

Kalkaska County Road Commission

1049 Island Lake Road
Kalkaska, MI 49646
Telephone: 231.258.2242
Facsimile: 231.258.8205

The Kalkaska County Road Commission is an Equal Opportunity Provider and Employer

January 19th, 2024

REQUEST FOR BIDS – HMA BASE CRUSH AND SHAPE AND HMA PLACEMENT

Sealed bids will be received until **9:00 a.m. Wednesday, May 08, 2024**, at which time they will be publicly opened and read. Bids shall be received at the office of the Kalkaska County Road Commission, 1049 Island Lake Road, Kalkaska, MI 49646. Bids will be tabulated and a recommendation will be made to the Board of Road Commissioners.

The Kalkaska County Road Commission requests bids for the following:

CR 571 from Meyers Rd to CR612.

Crush and shape, pave with 3" HMA, 4EML, place gravel shoulders, and place permanent signing and pavement markings.

Bids must be submitted on Kalkaska County Road Commission's Contractor Bid Form.

All mix shall be 4EML as specified on bid form, PG 58-28 liquid asphalt that complies with the Kalkaska County Road Commission Special Provision for Acceptance of HMA Mixture.

The contractor will coordinate the work with the Kalkaska County Road Commission. Project shall be completed by September 1, 2024 unless otherwise agreed to by the contractor and the Road Commission. Traffic control will be provided by the contractor, performed in accordance with the current Michigan Manual of Uniform Traffic Control Devices and shall be included in the unit prices on the bid forms.

Mobilization will be included in the unit price for each pay item and will not be a separate pay item.

Bid price shall include mixing, hauling, placing and compacting the mix in accordance with the current MDOT Standard Specifications for Construction and the Kalkaska County Road Commission Special Provision for Acceptances of HMA Mixture. Bid price shall also include all pay items listed on the "Contractor Bid Form".

The Kalkaska County Road Commission reserves the right to adjust quantities, to accept or reject any or all bids, to waive any irregularity or defect in a bid, or to accept the bid, which, in the opinion of the Road Commission is in the best interest of the county.

The successful bidder shall enter into a contract with and provided by the Road Commission.

Label bid "**CR 571 Bid**" plainly on the outside of a sealed envelope.

John S. Rogers Manager

Progress Clause

The Owner anticipates that construction can begin no earlier than **May 10, 2024**.

In no case shall any work be commenced prior to receipt of formal notice of award by the Road Commission.

The Contractor shall prepare and submit a complete, detailed, and signed MDOT Form 1130, Progress Schedule, according to 12SP-101A.

The Progress Schedule shall include, at minimum, the controlling work items for the completion of the project, as well as the planned dates or work days that these work items will be controlling operations. All contract dates including open to traffic, project completion, interim completion and any other controlling dates in the contract, must be included in the progress schedule.

If the bidding Proposal specifies other controlling dates, these shall also be included in the Progress Schedule.

The Project shall be completed in its entirety including final site restoration and clean-up

On or before September 13, 2024

Once work begins, it shall be continuous and be complete within 56 calendar days

After award and prior to the start of work, the Contractor must attend a preconstruction meeting with the Engineer. The Engineer will determine the day, time and place for the preconstruction meeting. The meeting will be conducted after project award and may be rescheduled if there are delays in the award of the project. The named subcontractor(s) for Designated and/or Specialty Items, as shown in the Proposal, should attend the preconstruction meeting if such items materially affect the work schedule.

Liquidated Damages shall be assessed in accordance with Section 108.10 of the 2020 Standard Specifications.

HMA Application Estimate

Description.

This work shall be done in accordance with the requirements of Division 5 of the Michigan Department of Transportation 2020 Standard Specifications for Construction except as herein specified.

Materials.

The HMA, 4EML (Identity 1) for Top Course shall have a yield of 165 pound per square yard.

The HMA, 4EML (Identity 2) for Leveling Course shall have a yield of 165 pound per square yard.

The HMA Approach (Identity 3), consisting of HMA, 4EML, for intersections shall have a yield of 330 pounds per square yard and placed in two lifts.

The HMA Approach (Identity 4), consisting of HMA, 4EML, for driveways shall have a yield of 220 pounds per square yard and placed in two lifts.

The Aggregate Wear Index for all top course applications shall be 260 minimum.

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

Target Air Voids shall be regressed to 3.0%.

Use of Recycled Asphalt Shingles (RAS) is prohibited.

The HMA Bond Coat material shall be per subsection 501.02.

Construction.

The Nuclear Gauge Method of testing compaction shall apply.

The HMA Bond Coat shall be constructed per subsection 501.03.D. The uniform rate of application shall be 0.05 to 0.15 gallons per square yard. This is for information only and is included in the cost of associated pay items.

Contractor shall provide a lab, testing equipment, and materials for acceptance testing conducted on behalf of the owner that is certified in accordance with 12SP-501I-01 series (Acceptance of Hot Mix Asphalt Mixture on Local Agency Projects).

Measurement and Payment.

Measurement and Payment shall be at the contract unit price per ton.

ACCEPTANCE OF HMA MIXTURE

Description.

This special provision provides acceptance-testing requirements for use on this project. The HMA mixture and mixture quality assurance and acceptance shall conform to section 501 of the Michigan Department of Transportation 2020 Standard Specifications for Construction except where modified herein. The MDOT HMA Production Manual, current edition, applies to this work.

Submittals.

Submit a mix design previously approved by MDOT (or equivalent independent verification approved by the Engineer) from within 1 year of the project start date, for the Engineer's review and approval. The Contractor shall not place any HMA without an approved mix design by the Road Commission.

Materials.

Aggregates, mineral filler (if required), and asphalt binder shall be combined as necessary to produce a mixture proportioned within the master gradation limits called for in the project and meeting the uniformity tolerances listed in Table 1 and the quality assurance testing tolerances in Table 2 of this special provision. The master gradation range is to be used for establishing mix design only. Topsoil, clay, or loam shall not be added to aggregates which are to be used in plant mixed HMA mixtures.

Asphalt Binder.

Liquid asphalt binder shall be a Performance Graded (PG) binder as specified in the bid requests and/or approved by the Road Commission.

Air Voids.

Design air voids will be 4.0% and shall be regressed to 3.0% in production by the addition of virgin liquid asphalt.

Recycled Asphalt Pavement (RAP).

RAP is limited to Tier 1. The binder grade shall be PG 58-28.

