ALCONA COUNTY ROAD COMMISSION
PO BOX 40 (301 N LAKE STREET)
LINCOLN, MI 48742
F30 HMA Overlay Specifications

The Alcona County Road Commission will accept bids until 4:00 p.m. local time on September 24, 2024 at the main garage, 301 N Lake Street, Lincoln, MI 48742. Bids will be presented to the Board at the regular board meeting at 4:00 pm on September 25, 2024.

BID REQUIREMENTS:
The bidder attests to having examined the locations of the work described herein and is fully informed as to the nature of the work and the conditions relating to its performance and understands the quantities shown are approximate and are subject to increase or decrease. All township bids require Township approval and are subject to cancelation if the necessary funding is not available.

The bidder hereby proposes to furnish all necessary equipment, tools, apparatus, and other means of construction, do all the work, furnish all materials except as otherwise specified herein; and, for the unit prices named in the itemized bid, to complete the work herein described in strict accordance with the plans and the requirements of these bid documents. The bidder further proposes to perform extra work (for items not included with the itemized bid) that may be authorized by the Alcona County Road Commission. Compensation for extra work will be made on the basis of an agreed upon unit price prior to performing the extra work.

Bids shall be submitted on the blank bid form provided. **Bids shall be in a sealed envelope and identified on the outside as "F30 HMA Overlay Project".** Bids shall be mailed or delivered. Bids shall NOT be accepted by fax or email.

By signing the bid sheet the bidder understands, in addition to the Bid Requirements, that the Board reserves the right to cancel any of the individual projects and the cancellation of a project shall not change the unit prices bid on any of the remaining projects.

By signing the bid sheet, the bidder further understands that projects will be awarded on a **low bid per project** basis and failure to be low bidder on any other projects shall not change the unit prices bid on any project.

All items of work are to be completed by **September 29, 2025**, unless otherwise authorized by the Alcona County Road Commission. Bidder shall contact the Alcona County Road Commission prior to each paving project to confirm preparation work is complete.

The Alcona County Road Commission reserves the right to reject any and all bids, to waive any irregularities therein, and to accept any bid, which in the opinion of the road commission may be most advantageous and in the best interest of the road commission.

TRAFFIC CONTROL:
The contractor shall furnish necessary traffic control during all work performed by utilizing proper signing and flaggers in accordance with Section 812 of the 2012 MOOT Standard Specifications for Construction and Part 6 of the Michigan Manual on Uniform Traffic Control Devices and as directed by the road commission. **Payment for traffic control is included in the HMA pay items and will not be paid for separately.**

BITUMINOUS:
All bituminous mixtures shall meet the requirements of the Michigan Department of Transportation's 2012 Standard Specifications for Construction, the Alcona County Road Commission Special Provision for Marshall Hot Mix Asphalt Mixture, and the Alcona County Road Commission Special Provision for HMA Application Estimate and as herein modified.

All bituminous mixtures shall meet a 13A Bituminous Mix design, performance grade 58-28, with **3%** air voids. There will be **NO RAS allowed.** The contractor shall provide an acceptable Marshall Mix Design in accordance with the Michigan Department of Transportation's HMA Production Manual prior to the start of production of any mixture and shall provide manufacturer certifications for all asphalt cement used on the project per the Special Provision for Sampling Asphalt Binder on Local Agency Projects.

Acceptance sampling and testing will be performed by the Road Commission using the sampling method and testing option selected by the Owner. Each day of production, random samples will be obtained for each mix type. Acceptance testing will be performed at a frequency specified by the Road Commission.

For each given day of production, the Road Commission reserves the right to test one sample and obtain a second sample for future testing if necessary. The Road Commission may perform any of the following actions:

a) Perform Full Quality Assurance Testing
b) Perform Volumetric Testing Only (Ignition or Extraction AC/Gmm, Air Voids, VMA)
c) Retain custody of sample for future testing if necessary

If the Road Commission elects not to perform Quality Assurance testing on a given day or project, the Contractor is still required to perform testing in accordance with Special Provision for Acceptance of Hot Mix Asphalt Mixture on Local Agency Projects. The Contractor's Quality Control test results shall be sent to the Engineering within 2 working days of each day's productions for a given HMA mixture.

