necessary to satisfy all sections of these Special Provisions.

Payment for those items of work required to complete the work as specified herein, but not shown as separate bid items on the bid schedule, shall be deemed as included in the other items of work, and no additional compensation will be allowed therefore.

All materials designated to be removed shall become the property of the Contractor, unless otherwise noted, and shall be disposed in accordance with local, state, and federal laws and ordinances.

Full compensation for disposal of materials and performing the work in these specifications shall be included in the prices paid for the various contract items of work and no additional compensation will be allowed.

**7-1.02                      Payments**

Attention is directed to Section 9-1.06, "Partial Payments", and 9-1.07, "Payment after Acceptance" of the Caltrans Specifications, and Section 9-1.16A, "Progress Payments – General," and 9-1.17D, "Final Payment and Claims," of the Standard Specifications. No partial payment will be made for any materials that are furnished on hand, but not yet installed or incorporated in the work.

Full compensation for all labor, equipment, tools, materials, service, travel, and incidentals and for doing all the work and all other items required to complete the work in conformity with the Contract Documents will be included

in the prices paid for the various contract items of work and no additional work compensation will be allowed, therefore. No other compensation will be made except for the items listed in the Bid Proposal. Work for which no separate payments has been provided will be considered as subsidiary obligation of the Contract.

**Schedule of Measurement and Payment:**

1. Mobilization: paid by lump sum, shall include but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site.
2. Traffic Control: paid by lump sum, shall include all preparatory work and operations, including, but not limited to, designing, furnishing, installing and maintaining traffic control and pedestrian access. Also, includes materials (including signs, cones, flashing arrows, and barricades and all other items shown on the traffic control plans), tools, equipment, and incidental (including overhead lighting, cellular phones and radios), and all incidentals for doing all work involved in traffic control, complete in place as specified in these Special Provisions and as directed by the Engineer.
3. Water Pollution Control: paid by lump sum, shall include preparing the WPCP, implementation of erosion control BMPs identified in WPCP, providing all labor, materials, tools equipment, and incidentals as described in Section 13 of the Caltrans Standard Specifications and these Special Provision.
4. Material Testing: paid by lump sum, payments for the lumps sum item shall be determined on the percentage of bid item work completed as determined by the Engineer at the time the progress payment is prepared. Contractor shall hire a third-party Caltrans Certified material testing laboratory. Contractor shall provide copies of all certifications. The 3<sup>rd</sup> party laboratory and its staff must be Caltrans Certified.
5. Pavement Repair – (3.0-Inch): paid per square yard, shall include removing asphalt material at 3.0 inches, pavement fabric, pavement markers, stripes and marking, disposal, and other incidentals.
6. Pavement Repair – (6.0-Inch): paid per square yard, shall include removing asphalt material at 6.0 inches, pavement fabric, pavement markers, stripes and marking, disposal, and other incidentals.
7. Hot Mix Asphalt (Type A): paid by ton and shall including supplying the HMA to the site, paving, compacting as described in these Special Provision, complete in place. Payment of tack coat is included in payment of Hot Mix Asphalt (Type A).

**SECTION 8                      BLANK**

**SECTION 9                      DESCRIPTION OF WORK**

**9-1.01                      Description of Work**

The work herein is primarily consists of pavement repair and other associated work.

The work includes all necessary, supplemental, incidental and related tasks to complete the work, including but not limited to, the furnishing of all labor, materials, tools, and equipment and other miscellaneous work. In general, the order of work consists of the following:

1. Contractor shall deliver letters/door hangers to the residents, businesses and/or school to be affected at least 48-72 hours in advance prior to start of road work.
2. Post “No Parking – Tow Away” sign one 48-72 hours in advance of start of road work, signs must state the day of the week and hours parking or access will be restricted.
3. Perform pavement repairs on marked (failed) area of the pavement.

All move-in, clearing, grubbing, traffic control and re-moving in (re-mobilization) shall considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed. All extra work authorized by Contract Change Orders shall be paid as per unit price for various bid items, if the Contract Change Order work includes any bid items. All move-in, clearing, grubbing, tree trimming and traffic control for this extra

work shall be included for in the unit price for the various bid item.

**9-1.02 Prosecution and Progress**

As specified herein, the Contractor shall follow the following procedures. The Engineer shall have the authority to approve any exceptions.

1. Once the Construction Contract is signed and the Engineer has issued the Notice to Proceed, the Contractor shall start work within ten (10) calendar days of the issuance date of the Notice to Proceed.
2. The Contractor shall provide written notice at least 48-72 hours in advance to property owners (via door hangers) describing the work to be done, dates of construction and contact information. All notices must be reviewed and approved by the Engineer prior to issuance to the public.
3. Contractor shall post “No Parking – Tow Away” sign at least 48-72 hours before start of road work.
4. The Contractor shall provide the City with an updated three-week look ahead project schedule at every weekly construction progress meeting.

