DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
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Be energy efficient!

June 14, 2013

11-SD-94-14.9/30.0
11-290404
Project ID 1100000360
ACNH-P094(059)E

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN SAN DIEGO COUNTY NEAR JAMUL FROM ROUTE 54 TO 0.2 MILE EAST OF MARRON VALLEY ROAD.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on Thursday, June 27, 2013.

This addendum is being issued to revise the *Notice to Bidders and Special Provisions*, the *Information Handout*, and the Federal Minimum Wages with Modification Number 7 dated 05/31/2013.

In the Special Provisions, Section 2-1.06B is replaced as attached.

In the Special Provisions, Section 10-1.02 is replaced as attached.

In the Special Provisions, Section 10-1.03 is replaced as attached.

In the Special Provisions, Section 12-4.05F, "Chart no. F5," is added as attached.

In the Special Provisions, Section 12-4.05H is added as attached.

In the Special Provisions, Section 37, "BITUMINOUS SEALS," is replaced as attached.

The *Information Handout* is replaced as attached.

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To *Bid* book holders:

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the *Notice to Bidders* section of the *Notice to Bidders and Special Provisions*.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the *Bid* book.

Submit bids in the *Bid* book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This addendum, attachments and the modified wage rates are available for the Contractors' download on the Web site:

http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/11/11-290404

If you are not a *Bid* book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

for LAURIE BERMAN
District Director

Attachments

Add to section 2-1.06B:

The Department makes the following supplemental project information available:

Supplemental Project Information

Means	Description
Included in the *Information Handout*	1. United States Fish and Wildlife Service, Special Use Application and Permit, Dated June 19, 2012 - with revisions dated June 4, 2013. 2. Vestar Property Management, Permit to Enter and Construct, Dated October 2, 2012 3. YMCA of San Diego County, Permit to Enter and Construct, Dated May 24, 2012 4. Grossmont Union High School District, Permit to Enter and Construct, Dated May 3, 2012 - revised May 23, 2013.

Add to section 10-1.02:

Do not place the uppermost layer of new pavement until all underlying conduits are installed. Detector loops may be installed after the uppermost layer of new pavement has been placed.

Before starting the traffic signal functional test at any location, all items of work related to signal control must be completed and all roadside signs, pavement delineation, and pavement markings must be in place at that location.

Replace "Reserved" in section 10-1.03 of the RSS for section 10-1 with:

Work at the following locations per Chart no. F5, Chart no. H1 and Chart no.H2 requirements:

1. Curb Ramp Locations #9 and #10

Stagger work at the following locations so that only one driveway will be under construction at a time. Complete work only on Mondays, Tuesdays, Wednesdays and Thursdays. Work must be complete before October 1, 2013:

1. Curb Ramp Locations #3, #4, #5, #6, #7, and #8

Chart no. F5
Conventional Highway Lane Requirements

County: SD	Route/Direction: 94/WB	PM: 16.18 – 16.38

Closure limits: 0.10 Mi. west of Cougar Canyon Dr. to 0.10 Mi. east of Cougar Canyon Rd.

From hour to hour	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays	S	S	S	S	S																				
Fridays																		S	S	S	S	S	S	S	
Saturdays	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	
Sundays	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	

Legend:

S	Shoulder closure allowed (right / left)
	Work allowed within the highway where shoulder or lane closure is not required

REMARKS

This chart to be used (2) two weekends only

Replace Section 12-4.05H with:

12-4.05H

Chart no. H1
Road / City Street - Lane Requirements

County: SD	Route/Direction: NB Cougar Canyon Dr.	PM:

Closure limits: @ Rte. 94

From hour to hour	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays	1	1	1	1	1																				
Fridays																		1	1	1	1	1	1	1	
Saturdays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sundays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Legend:

1	Provide at least 1 through traffic lane open in direction of travel
	Work allowed within the highway where shoulder or lane closure is not required

REMARKS:
This chart to be used for (1) one weekend only

Chart no. H2
Road / City Street - Lane Requirements

County: SD	Route/Direction: SB Cougar Canyon Dr.	PM:

Closure limits: @ Rte. 94

From hour to hour	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays	1	1	1	1	1																				
Fridays																		1	1	1	1	1	1	1	
Saturdays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sundays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Legend:

1	Provide at least 1 through traffic lane open in direction of travel
	Work allowed within the highway where shoulder or lane closure is not required

REMARKS:

This chart to be used for (1) one weekend only

This chart can't be used in conjunction with chart H1

37 BITUMINOUS SEALS

Add to section 37-2.01A:

Asphalt rubber stress absorbing membrane interlayer (SAMI) includes applying heated asphalt rubber binder, followed by heated screenings precoated with asphalt binder.