For each job the Alcona County Road Commission shall retain a sample of HMA that will be placed on site. The Alcona County Road Commission shall retain this sample and send for laboratory testing if chosen to do so. If the sample is sent for laboratory testing, then penalties (if any) will

be assessed in accordance with Special Provision for Acceptance of Hot Mix Asphalt Mixture on Local Agency Projects.

The Contractor will perform pavement cleaning prior to application of the bond coat. **Pavement cleaning and application of bond coat will be included in the payment of HMA and will not be for paid separately.**

Existing bituminous or concrete drives shall be matched in to mainline paving (up to 3-foot extension into all paved driveways to create a smooth transition). **Payment for driveway approaches will be included in HMA pay items and will not be paid for separately.**

The Alcona County Road Commission shall not allow within the right-of-way of any county road or street the cleaning and/or maintenance of tools or equipment.

For all monument boxes encountered the Contractor will supply adjusting rings for the contractor to adjust during paving operations. **This will be included in the overall bid and will not be paid for separately**.

TEMPORARY PAVEMENT MARKINGS:
Temporary, Type NR pavement markings will be required per the Michigan Department of Transportation's 2012 Standard Specifications for Construction Section 812. **Payment for temporary pavement markings shall be included in HMA pay items and will not be paid for separately.**

SPECIFICATIONS:
All work shall be done in accordance with the special provisions, plans and supplemental specifications that are included as part of this proposal as well as the Michigan Department of Transportation 2012 Standard Specifications for Construction.

INSURANCE:
Upon notification of award and prior to execution of a contract, the contractor shall furnish:

a. General liability insurance in amounts not less than $1,000,000 per occurrence and $2,000,000 general aggregate.
b. Automobile liability insurance in amounts not less than $1,000,000 combined single limit for each accident, bodily injury per accident, and property damage per accident, and in an amount not less than $500,000 for bodily injury per person.
c. Workers compensation insurance in compliance with the statutes of the State of Michigan.

Proof of insurance shall include a valid certificate of insurance naming the Alcona County Road Commission as additional insured on the policy. Insurance shall cover a period not less than the term of the project and shall provide that coverage cannot be cancelled without 30 days advanced written notice to the Alcona County Road Commission, by certified mail, first class,

return receipt requested. The contract will be invalid if insurance expires during the authorized period of work.

In addition to any liability or obligation by the contractor that may otherwise exist, the contractor shall, to the fullest extent permitted by law, indemnify and hold harmless the Alcona County Road Commission and its commissioners, officers, agents and employees from and against any and all claims, actions, proceedings, liabilities, losses, and damages thereof, and any and all costs and expenses, including legal fees, associated therewith which the Alcona County Road Commission may sustain by reason of claims for or allegations of negligence or violation of the terms and conditions of the Contract, arising out of the work which is subject of the Contract.

SPECIAL PROVISION
FOR
HMA APPLICATION ESTIMATE

a. Description. -This work shall be done in accordance with the requirements of Division 5 of the Michigan Department of Transportation 2012 Standard Specifications for Construction except as herein specified.

b. Construction Methods. -The Direct Density Method and Roller Method of testing compaction shall apply as directed by the Alcona County Road Commission per location.

c. Materials. -The HMA, 13A for widening shall have a yield of 220 pound per square yard.

The HMA, 13A for wedging shall have a variable yield.

The HMA, 13A for Top Course shall have a yield of 165 pounds per square yard.

The HMA Approach (HMA, 13A) shall have a yield of 220 pounds per square yard.

Recycled Asphalt Shingles (RAS) will not be allowed to be used.

Target Air Voids shall be reduced to 3.0%.

The Aggregate Wear Index for all top course applications shall be 220 minimum.

The Performance Grade Asphalt Binder for the Mixture shall be 58-28.

The HMA bond Coat material shall be per Section 501.03d. Coverage shall be complete, uniform, and have no pooling. HMA bond coat is included in the cost of HMA, 13A and HMA Approach.

SPECIAL PROVISION
FOR
SAMPLING ASPHALT BINDER ON LOCAL AGENCY PROJECTS

For informational purposes, original samples of asphalt binder will be taken by the Contractor and delivered to the Engineer prior to incorporation into the mixture. The frequency of sampling will be determined by the Engineer. The cost of obtaining and delivering the samples to the Engineer will be included in the hot mix asphalt (HMA) pay items.