**9-1.03 Quantities**

The following estimate of the quantities of work to be done and materials to be furnished are approximate only, and are intended as a basis for the comparison of bids. The City does not expressly or by implications agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work without increase or decrease in the unit price bid or to omit portions of the work that may be deemed necessary or expedient by the Engineer. Actual quantity of the work will depend upon the complaints, project budget and other considerations and constraints.

**BID ITEMS LIST**

<b>Bid Item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Total Cost</b>
1	Mobilization	1	LS	
2	Traffic Control	1	LS	
3	Water Pollution Control	1	LS	
4	Material Testing (Certified 3 <sup>rd</sup> Party Laboratory)	1	LS	
5	Pavement Repair – (3.0-Inch)	6,700	SY	
6	Pavement Repair – (6.0-Inch)	400	SY	
7	Hot Mix Asphalt (Type A)	1,300	TON	
<b>Total Project Cost</b>				

*See following page*

## **SECTION 12                      HOT MIX ASPHALT**

### **12-1.01                      Pavement Repair**

Saw cut and excavate the marked (failed) areas of the pavement and remove any wet and unstable material up to three (3) inches, until a solid & dry surface is reached. Compact existing subgrade to 95% relative compaction. Spray tack-coat on all saw-cut edges as per Caltrans Standard Specifications Section 39-1.09C on the milled pavement surface and to all vertical edges. The application rate shall be from 0.06 to 0.10 G/SY and as directed by the Engineer. Construct the base of the street using half (1/2) inch Nominal Maximum Aggregate Size hot-mix asphalt, type A PG64-10. A maximum of three (3) inches is allowed in one lift of hot-mix asphalt. Asphalt Bitumen content in the mix delivered at the site shall not be below 4.9%. The Contractor shall frequently test the material (at a minimum of one sample per 750 tons) for gradation, air voids, asphalt content, and stability at the hot-mix plant. An approved mix design is required. Details are in "Hot Mix Asphalt", section 12. Pavement repair work shall comply with Section 12-1.01 "Spreading Equipment", Section 12-1.13 "Spreading", Section 12-1.14 "Compacting Equipment", Section 12-1.15 "Compacting Pavement Repair" Section 12-1.16, and "Smoothness" Section 12.1.20 of these Special Provisions.

If the existing subgrade is pumping, Contractor shall place Geogrid fabric over entire area that is pumping. Geogrid fabric shall be provided to the Contractor by the Engineer. The Engineer or his/her designee has a full discretion to adjust the depth of the pavement repair depending on the existing condition of subgrade. Pavement fabric maybe present in the pavement areas to be excavated (or milled). Pavement fabric exposed by this operation shall be completely removed. No additional compensation will be allowed for saw cutting based on the presence of paving fabric and for the complete removal of the fabric.

Pavement repairs shall comply with Section 12-1.21 "Acceptance Testing for HMA", and Section 12-1.22 "Contractor's Quality Control and Acceptance Testing. Pavement repair shall be paid for by the actual area repaired (in square yards). It shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, traffic control, mobilization and doing all work involved in compaction, removal and disposal of materials as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer. No additional compensation will be allowed, therefore.

All saw cut material from the pavement repair shall become the property of the Contractor and be disposed outside the limits of the project. The existing pavement may also contain fabric interlayer (petromat, trupave and etc.). Stockpiling of saw-cut material on City streets will not be permitted. No additional compensation will be paid for removal of extra material and saw-cut material with interlayer fabric.

### **12-1.02                      Hot Mix Asphalt for Pavement Repair**

#### **Summary**

This work includes furnishing and placing ½" nominal maximum aggregate size Type A HMA, PG64-10 to be used for Pavement repair. Comply with Section 39, "Hot Mix Asphalt," of the Caltrans Standard Specifications.

### **12-1.03                      Asphalt**

Asphalt shall conform to Section 92, "Asphalts," of the Caltrans Standard Specifications.

#### **General**

Only Caltrans-approved asphalt suppliers who currently hold a Certificate of Compliance are eligible to supply bitumen for this project. The Contractor shall ensure the safe transportation, storage, use, and disposal of asphalt. The Contractor shall prevent the formation of carbonized particles caused by overheating asphalt during manufacturing or construction.

### **12-1.04                      Applying Asphalt**

Unless otherwise specified, the Contractor shall heat and apply asphalt in conformance with the provisions in Section 93, "Liquid Asphalts" of the Caltrans Specifications. The Contractor shall apply paving asphalt at a temperature between 250°F and 375°F. The Engineer will determine the exact temperature of paving asphalt.

### **12-1.05 Asphalt Grade**

PG 64-10 bitumen shall conform to Section 92-1.02(B) of the Caltrans Specifications. A certificate of compliance and test results performed by bitumen supplier shall accompany with each load and be presented to the Engineer.