Tier 1 - (0% to 17% RAP binder by weight of the total binder in the mixture). No binder grade adjustment is required to compensate for the stiffness of the asphalt binder in RAP.

Construction.

After the job-mix-formula is established, the aggregate gradation and the binder content of the HMA mixture furnished for the work shall be maintained within the Range 1 uniformity tolerance limits permitted for the job-mix-formula specified in Table 1. However, if deviations are predominantly either below or above the job-mix-formula, the Engineer may order alterations in the plant to bring the mixture to the job-mix-formula. If two consecutive aggregate gradations on one sieve, or binder contents as determined by the field tests, are outside Range 1 but within Range 2 tolerance limits, the Contractor shall suspend all operations. Contract time will continue during these times when the plant is down. Before resuming any production, the Contractor shall propose, for the Engineer's approval, all necessary alterations to the materials or plant so that the job-mix-formula can be maintained. The Engineer, after evaluating for effects on AWI and mix design properties, will approve or disapprove such alterations.

At no time shall the asphalt binder content fall below 5.0% regardless of the tolerance listed. Random liquid asphalt binder samples will be taken by the Road Commission. The Road Commission reserves the right to test any or all samples taken.

The crushed particle content of the aggregate used in the HMA mixture shall not be more than 10 percentage points above or below the crushed particle content used in the job-mix-formula nor less than the minimum specified for the aggregate in the project documents.

The Road Commission will perform quality assurance sampling and testing, using the sampling and testing option selected by the Road Commission. Mixture QA testing will be performed at the Contractor’s facility, using the Contractor’s equipment, at no additional cost to the Owner. Quality control measures to ensure job control are the responsibility of the Contractor. Quality assurance and acceptance testing will be as follows:

1. Sampling
Acceptance sampling and testing will be performed by the Road Commission using the sampling method and testing option selected by the Road Commission. 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.

2. Mixture Testing
Mixture samples will be tested to verify gradation, binder content and volumetric properties.

3. Density
Pavement density may be measured by the Road Commission, with a Nuclear Density Gauge or by 6 inch core sampling. The Gmm from the JMF will be used for the density control target. The in place density of the HMA mixture shall be at least 92.0% of the density control target. In place density will be calculated by averaging a minimum of four QA density test locations.

Table 1: Uniformity Tolerance Limits for HMA Mixtures

Parameter	TOP & LEVELING COURSE	
	* Range 1	Range 2
% Passing # 8 and Larger Sieves	± 5.0	± 8.0
% Passing # 30 Sieve	± 4.0	± 6.0
% Passing # 200 Sieve	± 1.0	± 2.0
*This range allows for normal mixture and testing variations. The mixture shall be proportioned to test as closely as possible to the Job-Mix-Formula.		

Table 2: HMA Quality Assurance Testing Tolerances (±) from the JMF

Parameter	Double Test per Lot (c)	Lot Average
Air Voids	1.00%	0.60%
Voids in Mineral Aggregate VMA (a)	1.20%	0.75% (b)
Maximum Specific Gravity (Gmm) (a)	0.019	0.012
Binder Content (a) (d)	0.50%	0.35%
a. Parameters with target values b. Or less, determined by VMA value in contract documents c. “Double Tests per Lot” refers to any two subplot tests in any one lot d. Binder content shall not fall below 5.0% at any time regardless of the tolerance listed		

Rejected Mixtures.

1. Gradation

If for any one mixture, two consecutive aggregate gradations on one sieve as determined by field tests exceed the uniformity tolerance of Range 2 under Table 1, or do not meet the minimum requirements for crushed particle content specified in the project documents, the mixture will be rejected. If such mixtures are placed in a pavement, the remaining portions of the failing field samples (split sample) will be sent to an independent laboratory to confirm the field test results. If the laboratory's results do not confirm the field test results and there are no price adjustments required due to test failures on the asphalt binder, then no price adjustments will be made for the mixture involved. If the laboratory's results confirm the field test results and if, in the Engineer's judgment, the defective mixture can remain in place and there are no price adjustments required due to test failures on the asphalt binder, the contract unit price for the defective mixture involved, as determined from field tests, will be decreased on the following basis:

The contract unit price for material outside of Range 2 or with a crushed particle content below that specified in the project documents will be decreased 25 percent.

If three consecutive aggregate gradations on one sieve, or asphalt binder contents as determined by field tests are outside Range 1 but within Range 2 tolerance limits, the mixture produced from the time the third sample was taken until the gradation, or asphalt binder content is corrected back into Range 1 will be decreased in contract unit price by 10 percent. Field tests indicating that mixtures are subject to the 10 percent penalty will be confirmed in the same manner as mixtures subject to the 25 percent penalty as described herein.

If a liquid asphalt binder sample does not meet the required specification, the mix produced from the point of the last liquid asphalt binder sample meeting specification to the failed sample shall be considered defective and shall be replaced at the sole expense of the contractor. This may also result in the termination of the contract and/or the right to bid on any future work.

2. Volumetric Properties

Acceptability tolerance for Air Void, VMA Gmm and Binder Content are shown in Table 2. Material produced outside of Table 2 tolerance limits will be rejected.

3. Pavement Density

A negative 10% adjustment in the HMA mixture unit contract price will be imposed on the lot or subplot if either the lot pavement density (average of all lot gauge readings or core results) is less than 92%, but equal to or greater than 91%; or if 2 or more readings or cores in any given subplot are less than 91%.

A negative 25% adjustment in the HMA mixture unit contract price will be imposed on the lot or subplot if either the lot pavement density (average of all lot gauge readings or core results) is less than 91%, but equal to or greater than 90%; or if 2 or more readings or cores in any given subplot are less than 90%.

If any subplot has an average density of less than 90%, the Contractor shall remove and replace the entire subplot at no cost to the owner.

Slope Restoration

Description.

This work shall consist of all labor, equipment, and materials required to provide screened topsoil, fertilizer, seed, and mulch on disturbed areas and newly graded surfaces of the project. The Work shall consist of preparing the foundation, machine grading to place the topsoil, fertilizing, seeding, and mulching areas as required.

Material.

Provide materials in accordance with Section 816 of the Standard Specifications for Construction.

Construction.

As directed by the Engineer, **Slope Restoration** may include, but is not limited to, the following work: placing and grading screened topsoil, fertilizer, seed, mulch, and mulch anchoring. All disturbed areas shall be restored.

Unless otherwise specified herein, all work shall be in accordance with sections 816, 911, and 917 of the Standard Specifications for Construction.