Replace "Reserved" in section 37-2.01B with:

crumb rubber modifier: Ground or granulated high natural crumb rubber or scrap tire crumb rubber.

descending viscosity reading: Subsequent viscosity reading at least 5 percent lower than the previous viscosity reading.

high natural crumb rubber: Material containing 40 to 48 percent natural rubber.

scrap tire crumb rubber: Any combination of:

1. Automobile tires
2. Truck tires
3. Tire buffing

Replace section 37-2.01C(5) with:

37-2.01C(5) Asphalt Rubber SAMI

For each delivery of asphalt rubber binder ingredients and asphalt rubber binder to the job site, submit a certificate of compliance and a copy of the specified test results.

Submit MSDS for each asphalt rubber binder ingredient and the asphalt rubber binder.

At least 15 days before use, submit:

1. Four 1-quart cans of mixed asphalt rubber binder
2. Samples of each asphalt rubber binder ingredient
3. Asphalt rubber binder formulation and data as follows:
   - 3.1. For asphalt binder and asphalt modifier submit:
     - 3.1.1. Source and grade of asphalt binder
     - 3.1.2. Source and type of asphalt modifier
     - 3.1.3. Percentage of asphalt modifier by weight of asphalt binder
     - 3.1.4. Percentage of combined asphalt binder and asphalt modifier by weight of asphalt rubber binder
     - 3.1.5. Test results for the specified quality characteristics
   - 3.2. For crumb rubber modifier submit:
     - 3.2.1. Each source and type of scrap tire crumb rubber and high natural rubber
     - 3.2.2. Percentage of scrap tire crumb rubber and high natural rubber by total weight of asphalt rubber binder
     - 3.2.3. Test results for the specified quality characteristics
   - 3.3. For asphalt rubber binder submit:
     - 3.3.1. Test results for the specified quality characteristics
     - 3.3.2. Minimum reaction time and temperature

At least 5 business days before use, submit the permit issued by the local air quality agency for asphalt rubber binder:

1. Field blending equipment
2. Application equipment

If an air quality permit is not required by the local air quality agency for producing asphalt rubber binder or spray applying asphalt rubber binder, submit verification from the local air quality agency that an air quality permit is not required for this Contract.

Submit a certified volume or weight slip for each delivery of asphalt rubber binder ingredients and asphalt rubber binder.

Submit a certificate of compliance and accuracy verification of test results for viscometers.

When determined by the Engineer, submit notification 15 minutes before each viscosity test or submit a schedule of testing times.

Submit the log of asphalt rubber binder viscosity test results each day of asphalt rubber SAMI work.

Replace "Reserved" in section 37-2.01D(1) with:

Equipment used in producing asphalt rubber binder must be permitted for use by the local air quality agency. Equipment used in spreading asphalt rubber binder must be permitted for use by the local air quality agency.

Replace section 37-2.01D(4) with:

37-2.01D(4) Asphalt Rubber SAMI

Each asphalt rubber binder ingredient must be sampled and tested for compliance with the specifications by the manufacturer.

Test and submit results at least once per project or the following, whichever frequency is greater:

1. For crumb rubber modifier except for grading, at least once per 250 tons. Samples of scrap tire crumb rubber and high natural crumb rubber must be sampled and tested separately. Test each delivery of crumb rubber modifier for grading.
2. For asphalt binder, test and submit at least once per 200 tons of asphalt binder production.
3. For asphalt modifier, test and submit at least once per 25 tons of asphalt modifier production.

Scrap tire crumb rubber and high natural crumb rubber must be delivered to the asphalt rubber production site in separate bags.

Take viscosity readings of asphalt rubber binder under ASTM D7741 during asphalt rubber binder production. Start taking viscosity readings of samples taken from the reaction vessel at least 45 minutes after adding crumb rubber modifier and continue taking viscosity readings every 30 minutes until 2 consecutive descending viscosity readings have been obtained and the final viscosity meets the specification requirement. After meeting the 2 descending viscosity readings requirement, continue to take viscosity readings hourly and within 15 minutes before use. Log the test results, including time of testing and temperature of the asphalt rubber binder.