The Contractor must certify in writing that the materials used in the HMA mixture are from the same source as the materials used in developing the HMA mixture design and the bond coat is from an approved supplier as stated in the *Material Quality Assurance Procedures Manual*.

SPECIAL PROVISION
FOR
MARSHALL HOT MIX ASPHALT MIXTURE

a. Description. Furnish hot mix asphalt (HMA) mixture, designed using Marshall Mixture Design Methods, in accordance with the standard specifications except as modified by this special provision.

b. Mix Design. Submit the mix design for evaluation in accordance with the Department's HMA Production Manual. Use a 50 blow Marshall hammer when compacting mixtures for developing Marshall mix designs.

c. Recycled Mixtures. Substituting reclaimed asphalt shingles (RAS) for a portion of the new material required to produce HMA mixture is **Prohibited.**

d. Materials. Table 1 provides the mix design criteria and volumetric properties. Table 2 provides the required aggregate properties. Use aggregates of the highest quality available to meet the minimum specifications. Use the mixture designation number shown in the contract item name when determining mix design properties from Tables 1 and 2.

e. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item Pay Unit
HMA, (type) .....Ton

Table 1: Mix Design Criteria and Volumetric Properties

	Mixture No.				
	2C	3C	4C	13A	36A
Target Air Void, % (a)	3.00	4.00	4.00	3.00	4.00
VMA (min) (b)	11.00	13.00	14.00	14.00	15.00
VFA	65-78	65-78	65-78	65-78	65-78
Fines to Binder Ration (max) (c)	1.2	1.2	1.2	1.2	1.2
Flow (0.01 inch)	8-16	8-16	8-16	8-16	8-16
Stability (min), lbs	1200	1200	1200	900	900

a. Lower target air voids by 1.00% if used in a separate shoulder paving operation. Consider reducing air void targets to 3.00% for lower traffic volume roadways when designing 13A and 36A mixtures for local agency use.
b. VMA calculated using Gsb of the combined aggregates.
c. Ratio of the weight of aggregate passing the No. 200 sieve to total asphalt binder content by weight including fines and binder contributed by RAP

Note: Target Air Voids is 3.0%

Table 2: Aggregate Properties

	Mixture No.				
	2C	3C	4C	13A	36A
	Percent Passing indicated Sieve of Property Limit				
1 ½ inch	100				
1 inch	91-100	100			
¾ inch	90 max	91-100	100	100	
½ inch	78 max	90 max	91-100	75-95	100
3/8 in	70 max	77 max	90 max	60-90	92-100
No. 4	52 max	57 max	67 max	45-80	65-90
No. 8	15-40	15-45	15-52	30-65	55-75
No. 16	30 max	33 max	37 max	20-50	
No. 30	22 max	25 max	27 max	15-40	25-45
No. 50	17 max	19 max	20 max	10-25	
No. 100	15 max	15 max	15 max	5-15	
No. 200	3-6	3-6	3-6	3-6	3-10
Crushed (min), % (MTM 117)	90	90	90	25	60
Soft Particle (max), % (a)	12.0	12.0	8.0	8.0	8.0
Angularity Index (min) (b)	4.0	4.0	4.0	2.5	3.0
L.A. Abrasion (max), % loss (c)	40	4.0	40	40	40
Sand Ration (max) (d)	-	-	-	50	50

a. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 8.0 percent for aggregates used in top course. The sum of the shale, siltstone, structurally weak, and clayironstone particles must not exceed 12.0 percent for aggregates used in base and leveling courses.
b. The fine aggregate angularity of blended aggregates, determined by MTM 118, must meet the minimum requirement. In mixtures containing RAP, the required minimum fine aggregate angularity must be met by the virgin material. NAA fine aggregate angularity must be reported for information only and must include the fine material contributed by RAP if present in the mixture.
c. Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50
d. Sand ratio for 13A and 36A no more than 50% of the material passing the No. 4 sieve is allowed to pass the No. 30 Sieve.

SPECIAL PROVISION
FOR
ACCEPTANCE OF HOT MIX ASPHALT MIXTURE ON LOCAL AGENCY PROJECTS

a. Description. This special provision provides sampling and testing requirements for local agency projects using the roller method and the nuclear density gauge testing. Provide the hot mix asphalt (HMA) mixture in accordance with the requirements of the standard specifications, except where modified herein.

b. Materials. Provide aggregates, mineral filler (if required), and asphalt binder to produce a mixture proportioned within the master gradation limits shown in the contract, and meeting the uniformity tolerance limits in Table 1.