### **Use of Reclaimed Asphalt Pavement (RAP)**

The use of RAP in HMA mix is allowed for up to 15% of the total mix by weight at the option of Contractor.

Requirements for RAP are as follows:

- 100% of RAP material must pass one (1) inch sieve;
- No deleterious materials are allowed in the RAP mix;
- No particle in the mixture made with RAP should exceed the maximum aggregate size at the time of discharge in the transport vehicle;
- The specific gravity of the virgin binder should be used as the specific gravity of the binder in the RAP for mixture design;
- The effective specific gravity of the aggregate in the RAP should be determined and used as the bulk specific gravity of the RAP aggregate for calculation purposes. When the RAP contains highly absorptive materials, the amount of absorbed asphalt should be estimated based on experience and used to back calculate the bulk specific gravity of the aggregate.

Requirements for aggregate properties, gradation and volumetric properties must be met by the blend of virgin and reclaimed materials.

The gradation of the aggregate in the RAP shall be used in calculation of the mix gradation and fractured faces. RAP is treated like a stockpile of aggregate during analysis. Fine aggregate angularity, sand equivalent and flat and elongated particles are not measured on the RAP aggregate.

The percentage of asphalt in the RAP should be considered when determining the trial asphalt content. The trial asphalt content is calculated during the trial blend analysis. The amount of asphalt contained in the RAP should be considered when determining how much virgin asphalt is required.

### **12-1.06 Aggregate**

Aggregate and combined aggregate shall conform to the quality and gradation provisions in these Special Provisions. Aggregates shall be clean and free from decomposed or organic materials and other deleterious substances.

Coarse aggregate is material retained on the #4 (4.75-mm) sieve, fine aggregate is material passing the #4 (4.75-mm) sieve, and supplemental fine aggregate is added fine material passing the #30 (600- $\mu$ m) sieve, including, but not limited to, lime, cement and stored fines from dust collectors. Fractured faces of the aggregate shall be obtained by crushing. Fine aggregate shall not contain more than ten (10) percent of natural (non-manufactured) sand by mass of the total aggregate.

The Contractor shall design a HMA mixture using a blend of aggregates with 1/2" (12.7 mm) NMAS. The target value for the percent passing each designated sieve size for the aggregate blend used in the proposed hot mix asphalt mix design shall be determined by the Contractor.



### 1/2 inch

Sieve size	Target value limit	Allowable tolerance
3/4"	100	--
1/2"	95-98	TV ± 5
3/8"	72-95	TV ± 5
No. 4	52-69	TV ± 5
No. 8	35-55	TV ± 5
No. 30	15-30	TV ± 4
No. 200	2.0-8.0	TV ± 2.0

\* The percent passing the 75-µm sieve shall be reported to the first decimal place (tenths).

Nominal Maximum Aggregate Size is defined as "one sieve size larger than the first sieve to retain more than 10% of the material."

In the table above, the symbol "X" is the gradation which the Contractor proposes to furnish for the specific sieve (Job Mix Formula).

Hot mix asphalt shall be Type-A conforming to the Caltrans Standard Specifications for half-inch (1/2") Nominal Maximum Aggregate Size.

For each hot mix asphalt mix proposed to be used, the Contractor shall submit a plot of the gradation of the aggregate on a Federal Highway Administration 0.45-power gradation chart. It is recommended that the proposed aggregate gradation should not vary from the low limit on one sieve size to the high limit on the adjacent sieve size, or vice versa, and should be free of any "sand hump." A sand hump is defined as a deviation of more than 3% upward from a straight line drawn from the origin of a 0.45-power gradation chart to the point at which the gradation line crosses the #4 (4.75-mm) sieve line.

During hot mix asphalt production, aggregate gradation shall be within the limits specified in the tables above. The combined aggregate shall conform to the following quality requirements prior to the addition of the bitumen:

#### Aggregate Quality Requirements

Quality	Test	Quality Requirement
Percent of Crushed Particles 1 (Min.) Coarse Aggregate Fine Aggregate (Passing no.4 sieve, Retained on no. no. 8 sieve)	CT 205	90% 70%
Fine Aggregate Angularity 1 (Min.)	AASHTO T304 Method A	45%
Los Angeles Rattler 1 Loss at 100 Rev. (Max.) Loss at 500 Rev. (Max.)	CT 211	12% 45%
Sand Equivalent 1 (Min.)	CT 217	47
Flat and elongated particles (%max. by weight @5:1)	CT 235	10

Notes:

1. Reported value shall be the average of three (3) tests from a single split sample.

Changes in aggregate source shall be considered a change in mix design and shall require a new mix design proposal before work can proceed.

Aggregates shall be treated in conformance with the provisions in "Anti-Strip Treatment" of these Special Provisions.