Supplier's certifications for all materials used for slope restoration shall be supplied to the Engineer prior to commencing slope restoration efforts. Engineer will verify that all materials adhere to Sections 816, 911, and 917 of the Standard Specifications for Construction prior to the commencement of slope restoration efforts. All certifications shall be supplied to the Engineer a minimum of 5 working days prior to scheduled date of starting slope restoration.

Hay Mulch will not be permitted unless otherwise directed by the Engineer.

Hydro Seeding may be an acceptable alternate method of slope restoration. All areas restored using this method shall receive straw mulch unless otherwise approved by the Engineer.

Any washouts or damage caused by rain or for reasons attributable to the Contractor's activity or failure to take proper precautions shall be cleaned up and repaired at the Contractor's expense within five (5) days of notice.

If weeds are determined by the Engineer to account for more than 10% of the area that slope restoration efforts are applied to, the Contractor shall provide weed control in accordance with Subsection 816.03 of the Standard Specifications for Construction. Additional payment will not be made for weed control.

Slope Restoration will be accepted when at least 85% vegetative coverage is achieved, unless otherwise approved by the Engineer.

If the seeded area does not reach the acceptable level of vegetative coverage, as defined in this special provision, at the end of the first growing season as defined as May 1st to October 1st, the Contractor is responsible to provide additional slope restoration in accordance with this special provision until slope restoration is accepted by the Engineer. Additional payment will not be made for these activities.

All waste generated shall be disposed of in accordance with subsection 205.03 of the Standard Specifications for Construction at the Contractor's expense. All disturbed areas shall be restored.

Measurement and Payment.

Measurement for **Slope Restoration** shall be in stations, defined as 100 foot in length, along the proposed centerline

of County Road 571 (**one side** being included in one station), with no deductions for driveways or intersections. The completed work as measured for Slope Restoration will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Slope Restoration	Station

Payment for Slope Restoration shall include all labor, equipment, and materials to complete this work.

Payment will be made to the Contractor as follows:

A payment of 50% of the total pay item will be paid upon completion of placing and grading topsoil, fertilizer, seed, mulch, and mulch anchoring on all disturbed areas within the project limits.

The remaining 50% of the total pay item will be paid upon completion of all other necessary work to comply with this special provision and final acceptance is granted by the Engineer.

Sign, Rem

Description. This work shall be done in accordance with the requirements of section 810 of the 2020 Standard Specifications except as herein specified.

Materials. Provide materials in accordance with the requirements of section 810 of the 2020 Standard Specifications.

Construction. In accordance with the requirements of section 810 of the 2020 Standard Specifications.

Measurement and Payment. Measurement and Payment includes removing supports, posts, sign bands, attaching or fastening hardware, removing signs from supports, and stacking by shape and size on the jobsite for pickup by the Kalkaska County Road Commission.

Pay Item

Sign, Rem

Pay Unit

Each

Post, Mailbox, Modified

Description. This work shall be done in accordance with the requirements of Section 807 of the 2020 Standard Specifications except as herein specified.

Materials. Provide materials in accordance with Section 807 of the 2020 Standard Specifications.

Construction. Move existing mailbox supports, mailboxes, and newspaper receptacles, but maintain serviceability during construction. Install a new post at the permanent location after construction is complete. Attach the existing mailbox and newspaper receptacle to the new post. If a newspaper receptacle is on its own post, then it shall be reinstalled at the permanent location on the existing post.

Measurement and Payment. Measurement and payment shall be at the contract unit price of Each. If an existing mailbox post has a newspaper receptacle attached to it, additional payment will not be given for reattaching the existing newspaper receptacle to the new post or replacement on its own post.

Pay Item

Post, Mailbox, Modified

Pay Unit

Each

Maintaining Traffic

General.

Traffic shall be maintained in accordance with Subsections 104.07C, 104.11 and Section 812 of the 2020 Standard Specifications, including any Supplemental Specifications, and as herein specified. Traffic shall be maintained using single lane closures. The Contractor shall coordinate his operations with Contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA).

Construction Influence Area (CIA).

The CIA shall include the right-of-way of the following roadways, within the approximate limits described below:

CR 571 from the furthest placed construction sign east and west of the project limits to the furthest placed construction sign north and south of the project limits.

In addition, the CIA shall include the right-of-way of any intersecting roads adjacent to the work zone to the furthest placed construction sign.

Traffic Restrictions.

No work shall be permitted on Sundays, or during any holiday period as defined below:

Memorial Day from 3:00 pm, Friday, 05/26/24 to 6:00 am, Tuesday, 05/28/24

Independence Day from 3:00 pm, Wednesday, 07/03/24 to 6:00 am, Friday, 07/08/24

Labor Day from 3:00 pm, Friday, 08/30/24 to 6:00 am, Tuesday, 09/03/24

Access shall be provided for School Buses and Emergency Services at all times. Commercial and residential driveways shall remain accessible at all times. The Contractor shall maintain access to the residents within this project at all times through the use of the following:

WZD 100A	Ground Driven Sign Supports for Temp Signs
WZD 125-E	Temporary Traffic Control Devices
100-GEN-KEY	Typical Numbering Key
100-GEN-SPACING-CHARTS	"B", "D", and "L" Tables, Channelizing Device Spacing, Sign Border Key, and Roll-Ahead Spacing
102-GEN-NOTES	Traffic Control Typical Note Sheet
103-GEN-SIGNS	Traffic Control Typical Sign Sheet
110-TR-NFW-2L	Lane Closure Utilizing Traffic Regulators on a 2-Lane Undivided Roadway

Sign W5-18b will not be required. Lane closure will be limited to 1 mile in length.

Traffic Control Devices.

All traffic control devices and their usage shall conform to the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), 2011 edition as revised, and as specified herein.

Utility Coordination Clause

The contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in subsection 104.08 of the 2020 Standard Specifications. In addition, for the protection of underground utilities, the contractor shall follow the requirements in subsection 107.12 of the MDOT 2020 Standard Specifications. Contractor delay claims, resulting from a utility, will be determined based upon subsection 108.09 of the MDOT 2020 Standard Specifications.

Public Utilities

The following Public Utilities have facilities located within the Right-of-Way:

Consumers Energy, 3201 E. Court Street, Flint, MI 48506, Contact: Kevin Couturier, ph. 989-574-7538.

Consumers Energy, 821 Hastings St, Traverse City, MI, Contact: Curtis Hansen, ph. 231-929-6265.