Replace section 37-2.02G with:

37-2.02G Asphalt Rubber Binder

37-2.02G(1) General

Asphalt rubber binder must be a combination of:

1. Asphalt binder
2. Asphalt modifier
3. Crumb rubber modifier

The blending equipment must allow the determination of weight percentages of each asphalt rubber binder ingredient.

Asphalt rubber binder must be 79 ± 1 percent by weight asphalt binder and 21 ± 1 percent by weight of crumb rubber modifier. The minimum percentage of crumb rubber modifier must be 20.0 percent and lower values may not be rounded up.

Crumb rubber modifier must be 76 ± 2 percent by weight scrap tire crumb rubber and 24 ± 2 percent by weight high natural rubber.

The blend of asphalt binder and asphalt modifier must be combined with crumb rubber modifier at the asphalt rubber binder production site. The asphalt binder and asphalt modifier blend must be from 375 to 440 degrees F when crumb rubber modifier is added. Combined ingredients must be allowed to react at least 45 minutes at temperatures from 375 to 425 degrees F except the temperature must be at least 10 degrees F below the flash point of the asphalt rubber binder.

After reacting, the asphalt rubber binder must have the values for the quality characteristics shown in the following table:

Blended Asphalt Rubber Binder

Quality characteristic	Test method	Value	
		Min	Max
Cone penetration @ 25 °C, 1/10 mm	ASTM D 217	25	60
Resilience @ 25 °C, percent rebound	ASTM D 5329	18	50
Field softening point, °C	ASTM D 36	55	88
Viscosity @190 °C, Pa • s ($x10^{-3}$)	ASTM D 7741	1500	2500

Maintain asphalt rubber binder at a temperature from 375 to 415 degrees F.

Stop heating unused asphalt rubber binder 4 hours after the 45-minute reaction period. Reheating asphalt rubber binder that cools below 375 degrees F is a reheat cycle. Do not exceed 2 reheat cycles. If reheating, asphalt rubber binder must be from 375 to 415 degrees F before use.

During reheating, you may add scrap tire crumb rubber. Scrap tire crumb rubber must not exceed 10 percent by weight of the asphalt rubber binder. Allow added scrap tire crumb rubber to react for at least 45 minutes. Reheated asphalt rubber binder must comply with the specifications for asphalt rubber binder.

37-2.02G(2) Asphalt Binder

Asphalt binder for asphalt rubber binder SAMI must be Grade PG 64-16.

Asphalt binder must comply with the specifications for asphalt binder. Do not modify asphalt binder with polymer.

37-2.02G(3) Asphalt Modifier

Asphalt modifier must be a resinous, high flash point, and aromatic hydrocarbon. Asphalt modifier must have the values for the quality characteristics shown in the following table:

Asphalt Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Value
Viscosity, m^2/s (x 10^{-6}) at 100 °C	ASTM D 445	X ± 3 [a]
Flash point, CL.O.C., °C	ASTM D 92	207 min
Molecular analysis		
Asphaltenes, percent by mass	ASTM D 2007	0.1 max
Aromatics, percent by mass	ASTM D 2007	55 min

[a] "X" denotes the proposed asphalt modifier viscosity from 19 to 36. A change in "X" requires a new asphalt rubber binder submittal.

Asphalt modifier and asphalt binder must be blended at the production site. Asphalt modifier must be from 2.5 to 6.0 percent by weight of the asphalt binder in the asphalt rubber binder. The asphalt rubber binder supplier determines the exact percentage.

If blended, the asphalt binder must be from 375 to 440 degrees F when asphalt modifier is added and the mixture must circulate for at least 20 minutes. Asphalt binder, asphalt modifier, and crumb rubber modifier may be proportioned and combined simultaneously.

37-2.02G(4) Crumb Rubber Modifier

Crumb rubber modifier must be ground or granulated at ambient temperature.

Scrap tire crumb rubber and high natural crumb rubber must be delivered to the asphalt rubber binder production site in separate bags.

Steel and fiber must be separated. If steel and fiber are cryogenically separated, it must occur before grinding and granulating. Cryogenically-produced crumb rubber modifier particles must be large enough to be ground or granulated.