#### **12-1.07 Contractor Mix Design Proposal**

Mix designs shall conform with Section 39-1.03, "Hot Mix Asphalt Mix Design Requirements", of the Caltrans Standard Specifications and these Special Provisions.

The Contractor shall submit for the Engineer's review a proposed hot mix asphalt mix design for each hot mix asphalt mixture to be used at least fourteen (14) days prior to production of that hot mix asphalt mixture. A laboratory (or laboratories) whose proficiency has been reviewed and qualified in conformance with the Caltrans' Independent Assurance Program shall prepare the hot mix asphalt mix design.

Aggregate quality and hot mix asphalt design test results shall be no more than twelve (12) months old when production of the hot mix asphalt starts. The mix design shall indicate the target values (X) proposed for gradation, asphalt content, percent air voids, and Percent Voids in Mineral Aggregate. This submittal shall include test results for aggregate and asphalt mixture quality; plots of the combined gradings showing the production tolerances; plots of unit weight, stability, and percent air voids versus asphalt content for the asphalt contents considered in the design process. In addition, this submittal shall include test results for stability, percent air voids, and swell for three (3) briquettes constructed using the submitted aggregate and asphalt blended at the proposed target values for each hot mix asphalt to be used.

The Contractor shall submit the following for each hot mix asphalt mixture proposed.

A. Aggregate and mineral filler:

1. Target values for percent passing each sieve size for the aggregate blend.
2. Results of tests for aggregate quality requirements.
3. Source of each aggregate to be used, including producer, location and California Mine Identification number.
4. Percentage of each aggregate stockpile, cold feed or hot bin to be used.
5. Gradation of each aggregate stockpile, cold feed or hot bin to be used.
6. Plots of Power 45 curve for representative sample.

B. Bitumen:

1. Bitumen source and target value.
2. Results of the bitumen quality tests conforming to the provisions in Section 92, "Asphalts," of the Standard Specifications.
3. Certificate of compliance from the bitumen supplier certifying conformance with the requirements of the requirements for the type and grade of binder.
4. Material Safety Data Sheets. The proposed hot mix asphalt mix design submittal will be considered complete only when the mix design letter, test results, plots, and samples have been received by the Engineer.

#### **12-1.08 Engineer Review of Hot-Mix Asphalt Design**

The Engineer, in consultation with the Contractor, shall decide the optimum bitumen content (after considering stability of mix and other factors) and acceptable tolerance during production. The production tolerance shall not exceed +0.45 and -0.45 from approved optimum bitumen content. Certification from the asphalt plant, periodic inspection of plant during production, and supervision and documentation of all quality control test results performed at the plant shall be provided to the Engineer. All records of production and quality control must be kept for at least two (2) years.

#### **12-1.10 Engineer Quality Assurance**

The Engineer will assess conformance to contract specifications by review of the Contractor's mix design proposal,

by inspection of the Contractor's procedures, by oversight of the Contractor's quality control inspection and records, by splitting and testing samples with the Contractor during evaluation of the plant production start-up and the nuclear density test strip, and by independent verification sampling and testing of the hot mix asphalt and aggregates during hot mix asphalt production. The Engineer may test the asphalt, aggregates or hot mix asphalt mixture to determine conformance with these Special Provisions. Bitumen, aggregates or hot mix asphalt that does not conform to these Special Provisions will be rejected.

#### **12-1.11 General Requirements**

Hot mix asphalt paving shall be done with asphalt paver (paving machine). Hot mix asphalt shall be handled, spread, and compacted in a manner which is in conformance with these Special Provisions and the Caltrans Specifications. Hot mix asphalt shall be placed in such a manner that cracking, shoving, and displacement will be avoided. Hot mix asphalt shall be placed only when the ambient temperature is above 50°F.

Hot mix asphalt shall not be placed when the underlying layer or surface is frozen or not dry or when weather conditions will prevent proper handling, finishing or compaction of the mixture.

During transporting, spreading and compacting, petroleum products such as **diesel fuel and kerosene shall not be used** as a release agent on trucks, spreaders or compactors in contact with the hot mix asphalt. The Engineer shall approve the release agent.

Segregation shall be avoided. Surfacing shall be free from pockets of coarse or fine material. Hot mix asphalt containing hardened lumps shall not be used. Longitudinal joints in the top layer of hot mix asphalt shall correspond with the edges of planned traffic lanes. Longitudinal joints in other layers shall be offset not less than six (6) inches nor more than 12 inches alternately each side of the edges of traffic lanes.

At locations where the number of lanes is changed, the top layer for the through lanes shall be paved first. Tracks or wheels of spreading equipment shall not be operated on the top layer of hot mix asphalt until final compaction has been completed. At locations where the hot mix asphalt is to be placed over areas inaccessible to spreading and rolling equipment, the hot mix asphalt shall be spread by practical means to obtain the specified results and shall be compacted thoroughly to the required lines, grades, and cross sections by means of pneumatic tampers or by other methods that will produce the same degree of compaction as pneumatic tampers.