AT&T, 514 E Mitchell Street, Petoskey, MI 49770; Contact Person: Jeffrey Collard, ph: 231-348-8010.

Great Lakes Energy Cooperative, 1323 Boyne Ave, Boyne City, MI 49712; Contact Person: Steve Murray, ph: 1-800-442-2796, ext. 1314.

Charter Communications, 1392 Trade Center Drive, Traverse City, MI 48696; Contact person: Bob Parker, ph: 231-215-6501.

Merit Network Inc., 880 Technology Drive, Ann Arbor, MI 48108; Contact: Dustin LaPoint, ph. 734-476-6100.

The owners of existing service facilities that are within grading or structure limits will move them to locations designated by the Engineer or will remove them entirely from the highway Right-of-Way. Owners of Public Utilities will not be required by the County to move additional poles or structures in order to facilitate the operation of construction equipment unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are dangerous to the Contractor's operations.

For protection of underground utilities and in conformance with Public Act 174, 2013, the Contractor shall dial 811 a minimum of three full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus far be routinely notified. This does not relieve the contractor of the responsibility of notifying utility owners who may not be a part of the "Miss-Dig" alert system.

Michigan Department of Transportation Specifications

All work will be completed in accordance with the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, as amended, and as here-in modified. The specifications can be found at the following website.

<https://www.michigan.gov/mdot/0,1607,7-151-9622---,00.html>

Schedule of Items (Itemized Bid Sheet)

Letting Date: Wednesday, May 8, 2024 9:00 AM

Contract ID: 23.169
Location: CR571
Description: Meyeres rd to Castle rd

Project Number: 23.169	Project Engineer: Rebecca Rivard, P.E.
Estimate Number: 1	Date Created: 1/29/2024
Project Type: Miscellaneous	Fed/State #:
Location: CR571	Fed Item:
	Control Section:

Description: Meyeres rd to Castle rd

Instructions to Bidders: IMPORTANT NOTICE:
If the proposal establishes a maximum price for any of the following work items, and if you bid a price higher than that maximum price, your bid will be considered to have quoted the maximum price and your bid total will be adjusted to reflect that maximum price.

If the proposal provides a specified price for any of the following work items, and if you bid a price higher or lower than that specified price, your bid will be adjusted to reflect that specified price.

If your bid is the lowest accepted bid, and if you refuse to accept the award of the contract due to the change in what you quoted as a maximum or specified price, you will forfeit your proposal guaranty.

Pay Item	Description	Quantity	Units	Unit Price		Bid Amount	
				Dollars	Cts	Dollars	Cts
2040020	Curb and Gutter, Rem	250	Ft				
3020001	Aggregate Base	1,950	Ton				
3050002	HMA Base Crushing and Shaping	20,745	Syd				
3070001	Approach, CI I	65	Ton				
3070021	Approach, CI II	70	Ton				
3070121	Shld, CI II	830	Ton				
5010005	HMA Surface, Rem	10	Syd				
5010061	HMA Approach	235	Ton				
5012025	HMA, 4EML	3,200	Ton				
5017001	_ HMA Valley Gutter	1,910	Ft				
8007050	_ Sign, Rem	25	Ea				
8020016	Curb and Gutter, Conc, Det B2	330	Ft				
8077050	_ Post, Mailbox, Modified	25	Ea				
8100371	Post, Steel, 3 pound	400	Ft				
8100399	Sign, Type IIB	12.75	Sft				
8100404	Sign, Type IIIA	59.25	Sft				
8100405	Sign, Type IIIB	54.75	Sft				
8100616	Reflective Panel for Permanent Sign Support, 6 foot	2	Ea				
8110231	Pavt Mrkg, Waterborne, 4 inch, White	11,000	Ft				
8110232	Pavt Mrkg, Waterborne, 4 inch, Yellow	9,540	Ft				
8120246	Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	900	Ft				

Pay Item	Description	Quantity	Units	Unit Price		Bid Amount		
				Dollars	Cts	Dollars	Cts	
8130010	Riprap, Plain	100	Syd					
8140010	Paved Ditch, HMA	100	Syd					
8167002	_ Slope Restoration	10	Sta					
8210001	Monument Box	2	Ea					
8210010	Monument Preservation	2	Ea					
Total Bid:								

Contractor: _____

_____ (Signature) _____ (Date)

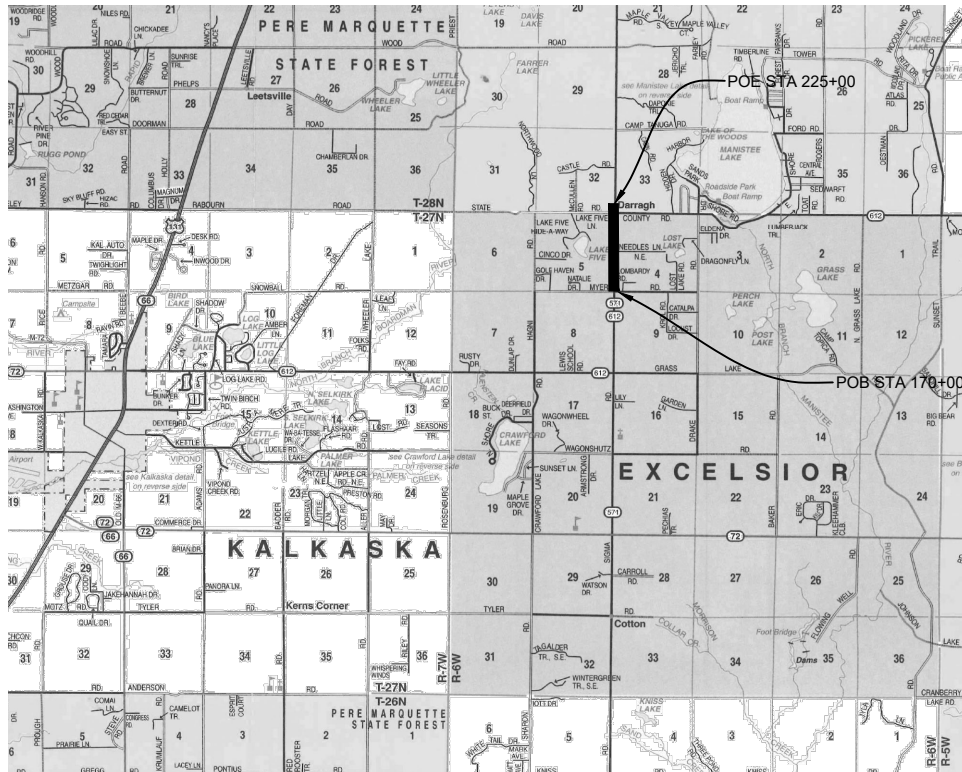
THE KALKASKA COUNTY ROAD COMMISSION

PLANS OF PROPOSED IMPROVEMENTS
 COUNTY ROAD 571 FROM MYERS RD TO CASTLE RD
 SECTIONS 4, 5, 8, & 9, T27N, R6W, EXCELSIOR TOWNSHIP
 SECTIONS 32 & 33, T28N, R6W COLDSPRINGS TOWNSHIP
 KALKASKA COUNTY, MICHIGAN