Wire must not be more than 0.01 percent by weight of crumb rubber modifier. Crumb rubber modifier must be free of contaminants except fabric, which must not exceed 0.05 percent by weight of crumb rubber modifier. Method for determining the percent weight of wire and fabric is available under Laboratory Procedure 10 at the following METS Web site:

http://www.dot.ca.gov/hq/esc/Translab/ofpm/fpmlab.htm

The length of an individual crumb rubber modifier particle must not exceed 3/16 inch.

Crumb rubber modifier must be dry, free-flowing particles that do not stick together. A maximum of 3 percent calcium carbonate or talc by weight of crumb rubber modifier may be added. Crumb rubber modifier must not cause foaming when combined with the asphalt binder and asphalt modifier.

Specific gravity of crumb rubber modifier must be from 1.1 to 1.2 determined under California Test 208.

When tested under ASTM D 297, crumb rubber modifier must comply with the requirements shown in the following table:

Crumb Rubber Modifier

	Scrap tire crumb rubber (percent)		High natural rubber (percent)	
Quality characteristic	Min	Max	Min	Max
Acetone extract	6.0	16.0	4.0	16.0
Rubber hydrocarbon	42.0	65.0	50.0	--
Natural rubber content	22.0	39.0	40.0	48.0
Carbon black content	28.0	38.0	--	--
Ash content	--	8.0	--	--

Scrap tire crumb rubber must have the gradation shown in the following table:

Scrap Tire Crumb Rubber Gradation

Percentage passing

Sieve size	Gradation limit	Operating range	Contract compliance
No. 8	100	100	100
No. 10	98–100	95–100	90–100
No. 16	45–75	35–85	32–88
No. 30	2–20	2–25	1–30
No. 50	0–6	0–10	0–15
No. 100	0–2	0–5	0–10
No. 200	0	0–2	0–5

High natural crumb rubber must have the gradation shown in the following table:

High Natural Crumb Rubber Gradation

Percentage passing

Sieve size	Gradation limit	Operating range	Contract compliance
No. 10	100	100	100
No. 16	95–100	92–100	85–100
No. 30	35–85	25–95	20–98
No. 50	10–30	6–35	2–40
No. 100	0–4	0–7	0–10
No. 200	0–1	0–3	0–5

Test the crumb rubber modifier gradation under ASTM C 136 except

1. Split or quarter 100 ± 5 g from the crumb rubber modifier sample and dry to a constant mass at a temperature from 57 to 63 degrees C and record the dry sample mass. Place the crumb rubber modifier sample and 5 g of talc in a 1/2-liter jar. Seal the jar, then shake the jar by hand for at least 1 minute to mix the crumb rubber modifier and the talc. Continue shaking or open the jar and stir until the particle agglomerates and clumps are broken and the talc is uniformly mixed.
2. Place 1 rubber ball on each sieve. Each ball must weigh 8.5 ± 0.5 g, measure 24.5 ± 0.5 mm in diameter, and have a Shore Durometer "A" hardness of 50 ± 5 determined under ASTM D 2240. After sieving the combined material for 10 ± 1 minutes, disassemble the sieves. Brush material adhering to the bottom of a sieve into the next finer sieve. Weigh and record the mass of the material retained on the 2.36-milimeter sieve and leave this material (do not discard) on the scale or balance. Fabric balls must remain on the scale or balance and be placed together on the side to prevent them from being covered or disturbed when the material from finer sieves is placed onto the scale or balance. The material retained on the 2.00-milimeter sieve must be added to the scale or balance. Weigh and record that mass as the accumulative mass retained on the 2.00-milimeter sieve. Continue weighing and recording the accumulated masses retained on the remaining sieves until the accumulated mass retained in the pan has been determined. Before discarding the crumb rubber modifier sample, separately weigh and record the total mass of fabric balls in the sample.
3. Determine the mass of material passing the 75-micrometer sieve by subtracting the accumulated mass retained on the 75-micrometer sieve from the accumulated mass retained in the pan. If the material passing the 75-micrometer sieve has a mass of 5 g or less, cross out the recorded number for the accumulated mass retained in the pan and copy the number recorded for the accumulated mass retained on the 75-micrometer sieve and record that number, next to the crossed out number, as the accumulated mass retained in the pan. If the material passing the 75-micrometer sieve has a mass greater than 5 g, cross out the recorded number for the accumulated mass retained in the pan, subtract 5 g from that number and record the difference next to the crossed out number. The adjustment to the accumulated mass retained in the pan accounts for the 5 g of talc added to the sample. For calculation purposes, the adjusted total sample mass is the same as the adjusted accumulated mass retained in the pan. Determine the percent passing based on the adjusted total sample mass and record to the nearest 0.1 percent.