#### **12-1.12 Spreading Equipment**

Asphalt pavers shall be self-propelled mechanical spreading and finishing equipment provided with a screed or strike-off assembly capable of distributing the material to not less than the full width of a traffic lane unless otherwise approved by the Engineer. Screed action shall include cutting, crowding or other practical action that is effective on the hot mix asphalt mixture without tearing, shoving or gouging and that produces a surface texture of uniform appearance. The screed shall be adjustable to the required section and thickness. The screed shall be provided with a suitable full width compacting device.

Pavers that leave ridges, indentations or other marks in the surface shall not be used unless the ridges, indentations or marks are eliminated by rolling or prevented by adjustment in the operation. When end dump haul vehicles are used, the asphalt paver shall operate independently of the vehicle being unloaded or shall be capable of propelling the vehicle being unloaded. The load of the haul vehicle shall be limited to that which will insure satisfactory spreading. While being unloaded, the haul vehicle shall be in contact with the machine and the brakes on the haul vehicle shall not be depended upon to maintain contact between the vehicle and the machine.

No portion of the mass of hauling or loading equipment, other than the connection, shall be supported by the asphalt paver. No vibrations or other motions of the loader that could have a detrimental effect on the riding quality of the completed pavement shall be transmitted to the paver.

#### **12-1.13 Spreading**

Layers shall be spread with an asphalt paver, unless otherwise specified or approved by the Engineer. Asphalt pavers shall be operated in such a manner as to insure continuous and uniform movement of the paver. Hot mix asphalt shall be spread by mechanical means that will produce a uniform smoothness and texture.

Before placing the top layer adjacent to cold transverse construction joints, the joints shall be trimmed to a vertical face on a neat line. Transverse joints shall be tested with a twelve (12) foot straightedge and shall be cut back for surface smoothness as required in conformance with "Compacting," of these Special Provisions. Connections to existing surfacing shall be feathered to conform to the requirements for smoothness. Longitudinal joints shall be trimmed to a vertical face and on a neat line if the edges of the previously laid surfacing are, in the opinion of the Engineer, in such a condition that the quality of the completed joint will be affected.

#### **12-1.14            Compacting Equipment**

A sufficient number of rollers shall be provided to obtain the specified compaction and surface finish required by these Special Provisions. Rollers shall be sized to achieve the required results. Rollers shall be equipped with pads and water systems that prevent sticking of the hot mix asphalt mixtures to the pneumatic or steel- tired wheels. Power driven front drums rollers are recommended to be used to eliminate the development of bumps formations on the paving mat. A parting agent that will not damage the hot mix asphalt mixture may be used to aid in preventing the hot mix asphalt mixture from sticking to the wheels. Petroleum products such as **diesel fuel and kerosene shall not be used** as a parting agent. The parting agent must be approved by the Engineer.

#### **12-1.15            Compacting – Pavement Repair**

Compacting equipment shall conform to the provisions in these Special Provisions and Caltrans Standard Specifications. Rolling shall commence at the lower edge and shall progress toward the highest portion. No rolling will be permitted after the hot mix asphalt temperature is below 140°F.

The goal of this compaction specification is to achieve a minimum density of 95.0 percent of maximum theoretical density (Rice density) as practicable as possible with minimum rolling and aggregate breaking. A rolling pattern will be established on a test trip to achieve the end result using Multicool, Pavecool, or similar computer program which can calculate the time available for compaction based on actual weather conditions in the field and HMA delivery temperature behind the paving machine. The Contractor shall extract cores and calibrate the nuclear gauge for this purpose. Once the rolling pattern is established, it should not be changed unless further cores or nuclear gauge measurements indicate a need of change. Cores shall be extracted daily at random locations for quality control and calibration. In-place density of hot mix asphalt will be determined prior to opening the pavement to public traffic using a calibrated nuclear gauge.

Upon completion of rolling operations, if ordered by the Engineer, the hot mix asphalt shall be cooled by applying water. Applying water shall conform to the provisions in Section 17, "Watering," of the Caltrans Standard Specifications. The completed surfacing shall be thoroughly compacted, smooth, and free from ruts, humps, depressions or irregularities. Ridges, indentations or other objectionable marks left in the surface of the hot mix asphalt by blading or other equipment shall be eliminated by rolling or other suitable means. The use of equipment that leaves ridges, indentations or other objectionable marks in the hot mix asphalt shall be discontinued.

When a straightedge twelve (12) feet long is laid on the finished surface and parallel with the centerline, the surface shall not vary more than .01 foot from the lower edge of the straightedge. The transverse slope of the finished surface shall be uniform to a degree such that no depressions greater than .02 foot are present when tested with a straightedge twelve (12) feet long in a direction transverse to the centerline and extending from edge to edge of a twelve (12) foot traffic lane.