Table 1: Uniformity Tolerance Limits for HMA Mixtures

Parameter			Top and Leveling Course		Base Course	
Number	Description		Range 1 (a)	Range 2	Range 1 (a)	Range 2
1	% Binder Content		-0.30 to +0.40	±0.50	-0.30 to +0.40	±0.50
2	% Passing	# 8 and Larger Sieves	±5.0	±8.0	±7.0	±9.0
3	% Passing	# 30 Sieve	±4.0	±6.0	±6.0	±9.0
	% Passing	# 200 Sieve	±1.0	±2.0	±2.0	±3.0
	Crushed Particle Content (b)		Below 10%	Below 15%	Below 10%	Below 15%

a. This range allows for normal mixture and testing variations. The mixture must be proportioned to test as closely as possible to the Job-Mix-Formula (JMF).
b. Deviation from JMF.

Parameter number 2 as shown in Table 1 is aggregate gradation. Each sieve will be evaluated on one of the three gradation tolerance categories. If more than one sieve is exceeding Range 1 or Range 2 tolerances, only the one with the largest exceedance will be counted as the gradation parameter.

The master gradation should be maintained throughout production; however, price adjustments will be based on Table 1. Aggregates which are to be used in plant-mixed HMA mixtures must not contain topsoil, clay, or loam.

c. Construction. Submit a Mix Design and a JMF to the Engineer. Do not begin production and placement of the HMA until receipt of the Engineer's approval of the JMF. Maintain the binder content, aggregate gradation, and the crushed particle content of the HMA mixture within the Range 1 uniformity tolerance limits in Table 1. For mixtures meeting the definition of top or leveling course, field regress air void content to 3.0 percent with liquid asphalt cement unless specified otherwise on HMA application estimate. For mixtures meeting the definition of base

course, field regress air void content to 3.0 percent with liquid asphalt cement unless specified otherwise on HMA application estimate.

Ensure all persons performing Quality Control (QC) and Quality Assurance (QA) HMA field sampling are "Local Agency HMA Sampling Qualified" samplers. The Alcona County Road Commission will determine the method of sampling to be used. Ensure all sampling is done in accordance with *MTM 313 (Sampling HMA Paving Mixtures)* or *MTM 324 (Sampling HMA Paving Mixtures Behind the Paver)*. Samples are to be taken from separate hauling loads.

For production/mainline type paving, obtain a minimum of two samples, each being 20,000 grams, each day of production, for each mix type. The Engineer will sample and maintain possession of the sample. Sampling from the paver hopper is prohibited. Each sample will be divided into two 10,000 gram parts Obtain a minimum of three samples for each mix type regardless of the number of days of production.

Obtain samples that are representative of the day's paving. Sample collection is to be spaced throughout the planned tonnage. One sample will be obtained in the first half of the tonnage and the second sample will be obtained in the second half of the tonnage. If planned paving is reduced or suspended, when paving resumes, the remaining sampling must be representative of the original intended sampling timing.

Ensure all persons performing testing are Bit Level One certified or Bit QA/QC Technician certified.

Ensure daily test samples are obtained, and provided to the Road Commission.

For production/mainline type paving, the mixture may be accepted by visual inspection. For non-production type paving defined as driveways, approaches, and patching, visual inspection may be allowed regardless of the tonnage.

Pavement in-place density will be measured using one of two approved methods. The method used for measuring in-place density will be at the discretion of the Engineer.

Pavement in-place density tests will be completed by the Engineer during paving operations and prior to traffic staging changes. Pavement in-place density acceptance testing will be completed by the Engineer prior to paving of subsequent lifts and being open to traffic. Testing will be at the discretion of the Engineer.

Option 1 – Direct Density Method

Use of a nuclear density gauge requires measuring the pavement density using the Gmm from the JMF for the density control target. The required in-place density of the HMA mixture must be 92.0 to 98.0 percent of the density control target. Nuclear density testing and frequency will be in accordance with the *MDOT Density Testing and Inspection Manual*.