TRAFFIC DATA

ADT 2021 = 2050 (10% COMMERCIAL)
 ADT 2041 = 2500 (10% COMMERCIAL)

POSTED SPEED = 55 MPH
 DESIGN SPEED = 55 MPH



GENERAL NOTES

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PAVEMENT MARKING AND THE PLACING OF TRAFFIC SIGNS SHALL BE DONE IN ACCORDANCE WITH THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS REVISED.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH 3R GUIDELINES AS DETAILED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROGRAMS GUIDELINES FOR GEOMETRICS, 2017 EDITION.

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS-DIG" ALERT SYSTEM.

INDEX OF SHEETS

SHEET 1	TITLE SHEET
SHEET 2-6	LOG
SHEET 7	TYPICAL SHEET
SHEET 8-10	DETAIL SHEETS

PROJECT LENGTH = 1.04

CONTRACT FOR:
 HMA SURFACING, SHOULDER CL II, PERMANENT SIGNING AND PAVEMENT MARKINGS.

KALKASKA COUNTY ROAD COMMISSION
 DAVID GILL, CHAIR
 JOHN ROGERS, MANAGER

PREPARED UNDER THE SUPERVISION OF:
 HURON ENGINEERING AND SURVEYING, INC.
 REBECCA E. RIVARD, P.E.
 ENGINEER NO. 6201050497



LOG OF PROJECT

County Road 571 from Meyers Road to CR 612, Excelsior Township & Coldspring's Township, Kalkaska County, Michigan.

DESCRIPTION OF WORK

The project includes HMA base crushing and shaping, HMA placement, shoulder material, permanent pavement markings, and signing upgrades.

CRITICAL STATIONING

170+00	Point of Beginning
195+06	Needles Lane
195+29	Quarter Corner Common to Sections 4 and 5
221+64	Section Corner common to Sections 4, 5, 32, and 33
	Centerline of County Road 612 & State Road
225+00	Point of Ending

MISCELLANEOUS ITEMS OF WORK

Monument Preservation	2	Ea
Monument Box	2	Ea
Post, Mailbox, Modified	25	Ea
Slope Restoration	10	Sta

MAINTAINING TRAFFIC ITEMS OF WORK

Minor Traf Devices	1	LSUM
Pavt Mrkg, Wet Reflective, Type R, Tape, 4-inch, Yellow, Temp	900	Ft

MAINLINE

Crush existing HMA, place HMA, and shoulder material as detailed in plans. Place HMA Valley Gutter and Spillways in accordance with the Detail Sheets.

Shld, CI II	815	Ton
HMA, 4EML	3200	Ton
HMA Base Crushing and Shaping	19600	Syd
Aggregate Base	1950	Ton
HMA Valley Gutter	1910	Ft
Paved Ditch, HMA	100	Syd
Riprap, Plain	100	Syd

INTERSECTIONS

Final curb and gutter grades will be determined once the mainline surface has been crushed and finish grading is completed.

Needles Ln

HMA Approach	35	Ton
Shld, CI II	5	Ton
Approach, CI I	60	Ton

County Road 612

Curb and Gutter, Rem	120	Ft
HMA Base Crushing and Shaping	650	Syd
Curb and Gutter, Conc, Det B2	165	Ft
HMA Approach	110	Ton
Shld, CI II	5	Ton

State Rd NE

Curb and Gutter, Rem	130	Ft
HMA Base Crushing and Shaping	495	Syd
Curb and Gutter, Conc, Det B2	165	Ft
HMA Approach	85	Ton
Shld, CI II	5	Ton

DRIVEWAYS

Shape existing aggregate driveways in accordance with the detail. There are 52 existing aggregate driveways, 2 existing HMA driveway, and 1 concrete driveway.

HMA Surf, Rem	10	Syd
Approach, CI I	5	Ton
Approach, CI II	70	Ton
HMA Approach	5	Ton

PERMENANT SIGNING

Place permanent signs as detailed in the table below. All D3-1 street name signs shall be 9" signs with 6" letters and no borders.

East of Centerline

Station	Code	Type			Size			Post Length Ft	Description
		IIIA	IIB	IIIB					
171+50	R4-2			5	24	x	30	16	Pass With Care
179+36	R4-1			5	24	x	30	16	Do Not Pass
Needles Ln	R1-1	6.25			30	x	30	16	Stop Sign
	D3-1	5.25			42		9		Needles Ln
200+05	R4-2			5	24	x	30	16	Pass With Care
203+32	R4-1			5	24	x	30	16	Do Not Pass
206+50	W14-3		4.25		40	x	30	32	No Passing Zone (Southbound)
213+25	W2-1			6.25	30	x	30	16	Four Way Intersection
	D3-2c	4			24	x	42		CR 612 → ← State Rd
216+80	M1-5	2.25			24	x	24	16	Kalkaska County 612
	M5-1R			2	21	x	15		Right Turn Arrow
218+30	Ex Sign to Remain								Manistee Lake Sands Park.
CR 612	R1-1	9			36	x	36	32	Stop Red Post Delineator
	R1-1	9			36	x	36	32	Stop Red Post Delineator
221+97	Ex Sign to Remain								Manistee Lake W/ Arrow
223+99	M1-5	4			24	x	24	16	Kalkaska County 571

West of Centerline

Station	Code	Type			Size			Post Length Ft	Description
		IIIA	IIB	IIIB					
175+62	W2-1			6.25	30	x	30	16	Four Way Intersection
	D3-2			5.25	42	x	18		Myers Rd
179+36	W14-3		4.25		40	x	30	32	No Passing Zone (Northbound)
203+32	W14-3		4.25		40	x	30	32	No Passing Zone (Northbound)
206+40	R4-1			5	24	x	30	16	Do Not Pass
213+23	R4-2			5	24	x	30	16	Pass With Care
218+80	I2-2b			5	24	x	30	16	Excelsior Township Zoning in Effect
220+82	M1-5	4			24	x	24	16	Kalkaska County 571
220+82	M1-5	4			24	x	24	16	Kalkaska County 612
State Rd	R1-1	6.25			30	x	30	16	Stop
	D3-1	5.25			42	x	9		State Rd NE
222+00	Existing Sign to be Removed								State NE
224+78	Ex Sign to Remain								Manistee Lake Sands Park.