The Contractor shall use a minimum ski length of 24 feet on one side and a joint matching control on the opposite side. Automatic grade controls are required to be utilized in conjunction with ski and joint matching devices.

New paving shall tie smoothly into previously resurfaced mats and existing pavement.

#### **12-1.16            Hot Mix Asphalt Paving**

A maximum of three (3") inch compacted thickness of hot mix asphalt (HMA) shall be installed in one lift. Quantities shown on the bidding schedule are approximate and are given for estimating purposes only.

Pay quantities for hot mix asphalt will be based on the gross weight less the tare weight of each loaded vehicle delivering said material to the job site, provided the gross weight does not exceed the legal weight limit for the particular vehicle being used. No payment will be made for the quantity in excess of the legal gross weight limit for each load of

material delivered to the job site.

It is the Contractor's responsibility to accurately estimate the required HMA on the days paving work is scheduled. Excess HMA at the end of the work day will be considered as waste and will not be compensated.

HMA will be measured by the ton and will be paid for at the contract price per ton. This payment shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing hot mix asphalt, complete in place, including tack-coat application, as shown on the Plans and as specified in the Specifications and these Special Provisions, and as directed by the Engineer.

#### **12-1.17 Conform Tapers**

New paving shall tie smoothly into previously resurfaced mats, existing pavement and to private driveways. Additional HMA may be placed to create smooth conform taper. Up to twenty-five (25) feet of side street overlay may be performed as per specifications and as directed by the Engineer. No extra compensation shall be paid for extra traffic control, time, equipment, manpower, slow progress, or delays due to removal and installation of frequent traffic control, or any other contingencies required for the side street work. It is anticipated that side street work may slow down the paving operation on the main street.

#### **12-1.18 Smoothness**

##### **General**

Determine HMA pavement smoothness with a 12-foot straightedge. In special circumstances such as excessive bumps formation on the finish pavement, the Engineer may request the use of Profilograph in lieu of the 12-foot straightedge. The use of Profilograph shall be in accordance with the Caltrans Standard Specification and at the contractor's expense.

##### **Straightedge**

The HMA pavement top layer must not vary from the lower edge of a 12-foot long straightedge:

1. More than 0.01 foot when the straight edge is laid parallel with the centerline
2. More than 0.02 foot when the straightedge is laid perpendicular to the centerline and extends from edge to edge of a traffic lane
3. More than 0.02 foot when the straightedge is laid within 24 feet of a pavement conform

##### **Smoothness Correction**

If the top-layer of HMA pavement does not comply with the smoothness specification, the contractor shall correct the problem at his or her own expense. The following are the correction methods:

1. Micro (Fine-tooth) grind or Diamond grind the pavement to within tolerance. Grinding shall not gouge out the aggregates of the finish pavement. Micro-surfacing must be applied on the ground areas per Caltrans Standard Specification.
2. Remove and replace the pavement.
3. Place a layer of HMA.

The Engineer must authorize the choice of correction before the work begins. Corrected HMA pavement areas must be uniform rectangles with edges:

1. Parallel to the nearest HMA pavement edge or lane line
2. Perpendicular to the pavement centerline

Measure the corrected HMA pavement surface with a 12-foot straightedge and/or Profilograph and correct the pavement to within specified tolerances. If a must-grind area or straightedged pavement cannot be corrected to within specified tolerances, remove and replace the pavement.

#### **12-1.19 Acceptance Testing for HMA**

Hot mix asphalt shall be compacted between a minimum of 92 percent and a maximum of 96 percent of Maximum Theoretical Density (Rice Density) as determined by the American Society of Testing Materials (ASTM) D-2041 or

Caltrans test 309.

Pavement density will be determined by comparing the average density of cores taken from the compacted pavement to the density of Maximum Theoretical Density as determined by the American Society of Testing Materials (ASTM) D-2041 or Caltrans test 309.

Core samples for determination of the density of completed pavements shall be obtained by the Contractor at his/her own expense, and no additional compensation will be allowed therefore. The core samples shall be four (4) or six (6) inches in diameter. In order for the Contractor to monitor their performance, the Contractor shall utilize a nuclear density gauge for preliminary testing, which shall be correlated to core density obtained at the project site. The cores shall be extracted within 24 hours of paving. A Caltrans certified geotechnical lab that can evaluate the density of the cores must be used. The Contractor shall have a representative with the roller at all times checking density of the compacted mat of the hot-mix asphalt. Dry ice may be used for cooling the pavement prior to coring. The number and locations of the samples will be as agreed upon in the field by the Engineer and the Contractor. Samples shall be neatly cut with a saw, core drill, or other approved equipment. The Engineer shall meet in the field with the Contractor and mutually agree on several locations for compaction testing for the given lot and tie them out to the sidewalk or side of the road. The actual test location(s) will be randomly selected from the several agreed upon locations. At least one (1) core must be taken from the wheel path area. The Contractor shall secure the core samples with proper label for at least two (2) months.