Replace section 37-2.02H(4) with:

37-2.02H(4) Asphalt Rubber SAMI

Before precoating with asphalt binder and when tested under California Test 202, screenings for asphalt rubber SAMI must have the gradation shown in the following table:

Asphalt Rubber SAMI Screenings Gradation

Sieve sizes	Percentage passing by weight		
	Coarse 1/2" max	Medium 1/2" max	Fine 3/8" max
3/4"	100	100	100
1/2"	75–90	85–90	95–100
3/8"	0–20	0–30	70–85
No. 4	0–2	0–5	0–15
No. 8	--	--	0–5
No. 200	0–1	0–1	0–1

Screenings must have the values for the properties shown in the following table:

Screenings

Properties	Test method	Value
Cleanness value, min	California Test 227	80
Durability, min	California Test 229	52

Screenings for asphalt rubber SAMI must comply with the Fine 3/8" max grading.

Add item 1.5 to the list in section 37-2.03B(1):

1.5. Tarpaulins to cover precoated screenings when haul distance exceeds 30 minutes or ambient temperature is less than 65 degrees F.

Replace section 37-2.03B(2) with:

37-2.03B(2) Asphalt Rubber SAMI

Equipment for asphalt rubber SAMI must include and comply with the following:

1. Tank to heat and maintain the temperature of blended asphalt binder and asphalt modifier before adding crumb rubber modifier. The tank must have a thermostatic heat control device and a temperature reading device accurate to within 5 degrees F. The heat control device must be the recording type.
2. Mechanical mixer for complete, homogeneous blending of asphalt binder, asphalt modifier, and crumb rubber modifier. Asphalt binder and asphalt modifier must be introduced into the mixer through meters. The blending system must vary the rate of delivery for asphalt binder and asphalt modifier proportionate to crumb rubber modifier delivery. The mixer must not allow the temperature of asphalt binder and asphalt modifier to vary more than 25 degrees F. Each ingredient feed must be equipped with a rate-of-feed indicator for determining the amount delivered during production. The meters used to proportion each liquid ingredient must be equipped with rate-of-flow indicators with resettable totalizers so that the total amount can be determined. Feed liquid and dry ingredients directly into the mixer at a uniform and controlled rate. Reduce the quantity of ingredients in the mixer if dead areas occur. The mixer must have a safe sampling device that delivers completed asphalt rubber binder in the quantity needed for testing.
3. Storage tank for asphalt rubber binder. The storage tank must have a heating system to maintain the temperature and an internal mixing device to prevent separation.
4. Self-propelled distributor truck. The truck must have the following features:
   - 4.1. Heating unit
   - 4.2. Internal mixing unit
   - 4.3. Pumps that spray asphalt rubber binder within 0.05 gal/sq yd of the specified rate
   - 4.4. Fully circulating spray bar that applies asphalt rubber binder uniformly
   - 4.5. Tachometer
   - 4.6. Pressure gages
   - 4.7. Volume measuring devices
   - 4.8. Thermometer
   - 4.9. Observation platform on the rear of the truck for an observer on the platform to see the nozzles and unplug them if needed.
5. Under supports for scale bearing points for scale structures where the total load, the live load plus dead load is less than 17 tons, must be constructed as follows:
   - 5.1. Use 4 legs. Total load on any leg may not exceed 14.5 psi.
   - 5.2. Use structural grade steel with a minimum cross sectional dimension of 20 inches and a minimum thickness of 1.5 inches.
   - 5.3. Construct under supports in a way that they do not move or deflect during production operations.
   - 5.4. Install mechanical indicating elements level, plumb, and rigidly mounted on the under supports.
   - 5.5. Prevent saturation of the ground under the scale with adequate drainage and provide support of 14.5 psi at each support.
   - 5.6. Scale structure may be installed using concrete under supports and comply with Section 9.

Replace section 37-2.03E with:

37-2.03E Precoating Screenings

For asphalt rubber SAMI, do not recombine fine materials collected in dust control systems except cyclone collectors or knock-out boxes with any other aggregate used in the production of screenings.