Sign, Rem	25	Ea
Sign, Type IIIA	59.25	Sft
Sign, Type IIIB	54.75	Sft
Sign, Type IIB	12.75	Sft
Post, Steel, 3 lb	400	Ft
Reflective Panel for Permanent Sign Support, 6 feet (Red)	2	Ea

Removed Signs shall be salvaged and stockpiled as indicated in the special provision for Sign, Rem.

All signs not proposed to be replaced and requiring relocation due to construction operations shall be salvaged and carefully protected to not damage the sign face. The signs will be reset by the contractor at the location designated by the Engineer. Compensation for this work will be considered as having been included in the pay item **Minor Traf Devices**.

PAVEMENT MARKINGS

White pavement markings will be placed 11' right and left of centerline and will be gapped out from spring point to spring point through all intersections.

Yellow pavement markings will be placed as follows:

Left	Right	Sta Applies
Solid	Skip	170+00 to 179+36
Solid	Solid	179+36 to 200+05
Solid	Skip	200+05 to 203+32
Solid	Solid	203+32 to 206+40
Skip	Solid	206+40 to 213+23
Solid	Solid	213+23 to 225+00

Pavt Mrkg, Waterborne, 4 inch, White

11000 Ft

Pavt Mrkg, Waterborne, 4 inch, Yellow

9540 Ft

STANDARD PLANS

Where the following items are called for, they are to be constructed according to the Standard Plan listed below unless otherwise indicated.

R-11-E	Monument Boxes
R-30-G	Concrete Curb and Concrete Curb & Gutter
R-74-D	Bumper & Parking Rails and MISC. Wood Posts
R-105-D	Grading Cross Sections

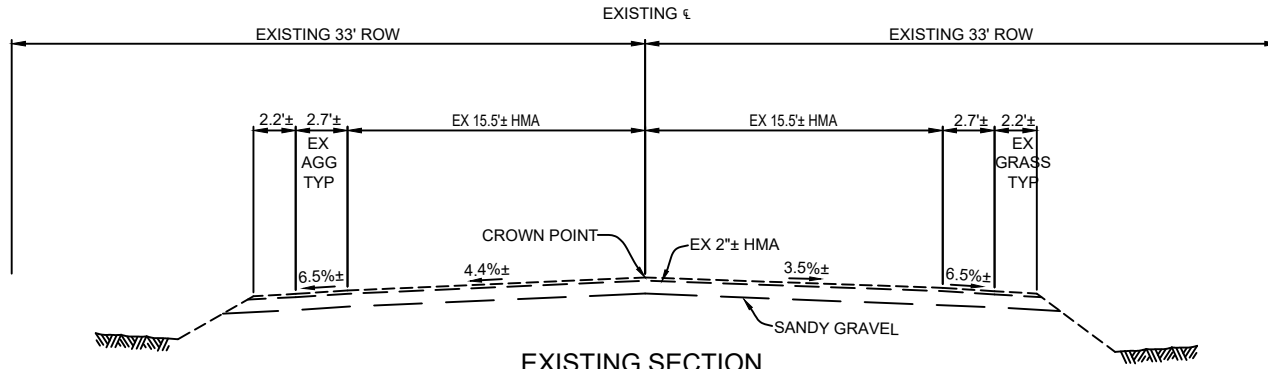
Traffic and Safety Standard Plans

**WZD-100-A	Ground Driven Sign Supports for Temp Signs
**WZD-125-E	Temporary Traffic Control Devices

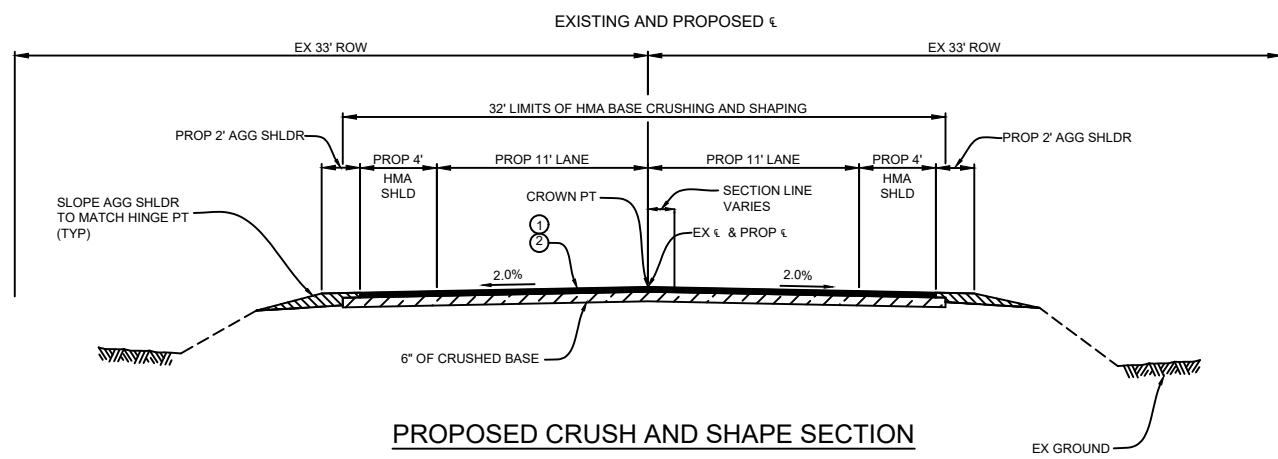
Pavement Marking and Permanent Signing Standard Plans

PAVE-905-E	Longitudinal Line Types and Placement
PAVE-930-D	Pavement Markings for Non-Signalized Intersections
SIGN-100-G	Standard Sign Installations
SIGN-110-E	Standard Route Marker Installations
SIGN-115-D	Sign Location Codes Placement
SIGN-120-E	Roadside Sign Locations and Support Spacing
SIGN-140-A	Placement of D3-1 Signs Above R1-1
SIGN-200-E	Steel Posts