All cost of coring, labor, equipment, traffic control, incidentals etc., shall be included in various bid items.

<b>Compaction Results</b>	<b>Action</b>
96.1% and greater	Work shall not be continued. A mandatory meeting shall be held between the Contractor and the Engineer. The Contractor shall propose adjustments to his/her materials and/or procedures in order to meet required compaction to the satisfaction of the Engineer. Paving may then resume, after the 24-hour mandatory waiting period, with a 500 ton maximum secondary test section.
91.9% and less	The Engineer shall stop the work. At the Contractor's expense, an independent engineering consultant acceptable to the Engineer shall be hired to analyze mix design, structural adequacy of existing road, placement and/or compaction methods, and test data. Working days shall cease for a maximum period of ten (10) calendar days while the engineering consultant is selected and the investigation performed. Paving may then resume by incorporating the recommended changes of the engineering consultant with a 500 ton maximum secondary test section.

No more than one (1) secondary test section shall be allowed. If compaction results from the secondary test section do not fall within 92% to 96%, and at the sole discretion of the Engineer, all remaining paving work and any associated work (striping, shoulders, etc.) may be terminated.

**12-1.20 Contractor's Quality Control and Acceptance Testing**

Quality control, sampling, acceptance testing, and inspection shall be provided by a certified 3<sup>rd</sup> party lab during hot mix asphalt work. Sampling, testing, and inspection shall be performed at a rate sufficient to ensure that the hot mix asphalt product conforms to the requirements in these Special Provisions and Caltrans Standard Specifications. Sampling for testing to be reported to the Engineer shall be performed at the minimum frequency specified in the following table (see following pages):

Quality characteristic	Test method	Minimum sampling and testing frequency	TYPE A HMA Acceptance
Aggregate gradation	California Test 202	1 per 750 tons but not less than 1 per day	JMF ± tolerance <sup>c</sup>
Sieve 3/4"			
1/2"	X <sup>b</sup>		
3/8"			
No. 4			
No. 8	X		
No. 200	X		
Sand equivalent (min) <sup>d</sup>	California Test 217	1 per 750 tons but not less than 1 per day	47
Asphalt binder content (%)	California Test 379 or 382	1 per 750 tons but not less than 1 per day	JMF ± 0.45
HMA moisture content (% max)	California Test 226 or 370	1 per 750 ton but not less than 1 per day	1.0
Percent of maximum theoretical density (%)	California Test 308/ California Test 309	3 per 750 tons but not less than 3 per day/ 1 per 750 tons but not less than one per day	92-97
Stabilometer value (min) <sup>d,g</sup> No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 366	1 per 4,000 tons or 2 per 5 business days, whichever is greater.	30 37
Air void content (%) <sup>d, h</sup>	California Test 367		4 ± 2
Percent of crushed particles Coarse aggregate (% min) One fractured face Two fractured faces Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face	California Test 205	Minimum of 1 per project.	90 75  70
Los Angeles Rattler (% max) Loss at 100 rev. Loss at 500 rev.	California Test 211	Minimum of 1 per project.	12 40
Fine aggregate angularity (% min)	California Test 234	Minimum of 1 per project.	45
Flat and elongated particles (% max by weight @ 5:1)	California Test 235	Minimum of 1 per project.	Report only
Voids filled with asphalt (%) <sup>i</sup>	California Test 367	Minimum of 1 per project.	

No. 4 grading 3/8" grading 1/2" grading 3/4" grading			76-80 73-76 65-75 65-75
Voids in mineral aggregate (% min) <sup>i</sup> No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367	Minimum of 1 per project.	17 15 14 13
Dust proportion <sup>i</sup> No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 367	Minimum of 1 per project.	0.9-2.0 0.6-1.3
Smoothness	Special Provision and/or Caltrans Standard	As often as required	12-foot straight-edge, must grind, or PI <sub>0</sub>
Asphalt binder	Special Provision and/or Caltrans Standard	1 per 500 tons but not less than 1 per project	Caltrans Standard Section 92
Asphalt rubber binder viscosity @ 350 °F, centipoises	Special Provision and/or Caltrans Standard	Minimum of 1 per each blend or as directed by the Engineer	--
Asphalt modifier	Special Provision and/or Caltrans Standard	1 per 23 tons but not less than 1 per project	--
CRM	Special Provision and/or Caltrans Standard	1 per 225 tons but not less than 1 per project	--

<sup>b</sup> "X" denotes the sieves the tests for the specified aggregate gradation.