Option 2 – Roller Method

Use of the Roller Method will be at the discretion of the Engineer, and meeting the requirements of Table 2. The Contractor is responsible for establishing and documenting an initial or QC rolling pattern that achieves the optimal in-place density.

Table 2: Minimum Number of Rollers Recommended Based on Placement Rate

Average Laydown Rate, Square Yards per Hour	Number of Rollers Required (a)	
	Compaction	Finish
Less than 600	1	1 (b)
601 - 1200	1	1
1201 – 2400	2	1
2401 – 3600	3	1
3601 and More	4	1

a. Number of rollers may increase based on density requirements.
b. The compaction roller may be used as the finish roller also.

After placement, roll the HMA mixture as soon after placement as the roller is able to bear without undue displacement or cracking. Start rolling longitudinally at the sides of the lanes and proceed toward the center of the pavement, overlapping on successive trips by at least half the width of the drum. Ensure each required roller is 8 tons minimum in weight unless otherwise approved by the Engineer.

Ensure the initial breakdown roller is capable of vibratory compaction and is a maximum of 500 feet behind the paving operations. The maximum allowable speed of each roller is 3 miles per hour (mph) or 4.5 feet per second. Ensure all compaction rollers complete a minimum of two complete rolling cycles prior to the mat temperature cooling to 180 degrees Fahrenheit (F). Continue finish rolling until all roller marks are eliminated and no further compaction is possible. The Engineer will verify and document that the roller pattern has been adhered to. The Engineer can stop production when the roller pattern is not adhered to.

d. Measurement and Payment. The completed work, as described, will be measured and paid for using applicable pay items as described in subsection 501.04 of the Standard Specifications for Construction, or the contract, except as modified below.

The Road Commission will maintain the samples and reserves the right to send the samples to an Independent AASHTO certified laboratory for testing if desired. If the mix is determined to be out of Uniformity Tolerances as stated in Table 1, a penalty for the individual job will be enforced in accordance with Table 3 below.

Table 3: Penalty Per Parameter

Mixture Parameter Out-of-Specification per Acceptance Tests	Price Adjustment per Parameter
NO	None
YES	Outside Range 1 but not Range 2: decrease by 10%
	Outside Range 2: decrease by 25%

Project Log

The project consists of the following:

Phase 1 – F-30 from Stout Rd to Kimberlin Rd (2.4 miles & 26' ex HMA width). This project can be completed in either 2024 or 2025, but if started in 2024 it must be completed in 2024.

Phase 2 – F-30 from Kimberlin Rd to N Lake Rd (3.1 miles & 26' ex HMA width). This project will be completed in 2025.

1. Trench the existing shoulders at a 2% slope approximately 2" deep and daylighted to the front slope to remove grass and vegetation.

2. Place an overlay at 220 lb/syd on the existing HMA surface.

3. Place Shoulder Class II material to match proposed HMA.

4. Log and replace existing permanent pavement markings. Temporary pavement markings are required for this project and included in other items of work.

The Alcona County Road Commission reserves the right to remove the Shld, Cl II item from the contract and perform this work with their own forces.

BID SHEET

Phase 1 – F-30 from Stout Rd to Kimberlin Rd.

Pay Item Number	Description	Quantity	Unit	Unit Cost	Total
3070121	Shld, Cl II	1200	Ton		
3070200	Trenching	254	Sta		
5010033	HMA, 13A	4200	Ton		
8110231	Pavt Mrkg, Waterborne, 4 inch, White	25350	Ft		
8110232	Pavt Mrkg, Waterborne, 4 inch, Yellow	22200	Ft		
8110351	Witness, Log, $1,250.00	1250	Dlr	$1.00	$1,250.00

Phase 2 – F-30 from Kimberlin Rd to N Lake Rd

Pay Item Number	Description	Quantity	Unit	Unit Cost	Total
3070121	Shld, Cl II	1550	Ton		
3070200	Trenching	328	Sta		
5010033	HMA, 13A	5400	Ton		
8110231	Pavt Mrkg, Waterborne, 4 inch, White	32750	Ft		
8110232	Pavt Mrkg, Waterborne, 4 inch, Yellow	28600	Ft		
8110351	Witness, Log, $1,250.00	1250	Dlr	$1.00	$1,250.00

BID SHEET

Company Name: _____ Telephone Number: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Email Address: _____

Printed Name: _____

Signature: _____