**Special Detail included in proposal



EXISTING SECTION
TO APPLY: POB STA 170+00 TO POE STA 225+00



PROPOSED CRUSH AND SHAPE SECTION
TO APPLY: POB STA 170+00 TO POE STA 225+00

HMA APPLICATION TABLE

IDENT.	PAY ITEM	RATE #/SYD	PERFORMANCE GRADE	REMARKS
①	HMA, 4EML	165	58-28	TOP COURSE, AWI=260
②	HMA, 4EML	165	58-28	LEVELING COURSE
③	HMA APPROACH	330	58-28	INTERSECTIONS TWO LIFTS (HMA, 4EML)
④	HMA APPROACH	220	58-28	DRIVEWAYS ONE LIFT (4EML)
HMA BOND COAT		0.05-0.15 GAL/SYD (FOR INFORMATION ONLY)		

HMA BASE CRUSHING AND SHAPING NOTES:

HMA BASE CRUSHING AND SHAPING SHALL BE DONE IN ACCORDANCE WITH THE MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION, EXCEPT AS MODIFIED BELOW.

FINAL CENTERLINE ELEVATION GRADES SHALL BE DETERMINED BY ATTAINING THE PROPOSED CROSS-SECTION AS APPROVED BY THE ENGINEER. FINAL CENTERLINE ELEVATIONS ARE EXPECTED TO BE APPROXIMATELY 4.5" ABOVE THE EXISTING CENTERLINE ELEVATIONS.

PLACE 2" OF AGGREGATE BASE ON THE EXISTING HMA (30' ± WIDE) PRIOR TO CRUSHING.

CRUSH AGGREGATE BASE, EXISTING HMA, AND UNDERLYING EXISTING AGGREGATE TO A TOTAL DEPTH OF 7.0" ± (INCLUDING 2" OF AGGREGATE BASE, 2" ± OF EXISTING HMA, AND 3" ± OF EXISTING AGGREGATE).

AFTER CRUSHING, THE HOMOGENOUS MIXTURE SHALL BE SHAPED TO THE PROPOSED CROSS SECTION.

TYPICALS SHEET

SCALE
N/A

ENGINEER
RIVARD

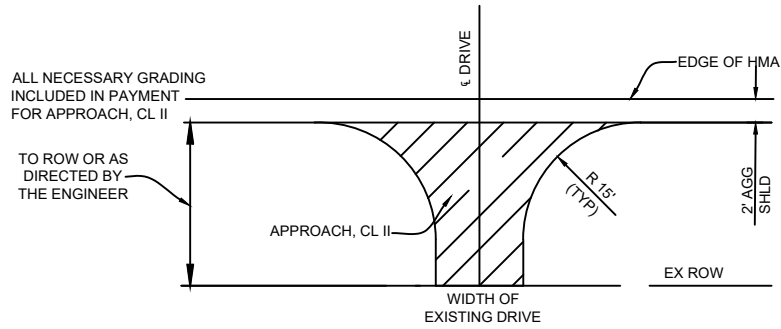
DATE
January 19, 2024

JOB NUMBER
23.169

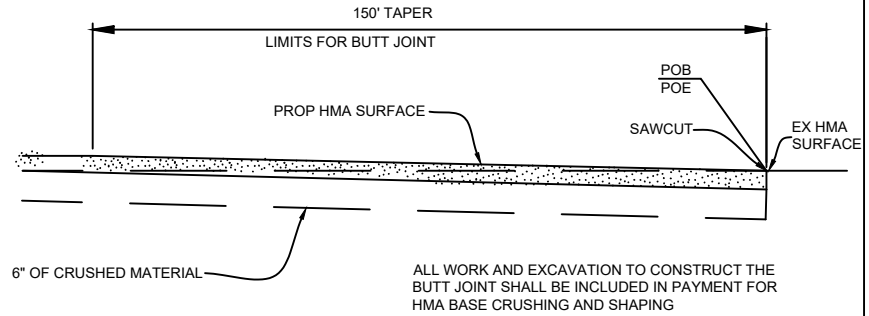


SHEET NO.

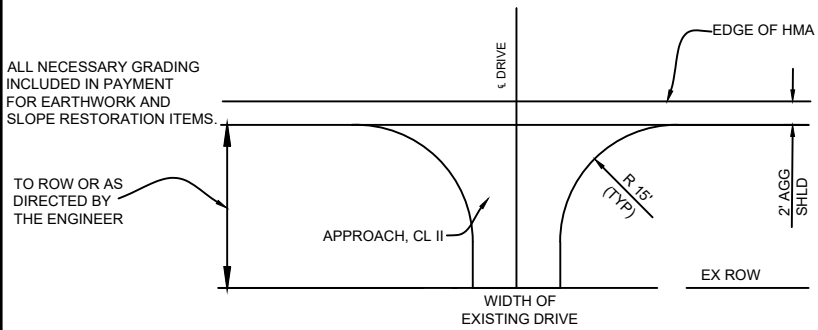
7



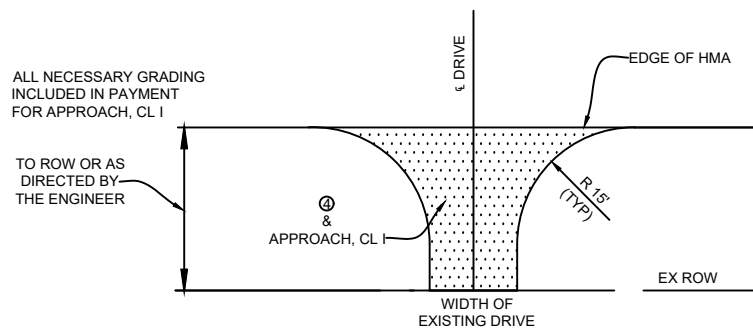
TYPICAL AGGREGATE DRIVE APPROACH
NOT TO SCALE



BUTT JOINT TRANSITION
NOT TO SCALE



TYPICAL FIELD DRIVE APPROACH
NOT TO SCALE



TYPICAL HMA & CONC DRIVE APPROACH
NOT TO SCALE

DETAIL SHEET

SCALE
N/A

ENGINEER
RIVARD

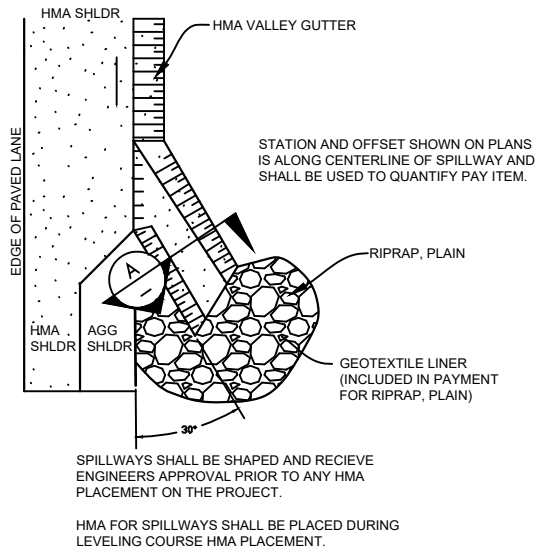
DATE
January 19, 2024

JOB NUMBER
23.169



SHEET NO.