<sup>c</sup> The tolerances must comply with the allowable tolerances

<sup>d</sup> Reports the average of 3 tests from a single split sample.

<sup>g</sup> California Test 304, Part 2.13.

<sup>h</sup> Determine the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.

<sup>i</sup> Report only if the adjustment for the asphalt binder content TV is less than or equal to ±0.3 percent from the OBC value submitted on a *Contractor Hot Mix Asphalt Design Data* form.

<sup>j</sup> Voids in mineral aggregate for RHMA-G must be within this range.



No single test result may represent more than 750 tons or 1 day's production, whichever is less. For any single quality characteristic except smoothness, if two (2) consecutive acceptance test results do not comply with the specifications:

1. Stop production.
2. Take corrective action.
3. Take samples and split each sample into 4 parts in the Engineer's presence. Test 1 part for compliance with the specifications and submit 3 parts to the Engineer. The Engineer tests 1 part for compliance with the specifications and reserves and stores 2 parts.
4. Demonstrate compliance with the specifications before resuming production and placement.

The Engineer will perform independent materials testing necessary to determine conformance with the requirements specified in the Special Provisions.

**12-1.21 Pay Factor for HMA**

HMA shall be compacted between a minimum of 92 percent and a maximum of 96 percent of Maximum Theoretical Density (Rice Density) as determined by the American Society of Testing Materials (ASTM) D-2041 or Caltrans Test 309.

It has been recognized that improper compaction (or void content) is the most significant factor affecting mix performance. An increase in void content leads to a decrease in modulus, fatigue life, and resistance to permanent deformation. These reduced factors equate to a great reduction in pavement life. A decrease in void content beyond an optimum range leads to flushing and reduced skid resistance. As such, all finished hot-mix asphalt pavements which do not conform to the specified relative compaction requirements will be paid for using the following pay factors:

<b>In-Place Relative Compaction</b>	<b>Pay Factor</b>
99% or higher (Unacceptable over-asphalted mix)	Remove and Replace
96.1 - 98.9% (Less Ideal)	95% Pay factor
92 - 96.0% (Ideal)	100% Pay factor
90 - 91.9% (Less Ideal)	95% Pay factor
89 - 89.9% (Marginal air voids)	87% Pay factor
88.9% or less (Unacceptable air voids)	Remove and Replace

Pavement density will be determined by comparing the average density of cores taken from the compacted pavement to the density of Maximum Theoretical Density as determined by the American Society of Testing Materials (ASTM) D-2041 or Caltrans Test 309.

- a. **Lot Sizes:** The pavement will be accepted for density on a lot basis. A lot will consist of 750 tons or portions thereof.
- b. **Laboratory Density:** Bituminous mixture for laboratory-compacted specimens will be sampled on a lot basis per Caltrans test 125. The lot size will be the same as indicated in paragraph (a). One sample shall be taken from each lot on a random basis. One sample (CT 309) shall be done per lot.
- c. **Core Density:** Cores for determining the density of the compacted pavement will be taken on a lot basis, a minimum of three (3) cores per lot. The lot size shall be the same as indicated in paragraph (a). A minimum of three (3) cores shall be taken from each lot on a random basis. The cores shall be taken in accordance with these Special Provisions and as directed by the Engineers Representative.

The density of each core shall be determined in accordance with ASTM D 2726-89 or Caltrans Test 308.

Core samples for determination of the density of completed pavements shall be obtained by the Contractor at his/her own expense, and no additional compensation will be allowed, therefore. The core samples shall be four (4) inches in diameter.

#### **12-1.22 Measurement and Payment**

HMA will be measured and paid for by the ton in the same manner specified for hot-mix asphalt in Section 39-6, "Payment," of the Caltrans Standard Specifications.

The contract price paid per ton of hot-mix asphalt shall include full compensation for traffic control, multiple mobilizations, furnishing all labor, materials, tack coat, tools, equipment and incidentals, and for doing all the work involved in placement, compactions, quality control, and acceptance testing of hot-mix asphalt as shown on the plans, as specified in Caltrans Standard Specifications and these Special Provisions, and as directed by the Engineer.

The contract price paid per square area of pavement repairs shall include full compensation for dig-out of damaged areas, multiple move-ins and traffic control, furnishing all labor, materials, tack coat, tools, equipment and incidentals, and for doing all the work involved in preparing the area for the placement of hot-mix asphalt, as specified in Caltrans Standard Specifications and these Special Provisions, and as directed by the Engineer.

The contract price paid per a lump sum of 3<sup>rd</sup> party certified lab shall include quality control, sampling, acceptance testing, and inspection shall be provided by certified 3<sup>rd</sup> party lab during hot mix asphalt work. Sampling, testing, and inspection shall be performed at a rate sufficient to ensure that the hot mix asphalt product conforms to the requirements in these Special Provisions and Caltrans Standard Specifications, and as directed by the Engineer.