For asphalt rubber SAMI, screenings must be preheated from 260 to 325 degrees F. Coat with any of the asphalts specified in the table titled "Performance Graded Asphalt Binder" in section 92. Coat at a central mixing plant. The asphalt must be from 0.5 to 1.0 percent by weight of dry screenings. The Engineer determines the exact rate.

Plant must be authorized under California Test Method 109 and the Department's material plant quality program.

Do not stockpile preheated or precoated screenings.

Replace section 37-2.03F(6) with:

37-2.03F(6) Asphalt Rubber Binder

Apply asphalt rubber binder immediately after the reaction period. At the time of application, the temperature of asphalt rubber binder must be from 385 to 415 degrees F.

Apply asphalt rubber binder at a rate from 0.55 to 0.65 gal/sq yd. The Engineer determines the exact rate.

Apply asphalt rubber binder when the atmospheric temperature is from 60 to 105 degrees F and the pavement surface temperature is at least 55 degrees F.

Do not apply asphalt rubber binder unless there are sufficient screenings available to cover the asphalt rubber binder within 2 minutes. Intersections, turn lanes, gore points, and irregular areas must be covered within 15 minutes.

Do not apply asphalt rubber binder when weather or road conditions are unsuitable, including high wind or when the pavement is damp. In windy conditions you may adjust the distributor bar height and distribution speed, and use shielding equipment, if the Engineer authorizes your request.

Replace the 1st paragraph of section 37-2.03G(1) with:

Prevent vehicles from driving on asphalt rubber binder before spreading screenings.

Replace section 37-2.03G(4) with:

37-2.03G(4) Asphalt Rubber SAMI

During transit, cover precoated screenings for asphalt rubber SAMI with tarpaulins if the ambient air temperature is below 65 degrees F or the haul time exceeds 30 minutes.

At the time of application, screenings for asphalt rubber SAMI must be from 225 to 325 degrees F.

Spread screenings at a rate from 28 to 40 lb/sq yd. The exact rate is determined by the Engineer. Spread to within 10 percent of the determined rate.

Replace section 37-2.03H(2) with:

37-2.03H(2) Asphalt Rubber SAMI

Perform initial rolling within 90 seconds of spreading screenings. Do not spread screenings more than 200 feet ahead of the initial rolling.

For final rolling, you may request use of a steel-wheeled roller weighing from 8 to 10 tons, static mode only.

Perform final sweep before overlaying the SAMI with HMA.

Dispose of swept screenings at least 150 feet from any waterway.

Add to section 37-2.04:

Screenings for asphalt rubber SAMI are measured by coated weight after they are preheated and precoated with asphalt binder. The weight of screenings must be the coated weight.

If recorded batch weights are printed automatically, the bid item for screenings for asphalt-rubber SAMI are measured using the printed batch weights, provided:

1. Total aggregate weight for screenings per batch is printed
2. Total asphalt binder weight per batch is printed
3. Each truckload's zero tolerance weight is printed before weighing the first batch and after weighing the last batch
4. Time, date, mix number, load number and truck identification are correlated with a load slip
5. A copy of the recorded batch weights is certified by a licensed weighmaster and submitted to the Engineer

Screenings for asphalt rubber SAMI is paid for as screenings (hot applied).

Asphalt-rubber binder is measured under the specifications for asphalts.

If test results for gradation tests do not comply with the specifications, deductions are taken.

Each gradation test for scrap tire crumb rubber represents 10,000 lbs or the amount used in that day's production, whichever is less.

Each gradation test for high natural rubber represents 3,400 lbs or the amount used in that day's production, whichever is less.

For each gradation test, the following pay deductions will be taken from the asphalt rubber bid item:

Gradation Test

Material	Test result [a]	Deduction
Scrap tire crumb rubber	Operating range < TR < Contract compliance	$250
Scrap tire crumb rubber	TR > Contract compliance	$1,100
High natural crumb rubber	Operating range < TR < Contract compliance	$250
High natural crumb rubber	TR > Contract compliance	$600

[a] Test Result = TR

Add to section 37-5.02:

Crack treatment material must be Type 3

Add to section 37-5.03:

Crack treatment must be hot applied.

Construct the reservoir 3/4 inches wide by 3/4 inches deep.