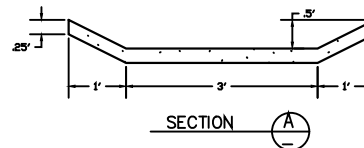
8



HMA SPILLWAY DETAIL

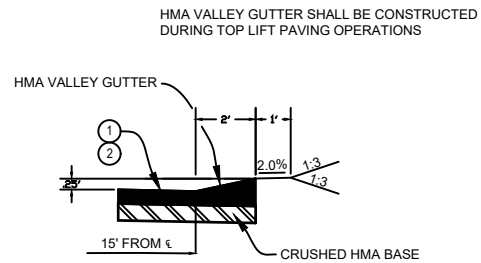
NOT TO SCALE

TO APPLY:	STA 195+55 LT	STA 172+25 RT
	STA 200+55 LT	STA 174+25 RT
	STA 218+40 LT	STA 194+63 RT
	STA 220+93 LT	STA 200+63 RT
		STA 217+40 RT
		STA 220+96 RT



NOTES:
HMA SPILLWAY WILL BE PAID FOR AS PAVED DITCH, HMA.

RIPRAP SHALL BE FLUSH WITH SPILLWAY.



HMA VALLEY GUTTER DETAIL

NOT TO SCALE

VALLEY GUTTER APPLIES FROM:

STA 195+55 TO STA 200+55 LT	STA 172+25 TO STA 174+25 RT
STA 218+40 TO STA 220+93 LT	STA 194+63 TO STA 200+63 RT
	STA 217+40 TO STA 220+96 RT

DETAIL SHEET

SCALE
N/A

ENGINEER
RIVARD

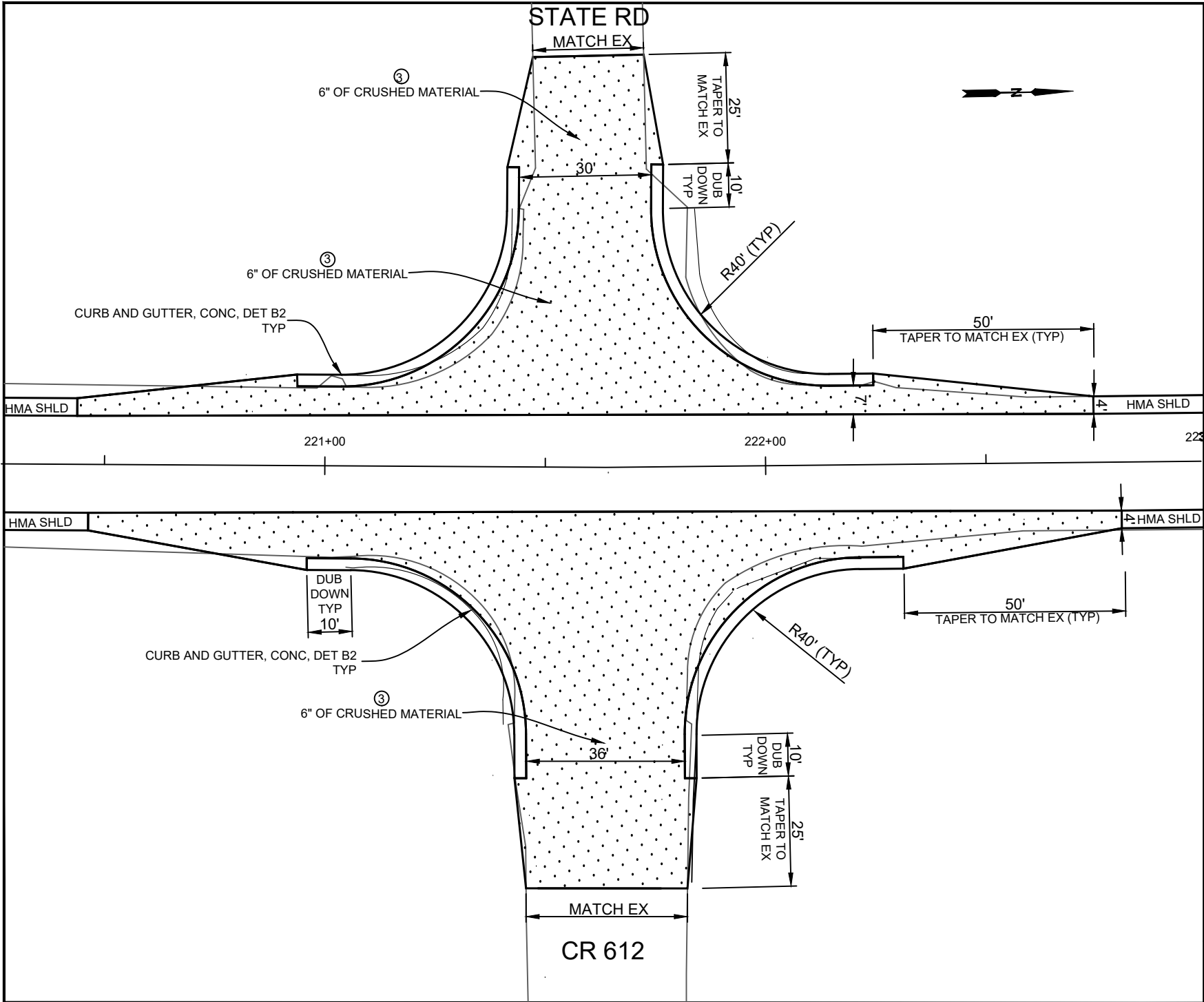
DATE
January 19, 2024

JOB NUMBER
23-169



SHEET NO.

9



DETAIL SHEET

SCALE	N/A
ENGINEER	RIVARD
DATE	January 19, 2024
JOB NUMBER	23.169

